

Police Capacity Building in European Models of Environmental Crime Enforcement

Strategic Lessons for the Dutch Police

dr. Anna Matczak



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Foreword

The thought process behind this project was long in the making, and the execution of it coincided closely with the adoption of the revised EU Environmental Crime Directive — a development that has brought a promise and obligation to advance the landscape this research set out to describe. The worsening climate and environmental degradation only add to the urgency of this line of research. Police organisations across the European continent, and elsewhere, are being asked to take on a role of environmental protection that, for most of their institutional history, was never truly theirs. This report is, in many ways, a snapshot of that transition as it is being lived and recounted by the people responsible for making it work.

This research starts with the insights from the Netherlands and then adds the comparative nuances from fieldwork in France, Sweden, and Spain. Through conversations with 70 practitioners and scholars, this research traces how these three countries build the capacity to police and investigate a category of crime that does not always look like crime, does not always have a clear victim, but does always require multilevel collaboration across multiple sectors and institutions.

Although the differences between the countries' environmental enforcement models — interestingly shaped by their geographical dispositions — are real and instructive, so too are the shared underlying tensions such as fragmentation between actors, unclear or overlapping roles, thin resources, political pressures, and a persistent gap between the cooperative ideals of modern environmental governance and the operational reality of the police officers and other actors trying to make it function on the ground.

This study was undertaken for the Dutch Police Academy, in close collaboration with the Sustainability and Environmental Safety Team and the High Impact Environmental Crime Unit of the Dutch Police, to help consolidate and extend the progress already underway within Dutch environmental crime enforcement. However, my hope is that the strategic lessons drawn from France, Sweden, and Spain — alongside the Netherlands — inform the ongoing work of building a more coherent and confident environmental crime identity within any police organisation ready to take that step forward.

I am grateful to have had the opportunity to undertake this research, and I hope the pages that follow prove genuinely useful to those doing this work every day.

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Executive summary

Introduction

- In this project, we set out to understand how police organisations in Europe are adapting to an expanded role within environmental crime enforcement structures. This is an area not traditionally associated with police work, yet one that is increasingly incorporated into policing mandates due to worsening ecological and climatic conditions and the subsequent growth of environmental regulation.
- This study coincided with the adoption of the revised Environmental Crime Directive (ECD) on 11 April 2024 and its subsequent transposition process, marking a significant milestone in the development of EU environmental criminal law and corresponding enforcement capacities. The Directive expands both the scope of police responsibilities and the range of prosecutable offences. Taken together, these developments are already increasing the demands placed on police and regulatory authorities across EU Member States.
- The comparative analysis of France, Sweden, and Spain, with the Netherlands serving as a departure-point case, reveals four distinct environmental crime enforcement models. These models are shaped by divergent policing traditions, institutional legacies, legal architectures, geographical and administrative arrangements, political contexts, and organisational capacities. This finding aligns with earlier comparative research emphasising the context-dependent nature of environmental enforcement systems and the decisive influence of national legal and policy frameworks (Sundari Akella & Cannon, 2009; Philipsen & Faure, 2015; Spapens, 2025), alongside a range of additional factors discussed in this report. Our study adds to these by grounding these observations in contemporary policing practice and their operational realities.
- The primary national target audiences of this research project include the Dutch Police Academy, Dutch Police Sustainability and Environmental Safety Team, High Impact Environmental Crime Unit, environmental crime and other strategic advisors, and police leaders responsible for implementing environmental and sustainability regulations within the Dutch Police, as well as police officers involved in investigating environmental crimes. Although the primary objective of this applied research is to strengthen the Dutch Police's capacity to respond to and investigate environmental crime, the research process itself highlighted an additional,

emergent objective, which is to facilitate mutual learning among the selected police organisations in Sweden, Spain, France, and beyond.

- Conceptually, this study is informed by the New Environmental Governance (NEG) framework, introduced to capture a shift, beginning in the 1980s, from predominantly command-and-control approaches toward more polycentric, adaptive, and cooperative models of environmental governance and enforcement. The NEG framework provides a useful lens for understanding the plurality of actors involved in contemporary environmental enforcement and the shifting balance between “steering” and “rowing” across governance landscapes. In this respect, NEG helps to explain the structural complexity observed across all four case-study countries, where police organisations operate alongside regulators, inspection services, municipalities, and civil society actors. However, this normative orientation does not always reflect enforcement conditions on the ground. The NEG’s often-cited “normative optimism” contrasts sharply with the realities identified in this study, where deep fragmentation, weak coordination, lack of role clarity, competition between enforcement actors, limited trust, poor communication, and resource scarcity remain the defining features of environmental crime enforcement.

Selection of case studies

- France presents a highly fragmented and multi-actor model of environmental crime enforcement, characterised by overlapping mandates across regulatory, administrative, and criminal justice actors. This institutional complexity closely mirrors the Dutch context. However, France has, in recent years, assumed a growing international role in environmental crime enforcement, largely through the expanding presence and influence of the gendarmerie, particularly CESAN, its specialised unit dedicated to environmental offences. France was also selected as it represents one of the few national contexts in which the policing of environmental crimes has recently been examined in substantial depth from an academic perspective.
- Sweden, like the Netherlands, has a long-standing tradition of prioritising environmental protection and environmental governance. Furthermore, Sweden places primary responsibility for investigating environmental crimes within its National Police, which was an important comparative factor in relation to the situation in the Netherlands. Sweden is also internationally recognised for its highly specialised prosecutorial structures in environmental crime and for maintaining a steady flow of cases through the justice system.
- Spain was selected primarily due to the central role of SEPRONA (Servicio de Protección de la Naturaleza), the environmental protection unit of the Spanish Civil Guard. Since its establishment in 1988, SEPRONA has not only evolved into a national cornerstone of environmental enforcement, but is currently one of the most recognised specialised units worldwide. Its gradual accumulation of technical, in-

vestigative, and operational expertise has positioned it as a global pioneer and leader in the development of policing capacity for environmental crime enforcement and investigation.

Methodology

- For this study, we adopted a qualitative, multi-case study design to answer the main research question: What can the Dutch Police learn from how police forces in Sweden, France, and Spain ensure they can handle the increasingly extensive and complex task of tackling environmental crimes? The case studies were selected to provide analytical variation across different policing traditions, institutional architectures, and enforcement models, while remaining comparable enough to draw lessons for the Dutch context. This comparative strategy allows the study not only to identify country-specific innovations but also to uncover cross-cutting mechanisms that underpin effective environmental crime enforcement across diverse settings.
- Data were gathered through semi-structured interviews with participants from diverse backgrounds, site visits, analysis of secondary data, and desk research. This combination of methods made it possible to triangulate findings across different sources and to examine both formal organisational arrangements and the lived experiences of practitioners engaged in environmental crime enforcement. The project commenced in September 2024 and was followed by a literature-review phase and preparatory work for the country visits. The main phase of data collection took place between January and March 2025. In total, 70 participants contributed to the study (25 in France, 20 in Sweden, and 25 in Spain). Each visit lasted approximately two weeks and was formally hosted by an institutional partner. Data collection methods varied and included fully recorded individual and group interviews as well as interviews documented through detailed note-taking. All recorded interviews were transcribed, and the complete set of interview data was subsequently coded and thematically analysed.

Key findings

- While all four countries and their respective policing actors face broadly similar challenges (albeit to varying degrees), several indicators emerge as being particularly salient when differentiating the enforcement models. These include: (1) the degree of fragmentation and the positioning of police within the enforcement system; (2) the clarity and structure of the interface between administrative and criminal domains, including the presence of hybrid or intermediary policing-like entities; (3) the relationship between police and prosecution; (4) the presence, maturity, and strategic use of environmental crime intelligence; (5) the extent and quality of police collaboration with civil society actors and the degree of civilianisation within environmental crime policing; and (6) the international presence and engagement of police organisations. Another factor that may be of limited importance to police

operational capacity and strategic vision, but was shown to be immensely significant in this study, is (7) the amount and quality of scholarly knowledge on environmental policing in each respective country.

- Each country case description in the main report is accompanied by a graphic visualisation of the respective environmental crime enforcement model. The Discussion section also includes a comparative table summarising the key features of each studied country, including the Netherlands, highlighting differences across the identified indicators.
- The French case study exemplifies a highly fragmented and pluralised enforcement landscape with multiple actors in which the military police, French Gendarmerie, and its most recent institutional development CESAN, occupy the main police roles in the enforcement model. However, this model is also characterised by a unique semi-hybrid position of the Office Français de la Biodiversité (OFB), administrative in nature however with expanding policing roles and even referred to in France as “Environmental Police”. Unlike in other countries, the French context of environmental policing is extremely well documented by scholarly publications that show the developing relationship between CESAN and civil society actors as well as a significant international presence and engagement.
- The Spanish case study represents a comparatively less fragmented enforcement model, again with the military police, the Guardia Civil, and SEPRONA its highly specialised environmental branch, occupying a central and dominant role in the enforcement model. SEPRONA’s historical development, intelligence-led policing approach, and investigative capacity demonstrate significant institutional adaptability in response to the evolving nature of environmental crime and harm. Its comprehensive investigative model increasingly relies on technological tools. A particularly distinctive feature is SEPRONA’s team of highly specialised officers and experts responsible for producing environmental crime impact assessments, often in collaboration with civil society organisations. The Spanish model is also characterised by strong, sustained, and institutionally embedded participation in international fora, active contributions to international training and capacity-building initiatives, and leadership roles in multi-country operations.
- The Swedish case study reflects a model of environmental crime enforcement that is strongly prosecutor-led, administratively initiated, and (National) police-executed with limited international presence. In this system, regulatory and supervisory agencies act as the primary detectors of environmental offences and submit reports directly to the police. The police rarely engage in independent inspection or detection but function primarily as an investigative body under the close legal and strategic guidance of specialised prosecutors. This results in a highly hierarchical, legally driven, and reactive enforcement model, with administrative expertise serving as

the primary reporting base. However, a notable development in this model is the integration of civilian investigators into police environmental crime teams, facilitating the incorporation of much-needed environmental science expertise. This internal diversification stands in sharp contrast to the absence of collaboration between the Swedish Police and third-sector organisations.

- The Dutch case represents a deeply fragmented enforcement model, similar in several respects to France, which also includes hybrid policing entities, particularly the Special Investigative Services (Bijzondere Opsporingsdiensten, BODs). It exhibits a dispersed environmental intelligence configuration, with intelligence spread across the Permitting, Supervision, and Enforcement system (VTH; Dutch: Vergunningverlening, Toezicht en Handhaving) and the National Police. While this produces valuable information, it also results in fragmented flows that require strong coordination mechanisms to translate intelligence into operational outcomes. Civil society engagement remains limited, although there are comparatively strong ties with universities and knowledge institutions. International engagement, largely driven by VTH actors, tends to be intermittent and often depends on individual initiatives or project-based participation rather than stable organisational commitments.
- From a comparative perspective, the Dutch model shares characteristics with each of the analysed systems and is not unique in its shortcomings, which are evident in varying degrees across all countries. The Dutch enforcement landscape resembles France in its dense and fragmented structure, Sweden in its reliance on prosecutors and administrative inspectors, and contrasts with Spain in lacking a strong, centralised specialist policing component (which can also be problematic). The Dutch Police operate within a system that is ambitious in scope (as manifested in internal and external strategic police documents and environmental crime risk assessments) but structurally constrained. The strategic prioritisation of environmental crime represents a significant step forward, and while several of the recommended actions are already in progress, more work needs to be done on establishing a cohesive environmental crime identity within the National Police that will strengthen its position and relevance in the Dutch enforcement model.
- Environmental crimes are inherently economic in nature and must therefore be understood in relation to the organisational dynamics of the economic system that produces them and that sustains continual economic expansion. However, an important novelty in this report is to include a brief section on each of the country's geographical disposition. The geographical distribution of environmental crime in a country reflects the intersection of industrial geography, natural resource density, and socio-economic structures. Certain regions exhibit structural vulnerabilities due to concentrated industrial activity, extensive logistical corridors, land use patterns, or ecologically sensitive landscapes. Such a multifaceted geographical dispo-

sition not only affects distribution of environmental crimes and the nature of laws created and applied, but it can also provide important information for the police's regional preparedness to respond to environmental crimes.

Conclusion and recommendations

- With this study, we demonstrate that while environmental crime enforcement models vary considerably across France, Sweden, Spain, and the Netherlands, they are united by a common set of structural challenges that place a significant strain on police organisations and their partners. By grounding comparative analysis in contemporary operational realities, the report moves beyond abstract governance ideals and offers a practice-sensitive assessment of environmental policing in Europe.
- Among the most (and continuously) important general recommendations relevant for any police organisation interested in expanding their environmental crime capacity are: (1) improving their knowledge base on environmental crimes, (2) measuring the impact and performance of environmental policing, (3) approaching environmental crime investigations as a systemic learning process that requires time and space, and (4) strengthening international presence, cooperation and education at EU-level and beyond.
- More-specific recommendations for the Dutch Police include: (1) strengthening data collection about investigating environmental crimes and their internal and external accessibility, (2) establishing a cohesive environmental policing identity, (3) consolidating specialist capacity and reducing organisational fragmentation, (4) exchanging practices about multi-level training (cross-sectoral, sequential training model) and education pathways, and (5) strengthening joint operational protocols and shared evidence standards.

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List of abbreviations

AFMJE	<i>Association française des magistrats pour la justice environnementale</i> (French Association of Magistrates for Environmental Justice)
BNEVP	<i>Brigade Nationale d'Enquêtes Vétérinaires et Phytosanitaires</i> (National Veterinary and Phytosanitary Investigation Unit)
BOA	<i>Buitengewoon Opsporingsambtenaar</i> (Special Investigative Officer)
BOD	<i>Bijzondere Opsporingsdienst</i> (Special Investigative Service)
CESAN	<i>Commandement pour l'environnement et la santé</i> (Environment and Health Command)
CESDIP	<i>Centre de Recherches Sociologiques sur le Droit et les Institutions Pénales</i> (Centre for Sociological Research on Law and Penal Institutions)
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COLDEN	<i>Comité opérationnel de lutte contre la délinquance environnementale</i> (Operational Committee for Combating Environmental Delinquency)
DDPP	<i>Direction Départementale de la Protection des Populations</i> (Departmental Directorate for Population Protection)
DDT	Directions départementales des territoires (Departmental Directorates for Territories)
DEPRONA	<i>Destacamento de Protección de la Naturaleza</i> (Protected Areas Detachment)
DLIO	<i>Dienst Landelijke Informatieorganisatie</i> (National Intelligence Organisation)
DRIO	<i>Dienst Regionale Informatieorganisatie</i> (Regional Intelligence Organisation)
DRR	<i>Dienst Regionale Recherche</i> (Regional Investigation Department)
DREAL	<i>Direction Régionale de l'Environnement, de l'Aménagement et du Logement</i> (Regional Directorate for Environment, Planning and Housing)
EAESP	<i>Enquêteur Atteintes à l'Environnement et à la Santé Publique</i> (Investigator Specialised in Environmental and Public Health Offences)
ECD	Environmental Crime Directive
EFFACE	European Union Action to Fight Environmental Crime
ENPE	European Network of Prosecutors for the Environment
EUFJE	European Union Forum of Judges for the Environment
FIOD	<i>Fiscale Inlichtingen- en Opsporingsdienst</i> (Fiscal Intelligence and Investigation Service)

FNSEA	<i>Fédération Nationale des Syndicats d'Exploitants Agricoles</i> (National Federation of Agricultural Holders' Unions)
FP	<i>Functioneel Parket</i> (Functional Prosecutor's Office)
FREE	<i>Formateurs Relais Environnement</i> (Environmental Relay Trainers)
GIMA	<i>Grupos de Investigación y Análisis / Grupo de Inteligencia e Investigación Medioambiental</i> (Environmental Crimes Intelligence and Investigation Group)
ICC	International Criminal Court
ILT	<i>Inspectie Leefomgeving en Transport</i> (Human Environment and Transport Inspectorate)
ILT-IOD	Intelligence and Investigation Service of the Human Environment and Transport Inspectorate
IMPEL	European Union Network for the Implementation and Enforcement of Environmental Law
IOD	Intelligence and Investigation Service
IPEC	Intelligence Project on Environmental Crime
KMTO	<i>Korpsmanagementteam Overleg</i> (Police Management Team Consultation)
LMK	<i>Landelijke Milieukamer</i> (National Environmental Chamber)
LX	National Expertise and Operations Unit
MISEN	<i>Mission Inter-services de l'Eau et de la Nature</i> (Inter-Services Mission for Water and Nature)
MITECO	<i>Ministerio para la Transición Ecológica y el Reto Demográfico</i> (Ministry for Ecological Transition and the Demographic Challenge)
NEG	New Environmental Governance
NFC	<i>Nationellt Forensiskt Centrum</i> (National Forensic Centre)
NLA-DO	<i>Nederlandse Arbeidsinspectie - Directie Opsporing</i> (Dutch Labour Authority - Investigation Service)
NOA	Nationella operativa avdelningen (<i>National Operations Department</i>)
NVWA	<i>Nederlandse Voedsel- en Warenautoriteit</i> (Netherlands Food and Consumer Product Safety Authority)
NVWA-IOD	<i>Inlichtingen- en Opsporingsdienst van de Nederlandse Voedsel- en Warenautoriteit</i> (Intelligence and Investigation Service of the Netherlands Food and Consumer Product Safety Authority)
OCLAESP	<i>Office Central de Lutte contre les Atteintes à l'Environnement et à la Santé Publique</i> (Central Office to Suppress Damage to the Environment and Public Health)
OD	<i>Omgevingsdienst</i> (Regional Environmental Service)
OFB	<i>Office Français de la Biodiversité</i> (French Biodiversity Agency)
ONF	<i>Office National des Forêts</i> (National Forestry Office)
OPJ	<i>Officier de Police Judiciaire</i> (Specialised Environmental Judicial Police Officer)
PAPRONA	<i>Patrulla de Protección de la Naturaleza</i> (Nature Protection Patrol)

PFAS	Per- and Polyfluoroalkyl Substances
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
REMA	<i>Riksenheten för Miljö- och Arbetsmiljömål</i> (National Environmental Crime Unit)
RNF	<i>Réseau des Réserves Naturelles de France</i> (National Nature Reserves Network)
SEPA	<i>Naturvårdsverket</i> (Swedish Environmental Protection Agency)
SEPRONA	<i>Servicio de Protección de la Naturaleza</i> (Nature Protection Service)
SMK	<i>Strategische Milieukamer</i> (Strategic Environmental Chamber)
SOCTA	Serious and Organised Crime Threat Assessment
UCOMA	<i>Unidad Central Operativa Medioambiental</i> (Environmental Crimes Central Investigation Unit)
UNODC	United Nations Office on Drugs and Crime
VTH	<i>Vergunningverlening, Toezicht en Handhaving</i> (Permitting, Supervision and Enforcement System)

1 Introduction

1.1 Aim of the project

In this project, we set out to gain an understanding of how police organisations in Europe are adapting to an expanded role in the policing of environmental crime. This is an area not traditionally associated with police work, but one that is increasingly incorporated into policing mandates due to worsening ecological and climate conditions and the subsequent growth of environmental regulation. Although the primary objective of this applied research is to strengthen the Dutch Police's capacity to respond to and investigate environmental crime, the research process itself highlighted an additional, emergent objective, which is the facilitation of mutual learning among the selected police organisations in Sweden, Spain, and France, and beyond. As this particular type of comparative study is being undertaken for the first time, the project also seeks to engage the police organisations from other countries in a collective dialogue on effective approaches to and models of environmental crime enforcement.

In this study, we emphasised the aspect of generating an in-depth understanding of each country through an exploratory case study approach. This report is the outcome of a multi-site fieldwork and data collection in Sweden, Spain, and France; a scoping first case study in the Netherlands; an extensive validation process with all study participants; consultations with environmental crime specialists from EUROPOL and INTERPOL; an extensive literature review; and several additional educational activities conducted at The Hague University of Applied Sciences, including an undergraduate thesis related to the project and a collaboration with undergraduate students on the development of a serious game focused on policing illegal fishing and waste-related offences.

Consequently, the report is structured as follows. This introductory section outlines the complexity of policing environmental crimes and the evolving EU landscape in this domain. It also presents the conceptual framework guiding the study and describes the methodological approach. In the next chapter, we examine the current landscape of environmental crime enforcement in the Netherlands, which serves as a point-of-departure case in this comparative design. This is followed by a detailed analysis of each country, organised into the following components: (1) geographical context and disposition, (2) environmental legal and policy framework, (3) the environmental crime landscape in the country, (4) environmental crime enforcement model, (5) opportunities for strengthening environmental policing capacity, and (6) conclusions. Each en-

forcement model is accompanied by a visual representation. The report concludes with a comparative discussion of environmental crime policing and a set of recommendations primarily directed at the Dutch Police, while acknowledging their relevance for other police organisations.

Although the numerous established and emerging networks can enhance police responses to environmental crimes, we expect that our findings will further contribute to strengthening connections among environmental crime officers and experts in strategic roles, thereby supporting the exchange of experiences and best practices.

1.2 Understanding and defining environmental crimes

The term *environmental crimes* encompasses a broad spectrum of activities that increasingly occur across borders and adversely affect ecosystems, wildlife, and human health. One way to conceptualise and define environmental crime is by examining the diverse classifications and typologies through which it is understood. The most recent UNODC report on Crimes that Affect the Environment provides an applicable typology, identifying nine key categories of environmental offences: forest-related offences, mineral-related offences, air pollution, noise pollution, soil pollution, water pollution, fishing-related offences, waste-related offences, and wildlife-related offences (UNODC, 2025). Environmental crimes are typically defined as offenses that harm or exploit the environment through violations of laws and regulations intended to protect natural resources (Brisman & South, 2014). They can be distinguished from conventional or mainstream crimes, where punishment usually addresses anthropocentric harms to humans or human interests (Lynch & Long, 2022). Environmental crimes generate a wide spectrum of harms, including direct physical and health consequences for affected populations, long-term degradation of ecosystems, and substantial economic losses arising from remediation costs, diminished natural resources, and distortions in legitimate markets. Consequently, Nurse (2023) observes that restoration and reparation should form integral components of the environmental criminal justice process, distinguishing it from other fields of criminal law.

One of the most frequently cited observations about environmental crimes is their heightened complexity relative to other types of crime; they have also been described as “hopelessly complicated and (often) impossible to win” (Epstein & Hammett, 1995, p. 20). The consequences of the “triple planetary crisis” (namely, climate change, pollution, and biodiversity loss) will further impact police organisations and require them to respond more efficiently to environmental harms (INTERPOL Innovation Centre, 2022). Furthermore, there is a growing body of literature suggesting that the crime landscape and the nature of police work will be both directly and indirectly affected by the consequences of climate change such as resource scarcity, changing opportunity structure for environmental crimes, or social unrest arising in response to climate-related challenges (see Matczak, 2025).

Given the nature of these offences, it is unsurprising that the spatial distribution of environmental crime predictably reflects regional and country-specific territorial envi-

ronmental characteristics. This observation was also noted in what appears to be the earliest report examining police responses to environmental crime commissioned by the U.S. Department of Justice in the mid-1990s (Epstein & Hammett, 1995). The geographical distribution of environmental crime in a country reflects the intersection of industrial geography, natural resource density, and socio-economic structures. Certain regions exhibit structural vulnerabilities due to concentrated industrial activity, extensive logistical corridors, land use patterns, or ecologically sensitive landscapes. This multifaceted geographical disposition affects the distribution of environmental crimes and the nature of the laws created and applied. In consequence, environmental crimes in a country display a spatial logic and a geographical disposition shaped by industrial geography, ecological sensitivity, and uneven enforcement capacity, consistent with opportunity structures and regulatory environments (Lynch & Stretesky, 2014).

This project is situated at the intersection of policing scholarship and green criminology, therefore it is important to recognise that although the latter emerged in 1990, it did not gain substantial scholarly attention until the late 1990s. Its subsequent growth has been closely linked to the deteriorating condition of the global ecosystem, characterised by escalating challenges such as climate change, biodiversity loss, and widespread pollution (Lynch & Long, 2022). It is important to acknowledge that green or environmental crimes are inherently economic in nature and must therefore be understood in relation to the organisational dynamics of the economic system that produces them and sustains continual economic expansion.

In the early days of green criminology, Van den Berg (1995) developed a “general market model” to examine the viability of environmental crimes, conceptualising “not-yet offenders” as entities functioning within market logics shaped by supply and demand. Positioning environmental crime within such an economic framework enables a deeper understanding than could be achieved through a straightforward catalogue of potential environmental violations (Neve, 2023). Given that most environmental harms worldwide stem from legal and illegal corporate practices, it is unsurprising that the development of corporate crime scholarship is also recognised as a necessary precursor to the emergence of green criminology (Lynch & Long, 2022).

A more recent understanding of specific components of environmental crime highlights its frequent involvement of (1) corporate structures, (2) financial flows, (3) cross-border actors, and (4) complex permit systems. In addition, historically, environmental offences were analysed in isolation as discrete phenomena. However, the growing body of research as well as professional policing and regulatory practice indicates that environmental crime often converges with other serious criminal activities such as organised crime and financial crime (van Uhm & Nijman, 2020; Faure & Kindji, 2022). Consequently, before addressing questions of detection and enforcement, it is essential to undertake an opportunity-based analysis of the relevant markets, sectors, actors, and regulatory frameworks (Neve, 2023). The nature of environmental crimes, and the ways in which they are committed is continually evolving, with several emerging trends being of particular relevance. For example, as far as environmental crimes committed by organised criminal actors are concerned, these include an increase in plant

trafficking; a shift in wildlife trafficking toward the use of images rather than text (which complicates evidentiary procedures in court), the adoption of new smuggling techniques such as maintaining controlled temperatures for eggs or other wildlife concealed in containers; the growing use of single-use passports by criminal networks, sometimes obtained through consulates and embassies that are unknowingly implicated; and an increased use of financial mules, often recruited online (INTERPOL, personal communication, 22 January 2025).

Although environmental protection historically occupied a marginal position within criminal law, this has recently begun to shift (Faure, 2024) as environmental regulation expanded substantially, currently comprising extensive, multi-volume bodies of legal provisions. Environmental law is largely designed to govern lawful economic activities and is characterised by a high degree of technical complexity and sector-specific regulation (Spapens, 2025). However, the UNODC (2025) further highlights that no comprehensive international legal framework currently exists to safeguard the environment or uniformly criminalise environmentally harmful activities. Instead, enforcement relies on a complex, multi-level governance structure that combines criminal, administrative, environmental, and public health law. These frameworks are further complicated by a fragmented patchwork of international and regional agreements, unevenly incorporated into national legislation. This resonates with the observations from the enforcement authorities that due to its technical and complex nature, and despite growing capacity in some countries, environmental legislation is generally difficult to enforce due to open-ended standards and limited possibilities for establishing proof (van Houten-Peschier, 2023).

Nevertheless, many harmful behaviours are criminalised across the nine thematic areas identified by the UNODC. Waste-related offences and wildlife crimes receive the greatest criminal attention, while areas such as soil and noise pollution are least frequently addressed (UNODC, 2025).

Alongside these developments, two emerging legal approaches are gaining specific momentum: the recognition of *ecocide* as a criminal offence and the advancement of the *Rights of Nature* framework (UNODC, 2025). Ecocide proposals seek to criminalise acts undertaken with the knowledge that they pose a significant risk of severe, widespread, and long-lasting environmental damage, even when such acts are formally permitted (Stop Ecocide International, n.d.). In the Netherlands, a draft bill has been submitted to this effect¹. Such reforms will likely require EU police services to allocate greater resources, personnel, and expertise to sustainably tackle environmental crime. In December 2025, the Office of the Prosecutor of the International Criminal Court (ICC) adopted a *Policy on Addressing Environmental Damage Through the Rome Statute*, marking a significant institutional step in how severe environmental harm is treated within the framework of international criminal justice. Rather than creating a new crime of ecocide, the Policy clarifies how the ICC may interpret and apply existing Rome Statute provisions to crimes contributing to serious environmental damage

1 <https://ecojurisprudence.org/initiatives/netherlands-ecocide-penalization-act/>

when linked to core international crimes such as genocide, crimes against humanity, war crimes, or aggression. It emphasises the integration of environmental considerations into prosecutorial decision-making and supports national enforcement efforts to hold actors accountable, signalling the Court's intent to treat environmental degradation as integral to human harm and justice rather than peripheral to it (International Criminal Court, Office of the Prosecutor, 2025). Another significant contribution of this policy document is that it reframes the enforcement logic from rule-violation to harm-focused. This means in practice that the guiding question shifts from "Which rule has been violated?" to "What environmental harm has occurred or is likely to occur, and what intervention is required to prevent or limit it?" This perspective broadens the scope for preventative and precautionary actions (*ibid.*).

The Rights of Nature are grounded in the premise that the natural world possesses inherent value and should be recognised as an independent rights-bearing entity, entitled to exist, thrive, and regenerate (Kauffman & Martin, 2021). What initially emerged as a philosophical proposition has gradually evolved into a legal and jurisprudential movement. Within Western legal scholarship, the idea of granting legal subjectivity to nature has been discussed for several decades, most notably through Christopher D. Stone's seminal work *Should Trees Have Standing?*, which laid the conceptual foundation for contemporary debates. As of January 2026, the Ecojurisprudence Monitor documents 599 Rights of Nature-related initiatives across 56 countries, indicating the growing institutionalisation and global diffusion of this approach.²

The expanding regulation and criminalisation of environmental harms can be viewed as a positive development, signalling legislative and judicial progress. Yet many jurisdictions remain in an intermediate state in which environmental violations are still predominantly treated as regulatory infractions rather than as serious economic or organised crime phenomena. In addition, as the UNODC (2025) notes, legal success does not always translate into tangible environmental improvements. While some legal frameworks incorporate restorative measures, such as compensation for damage or funding for ecological restoration, these mechanisms remain far less common than provisions centred on punitive sanctions.

The complexity of the environmental law and regulatory landscape represents a significant point of differentiation from traditional enforcement domains. As argued by Lazarus (2020), the pluralistic, dense, and often internally inconsistent nature of environmental law renders it technically demanding and dependent on specialised expertise. This complexity is compounded by blurred jurisdictional boundaries between permissible and prohibited conduct, as well as the overall volume and density of environmental regulation. This places environmental crimes in a distinctive domain marked by unique characteristics and complex challenges for regulation and enforcement, even for highly experienced scholars and experienced practitioners. The wide range of profit-driven criminal activities (Alfaro Moreno, 2023) positions nature both as a commodified resource and a complex site of criminal investigation. The environ-

2 <https://ecojurisprudence.org/?map-style=political>

mental crime literature cited in the next section consistently highlights deficiencies in environmental law enforcement, particularly its inadequate scope and slow development. Neve (2023) observes that complex legislation, coupled with limited oversight and weak enforcement capacity, often further amplifies the conditions conducive to environmental criminal activity.

1.3 Environmental crime and law enforcement

The creation of criminal or administrative environmental offences represents an initial step toward enforcing environmental protection; however, their effectiveness is contingent on several factors, particularly the capacity of the criminal justice system to apply and uphold these legal provisions (UNODC, 2025). Environmental crime/law enforcement can be defined as the system comprising detection, apprehension, prosecution, and conviction, and typically entails involves multiple authorities (Sundari Akella & Cannon, 2009:530). These typically include administrative regulators, custom services, tax authorities, the national police, and/or public prosecution, and is shaped by specific-site problems, a country's legal framework, the nature of the environmental crimes, and many other contextual factors (Spapens, 2025). This makes the response challenging as it is deeply systemic, and the system is as strong as the weakest link in the environmental enforcement chain (Sundari Akella & Cannon, 2009). While a holistic understanding of environmental enforcement systems is widely recommended (Sundari Akella & Cannon, 2009), in this study we deliberately narrow its analytical focus to the role, position, and capacity-building of the police within this broader environmental enforcement model.

From the earliest scholarly publications on environmental crime, the policing, investigation, and prosecution of these offences have consistently been identified as the most persistent impediments to effective prevention and control (see part three in White, 2009). Spapens and Mehlbaum (2019), in line with many others, identify several factors contributing to this persistent challenge, including: (1) the transnational nature of many environmental crimes and the resulting jurisdictional complexities; (2) the technical complexity of environmental law and regulation; (3) the fragmentation of regulatory responsibilities between administrative authorities and the police; (4) difficulties in multi-agency cooperation both domestically and across borders; (4) limited institutional trust in information exchange and competencies; (5) the specific characteristics of offenders, particularly corporate actors; (6) the low prioritisation of environmental crimes within criminal justice systems; and (7) the scarcity of specialised police units and trained officers. In addition, inadequate budgetary allocations and weak performance monitoring mechanisms further contribute to persistent criticism of environmental enforcement efforts (Sundari Akella & Cannon, 2009).

The holistic perspective discussed by Sundari Akella & Cannon (2009) aligned with the enforcement economic framework provides a key insight: interventions that target only a single stage of the environmental enforcement chain or that neglect the multiple factors underlying weaknesses at that stage, are unlikely to substantially improve over-

all enforcement performance where deficiencies are systemic. Effective improvement therefore requires investments that address several dimensions of the problem in parallel (ibid.).

Comparative research on environmental crime in Europe has demonstrated significant variation in legislation, policy framework, enforcement models, and institutional arrangements (see Farmer, Faure & Vagliasindi, 2017). Strengthening environmental enforcement systems therefore demands not only legal reform but also substantial organisational adaptation, including clearer prioritisation, more strategic allocation of resources, expertise development, and improved collaboration across the wider network of actors involved in enforcement. These interconnected challenges are captured by Spapens and Mehlbaum (2019: 178) under the concept of capacity building, which they define in this field as follows:

Capacity building thus aims to connect and strengthen the skills, competencies and abilities of actors involved – or stakeholders – in order to jointly overcome the problem. In the international arena, this not only refers to the police, but also to administrative bodies with enforcement roles. Capacity building generally involves the creation of (personal) networks of enforcement agencies' staff, exchange of good practices, provision of training and (technical) assistance. This not only enhances the quality of enforcement at the national levels, but also creates (personal) relations of trust amongst law enforcement personnel of different nations, and this in turn eases cooperation in actual cross-border investigation cases. Capacity building may be initiated by law enforcement agencies, but also by other stakeholders such as NGOs, scientists and civilians.

However, effective enforcement presupposes sufficient awareness at the political and policy-making levels where decisions are taken regarding investigative priorities and the allocation of resources across the environmental enforcement chain (Spapens, 2025). On a more practical and analytical level, capacity building, whether in this or any other policy/practice area, can be distinguished across three interrelated levels: the individual level (skills and expertise), the organisational level (resources and institutional structures), and the systemic level (coordination mechanisms, levels of trust, and legal harmonisation). When viewed through this lens, it becomes possible to more precisely identify where capacity deficits are most acute; this is the analytical approach applied in this study as demonstrated in the operationalisation table in Appendix I.

One of the central characteristics of environmental law enforcement is its hybrid nature. Unlike many conventional crimes, environmental offences are regulated through a “toolbox approach”, involving the coordinated use of administrative, civil, and criminal procedures (Epstein & Hammett, 1995; Faure, 2024). Subsequently, while police and prosecutors typically focus on intentionality and culpability, inspectorates and administrative authorities concentrate on compliance monitoring, permits, and reporting obligations. Effective enforcement therefore requires good coordination across multiple institutions with divergent mandates, capacities, organisational cultures and priori-

ties. This multi-actor dimension is both a strength, enabling specialised expertise, and a weakness, as it can lead to duplication, fragmentation, gaps in accountability, and/or so called “turf issues” between the agencies involved (Epstien & Hammett, 1995, p. 35). Very few studies have been conducted that explore the nature and models of national environmental crime enforcement with a particular focus on the national police. One of the first studies on this, conducted in the U.S., concluded that institutional leadership in responding to environmental crime is not uniform, as enforcement trajectories can be primarily police-led, prosecution-driven, or centred around specialised environmental agencies (Epstein & Hammett, 1995). Each configuration shapes distinct patterns of prioritisation, investigative practice, information flow, and interagency coordination. Understanding where strategic authority is situated within a given enforcement model is therefore essential, as it determines not only how cases are initiated and developed, but also how institutional capacities, legal mandates, and operational cultures interact (*ibid.*).

In addition, a theoretical scoping overview of selected jurisdictions (the United States, Mexico, and Australia) by Tomkins (2009), complemented by a small number of environmental investigation case studies, concludes by emphasising the importance of examining country-specific legal, institutional, and policing contexts when researching environmental crime enforcement (Tomkins, 2009).

More recently in France, extensive research has been conducted into the model of enforcement as well as the range of actors involved; this is discussed in chapter 7 (see Malochet, 2023; Magnin, Rouméas, & Basier, 2024). In a recent scoping article on the Polish landscape, Mądrzejewski reveals that it is the Environmental Protection Inspectorate, not the National Police, that occupies a primary position among the relevant institutions. The Inspectorate operates with a broad mandate and extensive inspection, operational, and procedural powers, beyond monitoring and compliance. These include: conducting visual and audio surveillance and recording, collecting and securing criminal evidence, interviewing individuals, inspecting premises and other locations, and preserving traces and evidence (Mądrzejewski, 2023).

A central, but often overlooked, issue in environmental crime enforcement concerns the relationship between the police and the prosecution in the model. As highlighted in the U.S.-based study by Epstein and Hammett (1995), prosecutors play a pivotal role in shaping investigative trajectories. One of the study’s key contributions is its distinction between vertical and horizontal prosecution models. In a vertical model, a single prosecutor (or small team) manages a case from the initial investigative stage through to court proceedings. This approach is often preferred for complex, technical, or long-running cases, as it preserves institutional memory and allows the prosecutor to steer investigative priorities more efficiently. By contrast, in a horizontal model, different prosecutors handle different stages of the case. While suitable in high-volume systems dealing with routine matters, this structure can lead to fragmented and difficult communication between prosecutors and the police (*ibid.*).

Unlike many other forms of crime, the policing of environmental crime almost always and increasingly requires collaboration with a wide range of actors. This includes

authorities from the administrative branch, but also involves cooperation with non-governmental organisations, lay actors, and international policing partners (Spapens & Mehlbaum, 2019). The latter is further distinguished by Spapens and Mehlbaum into *operational* cooperation—aimed at case building and the conduct of investigations—and *non-operational* cooperation, which encompasses joint training activities, collaborative projects, and the exchange of best practices. It is also noteworthy that global law enforcement focus has recently intensified, especially in relation to environmental offences linked to organised criminal networks, and some enforcement agencies, including INTERPOL and EUROPOL, have launched a range of new initiatives aimed at strengthening cross-border collaboration (Spapens, 2025).

A component included to various degrees within this multi-actor enforcement landscape is the role of civil society, including third-sector organisations that represent or mobilise public interests in environmental protection. For example, research in Sweden has found that environmental waste crimes tend to be reported close to roadways where it is more likely to be detected by ordinary people engaged in routine activities (Ceccato & Uittenbogaard, 2013). Official records thus tend to miss the true magnitude of environmental waste crimes because detection often depends on citizen reporting and routine inspections, neither of which are likely to detect crimes that occur in more remote areas (Stassen & Ceccato, 2020). These findings highlight a broader problem: while enforcement systems often rely on citizen reporting and routine inspections, these mechanisms are often ill-suited to detecting sophisticated or concealed violations.

At an international level, INTERPOL and EUROPOL constitute the principal policing organisations that facilitate the international exchange of practices and generate momentum for the policing of environmental crimes. While the latter will be discussed separately, it is important to note that in 2009, INTERPOL established its Environmental Crime Programme. Since then, INTERPOL has played a significant role in providing case-specific investigative and technical support, notably through the deployment of Investigative Support Teams. In addition, it has promoted the establishment of National Environmental Security Task Forces (NESTs) - multi-disciplinary teams bringing together experts from various national agencies, including the police, customs authorities, environmental ministries, and prosecutors' offices (Spapens & Mehlbaum, 2019).

Although INTERPOL is identified by Spapens & Mehlbaum (2019) as a key international player in capacity building for policing transnational environmental crimes, an analysis of a random sample of 7,010 active INTERPOL Red Notices issued in December 2023 further illustrates this point: cases related to environmental crime constituted only 2% of the total, making it the least represented category (Sinclair, Rubino & Verissimo, 2025). This finding may indicate that, despite growing (international) capacity-building efforts, environmental crimes remain relatively low in operational prioritisation within international policing. Alternatively, it may also reflect the fact that environmental crime enforcement relies less on fugitive-focused instruments such as Red Notices, and favours other investigative or collaborative mechanisms.

1.4 Policing environmental crimes in the European Union

At the European level, the regulatory process suggests growing pressures on enforcement capacity. The European Green Deal and its climate neutrality target for 2050 are expected to generate stricter environmental legislation, while the revised Environmental Crime Directive, adopted in November 2023, expands the scope of policing and prosecutable offences. Together, these developments are amplifying the demands on police and regulatory authorities in EU Member States.

In the last decade, there has been a progressive development of a strategic agenda for addressing environmental crime within EUROPOL, and, as a result, across EU Member States. Whether at the global or European level, progress in this area is largely attributable to the expertise brought in through secondments from Member States (INTERPOL, personal communication, 22 January 2025). This evolution has been shaped by a series of key initiatives, including the establishment of the so-called "four networks" (judicial, prosecutorial, administrative, and police services) aimed at enhancing international collaboration between the Member States. The 4 Networks are composed of (1) EUFJE - The European Union Forum of Judges for the Environment, (2) ENPE - European Network of Prosecutors for the Environment, (3) IMPEL - European Union Network for the Implementation and Enforcement of Environmental Law, and (4) EnviCrimeNet.³ Additionally, the Intelligence Project on Environmental Crime (IPEC) conducted an initial mapping exercise to assess the state of environmental crime enforcement within the EU (Alfaro Moreno, 2023). Other significant milestones include the creation of the EnviCrime Academy, an associated and specialised training company.⁴

A pivotal moment occurred in 2017, when environmental crime was formally recognised as a serious threat in Europol's four-yearly Serious and Organised Crime Threat Assessment (SOCTA), which informs the EU Security Policy Cycle (Alfaro Moreno, 2023). Prior to this, environmental crime had been classified merely as an emerging threat. This recognition led to the inclusion of wildlife trafficking and waste crime as priority areas within the European Multidisciplinary Platform Against Criminal Threats (EMPACT). As a result, between 2018 and 2021, a range of strategic and operational activities regarding the fight against environmental crimes were initiated (Alfaro Moreno, 2023).

Moreover, this study coincided with the adoption of the revised Environmental Crime Directive (ECD) on 11 April 2024 and its subsequent transposition process, marking a significant milestone in the development of EU environmental criminal law. According to Article 28(1) of the Directive, Member States are required to bring into force the laws, regulations, and administrative provisions necessary to comply with the Directive by 21 May 2026 (Faure, 2024).

3 See <https://www.impel.eu/en/news/4-networks-conference-strengthening-the-fight-against-environmental-crime>

4 <https://envicrime.academy/>

The significance of the revised Directive lies in its more nuanced articulation of the relationship between criminal and administrative law, which was a long-standing weakness hindering effective environmental law enforcement across EU Member States. For decades, this legal dependency constrained police and prosecutorial action, limiting their ability to meaningfully advance environmental crime cases (Faure, 2024). Both the evaluation of the 2008 ECD and the findings of the EU-funded research project European Union Action to Fight Environmental Crime (EFFACE) highlighted the need for a legal framework that would reduce the overreliance on administrative law in determining the threshold for criminal liability.

The revised Directive addresses these concerns by significantly expanding the scope of environmental offences (from 9 under the 2008 ECD to 20) and by introducing mandatory minimum penalties, as well as a broader range of sanctions applicable to both natural and legal persons (Articles 5 and 7). Notably, it establishes that criminal liability may arise even in cases where the conduct complies with an administrative permit, a clear departure from the previous legal interpretation under EU law, and a critical step toward closing enforcement gaps (Faure, 2024).

The critique of weak or inadequate law enforcement is partly justified within the EU context. While substantial improvements are still required, notable progress has already been achieved, and in this report we highlight these developments. Areas for improvement are widely recognised across jurisdictions and are often reiterated: increased investment in police capacity building, enhanced training and education, more advanced sampling and forensic investigation techniques, the development of specialised expertise in identification methods, and strengthened intelligence-gathering capacities (Stein, Troneci, Jesus, & Alfaro Moreno, 2024). What ultimately determines the effectiveness of enforcement efforts is not only improved coordination within the criminal justice chain but, perhaps more importantly, robust international collaboration. This requires secure platforms for information exchange and the adoption of advanced technologies such as DNA analysis and surveillance tools (ibid.). At the same time, conventional performance indicators in law enforcement such as the number of arrests, the quantity of seizures, or the severity of sentences, remain limited in capturing the actual impact of enforcement on environmental restoration. Metrics that assess ecological outcomes are still largely absent from current evaluation frameworks.

Police services and other relevant law enforcement agencies in EU Member States need to be better prepared to enforce the new wave of environmental legislation and respond to the EU's reinforced policy orientations. For instance, the EU Commission aims to create more opportunities for various actors to become involved in compliance monitoring and enforcement (e.g., through "citizen science" projects, multiple avenues for prosecuting environmental crimes, a greater reliance on NGOs and civil society to monitor and report environmental violations, and increased use of geospatial data) in response to shrinking police resources.

To date, the EU has supported several initiatives aligned with this objective. The two-year *Sensing Citizens* project (2021–2023) examined how grassroots-driven civic envi-

ronmental monitoring can generate evidence suitable for litigation⁵. Building on this momentum, the ongoing Horizon-funded *Enforce* project (2024–2028) seeks to strengthen environmental compliance and enforcement by empowering local communities and integrating citizen science with innovative technologies⁶. Similarly, *More-4Nature* (2024–2027), also funded under HORIZON, focuses on enhancing the contribution of citizen science in specific domains, including zero pollution, biodiversity protection, and deforestation prevention⁷.

5 <https://cordis.europa.eu/project/id/891513>

6 <https://join-enforce.eu/>

7 <https://more4nature.eu/about>

2 Conceptual Framework

Although police and enforcement agencies are central to translating environmental law into practice, it is evident that they are just one of many actors within a highly fragmented network operating at the intersection of regulation, governance, and policing - a network continually shaped by culture, legal structures, and specific environmental issues and their geographical disposition.

Since the 1970s, environmental harms have been increasingly addressed through the expansion of a diverse array of regulatory and administrative agencies (White, 2011). This has resulted in a significant pluralisation of environmental policing, now carried out by a complex web of actors, including regulatory institutions, customs authorities, conservation police, park rangers, environmental protection agencies, among many others (White, 2011; Holley & Shearing, 2016). Despite the growing transboundary nature of environmental crimes, the expansion of this environmental regulatory array continued to reinforce fragmented, siloed approaches within and among these institutions (Holley & Shearing, 2016, p. 554).

Drawing on a range of theoretical perspectives and schools of thought, Holley and Shearing (2016) introduced the concept of New Environmental Governance (NEG) to capture a shift, beginning around the 1980s, from a predominantly command-and-control model toward a “cooperative imperative” in environmental policing (Holley et al., 2011). NEG represents a shift from centralized, state-led environmental regulation toward a more polycentric, collaborative, and adaptive model of governance. It acknowledges the limitations of traditional regulatory approaches in addressing increasingly complex, transboundary, and cumulative environmental harms, particularly where such harms intersect with other serious crimes (Holley & Shearing, 2016).

The NEG conceptual framework emphasises collaboration among diverse public, private and non-state actors working together to pursue shared environmental goals that would be difficult or impossible to achieve independently (Holley et al., 2011). Within this framework, environmental policing is viewed as one component of the broader governance of environmental security, as contemporary forms of social ‘steering’ and ‘rowing’ are no longer necessarily reliant on formal legal regulation or direct state intervention (*ibid.*).

The core tenets of NEG include collaboration, integration, participation, deliberative decision-making, adaptation, collective learning, and facilitated information sharing - both horizontally among localised groups and vertically between these groups and institutional agencies (Holley & Shearing, 2016). Within this framework of nodal governance, the interweaving of formal and informal mechanisms of social control is

expected to enhance the effectiveness, efficiency, and legitimacy of responses to environmental violations (*ibid.*). This governance model closely mirrors the “whole-of-society” approach to policing, as it indicates the redistribution of responsibilities for prevention and control shared across public authorities, private actors, and civil society. In doing so, it signals a move away from reactive, state-centred enforcement towards more proactive and preventative forms of intervention.

Furthermore, the development of environmental crime enforcement increasingly relies on networked forms of governance that facilitate coordination, information exchange, and capacity building across institutional and national boundaries (Pink, 2015). In the past 20 years, growth in establishing and the proliferation of these networks can be observed. Drawing on network theory and communities-of-practice literature, the author argues that enforcement networks are often framed as capacity-building instruments. However, practice shows that their effectiveness depends on whether network-generated and/or facilitated knowledge is translated into organisational practice, especially where resource constraints and institutional fragmentation persist (*ibid.*).

It has long been recognised that non-state actors, including the private sector as well as civil society, have assumed an increasingly prominent role in both the ‘steering’ and ‘rowing’ functions of addressing and responding to environmental harms (Johnston & Shearing, 2003). This shift not only necessitates positioning the police as one “node” among many within a broader web of environmental governance, but the need to collaborate with both established and traditionally marginalised actors. The latter include, for example, civil society organisations (see Berti-Suman, 2024), restorative justice services (see Pali, Forsyth, & Tepper, 2022), and even the natural world itself, as recognised through emerging Rights of Nature legislation.

According to Holley and Shearing (2016), NEG is more likely to function effectively when the following capacity-related principles and conditions are met: (1) securing adequate resources; (2) thoughtfully designing incentives; (3) identifying, developing, supporting, and sustaining governance capacities (particularly among non-state actors); and (4) embedding robust mechanisms for both horizontal and vertical information exchange within NEG structures (Holley et al., 2011).

However, the NEG framework remains theoretical, giving little insights into how it can be operationalised on the ground. One of the most significant challenges facing NEG is the uncertainty surrounding its practical application and whether its anticipated benefits can truly be realized (Driessen et al., 2012). In this study, we provide a modest contribution to addressing this question.

2.1 NEG and the revised EU Directive

The revised EU Environmental Crime Directive signals an important reinvigoration of traditional legal instruments. The Directive strengthens command-and-control mechanisms, but notably does not replace the need for collaborative governance. Rather, it reflects hybridity—an evolving relationship between traditional enforcement and the

NEG principles. The Directive aims to harmonise legal definitions and procedures across the EU, potentially reducing fragmentation (Directive (EU) 2024/1203, 2024). Yet, from an NEG perspective, effectiveness lies not just in harmonisation but in coordination across governance “nodes”, which includes the integration of marginalised actors—civil society organisations, scientific communities, and even local residents as environmental monitors. NEG’s emphasis on a whole-of-society approach resonates with how the Directive frames the importance of capacity building, training, and cross-border cooperation. However, the Directive’s operational logic is still state-centric, privileging judicial and law enforcement cooperation over deliberative and participatory governance mechanisms. Holley and Shearing (2016) argue that for NEG to succeed, certain capacity-related conditions must be met. The Directive requires Member States to allocate sufficient resources to investigation and prosecution. The Directive strengthens vertical exchange (EU-national), but horizontal community-level monitoring and feedback (a hallmark of NEG) is not a central feature. While NEG values norm internalisation and social learning as being critical to long-term behavioural change, the Directive primarily focuses on deterrence via sanctions (Directive (EU) 2024/1203, 2024).

3 Methodology

The production of knowledge in policing studies has largely been shaped by locally embedded or nationally bounded research, and only infrequently engages in comparative analysis across different policing systems (Roché and Fleming, 2022). The edited collection *The Rise of Comparative Policing* by Jacques de Maillard, Sebastian Roché (2022) marks a very important shift in advancing a more sophisticated debate on the relationships between police, state, and society, particularly by enabling higher levels of generalisation. This study is therefore distinctive in its deliberate move beyond national boundaries to examine environmental policing in multiple national contexts.

In this study, we adopted a qualitative, multi-case study design to examine how relevant police organisations in three European countries - France, Sweden, and Spain - develop and implement internal policy processes and practices that enable them to detect, investigate, and respond more effectively to environmental crimes. A qualitative case study approach is particularly suited to this inquiry because environmental crime enforcement is shaped by complex institutional arrangements, multi-actor (environmental) governance structures, and highly context-specific organisational practices (Yin, 2018; Creswell and Poth, 2018).

The case studies were selected to provide analytical variation across different policing traditions, institutional architectures, and enforcement models, while remaining comparable enough to draw lessons for the Dutch context. This comparative strategy allows the study not only to identify country-specific innovations but also to uncover cross-cutting mechanisms that underpin effective environmental crime enforcement across diverse settings.

The empirical material was gathered through semi-structured interviews with participants from diverse backgrounds, as well as from site visits, analysis of secondary data, and desk research. This combination made it possible to triangulate findings across different sources and to examine both formal organisational arrangements and the lived experiences of practitioners engaged in environmental crime enforcement.

3.1 Research objective and questions

To address their practical needs, we aimed to advise the Dutch police on how they can develop and implement internal policy processes to enhance their capacity for detecting and investigating environmental crimes. To achieve this, we examined how police forces in three other European countries - France, Sweden, and Spain - currently manage this, to determine if any lessons can be learned from their existing experiences. In

this context, we proposed an exploratory case study approach (interviews, analysis of secondary data, desk research, and observations) to answer the research question below; combined with a conference and networking opportunities.

Main Research Question: What can the Dutch Police learn from how police forces in Sweden, France, and Spain ensure they can handle the increasingly extensive and complex task of tackling environmental crimes?

The aim of the research is to provide advice to the Dutch Police on how to improve its capacity, professional standards, and practices regarding the enforcement and investigation of environmental crimes. We examined the research capacity, professional standards, and practices in the three countries with the following five sub-questions:

- *How is the national model of environmental enforcement structured, and what role, mandate, and positioning do the police occupy within this multi-actor system of regulatory, administrative, and criminal enforcement?*
- *How are strategic decisions regarding environmental crime enforcement shaped within the police organisation's internal policy processes, including its organisational structure, resource allocations, and partnership arrangements?*
- *To what extent do organisational priorities, implementation measures, staffing decisions, team configurations, and available full-time equivalent (FTE) capacity influence the organisation's ability to enforce environmental crime effectively?*
- *How is capacity developed at the level of individual personnel, and what competencies, knowledge, expertise, training, and informational resources are required to enable staff members to carry out environmental crime-related tasks effectively?*
- *How do police organisations develop, strengthen, and sustain the investigative capacity required to address environmental crime, including the recruitment of specialised expertise, provision of training, access to technical and scientific resources, and mechanisms for organisational learning?*

Based on findings from other countries, the ultimate goal of the project is to make recommendations to relevant stakeholders within the Dutch Police on the best way to strengthen current police practices related to environmental crime. Furthermore, we anticipate that our project can lay the foundation for a network between environmental crime officers/experts in strategic positions within the various police forces to share their experiences and best practices.

The key target audiences of this research project include the Dutch Police Academy, Dutch Police Sustainability and Environmental Safety Team, High Impact Environmental Crime Unit, environmental crime and other strategic advisors, and police leaders responsible for implementing environmental and sustainability regulations within the Dutch Police, as well as police officers involved in investigating environmental crimes.

Representatives of the Sustainability and Environmental Safety Team and the strategic advisor for environmental crime were involved in the co-creation of the proposed research questions and the selection of case studies. They were consulted and kept informed about the study progress throughout the project.

Throughout the project, this study also benefited from the guidance of the members of the Advisory Committee, established specifically for this study and comprising: Dr Anna Berti Suman (European Commission Joint Research Centre), Peter Beck (European Commission Joint Research Centre), Professor Michael Faure (Maastricht University), Annelies Vanlandschoot (Dutch Police Academy), and Margo Verbaarschot (Sustainability and Environmental Safety Hub, Dutch Police).

3.2 Selection of case studies

3.2.1 France

France was selected as a case study for three principal reasons. First, it represents one of the few national contexts in which the policing of environmental crimes has been recently examined in substantial depth from an academic perspective. Scholarly contributions, most notably Virginie Malochet's report "*Green Policing: Exploratory Study on the Local Handling of Environmental Crime*" (2023) and the book *Environmental Policing Under Constraints* (2024) by Léo Magnin, Rémi Rouméas, and Robin Basier provide a rare, empirically grounded body of literature in a field where academic work remains exceptionally limited internationally. This existing scholarship offers a valuable analytical foundation for grounding this study's findings, thereby enabling a more nuanced interpretation of the French environmental enforcement landscape. Second, France presents a highly fragmented and multi-actor model of environmental crime enforcement, characterised by overlapping mandates across regulatory, administrative, and criminal justice actors. This institutional complexity closely mirrors the Dutch context, making France a particularly instructive comparator for understanding coordination challenges, gaps in mandate clarity, and the distribution of enforcement responsibilities. Third, France has, in recent years, assumed a growing international role in environmental crime enforcement, largely through the expanding presence and influence of the gendarmerie, particularly CESAN, its specialised unit dedicated to environmental offences.

3.2.2 Sweden

Sweden was included as a case study for several reasons relevant to the Dutch context. First, Sweden, like the Netherlands, has a long-standing tradition of prioritising environmental protection and environmental governance; this shared normative and policy orientation thereby providing a meaningful basis for comparison. Second, unlike France and Spain, where multiple policing bodies share responsibility for environmental enforcement, Sweden places primary responsibility for investigating environmental crimes within its National Police, operating under close and formalised supervision by the Swedish Prosecution service. This institutional configuration mirrors current developments in the Netherlands, where increasing attention is being directed towards strengthening the National Police's capacity to address environmental crime, alongside

other various specialised investigative bodies in the Dutch enforcement network. Sweden was thus considered as an opportunity to examine how a unified police organisation builds and maintains expertise in a complex regulatory field. Third, Sweden is internationally recognised for its highly specialised prosecutorial structures in environmental crime (Philipsen and Faure, 2015) and for maintaining a steady flow of cases through the justice system. On average, the Swedish police record approximately 5,000 environmental offences annually (Stassen and Ceccato, 2020), with about 350–400 cases resulting in prosecution or fines as directed by a public prosecutor (ENPRO, 2020). This distinguishes it as a setting where environmental offences are not only systematically investigated but also regularly pursued judicially.

3.2.3 *Spain*

Spain was selected as a case study primarily due to the central role of SEPRONA (Servicio de Protección de la Naturaleza), the environmental protection unit of the Spanish Civil Guard. Since its establishment in 1988, SEPRONA has evolved into not only a national cornerstone of environmental enforcement but also one of the most recognised specialised units worldwide. Its sustained accumulation of technical, investigative, and operational expertise has positioned it as a global leader in the development of policing capacity for environmental crime (Cabello Medina, 2025). This expertise has, moreover, informed the creation and consolidation of analogous structures within Europol.

SEPRONA's effectiveness derives from its multi-faceted operational model, which integrates patrols, inspections, intelligence-led policing, public awareness campaigns, and strategic partnerships with non-governmental organisations and community stakeholders. This combination enables the unit to detect and respond proactively to a broad range of environmental offences, significantly strengthening Spain's legal and operational framework for addressing environmental harm (Cabello Medina, 2025). SEPRONA's organisational design and long-term practice offer valuable insights into how specialised environmental policing can be institutionalised and sustained, particularly in contexts characterised by limited resources and complex environmental challenges (ibid.). Its international standing and demonstrated capacity-building impact make Spain a particularly instructive case for the purposes of this study.

In addition to their police institutional relevance, the three selected countries share important geographical and ecological characteristics that make them suitable for comparative analysis. France, Sweden, and Spain each encompass a wide range of biomes, extensive protected or sparsely populated natural areas, and diverse environmental risk profiles. This ecological variability creates heterogeneous enforcement demands, ranging from wildlife protection and habitat conservation to pollution control and waste management, which in turn require adaptable and context-sensitive policing responses. The selection of these cases was made in close consultation with key project partners and experts, including Emile Lindemulder-de Groot, Senior Advisor for Environmental Crime Strategy for the Dutch Police; José Antonio Alfaro Moreno, Head

of the Environmental Crime Unit at Europol; and Ingelou Sybrandij, Head of the Sustainability and Environmental Safety Unit of the Dutch Police.

3.3 Operationalisation

To assess how the environmental crime enforcement model is organised, prioritised, and practiced across the participating police organisations, the study adopted a multi-level operationalisation strategy (see Appendix I for a detailed operationalisation table). The study design distinguishes between contextual, organisational, and investigative levels of analysis, each associated with specific units of observation and corresponding data requirements.

At the broadest level, the analysis located each police organisation within its national and institutional context. We collected data on the historical development of the police, prevailing policing models, and current organisational structures, alongside recent trends in environmental criminality. Particular attention was given to the process of environmental crime enforcement, for example, shifts in mandate, institutional reforms, or emerging pressures linked to new or impending legislation. This contextual layer provided the baseline conditions that shape organisational capacity and strategic behaviour.

At the second level, we focused on organisational processes that enable or constrain effective environmental crime enforcement within a police organisation. Here, the focus was on the institutional architecture for responding to environmental crime, including the existence and development of specialised units, as well as the formalised partnership arrangements with environmental regulators, customs, prosecutors, or civil-society actors. Attention was also directed to how police organisations develop and maintain the competencies necessary for environmental crime enforcement, including training and professional development programmes, specialist expertise, and mechanisms for knowledge transfer. Finally, this level assessed the extent and form of police involvement in prevention - an aspect that reveals whether organisations frame environmental crimes primarily as a reactive investigative challenge or as a problem requiring proactive, multi-agency intervention.

For the third analytical layer, we considered the organisational outputs and strategic orientations that reflect institutional priorities and performance. This involved examining, if existing, national police strategies related to environmental crime, as well as broader strategies on sustainability and climate-related responsibilities which increasingly intersect with EC enforcement. In addition, we also reported on any participation in international networks and partnerships which provide further evidence of organisational engagement, capacity building, and institutional learning at transnational levels.

At the most practical level, the analysis focused on the investigative capacity of the police to handle environmental crime cases. This included assessing organisational arrangements for case allocation, availability of specialised investigative resources, the application of technology and artificial intelligence, use of intelligence-led or risk-ba-

sed approaches, and mechanisms for cooperation with prosecutors or environmental agencies. Outcomes at this level involved identifying patterns in investigative performance, bottlenecks, or enabling conditions that influence the successful completion of environmental crime investigations.

While the operationalisation substantially supported the data-collection process, the findings of the three country case studies are presented as a narrative synthesis of the themes that emerged most frequently and with the greatest degree of data saturation.

3.4 Data collection and analysis

The project commenced in September 2024 and was followed by a literature-review phase and preparatory work for the country visits. The main stage of data collection took place between January and March 2025, during which Sylvia Bergh joined the research team for approximately one week in each country to contribute to the data-collection activities. In total, 70 participants contributed to the study (25 in France, 20 in Sweden, and 25 in Spain). Each study visit lasted approximately two weeks and was formally hosted by an institutional partner.

In France, the host organisation was CESDIP – Centre de Recherches Sociologiques sur le Droit et les Institutions Pénales. During the visit (19–31 January 2025), 11 interviews involving 18 participants were conducted, comprising six individual interviews, one telephone interview, and four group interviews, combined with site visits (Le Monde, Cesan, CESDIP, and one French public institution that requested anonymity). The participants included seven academics, two journalists, one police representative, four members of the regulatory authority OFB, two civil servants, and one judge. The fieldwork in France also included a study visit to INTERPOL in Lyon to meet with the Environmental Security team (seven participants). As a follow-up to one of the Paris-based interviews, a seminar titled “*Policing Environmental Crimes in the Netherlands*” was delivered to civil servants at the École Nationale des Ponts et Chaussées.

In Spain (9 – 21 February 2025), the main host organisation was SEPRONA (Servicio de Protección de la Naturaleza), the specialised unit of the Guardia Civil responsible for enforcing environmental legislation and protecting natural resources, wildlife, and ecosystems. The fieldwork included a three-day visit to SEPRONA headquarters in Madrid and meetings with 16 SEPRONA officers. It was supplemented by a site visit to the Centre for Analysis and Diagnosis of Wildlife (CAD) of the Ministry of Environment of Andalusia in Málaga, where conversations were held with four experts. Additional data were collected through three individual interviews with Spanish academics and one joint interview with two environmental-crime consultants.

In Sweden (18 – 29 March 2025), the main host organisation was the Institute for Future Studies, where a public lecture titled “*Implications of Climate Change for Policing Practice Worldwide*” was also delivered. The fieldwork involved six interviews with nine police officers (including civilian staff), combined with site visits in Stockholm, Gothenburg, Malmö, and Norrköping. Additional interviews were conducted with one journalist, one representative from the Swedish Prosecution Authority, two interviews

with three representatives of the Swedish Environmental Protection Agency, and four interviews with six academics (one of whom also held a policy-making role). During this period, the research team was also joined for two days by two police officers from the Dutch High Impact Environmental Crime Unit, who shadowed a few meetings for the purposes of professional exchange, networking, and sharing of practices.

The first case study on the situation in the Netherlands was conducted initially as an undergraduate thesis by Emil Dekker between November 2024 and April 2025, and was subsequently supplemented with additional information between October and December 2025. After completing the first drafts of the country reports, each report was circulated to all study participants for validation. All country studies benefited from further suggestions and additional data provided during this phase.

Data collection methods varied and included fully recorded individual and group interviews as well as interviews documented through detailed note-taking. All recorded interviews were transcribed, and the complete set of interview data was subsequently coded and thematically analysed. In cases where note-taking was used, the notes were reviewed and validated collaboratively by two researchers to ensure accuracy and completeness. Most interviews were conducted in English, with a few exceptions. In France, three interviews were conducted in French by Sylvia Bergh, while in Spain, during the visit to the SEPRONA headquarters, two professional interpreters assisted in facilitating the discussions.

The analysis draws on a combination of scholarly and grey literature, policy documents, internal reports and data, and interviews. The use of multiple data sources enhanced the robustness of qualitative analysis by enabling triangulation across institutional perspectives and data types (Flick, 2018).

The report was originally written in English. It was first translated into Dutch using DeepL and subsequently reviewed, corrected, and refined by Dr. Sylvia Bergh.

3.5 Study limitations

As an exploratory, multi-country qualitative study, this study is subject to several limitations. First, because very few comparable studies of this scope have previously been conducted in the field of environmental crime enforcement (see Sollund, Stefes & Germani, 2016; Colantoni & Bianchi, 2020), the project necessarily operated without established methodological templates or benchmarks, which may limit the generalisability of its findings. It is well accepted in the policing scholarship that conceptualising the police has proven challenging due to the internal fragmentation (and pluralisation) of policing resulting from the diversity of tasks assigned to police organisations, and the ongoing difficulty of clearly distinguishing the police from other institutions (Roché and Fleming, 2022).

Second, although considerable efforts were made to maximise the time spent in each country, the duration of the site visits remained limited relative to the breadth of the institutional landscapes under examination. This raises the possibility that relevant

perspectives or practices were not fully captured, or that certain forms of information were not accessible or disclosed during interviews and site visits.

Third, despite extensive language capacities within the research team and the support of professional interpreters in Madrid, the study is unavoidably affected by the risks inherent in cross-linguistic and cross-cultural research. Subtle nuances, institutional terminology, or culturally specific practices may not always have been fully conveyed or interpreted.

Finally, although each country report underwent rigorous validation by study participants to ensure factual accuracy and contextual appropriateness, the synthesis and interpretation of the data were ultimately conducted by a single researcher. This analytical consolidation, while methodologically coherent, carries the inherent limitation of relying on one interpretive lens.

4 The Netherlands as a departure-point case

4.1 Geographical disposition

The Netherlands is a relatively small but highly densely populated delta, with 533 inhabitants per km² in 2024 (Statistics Netherlands, 2025), making it one of the most densely populated countries in Europe and beyond. It also hosts one of the most intensive agricultural sectors in the world, with livestock density currently the highest in Europe and livestock numbers exceeding the country's own feed-production capacity (van Selm et al., 2023). This has generated an excess of nutrients from livestock manure, contributing to groundwater contamination, increased greenhouse gas emissions, and high levels of ammonia, which in turn cause elevated nitrogen deposition that harms sensitive natural ecosystems (ibid.). The vast number of livestock in the country generates far more manure than can legally be applied to farmland. To manage this excess, the government has implemented strict controls. Meeting these requirements is expensive, prompting some advisory firms in the manure industry to show clients how to sidestep the rules—practices that result in substantial environmental damage (Neve, 2023).

Characterised by extensive waterways and major energy and petrochemical clusters, and with the Port of Rotterdam and Schiphol Airport functioning as high-volume transit nodes, the Netherlands has long held the status of a “Gateway to Europe” and occupies a key position in global value chains. Since the 1980s, this position has been reinforced through the spatial expansion of its hinterland logistics network (Nefs, Zonneveld, & Gerretsen, 2022). Decades of promoting the Netherlands as a *distributieland* (“distribution country”) have contributed to a rapid increase in both the number and size of distribution centres, resulting in the so-called *verdozing* (“boxification”) of the Dutch landscape. This development has significantly affected the quality of the Dutch living environment, contributing to road congestion, increased emissions, and substantial landscape transformation (ibid.).

These geographical and socio-economic characteristics of the Netherlands shape not only the environmental risks the country faces but also structural criminogenic conditions for environmental crimes, and the organisational design and pressures of its enforcement model.

4.2 Environmental legal and policy framework

Environmental crime regulation in the Netherlands has developed progressively since the 1960s, initially prompted by major environmental scandals that underscored the need for stronger legal frameworks (Neve et al., 2025). This was a result of gradual layering of strong EU legal influence, competing sectoral interests, and the changing landscape of environmental harms, crimes, and regulation. Over time, this resulted in a complex body of environmental law, culminating in the comprehensive restructuring of legislation under the new Environment and Planning Act (*Omgevingswet*). The Act came into force on 1 January 2024 and now functions as a single, codified, and integrated statutory framework⁸. The Act consolidates, reorganises, and modernises a wide range of laws and regulations governing the physical environment, including environmental protection, water management, soil protection, spatial planning, nature conservation, and noise and air quality. It also regulates the system for permitting, supervision, and enforcement (the VTH system), discussed in section 4.4. The *Omgevingswet* replaces numerous earlier statutes such as the Water Act, the Crisis and Recovery Act, the Spatial Planning Act, and the Soil Protection Act. It incorporates the principle of duty of care (*zorgplicht*)⁹, and, like its predecessor legislation, is closely aligned with and shaped by EU directives and regulations. As an integrated framework, the Act provides a streamlined digital permitting process through the new Environment and Planning Portal (*Omgevingsloket*).¹⁰ The consolidation of environmental law into the *Omgevingswet* was intended to counter decades of fragmentation, yet this structural simplification has not necessarily translated into clearer enforcement pathways, as discussed later.

Environmental crime has long been recognised not merely as a legal issue, but as a pressing social and public health concern. Enforcement policy has evolved in parallel: the National Enforcement Strategy for Environmental Law (LHSO), introduced in 2022, builds on and replaces the earlier national strategy of 2014, seeking to provide a more coherent and effective framework for tackling environmental violations (Neve et al., 2025).

Following reports by the Netherlands Court of Audit and the Centre for Crime Prevention and Safety (CCV), the Van Aartsen Committee, chaired by former minister and mayor Jozias van Aartsen, was a pivotal advisory body tasked in 2020–2021 with examining the Dutch landscape of environmental crime enforcement (Adviescommissie-VTH, 2021). The report critically assessed the enforcement system as being too fragmented, with enforcement capacity varying widely between regions that frequently lacked communication, information sharing, and expertise, and which treated envi-

8 <https://business.gov.nl/business-location/environment-plan/the-environment-and-planning-act-omgevingswet-what-does-it-mean-for-you/>

9 The duty of care applies when companies are aware, or could reasonably be expected to be aware, that their use of certain substances or mixtures poses risks to human health or the environment (Van Houten-Peschier 2023).

10 <https://omgevingswet.overheid.nl/home>

ronmental crimes as low-priority compared to other crimes (ibid.). There have been numerous initiatives responding to the report's recommendations (see Sorgdrager and van Aartsen, 2024), and the report shifted the perception of environmental crime from being treated as "technical non-compliance" to being recognised as serious, often organised, criminal behaviour with major societal consequences, and triggered the most significant renewal of Dutch environmental enforcement in a long time (Van Houten-Peschier, 2023; Neve, 2023).

From 2004, the four-yearly *Environmental Crime Threat Assessment* has become an established component of the Dutch policy cycle for addressing environmental crime, and one of the key factors shaping further policy development and priority-setting (Neve, 2023). Each assessment provides an overview of emerging forms of environmental crime within specific sectors and markets and seeks to elevate the issue on political and judicial agendas (ibid.).

In addition, thanks to the initiative of Lammert van Raan, former Member of Parliament of the Dierenpartij (Party for Animals), a bill to criminalise ecocide in the Netherlands was submitted to the Dutch House of Representatives on 30 November 2023. On 27 March 2024, the bill was referred to the Council of State (Adviescommissie) for an advisory opinion, and as of 2025 is still under review.¹¹

4.3 Environmental crimes in the Netherlands

The Dutch police classify recorded and pursued environmental crime activities in four categories, reflecting differences in investigative intensity, strategic relevance, and the involvement and coordination of Landelijke Milieukamer (National Environmental Chamber LMK) whose role is discussed in section 4.5. The following numerical information was obtained through the Business Intelligence Unit of the Dutch National Police, derived from a project-based registration format maintained by the LMK.

Category 1 comprises low-level support activities carried out by environmental investigators, Special Investigative Officers (BOAs), or inspectors from Environmental Services, Water Boards, and similar authorities. These activities typically involve advisory support or limited operational deployment, such as assistance during interrogations or the analysis of seized digital devices. No registration with, or authorisation from, the LMK is required for this category (personal communication, Dutch police officer, 7 January 2026).

Category 2 encompasses relatively small-scale and short-term criminal investigations that require limited deployment of specialised environmental investigators. Although these cases do not warrant full national coordination, they are registered with the LMK through formal registration and deregistration procedures to ensure an overview. In 2025, the overall caseload for this category was 43, of which 13 were completed (ibid.). Category 3 investigations constitute the core of environmental crime enforcement and involve more serious and complex offences. These cases are handled either by the poli-

11 <https://www.partyfortheanimals.com/nl/ecocide-law-proposed-in-the-netherlands>

ce's environmental investigation units alone or in cooperation with specialised national inspectorates, including the NVWA-IOD, ILT/IOD, the FIOD, and the NLA-DO. Intake occurs through an advance notice document, subject to approval by the information officer and policy advisor, after which cases are assessed and formally accepted by the LMK. Substantively, Category 3 cases predominantly address systemic and economically motivated environmental crimes such as illegal waste management, hazardous substances violations, and corporate non-compliance with environmental regulations, frequently intersecting with financial, labour, and transport-related offences. In 2025, the caseload for this category was 111, of which 51 were completed¹².

Category 4 cases follow a strategic approach and are conducted within thematic frameworks established by the LMK such as waste, Substances of Very High Concern¹³, and plant protection products. In 2025, one Category 4 project was registered, conducted in collaboration with ILT and focusing on heating oil (ibid.)

Other available numerical data suggest that in 2018, 51 of a total of 70 environmental crime cases were handled by the LMK, whereas in 2022 only 15 of 35 cases fell under LMK coordination (Liezen, 2022).

4.4 Environmental crime enforcement model

The organisation of environmental crime enforcement in the Netherlands is complex and multi-layered, involving various actors with diverse enforcement roles and authorities (Neve, 2021; Van der Geest, van Onna and Hill, 2023). It has been estimated that currently there are approximately 60 organisations entitled to carry out tasks within this model on behalf of no fewer than 360 authorities (van Houten-Peschier, 2023). This multiplicity of agencies reflects the Netherlands' preference for distributed governance, yet this same dispersion creates systemic vulnerabilities, especially where administrative and criminal enforcement intersect.

4.4.1 VTH system

Environmental crime enforcement in the Netherlands operates through two interconnected systems: the administrative framework of *Vergunningverlening, Toezicht en Handhaving* (Permitting, Supervision, and Enforcement, VTH) and the criminal justice system (Prosecution and Police). The VTH system functions as the first line of de-

12 The environmental crime categories covered in categories 2 and 3 include wildlife poaching, soil pollution or contamination, emission limit violations, environmental offences related to the energy transition, waste crime and illegal waste management, asbestos-related offences, air pollution offences, water pollution offences, noise pollution offences, flora and fauna or broader biodiversity offences, Substances of Very High Concern (SVHCs), manure and fertiliser offences, plant protection product offences, heating oil or fuel oil offences, commercial and industrial waste offences, chemical substances offences, and nature conservation offences.

13 This is the formal term used in EU regulatory language, particularly under the REACH Regulation (Registration, Evaluation, Authorisation and Restriction of Chemicals). https://environment.ec.europa.eu/topics/chemicals/reach-regulation_en

fence against environmental violations, focusing on permits, compliance monitoring, and administrative enforcement.

The central VTH agencies are the 29 Omgevingsdiensten (ODs), regional environmental services responsible for permits and enforcement on behalf of Dutch municipalities and provinces (Rijksoverheid, n.d.). These regional environmental services also employ special enforcement officers (BOAs) with limited but important investigative powers to detect and address environmental violations administratively (Ministerie van Infrastructuur en Waterstaat, 2024).

Other important VTH stakeholders are the following national inspectorates:

- ILT (Inspectie Leefomgeving en Transport, Human Environment and Transport Inspectorate)
- NVWA (Nederlandse Voedsel- en Warenautoriteit, Netherlands Food and Consumer Product Safety Authority)
- Nederlandse Arbeidsinspectie (formerly ISZW, Labour Inspectorate)

In the Dutch literature, the distribution of tasks and responsibilities among environmental enforcement agencies is typically outlined as follows. The ILT oversees so-called “grey” environmental domains, which include aviation noise, inland shipping sailing times, the integrity of housing associations, the transport of hazardous materials, waste streams, genetically modified organisms, and energy labelling. The “green” domains, such as nature protection and manure regulation fall under the competency of the NVWA. A third category, referred to as the “blue” domain, concerns water quality and is supervised by Rijkswaterstaat and the regional water authorities (van Houten-Peschier, 2023).

All these regulatory bodies have their own investigative services, commonly referred to as Intelligence and Investigation Service (IOD) (Neve et al., 2024). A distinctive feature of the Dutch model is the role of the *Bijzondere Opsporingsdiensten* (Special Investigative Services (BODs)), which occupy a hybrid position in the Dutch model/system by combining sector-specific administrative expertise with formal criminal investigative powers under the supervision of the Prosecution Service, including authority to conduct systematic surveillance (Justis, n.d.). Consequently, within the criminal justice system, investigations into serious environmental crimes are carried out by the following types of BODs: (1) FIOD (Fiscal Intelligence and Investigation Service), (2) ILT-IOD (ILT’s Intelligence and Investigation Service), (3) NVWA-IOD¹⁴, (4) NLA-IOD (Labour Inspectorate’s investigative service). These BODs operate under the dual supervision of their parent ministries and the Dutch Prosecution Service (Justis, n.d.).

The Dutch system of BODs is an unusual institutional arrangement because these agencies combine specialised administrative expertise (within their parent inspectorates and ministries) with formal criminal investigative powers (through their status as *opsporingsdiensten* under the Public Prosecution Service). In this sense, they represent

14 In 2023 the human capacity of ILT-IOD was 130 FTE, and the one of NVWA around 140 FTE. Retrieved August, 21, 2025 from <https://milieurecht-site.e-captain.nl/nieuws/smkimpulsopsporing>

an interesting and unusual hybrid enforcement model. Unlike the police, who possess general investigative authority, the BODs are embedded in administrative inspectorates with deep sector-specific knowledge — taxation and finance (FIOD), environment and transport (ILT-IOD), food safety and consumer protection (NVWA-IOD), and labour/environmental safety (NLA-IOD). This makes the BODs interesting compared to many other European jurisdictions, where administrative inspectorates and criminal investigators are more clearly separated¹⁵. It is accepted that the BODs have primacy in tackling crime in their areas of operation, and that the police play a complementary role (Neve et al., 2024). This hybrid configuration enhances investigative depth but can also blur institutional accountability, particularly where administrative and criminal priorities diverge.

The van Aartsen assessment of the VTH system was highly critical of its effectiveness. Despite multiple initiatives aimed at improving its performance, several structural issues continue to hinder the successful functioning of the enforcement model. Voices from within the VTH system note that fragmentation and non-binding arrangements are now embedded in the system itself. However, this still undermines both general supervision and enforcement. Moreover, it remains unclear what forms of improved coordination are feasible, and in practice it is nearly impossible to establish any meaningful overview of the environmental services—or of the system as a whole (Sorgdrager and van Aartsen, 2024). These shortcomings suggest that the system's inefficiencies are not merely operational but structural, raising questions about the sustainability of the Dutch enforcement model as environmental crime grows in scale and sophistication.

4.4.2 *National Police*

The Dutch Police view environmental crime as a direct threat to public safety, health, and quality of life, and therefore integrate its enforcement within their broader mission (Liezen, 2022; Van Houten-Peschier, 2023). In the past three years, environmental crime has received increasing attention and prioritisation within the Dutch Police. This shift is evident in the current strategic agenda, in which sustainability and environmental safety are designated as one of the organisation's three central priorities and strategic objectives (Nederlandse Politie, 2025), and reads as follows:

A safe living environment is a fundamental right and an essential condition for the functioning of our society—and therefore also for the police. Increasing threats to the living environment, such as a changing climate, create major security risks and lead to social unrest. That is why the police are taking responsibility in the transition to a

15 For example, the ILT operates its own Innovation and Data Lab (IDlab) and makes use of financial crime scripting and OSINT-based investigations—methods traditionally associated with conventional policing (Van Houten-Peschier, 2023).

more sustainable society. Climate change, environmental pollution, and the loss of biodiversity are complex threats that require a strategic approach.

A future-proof police force is one that actively works on sustainability and environmental safety. This theme concerns climate, the environment, scarcity of food and raw materials, biodiversity, health, and therefore safety. It is a theme that cuts across the development lines of this strategic agenda. In the coming period, we will strengthen the anchoring of this cross-cutting theme within the police organisation. We will do this from a shared ambition: the police contribute to safety and liveability by becoming more sustainable, by actively committing to environmental safety, and by preparing for the consequences of unavoidable changes in our living environment.

Meanwhile, the police management team has denoted ten sustainability ambitions (Van Houten-Peschier, 2023), three of which focus explicitly on environmental enforcement. These ambitions emphasise the need to learn from international police forces about how to investigate environmental crime sustainably—for instance, by reducing the ecological footprint of policing itself, such as substituting helicopters for drones in environmental monitoring. They also highlight the importance of efficiently training limited personnel resources and keeping expertise up to date with new legal and technological developments.

In October 2022, the Korpsmanagementteam Overleg (KMTO) adopted the Politie-milieutaak 2.0 strategy, designed to strengthen the police's environmental investigation capacity. A key ambition of this strategy is that by 2026, each of the 167 Basic Police Teams (Basisteams) will include two designated environmental officers, devoting at least 75% of their time to environmental tasks (Liezen, 2022). At the time of writing, this objective has not yet been achieved. According to the contribution of the Environmental Crime portfolio holder to the 12-month 2025 police management report: *"While a small number of units had already been operating close to this target for some time, most other units visibly began a catch-up effort in 2025. (...) Although now on the right track, the majority of units are unlikely to meet the target—or will fall considerably short of it—by the agreed deadline. The deployment plans for environmental officers as of 1 January 2026 will need to demonstrate whether units will in fact allocate 75% of the available environmental officers' time to their designated task focus. In the fourth quarter of 2025, this was still not the case in most units."* (personal communication, Dutch Police, 27 February 2026).

Within the Dutch National Police, environmental police capacity is distributed across multiple organisational layers. The environmental police officers embedded within the 167 Basic Police Teams are organised in ten regional police units. Within these regional units, environmental officers assigned to Basic Police Teams can collaborate with and rely on regional environmental intelligence services (Dienst Regionale Informatieorganisatie, DRIO), and, where necessary, on the national intelligence service (Dienst Landelijke Informatieorganisatie, DLIO). In addition, officers may also cooperate with the regional investigation departments (Dienst Regionale Recherche, DRR) or, at the national level, with the High Impact Environmental Crimes Team (HIEC) (personal

communication, Dutch police officer, 30 January 2026). At the central level, the National Environmental Intelligence Unit (DLIO) and the Strategic National Coordinator of Environmental Intelligence further support police investigative capacity in the field of environmental crime (ibid.). Furthermore, the *Environmental Policing 2.0 – Reliable and Sustainable* strategy sets out a plan to establish a capacity of 47 intelligence officers dedicated to supporting environmental crime enforcement and investigations on a full-time basis¹⁶.

Furthermore, within the Dutch Police, several specialised units support environmental crime enforcement. *Dienst Infrastructuur (Dienst Infra)* focuses on crimes related to national infrastructure and transport logistics, which can overlap with environmental cases such as illegal waste transport. The *Landelijk Team Milieucriminaliteit* (often described in English as the High Impact Environmental Crime Team, HIEC) addresses the most serious environmental crime cases and collaborates closely with the *Bijzondere Opsporingsdiensten* and regional investigative teams. In addition, the *Expertisecentrum NXT-milieucriminaliteit* develops investigative methods and tools to enhance police adaptability to emerging crime patterns.

The HIEC team, is a specialised tactical investigation team that combines operations and expertise to combat serious forms of organised environmental crime at national and international level. The HIEC has a strong international focus and is affiliated with the international law enforcement network. The HIEC collaborates with both public and private partners, both nationally and internationally. The unit currently comprises 31 FTEs. Early in 2026, a proposal was submitted within the police organisation to organise ‘National Environmental Responsibility’ within the National Investigation and Intervention Unit from 2027 onwards (personal communication, HIEC member, 11 June 2026).

NXT Environmental Crime Expertise Centre (*NXT Milieucriminaliteit*) is one of the teams within a nationwide network of specialist teams and centres operating under the National Expertise and Operations Unit (LX) (formerly the National Unit).¹⁷ The team consists of seven environmental specialists who develop and deploy specialist knowledge, skills, intelligence, technology, and equipment to other units, thereby strengthening police capacity to investigate environmental crime in complex cases. In this way, NXT draws on networks both within and beyond the police (personal communication with NXT Milieucriminaliteit, 28 November 2025).

In addition, the Sustainability and Environmental Safety Hub is an advisory unit guided by four thematic pillars: environmental crimes and security, sustainability within police, impact of climate change on police work, impact of climate change on individual police employees (Politie, 2024). The hub, alongside the grassroots Police Network for Climate Security, was discussed by Matczak and Blaustein (2025) as an example of adaptive policing, which compared with other documented examples of sustainability

16 *Politiemilieutaak 2.0 – Duurzaam betrouwbaar* (shared with the author via email communication on 29 January 2026).

17 Since January 2024, this national unit has been split into two: The “National Expertise & Operations Unit (LX)” The “National Investigation & Interventions Unit (LO)”

initiatives in police organisations, illustrates a more institutionalised and pioneering police approach to climate responsiveness.

Moreover, the *Selectieoverleg Politie* (Police Selection Consultations) is an internal police mechanism where incoming environmental cases are screened and selected for follow-up. Given its limited capacity, not all signals or reports can be fully investigated; the selection meetings decide which cases should be escalated to the National Environmental Chamber (LMK), which cases remain at the regional level, and those that can be referred back to administrative environmental services (Omgevingsdiensten). The selection is guided by national priorities (from SMK/FP), available capacity, and the seriousness/strategic importance of the case. In practice, it is a filtering and prioritisation process that allows the police to manage scarce investigative resources (Ministerie van Justitie en Veiligheid, 2009).

Although the Dutch Police have elevated environmental crime to a strategic priority, it remains unclear whether current organisational and staffing reforms will be sufficient to overcome long-standing capacity deficits, and whether the police's environmental priorities are symbolic or substantive.

Police Education and Training

The education and training portfolio on environmental crime offered within the Dutch Police has recently been modernised and adapted to reflect current and emerging operational needs. As discussed later in this section, the current portfolio reflects a layered and modular approach to capacity building, combining foundational and specialist training with shorter ad hoc modules, including much-needed intelligence-focused training options.

The Environmental Officer (Milieuagent) training is a specialised two-year environmental crime training programme with two intake moments per year, intended for environmental police officers based in local teams. From 2026 onwards, the programme will include three thematic modules: environmental law, waste–soil–water, and the natural environment. In addition, the programme focuses on skills development such as cooperation, networking, and communication (personal communication with Twan van Kraaij, 19 December 2025). The aim of this extensive training programme is to equip locally specialised police officers with the knowledge and skills needed to conduct basic environmental crime investigations and to participate in and/or build local networks involved in environmental crime enforcement (ibid.)

While the Milieuagent training programme targets officers seeking in-depth specialisation, a shorter and more accessible 15-day Environmental Crime course is available for a broader group of police personnel. This course, with two intake moments per module per year, is aimed at anyone from the Dutch Police interested in expanding their knowledge and skills in this area. The course has three modules: a basic introduction to environmental crime and legislation; an advanced legal framework module; and an integrated application module that combines both elements to learn how to initiate an environmental crime investigation (personal communication with Twan van Kraaij, 19 December 2025).

An important and complementary training course is the 15-day, practice-oriented Basic Environmental Intelligence (BMI) course, which includes case work and is intended for officers working in the field of environmental crime intelligence. The purpose of the course is to develop analytical skills for analysing basic environmental crime reports in combination with the priorities set out in the environmental crime threat assessment. These analyses are subsequently assessed by the LMK and, if approved, referred to an environmental crime investigative team to initiate an investigation (personal communication with Twan van Kraaij, 19 December 2025).

In addition to these broader and generic programmes, several short, highly specialised courses focus on specific environmental crimes of high concern in the Dutch context. The two-day EVOA (European Waste Shipment Regulation) course is a specialised programme focusing on domestic and cross-border waste transport. Furthermore, the three-day Fireworks course focuses on investigations into the illegal trade in professional fireworks and their hazardous nature, particularly in connection with criminal activities in which fireworks are used as explosives such as ATM raids, general threats, and attacks on emergency responders (personal communication with Twan van Kraaij, 19 December 2025).

4.4.3 *Prosecution*

Within the Dutch Prosecution Service, the Functional Prosecutor's Office (FP, *Functioneel Parket*) is a specialised and centralised branch, responsible for prosecuting complex fraud and environmental crimes, as well as handling complex asset-recovery cases.¹⁸ The range of investigative or enforcement services with criminal-law powers that can submit a case to the Prosecution is as follows: (1) National Police, (2) Regional Environmental Police Units, (3) Netherlands Food and Consumer Product Safety Authority (NVWA), (4) Human Environment and Transport Inspectorate (ILT), (5) Customs, and (6) the Environmental Service (*Omgevingsdienst*) (Van der Geest, van Onna and Hill, 2023). Nearly three-quarters (73.4%) of all environmental cases originate from regional police units, although their reporting practices vary considerably across regions (*ibid.*). The way the FP approaches environmental cases depends on their gravity and complexity. In case of standard and low-complexity cases, the majority, the prosecution receives an official report (*proces-verbaal*) from a Special Investigating Officer¹⁹ and assesses it. These cases are processed administratively or through simpler prosecution pathways. In the period 2012–2020, there were 38,212 cases of this nature of which 66% concerned the prosecution of a natural person (Van der Geest, van Onna and Hill, 2023). In more serious and high-complexity cases (so-called customised cases – *maatwerkzaken*), the FP not only prosecutes but also directs investigations. Between 2012–2020, these amounted to 3,659 cases, of which 61% concerned the

¹⁸ <https://www.om.nl/organisatie/functioneel-parket>

¹⁹ These are criminal investigations carried out by the aforementioned specialised investigative services and enforcement organisations with criminal-law powers.

prosecution of a natural person (ibid.). The Functional Prosecutor's Office has three options to respond to the investigated case: dismissal (conditional or unconditional), Public Prosecution Service settlement (transaction, prosecutorial penal order), and judicial sanction (imprisonment or other sanction) (ibid.). In this deeply fragmented and layered Dutch environmental crime enforcement model, the Functional Prosecutor's Office plays not only a decisive role regarding whether an administrative or criminal pathway is necessary, but also facilitating and bridging cooperation among administrative, regulatory, and investigative bodies. However, with very few specialised prosecutors and judges, the capacity for further development and specialisation within the Dutch Prosecution Service also remains a concern for other actors in the enforcement model (Van Houten-Peschier, 2023). The limited number of specialised prosecutors introduces a critical bottleneck, particularly in complex cases that require sustained coordination between BODs and police units.

To support the comparative analysis presented in this section, the environmental crime enforcement model is presented in Figure 1 to illustrate the institutional configuration and relationships between key actors.

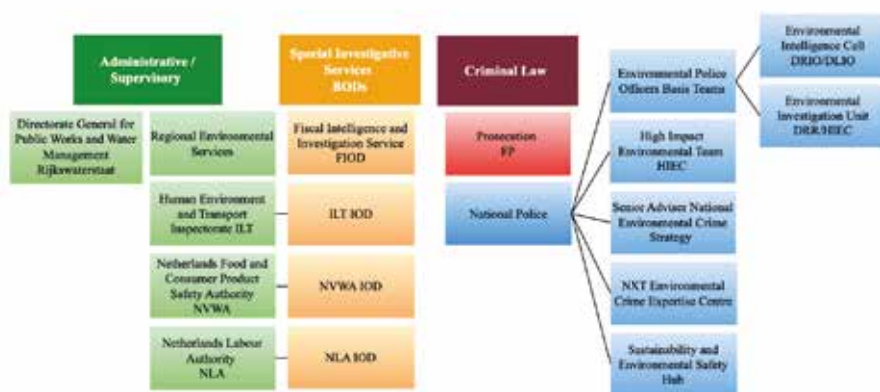


Figure 1. Visualisation of the environmental crime enforcement model in the Netherlands

4.5 Multi-level national and regional coordination

The coordination of environmental investigations is embedded in a national steering model under the authority of the Functioneel Parket. Within this framework, the Strategische Milieukamer (Strategic Environmental Chamber, hereinafter SMK) and the Landelijke Milieukamer (National Environmental Chamber, hereinafter LMK) manage strategy and operations. The SMK, composed of senior representatives from the police, the inspectorates (ILT, NVWA), the Omgevingsdiensten, and the Dutch Prosecution, is a central policy-making body for addressing environmental crime. It meets

three times a year to set overarching priorities based on a four-year environmental crime threat assessment (Neve, 2023). The SMK began as an informal forum for discussion, and has been in function for over a decade, and the government has come to increasingly regard it as the key body for coordinating and directing efforts against environmental crime. In 2022, it was formally established as an official entity (ibid.). The LMK, composed of Prosecution, Police, ODs and BODs, ensures operational implementation by prioritising cases and assigning investigative tasks across the police and the special investigative services (BODs). In many respects, the LMK functions comparably to an INTERPOL-style National Environmental Security Taskforce (INTERPOL, 2014), though challenges persist in balancing nationally steered priorities with regional investigative capacity.

Important addition to the coordinating bodies are the Milieuberaad/ Functionerend Milieuberaad (Regional Environmental Councils). These are regional-level coordination bodies where the police, *Omgevingsdiensten*, municipalities, inspectorates (e.g., ILT, NVWA), and prosecutors meet. Their role is to translate the national environmental crime priorities (set by the SMK) into regional enforcement strategies. They identify local risks (e.g., illegal dumping, waste trafficking, regional industries with compliance issues) and agree on division of tasks between administrative and criminal enforcement. In short, they serve as the regional “bridge” between policy and practice.

Taken together, these developments in the Netherlands reflect a wider European shift toward more formalised and institutionalised mechanisms for coordinating environmental crime enforcement.

4.6 Conclusion

The current Dutch model of environmental crime enforcement is the product of decades of evaluations and reform efforts (van Wingerde, Verbeek, & Bisschop, 2023). One of the most significant milestones was the Mans Committee’s recommendation to establish the 29 regional environmental agencies that today carry out permit and enforcement tasks on behalf of municipalities and provinces (de Ridder et al. 2008). The intention behind this consolidation was to create specialist expertise, reduce duplication, and improve coordination across previously fragmented authorities. Yet subsequent assessments have repeatedly demonstrated that many of these challenges persist (VTH Advisory Committee, 2021; Sorgdrager and van Aartsen, 2024). High-profile cases, such as those involving Tata Steel and DuPont/Chemours further illustrate how structural weaknesses can result in prolonged non-compliance and limited regulatory action despite clear environmental harm (van Wingerde, Verbeek, & Bisschop, 2023). Taken together, these developments reveal a fundamental paradox at the heart of the Dutch model. On one hand, it represents a sophisticated hybrid system that bridges administrative and criminal enforcement, benefiting from sector-specific expertise and specialised investigative agencies. On the other, the same hybrid and decentralised arrangements create persistent fragmentation, coordination challenges, and uneven enforcement outcomes. Multi-level governance structures such as the SMK and LMK

at the national level and regional *milieuberaden*, were designed to mitigate these issues, yet the overall system still struggles with unclear mandates, variable capacity, and limited coherence across jurisdictions. The unique role of the *Bijzondere Opsporingsdiensten* exacerbates these tensions by blurring traditional distinctions between administrative regulators and criminal investigators, contributing to institutional ambiguities and operational frustration.

Although these structural tensions influence the Netherlands' ability to address environmental crimes, this report concentrates on police capacity, comparing the Dutch Police with three European counterparts and outlining lessons for improvement.

5 Spain

5.1 Geographical disposition

Spain is in the Mediterranean basin, recognised as one of the world's biodiversity hotspots, characterised by high levels of endemism. It has the highest number of plant species among European and Mediterranean countries, with over 8,000 species and an endemism rate of approximately 23% (Rodríguez-Rodríguez, Sánchez-Espinosa, & Abdul Malak, 2021). Spain's biodiversity is shaped by its varied climate conditions, a diverse geography including mountains, forests, coastlines, and deserts, and its historical role as a key migration corridor for numerous species, particularly birds traveling between Europe and Africa. These factors make Spain one of the most ecologically rich countries in Europe.

Due to weather attractiveness, Spain presents an important case study of a country whose identity and economy have been shaped by its expanding tourism sector. While tourism serves as a vital source of income and economic growth, it also imposes significant environmental costs. According to the UN World Tourism Barometer, Spain ranks as the second most visited country globally, following France. In 2024 alone, the country received a record 94 million international tourists (World Tourism Barometer, 2025).

Administratively, Spain is divided into 17 Autonomous Communities, each with its own government and varying degrees of legislative autonomy, as well as 50 provinces. Furthermore, Spain comprises over 8,131 municipalities and two Autonomous Cities (European Committee of the Regions, n.d.). Spain's system of environmental governance mirrors the country's broader administrative structure that resembles a quasi-federal system with a high level of decentralisation. While this allows the 17 Autonomous Communities considerable flexibility to adapt policies to their territorial and ecological circumstances, it also creates difficulties in sustaining a unified regulatory framework and achieving uniform implementation of environmental obligations across regions (OECD, 2015).

All these extra-criminological factors are important when analysing the relevant police actors' capacity for environmental crime enforcement

5.2 Environmental legal and policy framework

Although Article 45 of the 1978 Spanish Constitution explicitly affirms the right of individuals to enjoy a healthy environment as well as the corresponding duty to preserve and protect it (Tribunal Constitucional, n.d.), there is no single, consolidated statute encompassing all environmental sanctioning provisions in Spain. Instead, administrative sanctions are dispersed across various environmental laws, while criminal offences are addressed solely within the Spanish Criminal Code. This fragmented legal framework results in a complex and often ambiguous system, particularly with regard to determining the precise moment at which an environmental offence is deemed to have been committed (see Fajardo, Fuentes, Ramos, & Verdú, 2015, for a comprehensive legal overview).

Specifically with regards to ecocide legislation, in July 2023, the Catalan Parliament introduced a bill proposing an amendment to the Spanish Penal Code to include ecocide as a criminal offence. The bill received initial approval at the regional level, and is currently pending further debate and voting, both within the Catalan Parliament and at the national level in the Congress of Deputies (Stop Ecocide, n.d.).

5.2.1 *Rights of Nature of the legacy of the Mar Menor case*

Amid this fragmented legal landscape, the passing of Law 19/2022 represented a paradigmatic shift introducing an unprecedented legal mechanism grounded in the Rights of Nature doctrine and signalling a move towards more holistic environmental governance that acknowledges the role of citizen initiatives. In September 2022, with an overwhelming majority, the Spanish Parliament passed Law 19/2022²⁰, officially granting legal personality and rights to the Mar Menor coastal lagoon and its basin, marking the first legal recognition of the Rights of Nature in Europe. This historic legislative development emerged from a Popular Legislative Initiative (PLI), initiated by civil society and supported by over 600,000 signatures. The initiative was spearheaded by environmental advocacy groups that had been active since 2016, in collaboration with the Legal Clinic of the Faculty of Law at the University of Murcia (Vicente Giménez & Salazar Ortuño, 2022). The law was a direct response to the ecological collapse of the Mar Menor, a consequence of more than three decades of cumulative environmental degradation. These included unchecked urbanisation, poor wastewater management, mining pollution, and the intensified expansion of agriculture and livestock farming. Despite the lagoon's prior designation under various protective statuses, symptoms of this crisis became alarmingly visible in 2016, with the appearance of the so-called “green soup” (a manifestation of severe eutrophication), and massive die-offs of flora and fauna from 2019 onwards (ibid.). Law 19/2022 not only grants the Mar Menor and its basin the status of legal subjects but also equips them with “capacity to act”, enabling

20 BOE-A-2022-16019: Ley 19/2022, de 30 de septiembre, para el reconocimiento de personalidad jurídica a la laguna del Mar Menor y su cuenca, published in BOE No. 237 on 3 October 2022.

these rights to be defended and exercised. Consequently, the Mar Menor and its basin is currently represented in 40 different legal proceedings, of which 13 involve civil society organisations (Interviewee 18). This is possible thanks to the establishment of Representation and Governance Bodies, which are part of the newly created Mar Menor Ombudsman, supported by an independent Scientific Committee (Vicente Giménez & Salazar Ortuño, 2022). The recognition of the Mar Menor as a legal entity not only set a legal precedent within Spain but also positioned the country as a pioneer in environmental jurisprudence on the European continent.

5.3 Environmental crimes in Spain

Between 2004 and 2017, the number of environmental crimes recorded annually by SEPRONA remained relatively stable, fluctuating between 3,871 and 3,494 cases annually. However, in the same period, the number of arrests rose markedly—from 661 in 2004 to 3,623 in 2017—indicating a significant shift in enforcement intensity and possibly in investigative or prosecutorial efficiency (Guardia Civil, 2018). A separate study highlights the significant gap between reported environmental crimes and resulting convictions. In Spain, for example, the report *Wildlife Crime and its Prosecution: Analysis in Spain* published within the framework of the LIFE SWIPE project, indicated that public administrations recorded a total of 3,125 cases of environmental crime between 2015 and 2021. However, only 327 court rulings were documented within the same timeframe and scope; a mere 10.5% of all reported cases (Cabello Medina, 2025). At the time of the study visit, the most recent available data indicated that between January and November 2024, approximately 2,221 environmental crimes were recorded and processed by SEPRONA. These offences were distributed across the following specific environmental crime categories:

Table 1. Environmental crimes recorded and handled by SEPRONA, January–November 2024

Crime Type	Number
Crime against land-use planning (urban development crime)	682
Crime of mistreatment of domestic animals	420
Crime of forest fire	278
Other crimes related to the protection of flora and fauna	201
Crime of abandonment of domestic animals	142
Hunting crime	140
Other crimes against natural resources and the environment	79
Crime of water diversion from public use	78
Crime of illegal trafficking of protected or endangered species	38
Crime against public health with food products	28
Crime against historical heritage	27
Crime against the environment (illegal shell fishing)	20
Crime of pollutant emissions into the atmosphere, soil, or waters	19
Fishing crime	16
Crime of fraud involving electricity and similar resources	14
Crime of depositing or dumping toxic or hazardous waste or operating facilities with dangerous activities	13
Crime against public health involving medicines	9
Crime of urban prevarication (urban fraud)	6
Crime of collection, transport, and disposal of hazardous waste	6
Other catastrophic risk crime	3
Generic crime related to land-use planning, protection of historical heritage, and the environment	2
Crime of violating safety regulations on hazardous activities	0
Crime related to nuclear energy and ionizing radiation	0

Table 2. Overview of recorded criminal offences, administrative offences and number of SEPRONA investigations in Spain, 2010-2020 (adapted from Alfaro Moreno, 2023)

Year	Recorded offences	Administrative offences	Detainees/Investigations
2010	2 946	115 719	1 151
2011	3 471	133 276	3 086
2012	3 185	140 166	1 660
2013	2 496	138 295	1 610
2014	980	126 033	1 334
2015	2 505	119 190	2 274
2016	2 690	113 283	2 598
2017	3 213	109 478	2 765
2018	3 286	99 694	3 010
2019	3 806	104 090	3 597
2020	4 086	233 893	3 957

These quantitative findings were further contextualised during the study visit, which offered a wealth of illustrative case studies related to the landscape of environmental crimes in Spain. The prominence of offences against land-use planning may initially appear unexpected. However, this was clarified in an interview with a Spanish green criminologist, who explained:

Somehow [in Spain], we have been building in places where we shouldn't be building. Now that the weather conditions are becoming more extreme, we are seeing the consequences of that. For example, I'm sure that you remember what happened in Valencia. (...) Nobody is talking about how the urban planning is happening not only in Valencia but in the whole Mediterranean coast. We want a holiday place, so here we go. (Interviewee 20)

The reference to Valencia, whose terrain and hydrological conditions have historically placed the region at heightened risk of flooding, relates to the severe floods triggered by record-breaking rainfall in October 2024²¹. At the time, Valencia received roughly a year's rainfall in an eight-hour period, triggering intense flash floods that caused more than 200 deaths, along with extensive material damage across multiple types of infrastructure in 87 municipalities (Polo-Martín, 2025). Climatological and territorial analysis of the history of land use revealed that the inland part of this region is mountainous, and that people have historically chosen to live and build mainly along the flat coastline. Over time, the major transport routes were also built along the coast, which resulted in a heavily urbanised coastal zone. In cases of heavy rain fall, the water from the mountains is blocked or slowed down, making flooding more likely and more se-

21 <https://wmo.int/media/news/devastating-rainfall-hits-spain-yet-another-flood-related-disaster>

vere (Eguibar, Porta-García, Torrijo, and Garzón-Roca, 2021). In a separate interview, an environmental academic and activist based in Spain remarked that no substantial lessons appear to have been learned from this disaster, as uncontrolled coastal urbanisation continues unabated in the region (Interviewee 19).

Several other environmental cases were explored in greater depth during the study visit, including those involving the increasing waste crimes, genetic modification of saffron, bluefin tuna trafficking, illegal farming, phytosanitary product trafficking, and eel trafficking. The latter, in particular, occupies a central position in the landscape of environmental crime in Spain, as the country is among the primary sources of trafficked eels, and records the highest number of seizures linked to this illicit trade (see Pons-Hernandez, 2024). Furthermore, after China stopped accepting plastic waste in 2018, unlawful waste movements began to grow within the European Union, and Spain became one of the main destinations for illegally discarded plastic, as revealed by content analysis of SEPRONA operations regarding smuggling plastic waste in and out of Spain (see Pons-Hernandez, 2025).

The under-researched environmental consequences of the huge scale of Spain's tourism are not fully captured in the SEPRONA data, but were discussed in an interview with a Spanish green criminologist:

I've been living in a city heavily impacted by tourism, and we've also experienced several droughts. In Catalonia, for instance, we went without sufficient water for quite a long time. What frustrated many people was that, while residents were subject to water restrictions, tourists were not. Hotels still had running water, while households often did not. That felt unfair. Another major issue is tourism itself. I don't understand how anyone could say tourism isn't a problem. Take cruise ships, for example, their environmental impact is significant. They pollute both the water and the air, and waste management onboard is questionable. In Tarragona, cruise ships dock for just a few hours. They don't contribute to the local economy; they simply leave their waste and move on to Barcelona or elsewhere. So yes, that's definitely a problem. Recently, I read that sunscreen is highly toxic to marine ecosystems. Just think about the amount of tourism along the Spanish coast: all these people entering the water with sunscreen on their bodies. It clearly contributes to environmental degradation. One key issue is that we often don't even know what qualifies as an environmental problem, simply because there isn't enough funding for research in these areas. (Interviewee 20, green criminologist).

5.4 Environmental crime enforcement model

As is the case in other countries, Spain's environmental enforcement system extends far beyond criminal investigation and encompasses a dense landscape of administrative and regulatory institutions trusted with substantial supervisory and sanctioning powers. Although this chapter primarily examines the development, structure, and investigative capacity of SEPRONA - the specialised environmental branch of the Spanish

Guardia Civil - it is first necessary to outline the broader administrative and regulatory framework within which SEPRONA operates.

At the national level, the Ministry for Ecological Transition and Demographic Challenge (*Ministerio para la Transición Ecológica y el Reto Demográfico*, MITECO) exercises overarching responsibility for environmental and climate policy²². Its mandate includes the initiation of basic environmental legislation, transposition of the relevant EU legislation, national planning, energy and climate strategies, coastal zone management, and overview of the marine environment. MITECO works through several auxiliary bodies²³, most notably the Hydrographic Confederations (*Confederaciones Hidrográficas*), which manage inter-regional river basins. Water governance is subject to a special territorial arrangement in Spain: the central government is responsible for marine and inter-regional waters, while the Autonomous Communities (ACs) regulate intra-regional waters (OECD, 2015).

Similarly, the Biodiversity Foundation (*Fundación Biodiversidad*)²⁴, a public, non-profit organisation established in 1998, provides expert advisory services and conducts public-awareness and conservation-related activities. Environmental regulation in sectors such as fisheries, shipping, and ports is governed through additional specialised regulatory frameworks (OECD, 2015).

At the regional level, Spain's 17 Autonomous Communities (AC) have primary responsibility for implementing and enforcing environmental policy. Each AC maintains its own environmental authorities and inspectorates, which function as first-line administrative inspectors. Regional administrations typically hold competencies for environmental inspections, waste-management oversight, wildlife authorisations, enforcement of environmental impact assessment (EIA) obligations, and administrative sanctioning. They issue environmental permits that adapt national objectives to regional contexts, set regional policy priorities, plan and implement investment programmes, monitor compliance, and respond to administrative violations (OECD, 2015). The term *inspectores ambientales* does not denote a single profession; rather, it encompasses a broad category of administrative inspectors across national, regional, and municipal bodies, authorised to conduct inspections and issue administrative sanctions. Where evidence indicates that an infraction may constitute a criminal offence, cases are referred to SEPRONA for potential criminal investigation.

Each AC has an environmental department (*Consejería*), often integrated with portfolios such as agriculture, water, rural affairs, or territorial planning. These departments are supported by specialised public entities, for example, Ihobe in the Basque Country, the Environment and Water Agency of Andalusia, Gedesma in the Community of

22 <https://www.miteco.gob.es/en/ministerio.html> Accessed 7 December 2025

23 These are: State Meteorological Agency (Agencia Estatal de Meteorología, AEMET), Hydrographic Confederations (Confederaciones Hidrográficas), Commonwealth of the Taibilla Canals (Mancomunidad de los Canales del Taibilla), National Parks Autonomous Agency (Organismo Autónomo Parques Nacionales, OAPN), Institute for a Just Transition (Instituto para la Transición Justa), Centre for Public Works Studies and Experimentation (Centro de Estudios y Experimentación de Obras Públicas, CEDEX) ((MITECO, n.d.).

24 <https://fundacion-biodiversidad.es/en/the-foundation/>

Madrid, and the Catalan Waste Agency, all of which provide technical expertise and implementation capacity (OECD, 2015).

At the municipal level, environmental and urban-planning authorities form another critical component of the enforcement landscape, particularly given the high incidence of land-use and planning-related offences. Spain's more than 8,000 municipalities hold competencies for urban-planning enforcement as well as for addressing minor environmental infractions, noise regulation, waste and water services, sanitation, and other local matters. Municipal police forces typically handle administrative environmental violations (OECD, 2015).

Collectively, these national, regional, and municipal institutions constitute the administrative backbone of Spain's environmental governance and enforcement model. SEPRONA becomes engaged when administrative violations escalate beyond regulatory thresholds or where criminal conduct is suspected.

5.4.1 **SEPRONA - History and development**

In Spain, the agency primarily responsible for policing environmental crimes is SEPRONA (Servicio de Protección de la Naturaleza), a highly specialised branch of the Guardia Civil, which is responsible for environmental crime prevention, investigation (of both criminal and administrative environmental infractions), and intelligence. The Guardia Civil, established in 1844 as a military police force, is the only national authority tasked with addressing environmental crimes (Cabello Medina, 2025). The National Police become involved only when these crimes converge with other serious crimes, such as drug trafficking. In the regions of the Basque Country, Catalonia, Navarre, and the Canary Islands, regional police forces also hold competencies in environmental crime enforcement and may occasionally be tasked with handling environmental crime cases. However, the Guardia Civil can also operate autonomously in these regions. The cooperation with regional police is not compulsory and only takes place when both agencies have an open investigation.

The origins of Guardia Civil are closely tied to rural areas, where the military police operated in various domains related to nature conservation. Its establishment was promoted by Field Marshal and Duke of Ahumada, who created the Guardia Civil Handbook, a compilation of principles and articles that regulated hunting, fishing, and forestry, and even reflected a humanitarian mission in response to floods, earthquakes, and wildfires (Cabello Medina, 2025). In 1988, SEPRONA was established as a specialised branch of Guardia Civil to carry forward and expand this legacy of environmental protection. The branch was created by General Order No. 72/1988, to carry out the specific responsibility assigned to the Guardia Civil in Article 12 of Organic Law 2/1986 on Security Forces and Corps, which states that one of their duties is to “*ensure compliance with provisions aimed at the conservation of nature and the environment, hydraulic resources, and the preservation of wildlife, fish stocks, forests, and other nature-related resources.*” This was one of the measures taken to guarantee citizens' rights to

enjoy the environment, as established in Article 45 of the Spanish Constitution (Guardia Civil, 2021).

While its core mission has remained consistent, SEPRONA's tasks and procedures have evolved over time (Asensio, 2000). SEPRONA's evolving structure and expanding functions, culminated in the adoption of the General Order No. 29/2021 of September 9, which significantly strengthened its investigative role by centralising command and optimising resources. This reorganisation also included the establishment of the Central (Intelligence) Office for the Analysis of Information on Environmental Illicit Activities, aligned with the objectives of the Spanish Action Plan against Illegal Wildlife Trafficking and Poaching (Plan TIFIES) (Cabello Medina, 2025). Within the structure of the General State Administration (AGE), SEPRONA operates under the direction of the Ministry of the Interior, but maintains close collaboration with other ministries, particularly the Ministry for the Ecological Transition and the Demographic Challenge (MITECO) (ibid.).

5.4.2 *SEPRONA - General structure*

The central SEPRONA unit/headquarters in Madrid is in charge of strategic direction and general coordination. It sets overarching policies and guidelines, coordinates large-scale operations, and maintains relationships with national and international institutions. Within the headquarters, SEPRONA is structurally divided into three main units:

1. Central Environmental Operational Unit (UCOMA),
2. Staff and support department,
3. Department of International Cooperation and Strategy.

The third of these was a result of SEPRONA's involvement in the design and implementation of EMPACT operational actions (European Multidisciplinary Platform Against Criminal Threats), along with its active engagement with international police organisations such as EUROPOL and INTERPOL.

The designation of environmental crime as a priority area under the EMPACT²⁵ framework reflects both the strategic evolution of EU-level criminal intelligence and the increasing prominence of environmental crime within the European security agenda. It is important to note the central role played by SEPRONA in shaping this process from its inception (personal communication, 12 June 2025). SEPRONA's longstanding involvement and leadership in the environmental crime domain have been instrumental in elevating the issue within both operational and strategic contexts in the European Union. Furthermore, the establishment of a dedicated environmental crime team within EUROPOL can be traced back to the deployment of a senior SEPRONA officer to the agency. Beyond the structural aspects, investigative scope, competencies, and

25 EMPACT stands for European Multidisciplinary Platform Against Criminal Threats. It is a cooperation framework used by the EU to address serious and organised crime that affects the European Union.

quantitative outputs, this historical context highlights the proactive role of SEPRONA as a driver of EU-level cooperation and capacity-building in the field of environmental crime enforcement.

This department has also played a significant role in developing and joining projects funded through European support instruments, with a focus on capacity-building, cooperation, innovation, and research (Cabello Medina, 2025; fieldwork notes, 10–12 February 2025).

SEPRONA Environmental Crimes Central Investigation Unit (UCOMA)

The UCOMA serves as the main investigation and prosecution base of serious environmental crimes, both at a national and international level, as well as offering technical and operational support to SEPRONA's territorial units. It includes the Unit Assigned to the Coordinating Prosecutor's Office for the Environment and Urban Planning, headed by a specialised officer or non-commissioned officer, which operates in accordance with the directives of the Environmental Prosecutor's Office governance (Cabello Medina, 2025).

UCOMA is comprised of six specialised thematic units, commonly referred to as GIMAs (Grupo de Inteligencia e Investigación Medioambiental, - Environmental Crimes Intelligence and Investigation Group), responsible for complex investigations requiring a high level of expertise or those with national or international scope. These teams and their themes are as follows:

GIMA 1 – wildlife and animal welfare

GIMA 2 – agriculture, food security/safety, illegal fishing

GIMA 3 – pollution & waste

GIMA 4 – forest fires and illicit water extraction

GIMA 5 - is a specialised unit dedicated to investigating illegal mining activities and crimes involving archaeological sites (unlike other operational teams, GIMA 5 is embedded within the Prosecution Office, and the team is highly mobile, frequently traveling across different regions of Spain to conduct site inspections)

GIMA 6 – operates in the Basque Country due to the special relationship with the Basque Country and their particular status.

These teams are specialised, highly adaptable, and led by an officer with the rank of Major. They are an important agency/node in building and strengthening international collaborations, as referenced in presentations and listed as a task typical of the investigators (fieldwork notes, 10–12 February 2025).

GIMAs' operational capacity cultivates highly skilled personnel with strong educational backgrounds, relevant highly sought-after expertise, and proficiency in English enabling participation in international fora, however these competences may contribute to a form of institutional brain drain. Field observations indicated that GIMA experience often functions as a stepping stone to careers in higher-profile international bodies such as EUROPOL, INTERPOL, or EMPACT. While this upward mobility reflects positively on the calibre of GIMA investigators and intelligence officers, it simul-

taneously presents an organisational challenge. Each departure necessitates recruiting and upskilling new personnel, generating recurring gaps in institutional memory and operational continuity (fieldwork notes, 10–12 February 2025).

Integrated intelligence-led environmental policing

Another distinct and unique feature of SEPRONA's organisational structure, implemented approximately 4–6 years ago, is that each specialised team is divided into two equally sized sub-teams: an investigation team and an intelligence team. The intelligence tasks fall under the Environmental Crimes Central Investigation Unit (UCOMA) and are later distributed by the Central Office for the Analysis of Information on Environmental Illicit Activities (OCN), which cyclically issues BIMA – a General Operational Intelligence Environmental Information Bulletin. What is important is that these sub-teams work in the same physical space, enabling a more efficient information flow and real-time updates on cases. This integrated setup allows SEPRONA to actively contribute to the broader intelligence cycle, which includes prevention, investigation, and information production. Environmental crime intelligence is employed to enhance the service's understanding of the evolving criminal landscape and to inform the planning of actionable interventions. This includes the implementation of annual campaigns or targeted operations directed at territorial units. This organisational development was most likely inspired by the structure of terrorism and counterterrorism units within the Spanish Police (fieldwork notes, 10–12 February 2025).

SEPRONA Territorial Units

SEPRONA maintains territorial units within each Command of the Guardia Civil tailored to the specific needs of each region. These units are typically composed of an environmental crime investigation team and several specialised patrols (PAPRONAS – patrols of nature protection and DEPRONAS – protected areas detachment) responsible for prevention, monitoring, and conducting less complex investigations. Some SEPRONA detachments are specifically tasked with monitoring protected natural areas such as National Parks (e.g., Doñana, Cabañeros, Tablas de Daimiel, Ordesa y Monte Perdido). This territorial structure allows SEPRONA to maintain a broad presence throughout the country, covering both rural and urban areas (Cabello Medina, 2025; fieldwork notes, 10–12 February 2025).

At a regional level, each territorial unit has an investigation cell that handles criminal cases. At a territorial level, SEPRONA units deal with both administrative violations and criminal cases. When a criminal case develops into a more complex scheme, the central unit steps in to support the regional investigation cell or, if necessary, take over and lead the investigation (fieldwork notes, 10–12 February 2025).

In routine, small-scale cases, territorial units receive guidance and technical support from the Central Operational Unit. A wide range of detailed manuals is available, covering topics such as sample collection procedures, identification of protected species, or incidents involving bird electrocution on power lines, a phenomenon typically attributable to negligence or inadequate infrastructure maintenance rather than inten-

tional harm. Territorial units are also tasked with intelligence-informed operational directives, commonly referred to as campaigns, issued by the Central Operational Unit. These directives are distributed in written form, are action-oriented, and frequently address emerging trends in environmental crime, including their modus operandi. The duration of these campaigns varies considerably, often ranging from three months to a year, depending on the seasonal characteristics of the targeted environmental crime. Examples of campaigns include those focused on the illegal trade of eels, the protection of endangered lizard species, or the use of poisoned baits. Campaign outcomes are typically assessed using quantitative indicators such as the number of detected infractions or violations. Through these campaigns, SEPRONA's territorial units have become increasingly proactive and engaged. Although participation entails an additional workload and necessitates concrete interventions, it is perceived as meaningful due to its foundation in actionable intelligence (fieldwork notes, 10–12 February 2025).

Technical Support Group – GATMA

In addition to the specialised and thematic teams, two separate units carry out highly specific, important functions in environmental crime investigations and represent an innovation in the process of building capacity for environmental crime enforcement. One of these is GATMA, a technological support unit, a team of four people, who, at the time of the study visit, were planning to hire two additional members. Their purpose is to support both central and territorial units with the basic and advanced technological tools related to environmental crime investigations. They provide technological assistance in areas such as undercover surveillance, drone operations, satellite imagery, camera traps, night vision data, GPS tracking, and the extraction of data from phones and laptops. Although there is currently no formal training in the use of technology for environmental crime investigations within SEPRONA, during one of the conversations it was observed that there is a growing openness within the service to incorporate and rely on technological tools. At the time of the visit, discussions were underway in several provinces about establishing local equivalents of this central technological unit. One of the team members said that just a few years ago, the existence of such a unit and its technological capabilities would have been considered inconceivable (fieldwork notes, 10–12 February 2025).

Environmental Damage Assessment Unit

The second unit, the Environmental Damage Assessment Unit (Unidad Técnica, UT)²⁶, is responsible for calculating and preparing environmental and economic impact assessments, referred to within SEPRONA as ELIP reports. Established in 2021, the unit is primarily composed of externally seconded civilian scientists, including a biologist, chemist, veterinarian, physicist, materials engineer, and art expert. On occasions, ad-

26 Although the unit was referred to as the technical support unit, in this report it has also been defined as the impact assessment team.

ditional external experts are brought in to support specific investigations. Each investigation led by GIMA concludes with a technical report produced by this unit often in collaboration with civil society organisations such as SEO/BirdLife (fieldwork notes, 10–12 February 2025). The reports are drafted by scientists, a practice aligned with judicial expectations, as judges tend to place greater trust in expert-led, evidence-based assessments. In the past year, the unit received approximately 300 requests and responded to more than 200 of them.

The creation of the UT reflects a strategic institutional response to the growing trend of environmental degradation driven by economic gain. Though relatively new within SEPRONA and rare even in international contexts, the UT, like other central units, also provides support and technical assistance to territorial units. Importantly, the team positions itself as a semi-independent entity within SEPRONA to preserve its scientific objectivity.

The creation of the unit also represents a positive development in response to longstanding criticism regarding the fragmentation of competences within Spain's environmental enforcement framework, particularly the lack of integration of expertise and contributions from the civil sector. According to one interviewee, an environmental academic and activist (Interviewee 19), the current system is marked by decentralisation and poor coordination, where legal ambiguity and administrative complexity frequently obstruct meaningful and swift action.

5.4.3 *SEPRONA – Prosecution relationship*

SEPRONA is required to work in close collaboration with the Spanish Public Prosecutor's Office. There has been a marked increase in specialisation within the Spanish Public Prosecutor's Office in relation to environmental crimes. Since 2020, an Environmental Prosecution Network has been in place, and the Prosecutor's Office at the Supreme Court has appointed a dedicated Coordinator for Environmental Crime ("Fiscal de Medio Ambiente y Urbanismo"). This position is responsible for overseeing and harmonising the work of prosecutors nationwide in this field (Fajardo, Fuentes, Ramos, & Verdú, 2015). In addition, each province has designated prosecutors specialising in environmental crime, with 3–4 in Madrid due to the higher volume of these offenses there. The State Prosecutor provides overarching guidance to provincial prosecutors. There are no regional prosecutors. Although the national prosecutor may become involved in cases that span multiple provinces, direct engagement in specific investigations remains relatively rare (fieldwork notes, 10–12 February 2025).

SEPRONA commonly plays a proactive role in its relationship with the Spanish Prosecution. The common pattern is that a case is presented to the prosecutor once there is basic evidence to begin proceedings. However, if the public prosecutor can also become aware of a suspicious case and assign it to SEPRONA to investigate further and determine whether any illegal activity is involved (fieldwork notes, 10–12 February 2025). In these cases, it is crucial to ensure clear delineation of roles and respect for the distinct competences of each institution in order to avoid duplication of efforts, ineffi-

ciencias, or potential conflicts between police and prosecutorial authorities (Cabello Medina, 2025). The National Prosecution Office includes representatives not only from SEPRONA but also from the Forest Rangers, and the local Madrid police. In this context, the Public Prosecutor's Office plays a central role in enhancing inter-agency coordination and promoting a collaborative model among enforcement bodies operating within the same jurisdiction (*ibid.*).

SEPRONA is a separate entity within the Guardia Civil. However, at the regional level, certain administrative tasks can be shared with relevant and regional regulatory environmental bodies. In addition, regional variations in environmental regulations across different parts of Spain further influence SEPRONA's duties and scope of involvement. These responsibilities are also shaped by the country's geographical and biodiversity variation²⁷ (fieldwork notes, 10–12 February 2025).

Today, SEPRONA is recognised in Europe and beyond as a pioneer in environmental enforcement and investigation, with a strong international presence. It has played a prominent role in promoting environmental police networks in Europe and Latin America, contributing to the integration of investigative perspectives into legislative developments both in Spain and the European Union, as well as demonstrating a high level of preparedness and capacity building (Cabello Medina, 2025). It has its own television show, SEPRONA En Acción (now in its seventh season)²⁸, and has received more than 600 awards, many of which are on display at SEPRONA's headquarters in Madrid (fieldwork notes, 10–12 February 2025).

At the time of the study visit, SEPRONA comprised approximately 1,800 allocated positions, with around 1,500 of these actively filled. This operational capacity has remained stable in recent years and includes one central forensic laboratory²⁹, 14 off-road patrol units in national parks, 49 intelligence officers, 53 specialised investigation teams, 50 urban patrol units, and 276 rural off-road patrols (Guardia Civil, 2018; fieldwork notes, 10–12 February 2025).

Recruitment is constrained by the fact that only 80 graduates per year pass the final exam and successfully complete the Guardia Civil training to join SEPRONA's units. Although the salaries are considered adequate, it remains challenging to encourage gendarmes to accept postings in remote areas of Spain, where attractive facilities for their families such as employment opportunities for partners and quality schools for children are often lacking. Conversely, the SEPRONA headquarters in Madrid has experienced significant growth in recent years in terms of staff capacity, resources, equipment, logistics, and expertise. Five years ago, the headquarters employed 12 people; today, that number has increased to between 40 and 50 (fieldwork notes, 10–12 February 2025).

27 For example, SEPRONA's activities can be shaped by local conditions and circumstances, for example some species can be protected in one area in Spain but not in the other.

28 <https://hbo.max.com/es/en/shows/seprona-en-accion/b70a521d-991b-4843-bc4f-71b6455882d5>

29 As part of the study visit to Spain, a one-day field trip was conducted on 18 February 2025 to El Centro de Análisis y Diagnóstico de la Fauna Silvestre de Andalucía (CAD), a regional wildlife forensics laboratory located in Málaga.

To support the comparative analysis presented in this section, the environmental crime enforcement model is presented in Figure 2 and illustrates the institutional configuration and relationships between key actors.

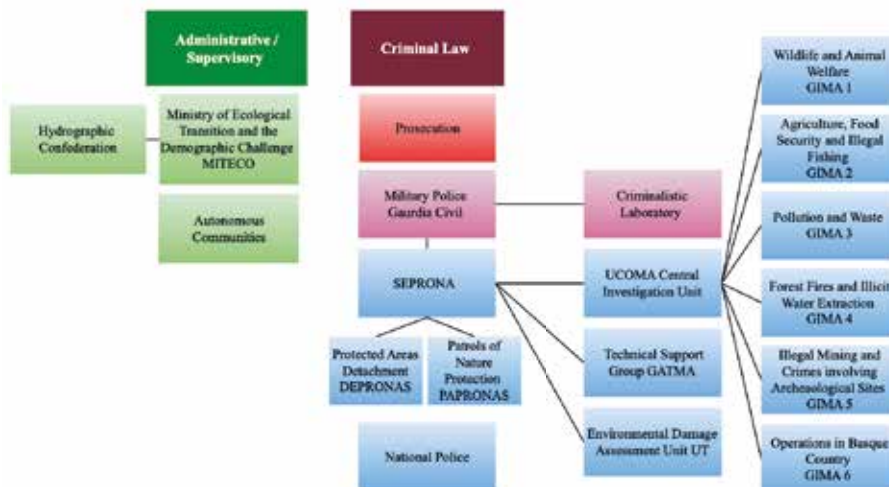


Figure 2. Visualisation of the environmental crime enforcement model in Spain

5.5 Strengthening the capacity of environmental policing in SEPRONA

5.5.1 Education and training

In addition to military training, SEPRONA offers the following training courses and education related to environmental crimes:

1. SEPRONA admission courses: high superior course (for high-ranking staff), specialist course for nature protection teams and patrols, investigation team course.
2. 14 refresher courses: online, in-house, specialised and tailored, delivered with the support of external institutions e.g. CITES, waste, wildlife, noise pollution, forest fires etc.
3. University education (master's level) – in collaboration with Carlos III University, University Centre for Guardia Civil (18 ECTS credits postgraduate degree in environmental crime investigations with a curriculum including the following topics: legislation, criminal typologies, inspection and evidence collection techniques, interviewing witnesses, and technological tools for investigative support (Cabello Medina, 2025).

SEPRONA's courses on environmental crimes are managed at the central level and are delivered by the Civil Guard's Training and Development Centre, with most partici-

pants coming from territorial units (Cabello Medina, 2025; fieldwork notes, 10–12 February 2025). These courses are also open to participants from other agencies and the broader criminal justice sector. During the presentation of GIMA 1, it was noted that over a four-year period, only two prosecutors had attended the course, most likely due to a personal acquaintance with SEPRONA staff. Initially, judges were not invited to these courses, but they now are; however, attendance remains low. This limited participation may not necessarily be due to low confidence in the quality of the training material, but rather to the fact that it is not offered by the judiciary or prosecution itself, nor through official judicial training channels. SEPRONA is hoping to improve this situation in the future (fieldwork notes, 10–12 February 2025).

Although one of SEPRONA's strengths is its internal investigative specialisation, there is a growing need for external expertise, often sought from institutions such as the Spanish National Institute for Toxicology. Each SEPRONA team maintains its own list of expert contacts to support investigations. Concurrently, SEPRONA is increasingly being asked to provide external training, for example, to the Saudi police through the I2LEC initiative (fieldwork notes, 10–12 February 2025).

5.5.2 *Environmental crime investigations*

During our study visit to Madrid, we had the opportunity to learn about numerous environmental crime investigations conducted by GIMA investigators. It became evident that SEPRONA possesses extensive experience across a wide range of case types and employs diverse investigative tools. Among the most discussed were Operation Garden³⁰, a coordinated investigation led by Europol, with collaboration from France and Italy, which uncovered a criminal organisation operating in Málaga and Barcelona that fraudulently sold genetically modified gardenia imported from China, as saffron on the EU market. Another was Operation Yucatán³¹, an investigation in Valencia that revealed a case of illegal livestock farming involving the illicit trade of horses from Ireland and the Netherlands, which were funnelled into slaughterhouses and entered the food chains of Italy, Belgium, and France, despite being unfit for human consumption.

The insights gathered during the visit were synthesised into five overarching themes related to environmental crime investigations.

General insights

Environmental crime cases are predominantly identified and proactively investigated by SEPRONA. However, there are also instances of collaboration with citizens, who may report suspected offences through local channels. This was echoed in an interview with a Spanish environmental lawyer, who said: *"When I started 24 years ago, most people only had a vague and distant understanding of criminal law or environmental*

30 <https://www.surinenglish.com/spain/gang-arrested-selling-20220404173855-nt.html>

31 <https://www.foodsafetynews.com/2022/12/europol-and-spain-lead-horse-meat-fraud-investigation/>

crimes. But now, citizens come to my office, they reach out to NGOs, and even approach the prosecutor directly. There is growing awareness and increasing knowledge about what environmental crimes are." (Interviewee 18). These citizen-generated reports, often referred to as "signals", typically concern minor, locally managed infractions. Nevertheless, such reports can occasionally serve as entry points to more complex investigations. When indications of organised environmental crime with transnational dimensions are detected, the case may be escalated to the central level of UCOMA (fieldwork notes, 10–12 February 2025).

In Spain, there is a growing shift from the application of administrative sanctions toward the use of criminal sanctions when addressing environmental crimes. One of the most complex and critical tasks in this process is the legal classification of the offence, namely, determining which specific legal provisions have been violated. The selection of relevant legal frameworks depends heavily on the particularities and complexity of each case. Investigators may initially identify what appear to be only one or two applicable offences, but as new leads emerge and further intelligence is gathered, the scope of the investigation may expand to include additional violations. Conversely, initial assumptions about multiple offences may be narrowed as the case progresses, depending on the strength of the evidence. SEPRONA informs the public prosecution of the suspected criminal offences believed to have been committed, based on the findings of their investigation. Ultimately, it is the prosecutor or judge who determines whether there is sufficient legal and evidentiary basis to proceed with specific charges. While no two investigations are identical, SEPRONA typically requires between 1.5 to 2 years to develop an environmental crime case to the point where it is considered actionable and can be submitted to the public prosecution (fieldwork notes, 10–12 February 2025).

The process of building a criminal case typically begins with the formulation of investigative hypotheses. The case is developed using a range of evidentiary sources, including physical samples, witness testimonies, open-source intelligence (OSINT), and data obtained through technological tools. In addition, SEPRONA draws on its own intelligence capabilities such as internal records and specialised databases. One example presented to us during the visit was the use of a fire database which documents suspicious outbreaks of fires both from within Spain and other countries, to support investigative efforts in relation to waste crimes (fieldwork notes, 10–12 February 2025).

Guardia Civil provides SEPRONA with forensic services through its Criminalistics Laboratory. However, in cases of more complex or resource-intensive investigations, SEPRONA also collaborates with the Spanish National Institute of Toxicology.

The complexity of environmental crime cases presents a double-edged sword. On the one hand, the lengthy investigative processes, the advanced level of required expertise, the scientific dimension of evidence collection, and the need to collaborate with multiple stakeholders can render these cases particularly challenging, thus they can often be discouraging for officers. On the other, these very complexities offer valuable opportunities for institutional learning and professional development within the service. Moreover, while a greater number of procedural steps in the commission of an environmental offence increases operational risks for offenders, it simultaneously provides

law enforcement with more entry points for detection, intervention, and successful prosecution (fieldwork notes, 10–12 February 2025).

During one of the conversations with SEPRONA investigators, it was noted that nature and environmental conditions often inform the design and timing of investigations. Operational windows may need to be extended or adjusted due to seasonal and weather-related variations that influence criminal activity, for example, certain crops involved in environmental offences only grow at specific times of the year (fieldwork notes, 10–12 February 2025).

Comprehensive investigative approach

SEPRONA adopts a comprehensive investigative approach aimed at illustrating the broader context and systemic impact of environmental criminality. This includes mapping the entire criminal chain, identifying the countries that serve as points of origin for environmental violations, those most severely affected, the extent of the environmental damage, as well as associated risks to human health, occupational safety, and major accident hazards. This “whole-of-crime” perspective enables investigators to demonstrate how environmental crime intersects with other forms of criminality and societal harm (fieldwork notes, 10–12 February 2025).

In conducting environmental crime investigations, SEPRONA strives to compile the most robust and wide-ranging evidentiary portfolio possible. This is achieved either by distinguishing and documenting multiple individual offences that support or facilitate environmental crimes, many of which are financial or economic in nature such as money laundering, tax evasion, or document forgery, or by engaging in convergent investigations that intersect with other criminal domains. The former strategy involves incorporating various auxiliary offences into the case file to reflect the financial and logistical underpinnings of environmental violations. The latter involves collaboration between SEPRONA and other law enforcement units, particularly in cases where environmental crimes intersect with organised criminal activities such as drug trafficking. In these cases, it was emphasised that effective inter-agency coordination is critical, involving the sharing of intelligence and the strategic allocation of case responsibility (fieldwork notes, 10–12 February 2025).

Although this was not uniformly evident across all investigative teams, there is a growing effort to connect and contextualise environmental crimes within the broader framework of public health. This emerging perspective acknowledges that certain environmental offences such as illegal waste management are likely to pose increasingly severe risks to human health in the future. A pertinent example of this intersection is the case of illegal fishing, where environmental crime directly threatens public health. Specifically, the illegal capture and distribution of species such as bluefin tuna or Japanese clams can introduce serious health risks, as certain naturally occurring toxins in these species cannot be effectively removed through standard purification processes. Some of these toxins are potentially lethal, highlighting the urgent need for integrated responses that address both environmental harm and its public health implications (fieldwork notes, 10–12 February 2025).

To our knowledge, SEPRONA does not employ specific Key Performance Indicators to formally assess its performance (aside from the number of arrests). However, one valuable point of reference for evaluating investigative activity in Spain, or in any EU member state, is the number of contributions made to SIENA (Secure Information Exchange Network Application) concerning environmental crime. SIENA is a secure communication platform managed by Europol that facilitates the exchange of sensitive law enforcement information among EU member states, Europol, and relevant partner agencies. During our visit, we were shown several graphs based on SIENA data which consistently illustrated Spain's strong performance and high level of engagement in the exchange of environmental crime intelligence (fieldwork notes, 10–12 February 2025; Alfaro Moreno, 2023).

Technology

A key factor underpinning SEPRONA's investigative effectiveness and institutional prestige is its access to a wide range of technical and technological resources. In certain cases, SEPRONA's equipment is acquired through donations or formal agreements with other public institutions, for example Autonomous Communities or Hydrographic Confederations, which aim to enhance surveillance and control within their respective jurisdictions (Cabello Medina, 2025).

During the study visit, we were shown and provided with detailed explanations of several technological tools employed by SEPRONA, including: (1) surveillance systems installed on fixed and/or portable platforms, (2) drones equipped with thermal imaging, infrared, or light enhancement capabilities, (3) GPS tracking devices, (4) photogrammetric software, (5) a Base Transceiver Station (BTS) tracker, and (6) satellite imagery. Among these, video surveillance emerged as the most frequently requested form of technical assistance, with approximately 90% of operational needs currently met through the use of 30 hidden cameras strategically deployed in the field (fieldwork notes, 10–12 February 2025).

In addition to these physical technologies, SEPRONA also makes extensive use of Open-Source Intelligence (OSINT) in its investigations. OSINT was described as a central tool for data collection and intelligence gathering, supporting both strategic and tactical dimensions of environmental crime enforcement (fieldwork notes, 10–12 February 2025).

Although the technological capacity of SEPRONA investigators is undeniably impressive, an equally important finding was their nuanced awareness of both the capabilities and limitations of these tools. For instance, drones were highlighted as particularly effective in measuring smoke emissions during industrial pollution investigations, as well as for identifying environmental hotspots or the early onset of events such as wild-fires. Similarly, surveillance equipment yields optimal results when it is contextually embedded within the local environment, for example, camouflaged to resemble stone, timber, or even objects like fire extinguishers, thereby enhancing its concealment and effectiveness. Photogrammetric software was cited as especially valuable in waste trafficking investigations. This tool allows investigators to estimate the volume of waste in

cubic meters, facilitating more accurate calculations of environmental damage and strengthening evidentiary claims. However, during a presentation on waste-related offences, it was noted that environmental crimes are often accompanied by false or fraudulent documentation. In these cases, investigators must rely on their own expertise and judgement, rather than technological assistance, to detect inconsistencies and advance the case.

Interestingly, when discussing the potential application of artificial intelligence solutions, the response was notably unenthusiastic. AI was not perceived as an urgent priority, particularly when compared to the pressing need for increased human resources. This reflects a broader recognition that, despite advances in investigative technology, the effectiveness of environmental crime enforcement remains heavily dependent on skilled personnel and situational awareness (fieldwork notes, 10–12 February 2025).

Environmental damage and impact assessment reports

Another highly significant and distinctive feature of SEPRONA's approach to environmental crime investigation is the mandatory involvement of the Technical Support Team in every case handled by a SEPRONA investigation unit. This specialised team is responsible for conducting environmental damage assessments, evaluating the economic impact, and producing technical analyses to support the legal framing of the case. While SEPRONA previously relied on external agencies and independent experts for these assessments, the development of this in-house capacity has markedly improved efficiency, consistency, and investigative autonomy. This function is not merely procedural but legally essential: in order for an offence to qualify as a criminal environmental violation under Spanish law, investigators must demonstrate either the occurrence of serious environmental harm or the credible potential for such harm. Without this evidentiary threshold, the case is likely to be classified as an administrative violation, falling outside the remit of criminal prosecution (fieldwork notes, 10–12 February 2025).

The Technical Support Team follow a structured procedure to assess the impact of environmental crime which forms a critical component of the evidence base required for criminal prosecution. The procedure involves three key stages:

1. Valuation of extracted or trafficked resources: The team begins by estimating the economic value of the natural resources that were illegally extracted or trafficked. This includes, for example, the market value of protected species, plants, or other environmental goods. In making these estimations, the team often relies on input from external entities such as relevant government ministries and civil society organisations.
2. Cost of restoration and recovery: The next step involves calculating the cost of environmental restoration or clean-up. This includes estimating the financial requirements needed to restore ecological balance, for instance, the cost of reintroducing fish populations or rehabilitating damaged ecosystems.
3. Assessment of impact on environmental and social assets: Finally, the team evaluates the broader socio-economic consequences of the environmental damage. This

includes the impact on local businesses and income-generating activities such as tourism or fishing which may suffer losses due to environmental degradation (e.g., polluted waters, loss of biodiversity).

The final report produced by SEPRONA's Technical Support Team follows a standardised structure, ensuring consistency and transparency in the presentation of findings. The key components of the report are as follows:

1. Authorship: Identification of the individuals or team responsible for preparing the report, ensuring accountability and traceability.
2. Case background / antecedents: A contextual overview of the case, including relevant historical information and the circumstances leading to the investigation.
3. Methodology: A detailed explanation of the methods used for data collection and analysis, including the number and type of samples or data points examined. This section establishes the scientific and procedural rigour of the assessment.
4. Study results: Presentation of the findings, often developed through collaborative group discussions within the team to ensure a comprehensive interpretation of the data.
5. Quantification of damage: An estimation of the environmental and economic harm caused.
6. Conclusions: A synthesis of the findings, highlighting the severity and implications of the damage and its relevance to the criminal dimension of the case.
7. Bibliography: A list of references and data sources consulted in the preparation of the report, contributing to its credibility and reproducibility.

The preparation of SEPRONA's Technical Support Team reports typically takes between three to four months, resulting in documents that range from 15 to 30 pages in length. Particular emphasis is placed on the Conclusions section, which must be written in clear, accessible, and comprehensive language. This ensures that key findings and implications are easily understood by a broad audience, including prosecutors, judges, and non-specialist stakeholders (fieldwork notes, 10–12 February 2025).

To illustrate the work of the Technical Support Team and the process of preparing an environmental impact assessment report, a case study involving the illegal fishing of *Lithophaga lithophaga*, commonly known as "sea dates" (dátiles de mar), named for their resemblance to dates and listed under CITES protection, was shared during the visit. These mussels are often distributed directly to restaurants without proper permits or veterinary inspection, posing both environmental and public health risks. The health concern arises from the potential presence of heavy metals in the mussels, which require appropriate purification before human consumption. In this case, the economic damage was estimated at €20 million for just 5 kilograms of mussels. This valuation included not only the commercial value of the trafficked species but also the ecological damage to the marine environment caused by their extraction. Because these mussels are embedded in the rock, harvesting them involves breaking the substrate, resulting in irreversible harm to the seabed habitat. To determine the cost of the dam-

age, SEPRONA collaborated with SEO BirdLife, which provided key valuation parameters (fieldwork notes, 10–12 February 2025).

The valuation of environmental damage in such cases is highly dependent on species-specific factors, including the organism's maturity, gender, and whether it was alive or dead at the time of seizure. When animals are transferred to wildlife recovery or welfare centres, these institutions provide technical parameters used for cost estimation. In the case of the *dátiles de mar* (sea dates), the overall environmental damage, encompassing habitat loss and species destruction was calculated by considering several critical factors: the irreversibility of the ecological damage (i.e., the impossibility of restoring the marine environment to its original state), the survival status of the mussels, the estimated cost of breeding them in captivity, and their listing under CITES. The estimated damages did not include any public health component, as no direct harm to human health was confirmed in this instance.

It is important to note that in this case, SEPRONA's Technical Support Team was heavily reliant on external inputs provided by ministries, civil society organisations, or other expert bodies for many of the parameters required in these assessments. Team members typically do not conduct fieldwork themselves except in cases deemed exceptionally serious. Consequently, the preparation of this type of report demands in-depth species-level analysis, particularly for CITES-protected species, which are generally assigned higher economic values due to their conservation status and legal protections (fieldwork notes, 10–12 February 2025).

Restoration and destruction of seizures

How do environmental crime investigations end? One notable challenge is the absence of formal feedback mechanisms between the investigative and judicial stages. SEPRONA investigators are rarely informed about how a case progresses in court or the nature of the final ruling unless they obtain this information informally through personal contacts. From a legal standpoint, many environmental crime cases handled by SEPRONA are considered successful, particularly when they result in prosecution and sentencing. However, from an environmental perspective, the outcomes can be less satisfactory, especially in cases involving irreversible ecological damage or limited restoration options (fieldwork notes, 10–12 February 2025).

Within SEPRONA's investigative teams, there is an ongoing discussion regarding the practical challenges associated with the restoration of environmental harm and the limitations of existing destruction facilities for seized environmental resources. A notable example concerns the handling of confiscated Plant Protection Products (PPPs). In these cases, judicial authorities typically retain a small sample for evidentiary purposes, while the remainder is designated for destruction. However, the destruction of PPPs requires specialised facilities capable of maintaining extremely high temperatures, such as 1200°C, which are both rare and geographically limited across Europe, and even scarcer within individual Member States (fieldwork notes, 10–12 February 2025). This infrastructural limitation is compounded by inadequate financial and logistical support from regulatory and governmental authorities, which often fail to allocate suf-

ficient budgets for secure disposal. As a result, the system becomes vulnerable to illicit practices. In some instances, false certificates of destruction have been used to cover up illegal disposals, or seized materials have been unlawfully retained and later removed, sometimes under the pretence of theft after security seals were broken. These gaps in enforcement infrastructure and overview not only undermine the effectiveness of environmental crime control but also the risk of facilitating secondary criminal behaviour associated with the mishandling of hazardous materials seized and processed within the justice system (fieldwork notes, 10–12 February 2025).

5.5.3 International presence and collaboration

SEPRONA has a strong international presence, not only due to its active participation in various networks and projects, but also because of its increasingly sought-after expertise, developed over decades, which it can offer to police services still in the early stages of building their environmental enforcement capacities. SEPRONA takes a strategic approach, aiming to establish operational contact points in as many countries as possible. These contacts help build trust and facilitate direct communication, which would otherwise be impossible or significantly delayed through formal channels (fieldwork notes, 10–12 February 2025). SEPRONA has led many of the major international operations, both within and beyond the European Union. It has also played a pivotal role in network-based actions and in supporting the creation of specialised police units in other countries, particularly in Latin America (Cabello Medina, 2025).

The importance of international collaboration was emphasised in six presentations held during our study visit. One of the most frequently mentioned collaborations was G4 FIEP³² Envi, involving the French, Italian and Portuguese Gendarmeries. This cooperation is particularly significant given the presence of military police counterparts in these countries and their shared roles and approaches to addressing environmental crime. Other key networks, collaborations and projects mentioned included, for example: EMPACT³³, Jaguar Network³⁴, Life + Satec Project³⁵, AI4 COPSEC³⁶, EnviCrime Academy³⁷, European Anti-Fraud Office (OLAF, Office Européen de Lutte Antifraude)³⁸, RASFF platform (Rapid Alert System for Food and Feed)³⁹. Furthermore, some of these projects have also allowed SEPRONA to procure equipment. Without this funding, SEPRONA would face challenges in quickly allocating internal resources for novel or urgent investigative initiatives.

32 <https://www.fiep.org/about-fiep/the-association/>

33 <https://www.europol.europa.eu/crime-areas-and-statistics/empact>

34 <https://www.envicrimenet.eu/the-celebration-of-the-general-assembly-of-the-jaguar-network-has-been-developed-with-the-presence-of-the-european-network-envicrimenet-to-promote-a-more-global-cooperation-model-that-acts-with-great/>

35 <https://www.envicrimenet.eu/life-satec-project/>

36 <https://ai4copsec.eu/>

37 <https://envicrime.academy/>

38 https://anti-fraud.ec.europa.eu/index_en

39 https://food.ec.europa.eu/food-safety/rasff_en

A particularly noteworthy observation is SEPRONA's participation in networks that traditionally do not include police or policing actors. A prime example is the Food Fraud Network (FFN)⁴⁰, a specialised regulatory and administrative EU network created by the European Commission in 2012/2013 to combat food fraud and related crimes across Europe. SEPRONA is a member of this network through its work with GIMA 2, making it the only police agency involved. All other members are typically ministries of agriculture and rural development (fieldwork notes, 10–12 February 2025).

5.6 Conclusions

Among the various actors involved in environmental inspection and enforcement in Spain, it is SEPRONA that occupies a central role in this system. SEPRONA exemplifies a highly specialised model of environmental crime enforcement, with a strong territorial deployment all over Spain with prevention, administrative and investigation capabilities. However, if the investigation requires more specialised techniques, territorial units can be supported by the UCOMA integrating prevention, investigation, and intelligence within a single operational framework. In addition, this intelligence-led policing model is characterised by a strong international presence and cooperation. SEPRONA's comprehensive investigative approach increasingly relies on the use of various technological developments. However, one of the most distinctive aspects of SEPRONA's approach is its team of highly specialised officers and experts who are tasked with producing environmental crime impact assessments. This work often involves collaboration with civil society organisations, reinforcing SEPRONA's multi-stakeholder orientation.

SEPRONA's historical development and growing investigative capacity demonstrate its institutional adaptability in response to the evolving nature of environmental crimes and harms. As noted by one interviewee, SEPRONA has played a pioneering role in the prevention, detection, investigation, and intelligence gathering on environmental crime in Spain, while judicial institutions have struggled to keep pace (Interviewee 18). Despite its accomplishments, SEPRONA, like any other police actor in this regard, faces significant limitations and challenges. One such challenge is the risk of a brain drain: as environmental crime enforcement gains prominence, the demand for specialised expertise increases, yet few agencies are equipped to provide this level of training or career progression, potentially undermining SEPRONA's human resource capacity. Another constraint raised informally during a coffee break at the study visit relates to SEPRONA's ongoing efforts to decentralise operations and support capacity-building within its territorial units. However, this process is progressing slowly, and it is precisely this slow pace that currently constitutes the limiting factor.

40 https://food.ec.europa.eu/food-safety/eu-agri-food-fraud-network_en

Despite the challenges, SEPRONA remains one of the best policing organisations to learn from about capacity building for successful environmental crime enforcement in Europe and beyond.

6 Sweden

6.1 Geographical disposition

Among the country's extra-judicial and extra-police factors that shape the nature, extent, and responses to environmental crimes, three were most frequently mentioned: administrative structure and governance, geographical disposition, and certain cultural aspects. Sweden is a decentralised country, divided into 21 counties and 290 municipalities which vary significantly in area, population size, and density. The governance structure is typically one of the primary factors shaping a country's environmental enforcement framework.

Furthermore, Sweden has a total land border length of approximately 2,205 km (Nordic Council of Ministers, n.d.), including a significant fixed border link to Denmark via the Øresund Bridge. Regional geographical differences and dispositions were also frequently referenced in our interviews, often highlighting a North–South divide in terms of population density and resource exploitation. The South was especially noted for one of its defining national features - its harbours. Forests cover around 70% of Sweden's land area, making it one of the most forested countries in Europe. However, these forests are predominantly privately owned. Nearly half of all forest land is held by individuals or families (approx. 48%), while private forestry and paper companies own a significant portion (approx. 25%) (Swedish Forest Agency, 2023).

6.2 Environmental legal and policy framework

Although not unanimously echoed by all study participants, Sweden was often depicted as an eco-conscious and pro-climate action country with a longstanding tradition of environmental science research. This factor was also an important criterion in the selection of Sweden as a case study for this research project. Sweden is frequently cited as a global leader in waste management and circular economy practices, with a highly efficient system that prioritises recycling, energy recovery, and a minimisation of land-fill—less than 1% of waste ends up in landfills (Osazee, 2021). Another distinctive feature of Sweden's environmental framework is *Allemansrätten*, known in English as "Everyman's Right" or "The Right of Public Access" - a uniquely Swedish legal and cultural principle that grants everyone broad rights to access nature, regardless of land ownership (Sandell & Fredman, 2010). This unique concept is enshrined in the Swedish Constitution and allows individuals to freely roam, hike, cycle, camp, and forage in

natural areas, even on privately owned land, provided they do not disturb or destroy the environment or infringe on the privacy of others (Ervola, Mäntymaa, & Uusivuori, 2024).

Culturally, many interviewees emphasised that Sweden is a trust-based society with a strong work-life balance ethos. However, this cultural feature, in the opinion of many of our interviewees, does not necessarily align with the current demands of environmental crime enforcement, which often requires a more control-oriented approach involving inspection and investigation beyond traditional working hours.

We have like this open trust thing with our authorities. It is the same as with the application for getting a personal ID number when you come to Sweden. It's been quite open and very easy to abuse the system. I think it's the same within the environmental field that we sort of trust the people who want to do business within this field. It's easy to abuse. I think it's a development from a more trust-based approach. There's also a trend within the police, particularly in this field, that is currently undergoing change. [Interviewee 6]

The primary legislative document governing approaches to environmental crime in Sweden is the 1999 Environmental Code (Miljöbalken), whose overarching objectives and provisions were thoroughly analysed by Philipsen and Faure (2015) as part of the EFFACE project (European Union Action to Fight Environmental Crime). The most relevant legal provisions for police work are found in Chapter 29 (Penalty Provisions and Forfeiture) and Chapter 30 (Environmental Sanction Charges) (Ministry of the Environment, 2000). In the Swedish environmental law system, permits (tillstånd) and notifications (anmälan) are central instruments for regulating environmentally hazardous activities. This legal framing also shaped how our police interviewees perceived and approached environmental crime in their investigative work.

A permit is mandatory for activities that have a significant environmental impact, for example, industrial operations (e.g., chemical plants, energy production), waste management facilities, major construction or infrastructure projects, and activities affecting protected areas or species (Länsstyrelsen, n.d.). Swedish law categorises such activities into three main types: B-activities, which require a permit from the County Administrative Board (Länsstyrelsen); A-activities, which require a permit from the Land and Environment Court (Mark- och miljödomstolen); and C-activities, which do not require a full permit but must still be reported (notified) to the relevant authority. C-activities include smaller-scale industries, certain agricultural practices, and minor land-use changes that may affect the environment (ibid.).

In 2007, there was an important legislative change in Sweden, discussed by some of the interviewees, which represents a significant shift in the legal framework surrounding environmental crimes. This reform modified the focus of criminal liability—moving from evaluating environmental outcomes (i.e., actual harm to the environment) to assessing the nature of the actions taken (or not taken) by individuals or corporations. In legal terms, this is a shift from consequence-based liability to conduct-based liability.

ity, and as a result, it reduces the burden of proof for prosecutors (Philipsen & Faure, 2015).

While the 1999 Environmental Code represents a significant legislative achievement in Sweden and beyond, one interviewee noted that both the Code and the prevailing inspection culture in Sweden were developed in a context that no longer aligns with current environmental challenges. According to the interviewee, the Code emerged during a time characterised by a linear rather than a circular economy, and was built on the assumption that companies found to be in violation during inspections would voluntarily improve their practices. However, the environmental landscape has since changed. Today, there is growing recognition that a more control and enforcement-oriented approach is necessary. Recent EU legislation, including the EU Environmental Crime Directive, reflects this shift toward stronger regulatory oversight to more effectively address the rise in environmental crimes (Interviewee 15).

An interesting example of this shift was the multi-agency Inquiry into the sanction system under environmental law to explore how to better combat environmental crimes, published in March 2025 (Miljöstraffrättsutredningen, 2025), right at the start of our fieldwork in Sweden. The 929-page Inquiry into Sweden's environmental crime framework was referred to in many interviews and presents a comprehensive strategy for reforming the legal and institutional approach to environmental crime - with a significant emphasis on the role of the Swedish Police in detection, investigation, and national coordination.

The Inquiry proposes that the Swedish Police take on a coordinating role in a new and structured partnership involving key relevant stakeholders. One of the core responsibilities of this partnership would be to identify and analyse risks and criminal methods, produce an annual national situational report on environmental crime, and serve as an information-sharing hub across the various agencies involved in environmental crime enforcement. In parallel, each County Administrative Board, in collaboration with the regional police, would establish a regional coordination function. These regional bodies would mirror national efforts on a localised scale, focusing on risk identification, reporting, and facilitating information exchange at the regional and local levels. Importantly, the Inquiry also considered, but ultimately rejected, the idea of involving inspectors from the administrative/supervision branch directly in police investigations, citing differences in mandates and legal standards (*ibid.*).

At the time of writing this report, the Inquiry had been handed over to the Swedish government and was under consideration by the relevant stakeholders and authorities. This proposal represents a significant institutional and strategic shift, positioning the Swedish Police at the centre of national efforts to combat environmental crime. However, this recommendation is accompanied by caveats, as the assumption of a more strategic role may strain police resources and expertise, capacities the Swedish Police may currently either lack or be unable to lose. This finding is particularly relevant given the police's present middle-ground position within Sweden's environmental crime enforcement model, as discussed in the following section.

At the time of the country visit, several other legislative, legal, and policy developments related to approaches to environmental crime were also underway.

On Wednesday, 15 May 2024, the Swedish Parliament narrowly voted against six proposals from four political parties to make ecocide an international crime under the International Criminal Court (ICC). Although the Foreign Affairs Committee agreed with the idea of outlawing ecocide, it advised rejecting the motions because the government already supports the concept and is working on it. Before the vote, Sweden's Ecocide Law Alliance led a campaign where 13 companies and business groups called on the government to push for ecocide to become an international crime, both to protect nature and support fair competition for sustainable businesses (Stop Ecocide International, 2024). In February 2024, six CEOs from diverse industries published a joint call to action advocating the inclusion of ecocide as a crime within the jurisdiction of the International Criminal Court (ICC). These companies are: SPP, Houdini Sportswear, Icebug, Polarbrödgruppen, Svea Solar, and Rejlers Sweden (Ecocide Law Alliance, n.d.). However, in one of the interviews, ecocide legislation was described as primarily having a symbolic significance, reflecting a political decision. The interviewee emphasised that to be taken seriously, this type of legislation must be preceded by a thorough and meticulous national assessment of environmental risks and harms in Sweden (Interviewee 4).

While there is no specific PFAS regulation or legislation in Sweden, one interviewee referenced a groundbreaking Supreme Court ruling concerning drinking water contamination from the Brantafors waterworks in Ronneby Municipality (Interviewee 14). The water was found to contain extremely high levels of PFAS, originating from fire-fighting foam used during training exercises at the Blekinge Air Wing. As a result, local residents were found to have exceptionally high concentrations of PFAS in their blood - a condition the Swedish Supreme Court deemed sufficient to establish harm (Supreme Court of Sweden, 2023).

PFAS presents a critical tension between science-based regulatory frameworks and judicial approaches to environmental harm. As a class of chemicals, PFAS are known for their persistence, bioaccumulation, and increasingly central role in legal disputes where establishing causality is scientifically and legally complex (Interviewee 14). The Ronneby court case reflects a shift in legal standards, moving towards what may be termed precautionary justice, where exposure itself is treated as a sufficient basis for liability.

Under traditional regulatory science, such as the REACH framework, chemicals are typically restricted only when adverse effects are demonstrated through toxicological, epidemiological, or ecological evidence. By contrast, the Swedish Supreme Court accepted elevated PFAS levels in human blood as adequate proof of harm, even in the absence of direct evidence of disease, emphasising the risk of exposure over the manifestation of harm (Interviewees 12 & 14). The Court's willingness to act without conclusive evidence of illness marks a potential paradigm shift. It signals an evolving legal philosophy in which credible risk, particularly at extreme levels of exposure, may suffice to establish harm.

The research project *Whose Body of Water? Rights of Nature as Environmental Guardianship for Sweden*, is a collaborative initiative involving the University of Gothenburg, Chalmers University of Technology, and Jönköping University. This project explores the potential for integrating the concept of Rights of Nature into Swedish law, with a particular focus on granting legal personhood to Lake Vättern. The research aims to assess how such legal recognition could transform environmental governance and protection strategies for the lake. The project is funded by Formas, a Swedish research council for sustainable development, and is scheduled to run from 2023 to 2027. It involves interdisciplinary collaboration among experts in design, environmental law, and social sciences (University of Gothenburg, n.d.).

At the time of data collection in Sweden, the Swedish Police did not have a dedicated national strategy specifically targeting environmental crime that formally integrates the police into a coordinated enforcement framework. As a result of the 2025 Inquiry as well as the consequences of the EU Environmental Crime Directive, there have been some initiatives and three joint discussions with other stakeholders to change this, as indicated in an interview with a senior police officer who plays an informal strategic role withing the Swedish Police regarding environmental crimes:

At the strategic level, we still have a lot to do. I think, thanks to the new EU directive, we'll need to allocate more resources to this area. We have a working group in place, and I've formally passed this on to my superiors so they're aware of the upcoming changes—particularly the demands on the police regarding training, the need for a national strategy, and related developments. They are well informed, but we haven't taken any concrete steps yet. Developing this strategy is still ahead of us. It will be a big challenge—but a good one. I really believe we need a national strategy, and right now, we don't have one. [Interviewee 2]

While it was evident during data collection that one of the Swedish Police's priorities is to enhance education and training on environmental crimes, alongside improving cooperation with supervisory authorities, some interviewees voiced concerns about the complexity and, at times, the vagueness of environmental law, especially the EU law (Interviewee 9). Compounding this challenge is the rapid pace at which environmental legislation evolves. Additionally, for many ordinary Swedish business owners, these environmental provisions are perceived as intrusive and unwelcome regulatory burdens.

There's quite a lot of opportunity for new environmental legislation coming from the EU. I would say, overall, these are really positive developments, and I'm genuinely pleased about them. However, they will likely clash with how we currently work with supervision and the Environmental Code in Sweden. Our Environmental Code, which was adopted in 1999, is built on the polluter pays principle—but also on the assumption that polluters will voluntarily seek knowledge and do the right thing. It's not a command-and-control model. It's based on the idea of a well-informed society, with

large, easily supervised units. But today, we have many small entrepreneurs, new technologies, new types of companies, and a lot more cross-border trade. This changing landscape creates challenges for how we implement and enforce environmental regulation. [Interviewee 15]

While national and international environmental regulation is expanding quickly in an effort to address pressing ecological and societal challenges, this very speed and complexity may be undermining its effectiveness on the ground. Law enforcement and regulatory actors are expected to adapt rapidly, yet often lack the resources, clarity, or societal buy-in needed to implement these changes smoothly. In other words, the regulatory system is accelerating in an attempt to catch up with environmental degradation and economic change, but the institutions tasked with enforcing these laws struggle to keep pace.

6.3 Environmental crimes in Sweden

In Stassen & Ceccato's study (2020), it was shown that between 2000 and 2017 there were 112,953 environmental and wildlife crime records in total; an average of about annual 6,275 cases. In comparison to previous years, in 2004, there were 3,509 reported cases, but only 267 were indicted (7.6%), 177 were prosecuted in court (5.0%), and 107 received judgment (3.0%); at the time none of these cases resulted in actual prison sentences (BRÅ, 2006).

Stassen & Ceccato's study combined police records with newspaper articles (media archives) in Sweden from 2000 to 2017 and revealed that environmental crimes do not follow a random pattern, but occur under specific and unique circumstantial, cultural, and/or economic circumstances of a region. Of the 290 Swedish municipalities, the authors classified 112 as urban areas (total population approx. 7 million), 156 as accessible rural (total population approx. 3 million), and 22 as remote rural (total population approx. 140,000) (Stassen and Ceccato, 2020). The higher proportion of chemical environmental crimes were reported in remote rural areas (24% compared with 19% in urban areas and 14% in accessible rural). There were also greater proportions of nature and wildlife crimes in non-urban areas, which makes intuitive sense given the greater opportunities for accessing nature outside of large cities. Conversely, minor offenses, such as residential waste burning represent a larger proportion of cases in more urbanised municipalities (43% urban, 36% accessible rural, and 26% remote rural), whereas the relative occurrence of serious environmental and wildlife crimes is about 20%, regardless of urbanity. The northern hot spots are likely attributable to heavy industrial mining activity in the region. They also show that although the majority of cases are minor crimes, particularly in urban municipalities, many of the more serious crimes show chronic temporal and spatial patterns in more rural and remote areas. The persistence of a number of serious crimes over time is interpreted as an indication that the costs of breaking environmental law are low relative to economic gains. The study notes that although crime is generally considered an urban phenomenon, nature is a

most convenient crime scene. Even though illegal waste dumping or hunting is more likely to occur in rural areas, production in urban areas might still have a (illegal) waste continuation through disposal in rural areas. This picture is now complemented by official statistics from the Swedish Police and Prosecution Service obtained during the data collection process.

Table 3. Number of recorded environmental crime cases per police region in Sweden, 2022–April 2025

	2022	2023	2024	2025 (until April)
Bergslagen	213	194	196	77
Central Region	198	216	235	78
Northern Region	247	280	325	121
Stockholm	365	470	556	159
Southern Region	386	483	608	183
Western Region	325	374	503	129
Eastern Region	164	207	227	77
NOA*	112	119	97	30
In total	2010	2343	2747	854

* NOA – Sweden's Department of National Operations, it leads and coordinates actions against organised crime.

Table 4. Types and number of recorded environmental crimes in Sweden by category, 2020–2024

	2020	2021	2022	2023	2024
Environmental crime (including aggravated)	1008	848	815	821	1031
Hazardous chemical management, unlawful chemical handling, chemical registration offenses	61	69	60	132	246
Unauthorised environmental activity due to lack of permit	256	266	255	345	382
Unauthorised environmental activity through breach of permit conditions	259	201	253	304	322
Obstruction of environmental control	32	27	34	40	33
Deficient environmental information	30	22	6	60	60
Offenses against protected areas	421	388	361	381	382
Species protection crime (including aggravated)	109	122	127	142	117
Other offenses against the Environmental Code	67	41	39	48	56
Unauthorised domestic waste transport	22	25	21	38	63
Unauthorised cross-border waste transport (within, to, and from the EU)	30	34	38	30	54
Unauthorised handling of an invasive alien species	2	8	2	2	1
In total	2297	2051	2011	2343	2747

In addition, data obtained from the Swedish Prosecution during the data collection period show that in 2023 there were 315 court sentences issued for environmental crimes that ended with corporate fines and 112 with personal liability.

Table 5. Number of judgments or issued penal orders involving corporate fines in Sweden, 2023

Amount	Prosecution:			
Unit	1. Penal Order	2. District Court Judgment	3. Court of Appeal Judgment	Total
Gothenburg	43	4	2	49
Jönköping	36	1		37
Malmö	82	5		87
Stockholm	71	1		72
Östersund	63	7		70
Total	295	18	2	315

Table 6. Number of judgments or issued penal orders involving personal liability in Sweden, 2023

Amount	Prosecution:			
Unit	1. Penal Order	2. District Court Judgment	3. Court of Appeal Judgment	Total
Gothenburg	15	10		25
Jönköping	8	1		9
Malmö	32	9	2	43
Stockholm	11	4		15
Östersund	14	3	3	20
Total	80	27	5	112

During one of the interviews with a police officer, it was suggested that a key distinction in corporate liability is that prosecutors do not need to prove individual culpability. This reflects a lower burden of proof, which makes it easier for prosecutors to pursue sanctions against companies.

When we investigate company fines, we don't have to identify exactly who in the company did something wrong. It's enough to say that something went wrong within the company, and that someone responsible didn't do enough to prevent it. That makes it easier for the prosecutor, because the burden of proof is lower. [Interviewee 2]

The majority of the cases presented above are related to compliance with permit and notification requirements. Some may perceive this line of environmental enforcement as routine, localised, uninspiring and too straightforward. However, a civilian investi-

gator (Interviewee 6) defended its importance and pragmatism. The interviewee said that this professional routine shows a deeper normative commitment to regulation as a form of structural integrity.

Despite having access to statistics, many of the interviewees expressed a need for having a broader and bigger picture of the scope, extent and prevalence of environmental crimes in Sweden. During the interviews, many references were made to waste crimes, transboundary waste shipping, black mass cases, illegal car grinding or end-of-life vehicle processing, burning household waste, the use of creosote-impregnated wood, or Per- and polyfluoroalkyl substances (PFAS), however there is no single document that compiles and analyses the prevalence of these environmental harms. The following excerpt from a civilian environmental crime investigator from the Swedish Police illustrates this point:

I think one important issue is that we lack a comprehensive picture of what's happening in our field across Sweden. We don't have the resources or analytical capacity to compile that kind of information. Instead, we work on individual cases in isolation. In the best-case scenario, we send some information to our intelligence unit to put things together. But we don't have a dedicated officer to manage that information and share it with us—someone who can create those synergies. For example, recognizing that something happening in one part of the country is connected to our area. Right now, we operate quite separately, and we really need that kind of resource, but we just don't have it. [Interviewee 6]

At the time of the fieldwork in Sweden, the information was shared that the second government assignment coordinated by the Environmental Protection Agency, of which the Swedish Police is part of along with 9 other agencies, is supposed to address this gap.

The interviewed environmental crime investigators, whether police officers or civilians, shared that they have little or no experience with high-profile large environmental crime cases. Most cases dealt with by the Swedish Police relate to compliance or negligence with permit, notification violations. However, none of the respondents were aware which low-profile case was in fact an element of bigger criminal chain, as revealed in the Think Pink case. This high-profile case study was mentioned and referred to by almost every single interviewee.

6.3.1 *Think Pink case – case Rosa*

The Think Pink case is regarded as Sweden's largest known environmental crime case and trial, involving the illegal dumping of approximately 200,000 tonnes of waste across 21 sites in 15 Swedish municipalities between 2015 and 2020. Eleven individuals, including former CEO Bella Nilsson (who now goes by Fariba Vancor), face charges of aggravated environmental and economic crimes. The waste, comprising construction debris, electronics, plastics, and hazardous materials, was allegedly buried or

abandoned without proper processing, leading to significant environmental contamination (Bryant, 2024). Prosecutors assert that Think Pink operated with no intention or capacity to manage the waste in compliance with environmental laws. Investigations revealed elevated levels of toxins such as arsenic, lead, mercury, and PCBs at the dumping sites. The case has prompted municipalities to seek damages of 260 million SEK (approximately €23 million) for cleanup and decontamination efforts (*ibid.*).

In June 2025, the Court sentenced ten of the eleven individuals for their roles in committing these aggravated environmental crimes. The main defendant, Fariba Vancor, previously known as Bella Nilsson, who acted as the Group's official representative and was effectively in charge of its operations, received six years imprisonment for 19 counts of serious environmental crime. The remaining defendants received varying sentences, while one individual was acquitted of all charges. In addition, the court imposed a business ban on the main defendant and three co-defendants. The principal defendant and four co-defendants were also held jointly liable for damages of approximately SEK 250 million (Södertörns tingsrätt, 2025).

Many of our interviewees were involved in the investigation or forensic analysis of the Think Pink case and were summoned as witnesses. There is a shared hope that lessons will be learned from this case, which has demonstrated how regional differences in practice can be overcome in order to build a complex, large-scale investigation. The Think Pink case serves as an example of a multi-actor investigation that, in many ways, united the country and facilitated interagency collaboration - an endeavour that is otherwise often challenging.

6.4 Environmental crime enforcement model

As in many other countries, the Swedish Environmental Enforcement System is comprised of an administrative/supervisory part (municipalities, county administrative boards, and Special Land and Environmental Courts) and criminal law enforcement (police, prosecution, and criminal courts).

Based on our findings, we propose considering the Swedish model of environmental crime enforcement as prosecutor-led, administrative/supervision-body-initiated, and police-executed. The Swedish prosecution determines the merit of a case early on and guides the investigation (Philipsen & Faure, 2015). In this model, administrative regulatory and supervision agencies act as primary detectors of environmental offences and submit reports directly to the police. The police, however, do not inspect or detect crimes independently; instead, they serve as an investigatory body under the close legal and strategic guidance of specialised prosecutors. This makes the model highly hierarchical, legally-driven, and reactive, with administrative/supervision expertise as its original informational and reporting base.

6.4.1 *Police – Prosecution axis*

The distinct feature of the Swedish environmental crime enforcement model is that is based on a strong and dependent relationship between the police and the specialised environmental crime prosecution REMA (National Environmental Crime Unit), established in 2009 (Philipsen & Faure, 2015). Of the approximately 1 100 prosecutors located all over Sweden, about 26 are currently working solely on environmental crimes (Johansson Welin, 2022; field notes). The model is characterised by early prosecutorial screening, legal merit assessments, and investigation planning, ensuring that only cases with sufficient evidentiary and legal grounding proceed. Prosecution plays a central role and was also considered as one of the success factors of the Swedish model during our study visit:

I think that's one of the success factors in Sweden, there's very good cooperation and specialised units, as you know. I believe there are about 26 people employed now. When I started, before the Environmental Code came into force in 1999, these cases were handled by all kinds of prosecutors who weren't specialised. It was a disaster because, as you know, the legislation is complicated, and they had no idea what to do with it. When they received one of these cases, maybe two or three in their entire career, they certainly didn't prioritise it. So, it's a great success that we now have this national prosecution unit. [Interviewee 3]

However, given the increasing environmental challenges, evolving legislation, and rising societal expectations, several interviewees indicated a willingness for the police to assume a more prominent and proactive role with a more diversified range of investigative tools within the current enforcement model:

We are quite reactive. It's very rare that we discover cases on our own. One of my colleagues recently found a case, but it was purely by coincidence, his neighbour had noticed suspicious activity nearby. Otherwise, we usually respond to reports that come in. Ideally, we want to be more present in the field, seeing things firsthand and working with our informants. Some of this can even be done undercover. We definitely need more of that, because I'm quite certain there's a lot of hidden waste, old cars, abandoned scrap yards, and garbage that's been buried or dumped out of sight. We need to be more proactive and observant on the ground. Right now, we mostly react to reports, whether from authorities or private individuals who notice something suspicious." [Interviewee 6]

The types of cases handled by the Swedish Police typically concern compliance with the notification and permit requirements set out in the Swedish Environmental Code, as previously noted. While these cases may not be perceived as particularly stimulating aspects of police work, the interviewee cited above emphasised that even straightfor-

ward and routine cases, particularly those involving companies that readily admit to violations, play a preventive role.

6.4.2 *National Police*

In 2015, the Swedish Police Authority began a major reorganisation, the most extensive since 1965, in which 21 local counties were restructured into one national police service, reducing the number of command centres from 21 to 7 (Brå, 2024). In Sweden, police staffing levels remained relatively stable at approximately 20,000 officers between 2012 and 2018. From 2018 onwards, however, officer numbers increased, rising from 20,040 to 21,981 in 2022, corresponding to roughly 205 police officers per 100,000 inhabitants (Statista, 2024). This increase is still below the Swedish Police initiative aim to increase the number of police employees by 10,000 in the period 2016–2024 (Brå, 2024).

At the same time and for the same reasons as for the prosecutors, special environmental police investigators were appointed in the year 2000 (Persson, 2020). As a result, the Swedish Police now has seven regional environmental crime investigation units, each corresponding to one of Sweden's police regions: North, Middle, Bergslagen, East, South, West, and Stockholm (Persson, 2020), which not only deal with environmental crimes but also with work-safety crimes. Each unit is coordinated and managed by a police investigation leader. However, these units are not only staffed by police officers, but also increasingly by civilian investigators who bring much-needed environmental expertise into police investigations –another distinct and interesting feature of the Swedish environmental crime enforcement model. In 2022, of the 28,000 people employed by the police, only 70% had police training; the remaining 30% were civilians. For investigators, it is estimated that approximately 30–40% are civilians. In some types of investigations, such as fraud, this figure rises to as much as 50% (Brå, 2023).

To start with, when the legislation came into force in 1999, that's when things really began to improve. We established a specialised unit, and quite early on, we realised that certain types of knowledge—particularly ecological and biological—were lacking among police officers. So, we decided it would be easier to train experts in those fields to conduct investigations rather than trying to train police officers to become biologists. In the beginning, there was some suspicion among police officers about involving civilians or biologists, but I think that's changed now. We each have our roles, and I haven't heard anyone complain in recent years. [Interviewee 3]

Civilians engaged in environmental crime investigations in Sweden contribute a particular and sought after expertise in areas such as environmental science, biology, and they may be more familiar with sampling ecological assessment. Civilian investigators do not possess the coercive powers granted to police officers such as the authority to conduct arrests, execute house searches, or perform formal interrogations. However, unlike police officers, civilian investigators, especially those with academic or pro-

fessional backgrounds in environmental science, often demonstrate a high level of intrinsic motivation. Of the seven environmental crime investigators interviewed during the fieldwork, four were civilians and some admitted that their commitment is frequently driven by a desire to see tangible environmental impact and to support the effective implementation of relevant environmental legislation. Some of the civilian investigators interviewed for this project previously worked as inspectors within the administrative or supervisory branch of the system. This finding illustrates a form of inter-agency professional knowledge transfer, characterised by asymmetrical mobility from regulatory bodies to enforcement institutions.

As in many other countries, environmental crime enforcement within the Swedish police remains a relatively low-profile and less attractive specialisation compared to other areas of police work. There is limited knowledge and awareness, both within the police force and among the general public, regarding the nature of this work, the specialised units involved, and their mandates. Interest in environmental crime among Swedish police cadets remains notably low, as many are primarily attracted to more traditional areas of policing. This is the case despite some teams introducing a shorter, six-month probationary period (down from the previous one-year term) in an effort to encourage greater participation. In addition, sustained efforts to enhance the visibility of environmental policing have been undertaken by many of the interviewees who are investigators.

In the absence of a formal incentive structure, individual officers often take it upon themselves to promote their work and the relevance of their units, engaging in self-marketing and outreach to build recognition and legitimacy for this field. Environmental crime investigators in Sweden, both uniformed and civilian, often use professional encounters as platforms to showcase their work—employing a form of strategic self-promotion to enhance recognition and legitimacy within the field. This occurs in the vacuum of any formal incentive structure. This self-promotional tendency can be understood as a form of symbolic positioning, where investigators actively construct and project professional legitimacy in a field that often struggles for visibility and institutional support.

Environmental crime intelligence

At the time of the fieldwork, it became evident that environmental crime enforcement in Sweden received minimal support from the national intelligence services. The intelligence unit dedicated to environmental crimes had been significantly weakened, primarily due to limited resources and persistent challenges in staff retention, particularly as individuals with relevant expertise often possess skill sets that are highly competitive in the private sector. Multiple respondents, including those from the administrative branch, expressed a clear need—and even a sense of longing—for improved access to intelligence data. As one interviewee noted, "*You need intelligence to be proactive*" (Interviewee 6), highlighting the essential role of intelligence in facilitating forward-looking and preventive enforcement strategies.

National Forensic Unit

Within the Swedish Police there is a Forensics Department comprising a small team of environmental forensic experts (Nationellt forensiskt centrum, NFC). They receive samples used and tested in environmental crime investigations, which on further examination and classification are sent to private sector labs for further testing. The overwhelming majority of the samples (80-90%) come from the inspectors who represent the administrative/supervision branch of the environmental enforcement system and are usually waste samples. The Unit does not have any international collaboration with any other police services or forensics units, but it is increasingly common for them to be summoned to give expert evidence in court. They provide a one-week training course for police officers who are special environmental crime scene investigators; there are about 24 in the country (personal communication, NFC, 25 June 2025).

6.4.3 *Administrative/Supervision branch*

In Sweden, environmental inspections are carried out under the Swedish Environmental Code (Miljöbalken) by administrative bodies at both local and regional levels, including municipalities (kommuner) and county administrative boards (länsstyrelser), and they are referred to as primarily responsible for environmental supervision. While their responsibilities often intersect, they differ in scope, scale, and authority.

Municipalities in Sweden are primarily responsible for supervising and enforcing environmental regulations at a local level. This includes controls and inspections for activities classified as “C” under the Swedish Environmental Code regarding the activities’ mandatory notification (not permit), and the environmental safeguards that the municipality may issue in response to the notification.

By contrast, the Swedish County Administrative Boards represent the national government at the regional level and hold broader supervisory responsibilities. These include overseeing larger or more environmentally hazardous operations, conducting environmental impact assessments (EIAs), and issuing permits for activities classified as “B” under the Environmental Code. There are 21 County Administrative Boards who supervise both “A” and “B” activities, although sometimes the supervision of certain types of activities are delegated to other (larger) municipalities (Interviewee 8). Of these, five have specific supervisory responsibilities related to transboundary shipments of waste. These particular boards are geographically located near major points of entry such as harbours or border bridges (Interviewee 15). A recent development within the County Administrative Boards is the appointment of dedicated waste coordinators to enhance oversight and coordination in this area.

Although the Swedish model is often described as prosecution-led, there is a highly dependent interagency relationship between the supervision branch and police/prosecution duo due to the reporting structure. An important yet often overlooked aspect of Swedish environmental legislation is the statutory obligation for inspection authorities—including municipalities, counties, and other relevant bodies—to immediately

report suspected environmental crimes, as stipulated in the Environmental Code, Chapter 26, §2 (Swedish Environmental Code, 1998). This legal provision, introduced in 1999, appears to be distinctive to Sweden and has had a significant impact on reporting practices. Following its implementation, the number of registered environmental crimes rose sharply from approximately 400 to 4,000 cases annually, suggesting that a considerable number of offenses had previously gone unreported, possibly due to civil authorities' reluctance to confront local businesses.

However, intra-regional differences can be found in the willingness to collaborate with the police, and the regulation also has many unintended consequences. In order to avoid liability for failing to report, which itself could constitute an offence, authorities sometimes file reports on incidents that ultimately fall below the legal threshold of a crime (Interviewee 3). When a case is not processed or discontinued, this reduces institutional morale and the willingness to engage with the police (Interviewee 16). Investigators from municipal or county administrative boards operate under significant resource and capacity constraints, particularly in smaller municipalities where staff must juggle multiple regulatory domains. This can lead them to select and prioritise cases in which the company pays for the inspection (*ibid.*). As a result, collaboration between the police and administrative or supervisory branches is highly dependent on external circumstances.

A systemic issue in environmental crime enforcement, probably not only in Sweden, emerges from a persistent gap between legal ideals and enforcement practice. Inspectors often express mistrust in judicial outcomes, perceiving that reporting environmental violations is futile due to frequent case dismissals. This demotivates them from taking further action. At the same time, the police rely heavily on the administrative branch for reporting and initiating investigations, yet they often struggle to meet the evidentiary standards required for prosecution. This creates a paradox: when the police are unable to prove a crime, they risk losing the trust and cooperation of inspectors, further weakening the enforcement chain (Interviewee 11). The result is a misalignment between legal frameworks, institutional mandates, and operational realities, undermining the overall effectiveness of environmental crime enforcement.

6.4.4 *Swedish Environmental Protection Agency (Naturvårdsverket)*

The Swedish Environmental Protection Agency (SEPA) serves as the central authority responsible for overseeing environmental protection in Sweden. Its core functions include policy development, the provision of guidance and support, and the coordination of supervisory activities among inspectors in the administrative branch. In recent years, SEPA has taken on an increasingly important coordinating role in relation to government assignments.

An example of a coordinating role by SEPA is the 2022-2026 assignment conducted with the Coast Guard, the Swedish Police, the Swedish Customs, the Prosecution and the county administrative boards of Gävleborg, Norrbotten, Stockholm, Skåne and Västra Götaland counties. The objective of the assignment was to prepare a compre-

hensive risk assessment of illegal waste management in Sweden, and strengthen the collaboration and information exchange among the relevant bodies dealing with the crime. The final report is due by the end of March 2026 (Naturvårdsverket, n.d.)⁴¹.

As part of this initiative, SEPA organised joint workshops two - three times per year, with a particular emphasis on legislative review. In 2023, SEPA representatives conducted a national tour to promote new supervisory guidance aimed at shifting the prevailing model from trust-based supervision to a more control-oriented approach (Interviewee 16 & 17).

To support the comparative analysis presented in this section, the environmental crime enforcement model is presented in Figure 3 to illustrate the institutional configuration and relationships between key actors.



Figure 3. Visualisation of the environmental crime enforcement model in Sweden

6.5 Strengthening the capacity of environmental policing in the Swedish Police

6.5.1 Police education and training

Environmental crime education and training within the Swedish police system remains limited and fragmented, though gradual improvements are being made. In the past, the University of Uppsala gave a six-week course. Currently, the environmental crime course lasts four weeks and is given by the Police in a more concentrated manner (Interviewee 3). Civilian investigators undergo an 11-week course at the Swedish Police Academy, which was previously given in a hybrid format but is now fully online.

⁴¹ The interim project reports are available at <https://www.naturvardsverket.se/om-oss/regeringsuppdrag/pa-gaende-regeringsuppdrag/utveckla-den-myndighetsgemensamma-satsningen-mot-avfallsbrottslighet/>

Police officers, by contrast, can access an environmental investigation course and a separate six-week course for crime scene investigation. In addition to the 11-week course for civilians, there is an additional programme called FPU - function based police education. This course has been developed especially for civilian police employees with an academic degree who are hired or nominated (if already employed) by the police to become full police officers (Interviewee 11).

In general, the environmental crime education programme is on-the-job learning, making the development process highly adaptive and practice-based (Interviewee 1, 2, 10, & 11). There is a recognised need to strengthen basic training, particularly for police officers, who must develop a better understanding of environmental legislation. From a strategic perspective, enhancing foundational education is considered a priority for improving overall enforcement capacity.

6.5.2 *Environmental crime investigations*

As previously noted, each of Sweden's seven police regions has a dedicated environmental crime unit. Among the teams to which our study's participants belonged, the number of members typically ranged from 8 to 12. Not all members serve as investigators, but each team includes a designated investigation leader. Based on interviews, individual investigators typically manage between 10 and 20 cases.

In most cases, environmental crime investigations begin with a case report originating from an administrative or supervisory authority. These are promptly discussed with a prosecutor specialising in environmental crime. The geographical size of police jurisdictions, which varies significantly across Sweden, can influence the rate of environmental crime detection. For instance, southern municipalities are generally smaller and more densely populated, making them easier to monitor. By contrast, northern regions require coverage of large, sparsely populated areas, posing logistical challenges (Stassen & Ceccato, 2020). Another factor influencing reporting frequency mentioned repeatedly in the interviews is the quality of collaboration between police investigators and environmental inspectors.

During a personal communication with and presentation by Nubia Evertsson (28 October 2025) further information based on police data provided valuable insights into the operational realities of environmental crime investigations in Sweden. The data indicate that only a limited subset of recorded environmental crime cases proceeds to the prosecutorial stage. Between 2020 and 2023, the number of cases forwarded to the Swedish Prosecution Authority remained relatively stable at just over 100 cases per year, before declining in 2024. These figures reflect cases that met the evidentiary threshold required for prosecution and point to the inherent complexity of environmental crime investigations, where evidentiary challenges, technical assessments, and legal requirements can constrain the progression of cases.

At the same time, the Swedish Police appear to have made notable gains in investigative efficiency. Average case processing times decreased substantially between 2020 and 2024, falling from approximately 329 days to 147 days, indicating faster case handling

and potentially reflecting the effects of specialisation, organisational learning, and prioritisation within environmental crime enforcement. Nevertheless, the persistence of a sizeable number of open cases (around 1,000 in recent years) suggests that efficiency improvements have not yet fully alleviated investigative workloads (*ibid.*). Taken together, these findings highlight a system characterised by increasing procedural efficiency and continued capacity pressures, particularly in light of the complexity and resource demands of environmental crime investigations.

The investigative toolkit available to Swedish environmental crime units is extensive but largely standardised. Field inquiry and direct engagement are rare. The choice of investigative tools depends on the severity of the offense and the legal thresholds governing investigative powers. Cases are typically built using multiple data sources, including municipal reports, interviews with inspectors (from municipalities or County Administrative Boards), photographs, sampling, and on occasions, online information. However, open-source intelligence (OSINT) is not yet used in a systematic or structured way. Tools such as drones and helicopters are employed to monitor land changes, and one interviewee mentioned the use of trained dogs for detecting hidden cash. Investigators can also gain information from bailiffs and debt collectors to trace business and financial histories. The use of informants is non-existent, and artificial intelligence (AI) is currently only used for transcribing interviews. However, some of the interviewees shared an expectation that advanced technologies will soon be introduced to support investigations more broadly (Interviewee 3). It is worth mentioning that Swedish Police are also participating in Perivallon, a Horizon-funded research project that aims to assist law enforcement agencies across Europe in detecting and preventing environmental crimes with AI-powered geospatial intelligence, remote sensing, digital scanning, online monitoring, and risk assessment (Perivallon Consortium, n.d.).

An important finding emerging from this study concerns a structural paradox in the Swedish enforcement model related to the burden of proof (Interviewee 1 & 16). There is a critical distinction between the investigative logics of the administrative/supervisory branch and the police–prosecutor axis. While prosecutors must establish guilt beyond reasonable doubt and support it with admissible evidence, inspectors typically operate under administrative logic, which assumes that violations are not necessarily criminal in nature. This mismatch becomes evident in procedural areas such as environmental sampling, where, for example, prosecutors may require standards of evidence that inspectors do not routinely meet.

Among the most significant challenges highlighted in our study is the importance of sampling and traceability in determining criminal liability, which has arisen as one of the most significant themes in the study overall. While support is available from the National Forensic Centre, the complexity of tracing environmental contaminants is considerable. One forensic expert noted that the physical characteristics of many chemicals and pollutants make them nearly indistinguishable without contextual or testimonial evidence (Interviewee 4 & 9). For instance, sulphuric acid looks identical regardless of its origin, which amplifies the complexity of its forensic traceability.

Sweden has made improvements in sample collection, largely due to specialised training and the deployment of environmental crime scene investigators authorised to take samples. Samples may be collected by police forensic units (trained police officers) or inspectors from municipal or county authorities. The latter has gradually decreased as more trained police officers in this field are available. However, as noted by the forensic expert, a single case may involve multiple samples (Interviewee 9). Interview data suggests that the willingness of inspectors to take samples increases when cooperation with the police is good. Some inspectors and police officers still hesitate, perceiving sampling as being overly technical or ‘too scientific’ (Interviewee 16).

It has been established that environmental crime enforcement requires a range of specialised expertise, depending on the nature of the case. When such expertise is needed, in Sweden it is typically sourced externally and incorporated through expert witness testimony. Many interviewees identified the Swedish Environmental Protection Agency as a key source of technical knowledge, especially given that police forces are still at early stages of developing internal expertise.

Because environmental crimes almost always involve financial or economic dimensions, several interviewees emphasised the need to include financial investigators in environmental crime teams (Interviewee 1). Another critical role identified was that of a data analyst capable of synthesising and interpreting diverse data sources, including social media, geospatial data, and financial records. For instance, assessing waste volumes—both above and below ground—and evaluating compliance with storage regulations requires a much-sought after analytical capacity in some of the teams.

A number of indicators are used to measure police effectiveness in processing environmental crimes. Among them are the number of processed cases referred to the Swedish Prosecution, the time needed for processing cases, and the number of pending cases. In addition, the number of fines issued or the number of interactions with other agencies are sometimes used as informal indicators of police performance (Interviewees 5 & 6).

6.5.3 *International presence and collaboration*

While there are clear examples of the Swedish Police taking an active role at an international level, most notably through participation in EnviCrimeNet (its 2023 General Assembly was held in Stockholm⁴²), the overall international presence and engagement of the Swedish Police in environmental crime enforcement remains limited. This is particularly evident when compared with the more extensive international involvement observed in the case studies of France and Spain. Nonetheless, more recent developments point to a gradual expansion of international engagement, as illustrated by the participation of the Swedish Police in the EU Horizon-funded Perivallon project,

42 <https://www.envicrimenet.eu/the-swedish-police-hosted-the-envicrimenet-annual-general-assembly-meeting-in-stockholm-as-part-of-the-swedish-presidency-of-the-council-of-the-european-union/>

which aims to develop a digital tool to improve the detection of illegal waste disposal and to strengthen intelligence on organised environmental crime.⁴³

6.6 Conclusions

This country report provides a summary of environmental crime enforcement in Sweden, with particular emphasis on the role and current position of the Swedish Police. It explores the resources currently available to them, their capacity to address environmental crime, and the changes anticipated in the near future.

The challenges and limitations identified during interviews in Sweden are not unique to the country; they are highly relevant to other jurisdictions as well, though their scale and manifestation may differ. Data collection took place during a period of paradigm shift in Sweden, marked by the introduction of new legislative, policy, and procedural proposals. There is growing recognition of the need for more substantial police involvement in environmental crime enforcement. While the existing model does not yet fully support this expanded role, it continues to perform a necessary function.

One of the most notable findings from the analysis of Sweden's enforcement model is the integration of civilian investigators into police environmental crime teams. This development facilitates the inflow of much-needed environmental science expertise, while alleviating staffing shortages and retention pressures within the police force. Notably, this internal diversification of expertise stands in stark contrast to the absence of formal collaboration between the Swedish Police and third-sector organisations, suggesting that specialised knowledge is being institutionalised within law enforcement rather than sourced through external civil society partnerships.

Efforts by the Swedish Police to centralise environmental crime enforcement have been significantly shaped, perhaps unexpectedly, by the Think Pink case. No other topic emerged as consistently across all interviews. The case has served as a shared point of reference, offering critical insights not only into the nature of environmental crime in Sweden but also into the potential for multi-agency collaboration, even across regions with differing structures and capacities.

43 <https://perivallon-he.eu/>

7 France

7.1 Geographical disposition

France is the largest European Union country with a wide territorial diversity, spanning major river basins systems (Seine, Rhône, Loire), industrial corridors, mountain ranges (Alps, Pyrenees), extensive agricultural areas, and the EU's largest maritime zone (Atlantic, Mediterranean). This geographical diversity translates into an environmental crime landscape that is both varied and geographically dispersed, distinguishing France from most other EU Member States.

Regions with high industrial density have historically been associated with elevated pollution risks (EEA, 2019). For instance, the area south of Lyon, commonly referred to as the *Vallée de la Chimie* (Chemical Valley), represents one of France's most significant industrial clusters. Here, chemical and petrochemical activities generate heightened exposure to environmental risks and regulatory non-compliance issues, including illegal emissions and the mismanagement of hazardous waste, among others (Interviewee 22). Conversely, rural and protected regions such as the Camargue and parts of Corsica face biodiversity threats linked to illegal hunting, wildlife trafficking, and habitat destruction.

Moreover, France's proximity to Belgium, Spain, Italy, and Switzerland makes it a strategic corridor for waste trafficking, adding a transnational dimension to its environmental enforcement challenges. As a result, regional and urban disparities are evident in how local authorities and communities engage with ecological governance, sustainability, and green transition initiatives. Cities such as Strasbourg, Lyon, Bordeaux, and Grenoble, often governed by Green or Socialist parties, are frequently cited as leading examples of "green cities" (Interviewee 22).

7.2 Environmental legal and policy framework

In France, more than 2,000 distinct environmental offences have been identified, dispersed across 15 environmental codes and several other legal instruments designed to strengthen environmental protection. Key developments include the establishment of the Environment Code in 2000, the adoption of the Environment Charter with constitutional status in 2005, the Biodiversity Act of 2016, the Circular Economy Act and the

Environmental Justice Act of 2020, and the Climate Act of 2021⁴⁴ (Bianco, Lucifora, & Vagliasindi, 2015; Gendarmerie Nationale, 2022). In addition, the 24 December 2020 law (Loi n° 2020-1672) created regional centres (“pôles”) which are specialised in the environmental offences that come under the jurisdiction of each court of appeal, in order to handle the investigation, prosecution, and judgment of complex environmental offences.⁴⁵

Furthermore, ecocide is an offence under Article L. 231-1 in the Environmental Code. This is something that is considered disappointing by some, as the offence is classified as a “délit” (misdemeanour) and not a “crime”, and it appears in the Environmental Code, not in the Criminal Code (Interviewee 23). What is also noteworthy, in February 2025, France introduced one of the most ambitious legal frameworks with respect to PFAS⁴⁶ regulation, which bans manufacture, import, export and placing on the market of certain consumer categories containing PFAS from 1 January 2026⁴⁷.

However, interestingly, the French legal system does not provide a single definition of *environmental crime*. Instead, environmental offences are framed and classified within the broader penal structure as contraventions (minor offences), délits (misdemeanours), or crimes (felonies). Major pollution scandals, when exposed, tend to be categorised and discussed as cases of corporate or white-collar crime rather than as environmental crime *per se* (Interviewee 23, Interviewee 29). Most are administrative in nature, becoming criminal only when administrative or judicial decisions are breached (Bianco, Lucifora, & Vagliasindi, 2015). As one study participant noted:

From what I know, and from the work we're doing together at the OFB⁴⁸, France is generally very advanced when it comes to environmental law. Honestly, I don't really see yet what exactly the Environmental Crime Directive is going to change in French law, since we already have defined offences, criminal provisions, and a gradual system of sanctions. As we've discussed, there are already many structural and institutional strategies being put in place that cover the whole scope of the Environmental Crime Directive, I believe. I even think that the Environmental Crime Directive itself was inspired by certain aspects of French legislation. (Interviewee 29)

However, this complex and fragmented legal basis has direct consequences for law enforcement and the practical feasibility of environmental crime investigations. The dispersion of legal provisions across multiple codes complicates both the classification of offences and the procedural steps that follow. Consequently, the fundamental question, “How should an investigation begin?”, is invariably linked to the equally complex issue

44 Although the term “ecocide” is now officially recognised as an offence in the French law, the 2021 Climate Act introduced a new offence aimed at serious environmental harm could amount to “ecocide.”

45 <https://www.cours-appel.justice.fr/nancy/les-actions-des-juridictions-locales>

46 Per- and polyfluoroalkyl substances, which are a family of over 10,000 highly persistent synthetic chemicals often called ‘forever chemicals’ as they do not break down naturally.

47 <https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000051260902>

48 The French Office for Biodiversity (Office français de la biodiversité), will be discussed later in the chapter.

of “*Which law applies?*” (Interviewee 28). This observation is reinforced by the Cour des Comptes 2026 evaluation of the French water police, which identifies the complexity, instability and limited readability of the applicable environmental legal framework as a major obstacle to effective enforcement (Cour des Comptes, 2026).

7.3 Environmental crimes in France

In 2021, the French National Police and Gendarmerie recorded 31,400 environmental offences (felonies and misdemeanours), representing an increase of 7% compared to 2016 (i.e., +1.3% per year on average), of which 7,647 were reported by individuals or legal entities (usually direct or indirect victims) (Service statistique ministériel de la sécurité intérieure, 2022). Nearly half (45%) of these recorded offences involved acts leading to the depletion or degradation of natural resources, of which 55% concerned illegal forestry or mining activities (i.e., 25% of all offences), and 29% related to breaches of hunting and fishing regulations (13% of the total).

About one-third (34%) of the 31,400 recorded offences targeted animals, 11% related to failure to comply with prevention rules, 4% to pollution offences, 4% to the transport or dumping of waste (including cross-border waste movement), and 1% to the trade or possession of protected wildlife species (CITES) (ibid.). Approximately 62% of environmental offences recorded by the police and the national gendarmerie were considered minor in nature (Service statistique ministériel de la sécurité intérieure, 2022; Frattini, 2022, as cited in Malochet, 2023, p. 9).

Approximately 64% of recorded environmental offences were disproportionately concentrated in rural municipalities and small urban settlements (fewer than 10,000 inhabitants). This concentration is largely explained by the nature of the offences: most environmental violations—such as those related to hunting, fishing, and the exploitation of natural resources—require access to natural spaces, which are more common in rural or semi-rural areas (Malochet, 2023).

In addition, rural areas near major cities such as Paris are particularly prone to illegal dumping of construction waste, facilitated by short transport distances, farm tracks, and wooded areas that provide cover. However, this does not mean that urban areas are spared. Cities face their own environmental issues including high pollution levels, unauthorised dumping of bulky waste on pavements, watering by local authorities during droughts, the keeping of non-domestic species by individuals or establishments, and the proliferation of tags, graffiti, and other illegal displays (ibid.).

Furthermore, only 8% of suspects in environmental offences in France were legal entities, particularly in cases involving pollution, waste management, and breaches of regulatory prevention duties (Service statistique ministériel de la sécurité intérieure, 2022). Legal-entity involvement was highest in the agriculture, automotive, and construction sectors.

Among environmental cases handled by public prosecutors (excluding acts against animals), those recorded by law enforcement agencies accounted for nearly half (47%) on average (ibid.). More specifically, of all cases handled by prosecutors dealing with

environmental disputes, one-third originated from the French Gendarmerie and 14% from the National Police (compared with 36% and 50% of all criminal cases, respectively), while 46% were referred by other administrations (national, regional, departmental, municipal, or other) (Bouhoute & Diakhaté, 2021, as cited in Malochet, 2023). In 2020, France generated 310 million tonnes of waste, 70% of which came from the construction and public works sector. This was accompanied by a significant rise in illegal dumping, with 36,000 illegal sites identified in 2021 (Senate, Information Report No. 738 – 2021, cited by Gendarmerie nationale – CESAN, 2025).⁴⁹ The issue of illegal waste dumping has gained visibility in recent years and was the subject of widespread media coverage and national outrage in August 2019 following the death of Jean-Mathieu Michel, mayor of the Var commune of Signes, who was struck by a van whose driver had been caught dumping rubble in the countryside (Malochet 2023). Between 2018 and 2021, Johnny Demeter was the main defendant in a trans-border environmental crime involving the illegal transport of nearly 10,000 tonnes of waste from Belgium into France. Under the guise of authorised waste collection, his network posed as legitimate managers, falsified documents, and collected and transported industrial and domestic waste from Belgium into French territory—particularly in the northern region near Rédange—before dumping it without authorisation on local authority or private land. The operation yielded substantial profits (estimates exceeding €1.5 million) and caused serious environmental harm, including contamination of water bodies, yet the waste remains untreated. The trial, held in France, marks a significant criminal-law success, though from an environmental-remediation perspective the case remains unresolved.⁵⁰

There is a parallel economy in waste management, particularly within the construction sector, accompanied by forms of corporate crime characterised by illegal dumping practices—whether carried out directly by companies or through subcontractors who fail to comply with waste reprocessing obligations. Introduced under the Circular Economy Act of 2020, the implementation of Extended Producer Responsibility (EPR) schemes, based on the “polluter pays” principle, seeks to limit this type of environmental damage. However, it remains to be seen to what extent these measures will effectively reduce illegal practices (Malochet, 2023).

In addition, France has emerged as one of the leading countries in the debate on PFAS (per- and polyfluoroalkyl substances) pollution, largely due to two major investigative journalism initiatives: the *Forever Pollution Project* and the *Forever Lobbying Project*.⁵¹ Launched in 2023, the *Forever Pollution Project* was a pioneering cross-border initiative that united journalists and scientific experts to investigate and visualise the scale of

49 Gendarmerie nationale – CESAN. (2025, September 22). Déchets et criminalité environnementale : la face cachée d'un fléau toxique (épisode 1/2 – état des lieux). Gendinfo – Terrain. Ministère de l'Intérieur. <https://www.gendarmerie.interieur.gouv.fr/gendinfo/terrain/dechets-et-criminalite-environnementale-la-face-cachee-d-un-fleau-toxique-episode-1-2-etat-des-lieux>

50 <https://www.euronews.com/green/2023/12/19/waste-traffickers-who-posed-as-rubbish-collectors-then-dumped-it-go-on-trial-in-france>

51 <https://foreverpollution.eu/>

PFAS contamination across Europe. Its findings, published in February 2023, revealed nearly 23,000 confirmed contaminated sites and an additional 21,500 presumptive sites, which were presented through an interactive map—the first of its kind on this issue. Building on this work, the *Forever Lobby Project*, released in January 2025, uncovered the lobbying and disinformation strategies employed by chemical and plastics industries to hinder EU regulatory efforts aimed at restricting or banning these so-called “forever chemicals” (Fieldwork notes, 23 January 2025, Interviewee 26 & 27).

Alongside the French national police and gendarmerie, other agencies are also authorised to record environmental offences⁵². Among them are: customs services, municipal police, environmental inspectors of the French Biodiversity Office (OFB), and territorial forestry officers of the National Forestry Office (ONF). In 2024 there were 126,604 inspections conducted by the OFB inspectors, a 12% year-on-year rise. Although the majority of inspections confirmed compliance, the OFB recorded more than 9,500 criminal offences against environmental law in 2024. These offences resulted either in full investigations or in the issuing of simple penalties (OFB, 2024).

The effectiveness of the enforcement system and the activity of the courts remain weak in this area. Data from the French Ministry of Justice indicate that environmental litigation accounts for less than 1% of cases handled by the criminal courts between 2015 and 2019 (Malochet, 2023; Magnin et al., 2024). The Cour des Comptes similarly concluded that, in the field of water policing, enforcement remains weak despite inspection activity (Cour des Comptes, 2026). Within this limited caseload, waste-related offences dominate criminal environmental proceedings: 41% of cases during the same period concerned pollution, of which 84% fell into the “rubbish and waste” category (Malochet, 2023).

7.4 Environmental crime enforcement model

Existing empirical studies and scholarship demonstrate that France’s environmental crime enforcement model is characterised by a deeply pluralistic, complex, and fragmented system of actors. This has been extensively documented in the comprehensive report by Virginie Malochet (2023)⁵³ and in the detailed analysis of the administrative and regulatory dimensions of the system by Léo Magnin, Rémi Rouméas, and Robin Basier (2024).

A wide range of institutions and services are authorised to conduct environmental inspections, record violations, and pursue enforcement actions. These bodies may be

52 In the period 2015–2019, 47% of environmental cases (excluding offences against animals) processed by French Prosecution originated from Gendarmerie (33%) or national police (14%), while 46% came from other administrative organisations (Service statistique ministériel de la sécurité intérieure, 2022).

53 While extensively comprehensive and meticulous, the report approached the issue from the perspective of local governance, with a particular focus on the actions undertaken by local authorities. This is because the report was commissioned in response to mounting concern among local authorities over the proliferation of waste dumping across urban, semi-urban, and rural areas. The issue revealed a widespread sense of uncertainty among mayors regarding the appropriate mechanisms and institutional responsibilities for managing such offences.

primarily administrative or judicial, more or less specialised, and include gendarmes (military police), police officers, environmental inspectors, and wardens. Key actors include specialised branches of the French Gendarmerie (OCLAESP/CESAN), the French Office for Biodiversity (OFB), the National Veterinary and Phytosanitary Investigation Unit (BNEVP), the National Forestry Office (ONF), the National Nature Reserves Network (RNF), the Coastal Protection Agency (Conservatoire du Littoral), the Regional Directorate for Environment, Planning and Housing (DREAL), the Departmental Directorate for Population Protection (DDPP), the National Police, Customs, and local elected officials (Gendarmerie Nationale, 2022).

France thus operates a highly pluralistic, multi-layered, and institutionally complex environmental enforcement system, blending administrative and judicial policing across a diverse array of actors with overlapping mandates. This plurality represents both a strength, through broad coverage and diverse expertise, and a weakness, due to fragmentation and coordination challenges. The 2026 Cour des Comptes report on water policing provides independent confirmation of this diagnosis. Although focused specifically on water enforcement, it describes the system as being marked by institutional complexity, the presence of multiple actors, and persistent coordination challenges (Cour des Comptes, 2026).

7.4.1 *National Police*

France is typically described as a dualist and highly centralised policing system structured around two national forces—one civilian, the *Police nationale*, and one military, the *Gendarmerie nationale*, each of which has a distinct history, identity, organisational culture, and operational doctrine (de Maillard and Skogan, 2020). At the time of this research, and consistent with observations made by other French scholars (Malochet, 2023; Interviewee 22, 24 & 25), environmental crime does not constitute an operational priority for the French National Police. Cases involving environmental offences represent only a marginal share of (National) police activity.

7.4.2 *Gendarmerie – OCLAESP – CESAN*

Policing environmental crimes has historically been part of the French Gendarmerie's local mandate, particularly in relation to hunting and fishing (Haberbush, 2023, as cited in Malochet, 2023, p. 15). Within the Gendarmerie, the Central Office for Combating Damage to the Environment and Public Health (OCLAESP), established in 2004, functions as a specialised interministerial judicial police unit responsible for complex investigations into environmental and health-related offences (Jolly, 2021). This is noteworthy as few law enforcement agencies combine environmental protection and public health within a single investigative framework.

OCLAESP is tasked with investigating complex cases, coordinating with partner agencies across the enforcement chain, supporting regional units, providing training, and conducting strategic forecasting. The office also serves as France's international contact

point, maintaining close relations with European and international police forces to facilitate intelligence exchange, operational coordination, joint investigations, and participation in EU-funded initiatives. In the past two decades, OCLAESP has established itself as a key national and international actor in the fight against environmental crime (Jolly, 2021; Malochet, 2023).

To strengthen the Gendarmerie's capacity to respond to environmental crimes, a new overarching command centre — the CESAN (Commandement de la Gendarmerie pour l'Environnement et la Santé — Environmental and Health Command) — was established in July 2023 under the authority of the General Directorate of the National Gendarmerie (Direction Générale de la Gendarmerie Nationale, DGGN).⁵⁴ CESAN provides operational, legal, and technical support, and coordinates the Gendarmerie's intelligence collection and analysis on environmental crime. Its primary objectives are to support field operations, enhance prevention, strengthen institutional partnerships, and develop criminal intelligence capabilities in order to strengthen the preventative actions against environmental crimes. It should also be specified that CESAN is now responsible for managing the training programme for all environmental gendarmes (personal communication with Sébastien Nochez, 30 December 2025).

The CESAN National Action Plan 2024–2027 is structured around four main objectives, thirty-two measures, and six performance indicators. The first objective focuses on strengthening governance in the fight against environmental offences by enhancing coordination and accountability across all levels. The second seeks to mobilise all Gendarmerie units, integrating environmental protection into the daily activities of both territorial and specialised forces. The third objective aims to expand training programmes, foster inter-agency cooperation, and develop dedicated tools to enhance investigative and preventive capacities. Lastly, the fourth objective promotes a comprehensive and integrated approach, combining governance, mobilisation, and capacity development to deliver tangible results in combating environmental harm (Gendarmerie Nationale – CESAN, 2024). Its implementation is to be monitored with the active involvement of partner institutions. The plan is designed to be updated annually, with specific priorities defined each year to guide operational focus and resource allocation. Since 30 January 2025, CESAN gendarmes have been authorised to conduct criminal environmental investigations (Interviewee 33).

The role of the eco-gendarme has been evolving since the 1990s. It was first created in 1993 under a different designation—*environmental relay trainers* (*formateurs relais environnement*, FREE)—and renamed in 2003 as *environmental relay investigators* to emphasise its judicial component. With the subsequent establishment of the OCLAESP, responsibility for coordinating and training this network was logically transferred to the central office, which now oversees EAESPs (*enquêteurs atteintes à l'environnement et à la santé publique* – investigators specialising in environmental and public health

54 Ministry for Europe and Foreign Affairs. (2025, April). Fighting environmental crime. <https://www.diplomatie.gouv.fr/en/french-foreign-policy/security-disarmament-and-non-proliferation/fight-against-organized-criminality/fighting-environmental-crime/>

offences) and 2EP (*enquêteurs environnement de proximité* – local environmental investigators). The EAESPs serve as liaisons between the central office (OCLAESP) and the territorial or specialised Gendarmerie units to which they belong. They receive specific training provided by OCLAESP, consisting of a three-month distance learning programme, an examination, and a two-week in-person internship (Malochet, 2023). It must be noted that the EAESP designation refers to a specific qualification or function, rather than a separate post. The gendarmes concerned perform this function within their existing units, and the time they can dedicate to it depends on their operational workload. As of 2022, the Gendarmerie had approximately 350 EAESP officers, averaging three per department (*ibid.*). The appointment of (less trained) local E2P was designed to strengthen the local environmental crime enforcement chain by supporting investigators, advising elected officials, and raising public awareness (*ibid.*).

At the end of the summer of 2022, following a series of forest fires that devastated several regions of France, the Minister of the Interior announced plans to “improve judicial investigations” by “massively strengthening the resources of the OCLAESP” and creating 3,000 ‘green gendarme’ positions. In reality, however, these 3,000 posts do not correspond to full-time equivalents but to the additional functions in this regard (Le *Canard enchaîné*, 2022; Delbecq, 2020, both cited in Malochet, 2023, p. 19). As noted by one interviewee, the evolution of eco-gendarmes represents a specialised skill set rather than a distinct position (Interviewee 24).

The establishment of dedicated environmental units within the Gendarmerie reflects a growing institutional recognition of environmental issues. As noted by several interviewees, the Gendarmerie has become particularly adept at communicating its environmental engagement to a range of audiences; however, this visibility does not necessarily translate into substantive or sustained enforcement activity (Interviewee 25). Beyond this dedicated structure, quantifying the number of gendarmes directly or indirectly engaged in environmental policing remains highly complex. In practice, any officer may encounter environmental violations in the course of routine policing duties. While the designation of focal points or liaison officers enables the Gendarmerie to claim a nationwide network of environmental correspondents, these officers are not environmental specialists *per se* and are often reassigned to other priorities, which limits their ability to develop consistent expertise in environmental crime (Interviewee 24).

Moreover, structural tensions exist within the Gendarmerie’s dual mandate. On the one hand, it maintains close partnerships with the agricultural sector and rural constituencies; on the other, it is also tasked with enforcing environmental protection laws—sometimes against the very actors with whom it collaborates. The Déméter unit, created within the Gendarmerie nationale in 2019⁵⁵ through a partnership agreement with the agricultural unions FNSEA and Jeunes Agriculteurs, illustrates the blurred bound-

55 <https://www.gendarmerie.interieur.gouv.fr/gendinfo/terrain/immersion/2020/qu-est-ce-que-demeter-la-nouvelle-cellule-destinee-a-protger-les-agriculteurs>

daries between policing, industry interests, and political pressure in the field of environmental governance (Interviewee 34 and 35).

Officially justified as a response to so-called *agribashing*, the unit was mandated not only to address offences against agricultural property, such as tractor or GPS thefts, which were prominently cited at the time, but also to monitor “actions of an ideological nature” critical of intensive farming. In practice, this referred primarily to animal-protection organisations that documented, through filming in slaughterhouses or farms, instances of animal mistreatment, including beatings or other forms of abuse (Interviewee 34 and 35). This expansion into the surveillance of lawful activist activities has sparked sustained criticism from NGOs, legal scholars, and civil-liberties advocates, who argue that it risks conflating dissent with threat and creating a *de facto* offence of opinion.⁵⁶ This dual positioning increasingly requires the institution to balance its traditional rural legitimacy with emerging ecological priorities, a tension that may become more pronounced as environmental enforcement expands (Interviewee 25).

7.4.3 *Environmental Inspectors (Inspecteurs de l'environnement, IE)*

Since 2012, environmental inspectors have also formed part of the environmental enforcement chain in France. These inspectors operate within decentralised government departments, headed by regional and departmental prefects, and are based in directorates responsible for planning, housing, territorial management, or population protection, as well as within the French Office for Biodiversity and national parks.

Typically trained in engineering or technical disciplines, these officials are commissioned by the Ministry of Ecology and sworn in by the judicial court, authorising them to investigate and record offences under the Environment Code and relevant provisions of the Criminal Code relating to illegal waste disposal. In practice, however, their work is primarily oriented towards administrative policing rather than judicial investigations. They operate in plain clothes and do not carry weapons. The scope and methods of their missions, however, vary depending on the department to which they are assigned and the local institutional arrangements in place (Malochet, 2023).

Environmental inspectors in France are divided into two main categories: (1) IEs specialising in “classified facilities” (*inspecteurs des installations classées pour la protection de l'environnement*, ICPE inspectors) with approximately 1,530 officers in 2021 (Sénat, cited in Malochet, 2023: 23); and (2) IEs specialising in water and nature harms with around 3,100 officers (Magnin et al., 2024: 35). The former are based primarily within the Regional Directorates for the Environment, Planning and Housing (*Directions régionales de l'environnement, de l'aménagement et du logement* – DREAL) and the Departmental Directorates for Population Protection (*Directions départementales de la protection des populations* – DDPP) (ibid.). They are responsible for monitoring com-

56 https://www.lemonde.fr/idees/article/2025/04/06/la-cellule-demeter-menace-les-militants-animalistes-et-environnementalistes-ainsi-que-les-libertes-associatives_6592083_3232.html

pliance, preventing pollution, and mitigating risks associated with industrial and agricultural facilities subject to environmental protection regulations (Malochet, 2023). According to Magnin et al. (2024), however, their role is often oriented more towards technical and regulatory support for the private sector than toward strict inspection and enforcement.

The environmental inspectors specialising in water and nature-related cases are positioned within the Departmental Directorates for Territories (*Directions départementales des territoires* – DDT), the Regional Directorates for the Environment, Planning and Housing (*DREAL*), as well as within the French Office for Biodiversity (OFB) and national parks (Magnin et al., 2024). A significant part of their work involves issuing technical opinions on nature-related projects, as well as advising and monitoring project developers to ensure compliance with environmental requirements (Malochet, 2023).

In 2022, approximately 1,600 inspectors were responsible for monitoring around 500,000 regulated establishments (Ministère de la Transition Écologique et de la Cohésion des Territoires 2023, cited in Malochet 2023: 78). As Louvet (2021: 32–33, cited in Malochet 2023: 78) observes, this staffing level renders regular oversight unfeasible: on average, each site is inspected only once every seventeen years. The capacity problem is also echoed by the French Cour des Comptes, which estimates that approximately 1,560 full-time equivalents are devoted to water policing in the broad sense, which is extremely limited given the number and diversity of France's river basins and aquatic ecosystems, as well as the increasing complexity of the enforcement tasks (Court des Comptes, 2026).

The law establishing the title of *environmental inspector* also promotes the use of “criminal transactions” (*transactions pénales*), which is currently the most dominant approach. Although these must be validated by a public prosecutor, they are proposed and implemented within the framework of administrative policing. This mechanism allows inspectors to offer offenders a settlement that typically combines compensation for environmental damage with a reduced fine. Once approved by the prosecutor, the transaction precludes further criminal proceedings, results in no criminal record entry, and remains non-public, thereby avoiding a court appearance and theoretically promoting faster environmental restoration (Magnin et al., 2024; Interviewee 30 and 35).

7.4.4 *The French Office for Biodiversity – OFB*

The French Office for Biodiversity (OFB) was created in 2020 through the merger of the French Agency for Biodiversity (AFB) and the National Office for Hunting and

Wildlife (ONCFS)⁵⁷. It has become a key specialist environmental policing authority in the French environmental crime enforcement model.

The 1,700 environmental OFB inspectors (IEs) visibly embody the institution's dual policing role, operating in uniform, armed, and equipped in a manner consistent with conventional law enforcement. Although they share the same legal status as other IEs, OFB inspectors work within a distinct institutional framework that combines administrative and judicial policing. They not only issue technical opinions and monitor regulatory compliance, but also detect offences and conduct criminal investigations. Reforms in 2019 and 2020 strengthened this hybrid mandate, granting OFB officers expanded powers to interview suspects, conduct searches, issue summons, submit formal requests, and—for selected agents—acquire judicial police officer (OPJ) status, including the authority to impose police custody (Malochet, 2023; Magnin et al., 2024). However, our study findings suggest that the OFB's activity continues to focus predominantly on low-intensity environmental offences such as littering, small-scale dumping, or other acts of “environmental incivility,” rather than on serious criminal cases (Interviewee 31). This indicates a gap between the agency's expanded legal powers to use controlled purchases and rely on undercover investigations, and the nature of its low-threshold day-to-day enforcement work (Interviewee 30). Moreover, inspectors frequently emphasise the technical dimension of their role, highlighting their interest and expertise in ecological assessment and restoration rather than punitive enforcement. As one interviewee said: *What matters most for us is the restoration or repair of the damage done to the environment. This can mean restoration measures, or what we might call ecological remediation. For instance, we had a major case involving a gas pipeline crossing a national park forest. The judge's ruling, to summarise it, made no ecological sense—I'm exaggerating a bit, but essentially, we were ordered to replant trees in the middle of summer, which is, of course, impossible* (Interviewee 30).

Despite their enhanced judicial role, policing does not constitute the entirety of OFB inspectors' work. They are expected to devote approximately 60% of their time to enforcement activities, with the remaining share dedicated to education, policy implementation, research, environmental monitoring, and heritage management (Malochet, 2023; Interviewee 32). For instance, at the time of our fieldwork, the OFB was preparing its own benchmarking study on environmental policing practices in Belgium, Germany, Austria, Italy, and Spain, aiming to understand how other countries address similar challenges and to identify the key institutional actors involved (Interviewee 31).

Initial OFB training lasts approximately one year and combines theoretical instruction with field placements in the units where new inspectors will subsequently serve. After obtaining certification, inspectors have access to continuing professional development throughout their careers. These include specialised modules in core areas of enforce-

57 Namely, the National Agency for Water and Aquatic Environments (Onema), the French National Parks Authority (PNF), the Marine Protected Areas Agency, and the Technical Workshop for Natural Areas (Aten) (see Malochet, 2023, p. 9, footnote 7).

ment such as water policing, pollution control, pesticide regulation, and wildlife trafficking. The OFB also maintains an extensive in-house training catalogue, which includes foundational courses such as basic OSINT training (Interviewee 32).

OFB also maintains extensive collaboration with environmental non-governmental organisations at both the national and international levels. The OFB regularly exchanges information with organisations such as TRAFFIC, WWF, and other conservation networks which can provide intelligence gathered through their local, national, or transnational monitoring activities. This cooperation is particularly active in the area of wildlife protection and trafficking, where NGOs play a key role in reporting offences and sharing data relevant to French jurisdiction (Interviewee 30). In addition, OFB is part of BIOVAL project – launched in 2020 this is an ongoing cross-network project led by the EUFJE (the European Union Forum of Judges for the Environment), in cooperation with IMPEL (the EU Network for the Implementation and Enforcement of Environmental Law) and ENPE (the European Network of Prosecutors for the Environment) to develop and disseminate a non-binding, practical tool that allows legal professionals (judges, prosecutors) to value damage to nature (especially fauna/vertebrates) in court when restoration “in natura” is not feasible.⁵⁸

However, the OFB also faces several challenges. First, as it carries with it the history of each of the organisations incorporated into it, the recent process of aggregation and organisational transformation raised issues of identity and professional (re)positioning, causing tensions and even a certain unease among the ranks as “*within the agency there are some tensions because agents do not all come from the same agency, they have different backgrounds, different professional cultures*” (Interviewee 24). Despite promising developments, OFB also faces enduring pressures related to staffing, marked by recurrent risks of workforce downsizing and significant levels of turnover, which leads to the feeling among OFB staff that there are not enough of them to carry out the full scope of their duties (Interviewee 24).

Another related challenge to this are the public calls by farming unions and (far) right wing politicians in recent years to abolish OFB or to disarm OFB officers⁵⁹ (Interviewee 24 and 35)⁶⁰. The criticism directed at the OFB is perhaps not rooted in the organisation itself but rather reflects broader structural tensions within the agricultural sector

58 https://www.eufje.org/index.php?option=com_content&view=article&id=66&Itemid=257&lang=en

59 The right of OFB officers to carry firearms remains a contentious issue but it is officially justified as a measure of self-protection, given their frequent interactions with hunters and farmers. However, this is not a provision that OFB officers themselves generally welcome (Interviewee 24).

60 Several interviewees noted that political pressure to abolish the OFB has periodically resurfaced, particularly among elected officials from the Republicans and the National Rally, as well as figures such as Laurent Wauquiez (president of the Auvergne-Rhône-Alpes region) and Gérard Larcher (president of the Senate, who has made similar remarks about ADEME). These calls were revived during the agricultural protests of the previous winter in 2024, when major unions such as the FNSEA and Coordination Rurale criticised environmental policing as overly intrusive, excessively frequent in its controls, and, in their view, unnecessarily armed and overly stringent in its legal requirements. This stance is paradoxical, given that agricultural sector face only a 10% likelihood of inspection in any given year — effectively one inspection per decade (see Magnin, Rouméas, & Basier, 2024). Claims of an “obsession with control” or constant monitoring are therefore not supported by empirical realities. (Interviewee 35).

that is frequently a subject of OFB interventions. The current controversy over the OFB illustrates how environmental governance debates can be used to deflect attention from structural challenges, as political actors increasingly instrumentalise the agency's role for strategic ends. As two interviewees explained, addressing these issues requires a fundamental shift in how agriculture is conceived: farmers often do not earn sufficient income, and the existing system fails to provide the financial conditions necessary to transition to sustainable agriculture practices (Interviewee 23 & 33).

According to one interviewee, future institutional reforms may lead to a clearer division within the OFB between its environmental police and scientific staff. OFB would then retain its scientific and technical expertise, while enforcement personnel could be integrated into the National Police or the Gendarmerie, following the example of the Italian Carabinieri's environmental unit. Such a shift is viewed as necessary as OFB does not have enough public trust to be viewed as a legitimate security actor in this field (Interviewee 33).

7.4.5 *The National Forestry Office - ONF*

The National Forestry Office (ONF) is a public industrial and commercial establishment (EPIC) under the supervision of the ministries of agriculture and ecology; its statutes are defined in the Forest Code. Although the ONF lists 160 different professions within its organisation, territorial forestry technicians (TFT) represent the majority of its staff. They are the main point of contact for local stakeholders and perform a wide range of tasks related to the sustainable management of state-owned and communal forests. In their site monitoring role, TFTs perform a 'police function' – a historical role reflected in their former title of forest ranger (*garde forestier*) (Malochet 2023).

TFTs hold either public-law or private-law status. Public-law TFTs are sworn officers with powers under the Forest and Environment Codes, including seizure, requisition, and informal questioning and may be armed (practices vary by region). Private-law TFTs now form the majority of the workforce and their numbers are set to grow. They wear the same uniform, record offences, but do not investigate them (*ibid.*).

In practice, policing is a minor component of their work. Staffing reductions mean one TFT now covers roughly 1,000 hectares, compared to 500 a decade ago, with ecological management and wildfire risk being increasingly prioritised. Consequently, routine patrols and enforcement operations are limited. In one ONF agency in western Île-de-France, officers devote less than 5% of their time to policing, producing just over 20 reports annually. Nationally in 2023, ONF reported approximately 4,600 recorded offences; modest given the 11 million hectares under its management (*ibid.*).

Given the limited availability of TFTs for police missions, and considering the need for expertise on judicial procedures, the ONF has, for several years, been focusing on specialising certain agents and setting up a 'policing network' 'to make the most of their skills' (ONF 2019 cited in Malochet 2023: 29). The TFTs in this network formulate regional priorities in local 'policing strategies' such as the fight against fly-tipping, motor

vehicles, mountain biking on unauthorised paths, stray dogs and dog sitters, and those who take over a forest area to conduct a commercial activity without permission. They facilitate the organisation of police operations with other agencies and are in contact with the public prosecutor. However, all these tasks are additional to their regular workload (ibid.).

The organisation has recently faced sustained financial pressures and structural reform. Since 2000, staff have been cut from nearly 13,000 to around 8,000 (-40%), with a further 475 posts scheduled to disappear by 2025. Reforms also target priority-setting and employment models, shifting from civil-service status to private-law contracts (ibid.). This downward trend persists despite growing public, media, and political recognition of the ONF's crucial role, particularly in light of increasingly severe summer wildfires in France in recent years.

7.4.6 *Municipal Green Policing*

Local authorities in France have increasingly mobilised their regulatory instruments and expanded their involvement in the security field, notably through the management and coordination of local partnerships (de Maillard, 2005). Similar dynamics are evident in the domain of environmental crime enforcement, where local authorities have likewise expanded their operational and coordinating roles. Mayors hold environmental policing powers under the General Code for Local Authorities (CGCT) and related regulations. At the local level, municipalities play an increasing role in co-producing everyday environmental order through dedicated "green brigades." These units take diverse forms: some are integrated within security departments and adopt a repressive approach, while others are attached to sanitation services and focus on reactive urban-cleanliness work (Malochet, 2023).

Municipal green police generally comprise public order officers (*agents de surveillance de la voie publique* – ASVP) and, in some cases, rural police officers (*gardes champêtres*). The former are often part of municipal cleaning services. Rural green police constitute a distinct employment category within the municipal police branch of the local civil service, and demand for them is growing. They may be armed, and their judicial powers exceed those of municipal police officers, whose role is largely confined to recording offences. Under the Environment Code, rural police officers possess the same powers as inspectors from the OFB: they can conduct investigations, carry out home visits and informal interviews, seize property, and request documents or CCTV footage. By contrast, public order municipal police rely on the national police or gendarmerie to pursue further investigations based on their reports (ibid.).

Municipal strategies primarily emphasise prevention and communication through, for example, poster campaigns, school programmes, and awareness initiatives in natural areas. Some cities also encourage citizen participation via reporting apps and community engagement to enhance citizen responsiveness to environmental matters (Malochet 2023). There have been several excellent collaborative initiatives involving gendarmes, mayors, and hunters' federations that target illegal waste disposal and develop

local digital tools. Many of them were documented by Virginie Malochet in her extensive report, however the effectiveness of these local green policing measures remains uneven and difficult to evaluate systematically (Malochet 2023:113). In addition, mayors occupy a dual position as both regulators and regulated actors. They are subject to inspection (e.g., concerning municipal pesticide use) and may obstruct national enforcement agencies, such as the OFB, if local economic interests are at stake. This tension underscores the broader conflict between decentralised authorities and national environmental enforcement bodies (Magnin et al. 2024).

7.4.7 *Partnerships and coordination*

Given the deep fragmentation of the environmental policing and enforcement model in France, it is unsurprising that significant challenges persist in building effective collaborations and partnerships (Malochet, 2023).

Recent institutional developments have sought to address these coordination problems. Following the model of the decentralised anti-fraud committees (*Comités départementaux anti-fraude*, Codaf), the Comité opérationnel de lutte contre la délinquance environnementale (COLDEN – Operational Committee for Combating Environmental Delinquency) was established to improve coordination among the various administrations responsible for environmental protection at each French *département*. COLDEN brings together the judiciary, prosecution and policing actors to strengthen information sharing and enhance the effectiveness of legal actions against environmental offences. The committees meet annually in a plenary session to define strategic objectives and review progress, while operational meetings are held several times a year to implement priorities, plan control operations, and monitor ongoing investigations (fieldwork notes, 27 January 2025; Interviewee 34).

Furthermore, following an initiative by the Ministry of the Interior and Justice, in 2022, the Government Priority Workstream on strengthening the fight against environmental offences was established (*Chantier prioritaire du gouvernement (CPG) "Renforcer la lutte contre les atteintes à l'environnement"*)⁶¹. It is chaired by OCLAESP, with the OFB participating on its management committee. The committee meets every six months and has proven to be a productive and collaborative forum (Interviewee 33).

Another coordinating structure, the Mission inter-services de l'eau et de la nature (MISEN – Inter-Services Mission for Water and Nature), operates under the leadership of the departmental directorate for territories (*Direction départementale des territoires*, DDT). MISEN is tasked with coordinating public actions related to water policy, including the implementation of water-related regulations, management of water resources, and protection of natural habitats (fieldwork notes, 27 January 2025).

61 <https://www.gendarmerie.interieur.gouv.fr/gendinfo/actualites/2025/formation-des-administrations-competentes-en-matiere-de-lutte-contre-les-atteintes-a-l-environnement-aux-fondamentaux-de-la-police-judiciaire>

The Cour des Comptes also identifies MISEN and COLDEN as important coordination mechanisms, but stresses that their existence does not in itself resolve the deeper problem of fragmented responsibilities and uneven follow-up (Cour des Comptes, 2026).

Efforts to enhance collaboration have also been pursued through bilateral agreements. In 2020, OCLAESP signed a partnership agreement with the ONF, followed by a similar agreement with the OFB in 2022. The latter arrangement provides for the secondment of officers between the two institutions, reciprocal contributions to training programmes (technical input from the OFB for gendarmerie training and judicial input from the gendarmerie for environmental inspectors), and shared access to resources such as radio systems, drones, and helicopters. Notably, in 2022 the OFB and ONF also signed a bilateral agreement to reinforce exchanges and joint actions in the forestry sector (Malochet, 2023; Interviewee 33). At the time of our fieldwork, a judge was seconded to the OCLAESP headquarters (Interviewee 28).

At regional and departmental levels, there are additional examples of cooperation among prefectures, gendarmerie units, mounted police divisions, ONF and OFB services, *lieutenants de louveterie* (sworn volunteers responsible for wildlife and hunting enforcement), as well as local hunting and fishing federations and other policing actors. These collaborative arrangements are reflected in initiatives such as the “Clean Territories” operations (see Malochet, 2023, pp. 93–96).

The “Clean Territories” operations vary considerably in scope and composition, ranging from small-scale actions led solely by the Gendarmerie to large, multi-agency initiatives that involve extensive communication and public visibility. These broader operations mobilise a range of actors with environmental policing mandates, including specialists from the OFB, ONF, or environmental inspectors from decentralised state services⁶². The division of responsibilities among these actors reflects the broader institutional complexity of France’s environmental enforcement landscape, where administrative and judicial policing functions intersect but remain unevenly distributed (Interviewee 24). As Malochet (2023) concludes, the dynamics of partnership, communication, and cooperation vary markedly between territories. These differences depend on factors such as the degree of mutual trust and institutional legitimacy, the history of inter-agency collaboration, local power relations, professional culture, and interpersonal dynamics.

7.4.8 Prosecution

As in many other countries and the two other case studies examined in this research, environmental crime investigations in France are led by the prosecution. Green-policing actors engage with the public prosecutor’s office (*parquet*) at two levels: first, with

62 In the Île-de-France gendarmerie region, for example, two operations of this type took place in 2022, the first in January (80 gendarmes mobilised) and the second in October (160 gendarmes mobilised), concentrating a series of interventions on several previously identified targets in the same week, such as fly-tipping, excavated soil, car wrecks, garages that have not recycled their waste properly (Malochet 2023: 18).

the *officier du ministère public* (OMP)—typically a police commissioner—who handles the first four categories of offences heard by the police court; and second, with the *procureur de la République*, who determines whether to pursue more serious cases, including fifth-class offences, misdemeanours, and crimes (Malochet, 2023).

As in the policing domain, the justice system's response capacity remains limited, which helps explain why environmental offences represent only a small proportion of criminal court activity. Between 2015 and 2019, more than one in four environmental cases were dismissed without further action (Bouhoute and Diakhaté 2021, cited in Malochet 2023: 98). Notably, in recent years a so-called “environmental citizenship course” has been introduced as an alternative educational measure to criminal prosecution or judicial sanctions (Interviewee 34). Designed to raise awareness of environmental issues and promote responsible ecological behaviour, the course, organised by associations such as France Nature Environnement (FNE), may be proposed by prosecutors or judges for individuals involved in relatively minor environmental offences.

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However, among some policing actors, the main source of dissatisfaction with the public prosecutor's office lies in its failure to follow up on initiated proceedings and the lengthy delays involved (Malochet 2023; Interviewee 30).

In 2022, a decision was made to establish 36 court and prosecution sections dedicated to environmental crimes in France. The initiative ultimately failed, as these positions were never filled (Interviewee 28). Between 2020 and 2022, the French government pursued a policy to specialise prosecutors and courts in environmental matters, signalling a broader move towards the professionalisation of environmental justice (Ministère de l'Économie, des Finances et de la Relance, 2022). Yet, implementation has been only partially successful, as the planned number of specialised posts has not been fully achieved (Interviewee 28).

Nonetheless, progress is evident in the field of judicial training. At the French National School for the Judiciary (École nationale de la magistrature) in Bordeaux where judges and prosecutors train together, a specialised course on environmental crime has been introduced. Each year, approximately 20 to 30 participants enrol, and its growing popularity indicates a gradual strengthening of expertise and institutional interest in environmental criminal law (Interviewee 28). This trend also reflects a generational shift: younger magistrates increasingly enter criminal law with the explicit goal of practising environmental criminal law. Moreover, professional networks such as the Green Robes Group and the *Association française des magistrats pour la justice environnementale*

63 See for example <https://www.ville-chaumont.fr/actualites/une-convention-relative-au-stage-de-citoyennete-environnementale/#:~:text=Le%20%C2%AB%20stage%20citoyennet%C3%A9%20environnementale%20%C2%BB%20est,pr%C3%A9venir%20le%20renouvellement%20des%20faits>; <https://www.cours-appel.justice.fr/metz/stage-de-citoyennete-environnemental-une-premiere-session-concluante> and <https://www.fne-vaucluse.fr/dossiers/stage-citoyennete-et-sensibilisation-a-l-environnement-un-engagement-concret-avec-fne-84>

(AFMJE) have become key platforms for promoting environmental justice within the judiciary.⁶⁴

To support the comparative analysis presented in this section, the environmental crime enforcement model is visualised in Figure 4 to illustrate the institutional configuration and relationships between key actors.



Figure 4. Visualisation of the environmental crime enforcement model in France

7.5 Strengthening the capacity of environmental policing in CESAN

Initially, OCLAESP employed around 20 officers; it currently employs approximately 144 to 150 officers, with about 90 based at the central headquarters in Arcueil, and others deployed across metropolitan France (Bordeaux, Marseille, Metz, Rennes, Lyon, Valenciennes) and three overseas regions (French Guiana, Réunion, and French Polynesia) (Gendarmerie Nationale, 2022; Malochet, 2023). In addition, a small number of seconded experts from the judiciary and the French Office for Biodiversity are stationed at CESAN's headquarters in Arcueil (Interviewee 33). An estimate of how many gendarmes are actually engaged in this work remains difficult. According to an officer from the sub-directorate for force deployment (cited in Malochet 2023: 77), *“if we were completely optimistic, I would say 100,000,”* since all gendarmes are generalists and therefore potentially involved— *“but if we are realistic, the figure drops to 1,000,”* including currently deployed OCLAESP personnel and environmental investigators.

7.5.1 Education and training

Following a major policy initiative in 2022, France committed to training several thousand “gendarmes verts” (green gendarmes) to strengthen detection and enforce-

64 <https://www.agriculture-environnement.fr/2024/09/19/le-verdissement-de-la-magistrature-est-en-marche>

ment of environmental offences such as illegal waste trafficking, pollution, and arson. This initiative received broad coverage in the French press, which highlighted its strategic goal of embedding environmental expertise across territorial units.⁶⁵

The training and education programme in the field of policing environmental crimes, coordinated by CESAN, is organised in three tiers. The first provides foundational skills for investigators and consists of a 12-hour online module followed by three days of field-based instruction. At the time of fieldwork, approximately 3,500 gendarmes had completed this level over a two-year period, with the target set at 5,000. Participants are selected by the institution rather than volunteering, and the programme is taught in partnership with external actors. The second tier offers advanced training for those signing up voluntarily. It includes 24 hours of online instruction and ten days of in-person training. This level is designed to prepare practitioners to conduct complex investigations and is accessible not only to gendarmes but also to customs officers, magistrates, and national police personnel. Around twenty participants participate per year with a pass rate of 75%. Since its creation in 1993, the programme has produced approximately 700 graduates. A third, expert-level tier was under development at the time of research. Described as equivalent to a master's-level qualification, it will be delivered online and targeted towards a limited number of specialists (Interviewee 33). OCLAESP has also formed a partnership with the University of Avignon, which offers a continuing-education course that covers environmental crime, the University Diploma (DU) in "Scientific Expertise in Environmental Justice". It includes modules such as "Forensic Analysis and Environmental Crime (Interviewee 33).⁶⁶

Across all tiers, course content is grounded in practical investigative experience and supplemented by contributions from field practitioners and guest lecturers. Although the topic of environmental crime is not yet hugely popular within the force, interest and motivation are clearly increasing (Interviewee 33).

To attract and retain qualified personnel, the role should ideally become a full-time position within dedicated environmental units, accompanied by additional financial incentives. This is particularly important for officers holding a master's degree, for whom flexible pathways for rank advancement would serve as a further motivator. While these conditions are not yet in place within CESAN, there is a clear intention to move in that direction (Interviewee 33).

7.5.2 *Environmental crime investigations*

Environmental crime cases in France can be reported by any stakeholder directly to OCLAESP/CESAN through its dedicated hotline. Once received, the information is processed by the operations bureau, where it is analysed and prioritised. Priority is given to cases that intersect with existing intelligence, particularly those involving

65 https://www.lemonde.fr/planete/article/2022/09/01/des-gendarmes-bientot-formes-aux-atteintes-a-l-environnement_6139794_3244.html

66 <https://formations.univ-avignon.fr/en/formation/diplome-universitaire-expertise-scientifique-de-justice-en-environnement/>

organised criminal groups (Interviewee 33). At the time of the field visit, CESAN employed eight highly specialised investigators, responsible both for providing analytical support and for participating directly in field operations. Investigations can utilise the Gendarmerie's internal forensic laboratories, although external laboratories, including those from the private sector or the customs administration, can be engaged if specific technical expertise is required (Interviewee 33).

While it was acknowledged during the fieldwork that technical expertise and competence in environmental investigation is not evenly distributed among the various enforcement and inspection bodies in France (Interviewee 32), a distinct feature of the French model is the functional division of investigative labour within environmental crime investigations between OFB and OCLAESP/CESAN. This was explained by an OFB officer as follows:

It concerns the nature of the issues we deal with. The Gendarmerie tends to focus on environmental offences involving significant financial stakes, and this often serves as one of the criteria guiding their choice of investigations. By contrast, our work is more oriented toward environmental and biodiversity-related harm, which is the core of our mandate. This is where our roles complement one another in the broader landscape of investigations: the Gendarmerie concentrates its efforts on trafficking and offences that generate illegal financial gains, whereas our focus lies primarily on ecological damage and biodiversity protection, regardless of whether financial motives are involved (Interviewee 31)

This is the reason why the collaboration between CESAN and the OFB was formally established through a memorandum of understanding that provides for officer exchanges, joint training sessions, shared technical tools, and secure communication networks. Whenever feasible, investigations are supported by investigators from both organisations (Interviewee 29, 30, 31, 32 & 33). Within this framework, the Gendarmerie assumes the lead in matters of criminal and procedural law, while the OFB contributes scientific and technical expertise. Where other specialised expertise is necessary, external experts may be appointed from the Court of Appeal's official register, though informal expert networks and internal knowledge repositories are also frequently used (Interviewee 33). In cases where environmental offences overlap with broader criminal issues (e.g., organised crime, financial investigations), the prosecutor may institute an alliance between OFB and the police/gendarmerie to leverage both technical and enforcement expertise.⁶⁷

Both OCLAESP and CESAN benefit from the contribution of part-time, open-source intelligence (OSINT) investigators, many of whom are reservists engaged for specific cases or operational actions (Interviewee 21 & 33).

Cross-border cooperation further strengthens investigative capacity. CESAN maintains regular exchanges with Spain's SEPRONA (Nature Protection Service of the

67 <https://www.syndicat-magistrature.fr/documents/633/obs-mi-senat-ofb.pdf>

Guardia Civil) and the Italian Carabinieri, both of which share a gendarmerie model and remit for environmental enforcement. Interaction with SEPRONA occurs on an almost daily basis, reflecting the transnational dimension of environmental crime and the importance of operational intelligence-sharing in this domain (Interviewee 33).

7.5.3 *Collaboration with civil society organisations*

At the time of data collection, OCLAESP/CESAN, together with their counterparts in Belgium, Spain, and Denmark, participated in a comparative study on police collaboration with civil society organisations conducted by dr Agathe Piquet⁶⁸. Although the final report has not yet been published, preliminary findings indicate that the French Gendarmerie approaches this type of collaboration in three distinct ways. These partnerships have emerged partly in response to growing institutional pressure to seek external expertise, as one interviewee explained: “*We are generalists, not specialists*”. The first type of collaboration involves formal agreements with organisations such as the *Société pour la Protection des Animaux*, enabling structured cooperation in areas of shared concern.

The second type comprises informal collaborations, exemplified by interactions with *France Nature Environnement*, an organisation recognised for its strong legal expertise. However, these relationships are constrained; as study participants noted, cooperation cannot be openly acknowledged due to *France Nature Environnement*’s refusal to condemn the use of violence against law enforcement. France Nature Environnement (FNE) is the organisation that also offers a platform for citizen-reporting via platform called *Sentinelles de la Nature*⁶⁹ (Interviewee 24). This interactive and territorialised platform allows lay citizens to signal environmental harm (“*atteintes à l’environnement*”) or positive actions via an online form or mobile application. This is a valid example of civil society actor-led citizen reporting of environmental harm in France, which links with the notion of non-state actors and cooperative governance in environmental policing. However, while citizens can report environmental degradations, the reporting scheme is not necessarily integrated formally with law-enforcement agencies in the sense of automatic case referral.

Finally, there are organisations with which cooperation is not possible; typically these are more activist or movement-oriented environmental groups. Interestingly, in the overseas French territories, collaborations tend to be closer and more pragmatic, reflecting the greater demand for specialised knowledge that local law enforcement lacks (Interviewee 21).

68 <https://cordis.europa.eu/project/id/101108537>

69 <https://sentinellesdelanature.fr/signaler/>

7.5.4 Technology

The use of technology in environmental inspections and investigations is increasingly widespread in France, as evidenced both by the fieldwork observations and by recent French scholarship on the subject. Among the most common tools applied are camera traps and video surveillance systems which have proven useful for identifying perpetrators, for instance, by capturing vehicle licence plates used when committing offences. Identification is often a prerequisite for filing charges and securing convictions, however not many cases include this type of evidence. Camera traps, typically equipped with camouflage patterns, can be installed in known or suspected illegal waste disposal sites and are triggered by motion sensors. Unlike conventional video surveillance systems, the legal framework governing their use depends on the status of the land where they are deployed, which creates uncertainty about their use for local authorities and enforcement services (Malochet, 2023). By contrast, video surveillance systems are more clearly regulated. Local authorities are authorised to transmit and record images from public cameras for the prevention and detection of offences related to waste abandonment and illegal dumping under Article L. 251-2 of the French Internal Security Code (*ibid.*).

In parallel, the use of reporting applications has expanded rapidly. These mobile apps are increasingly adopted by both citizens and municipal “green brigades” to report abandoned waste, illegal dumping, or other environmental violations such as unauthorised construction. The digitalisation of reporting enables more targeted field responses; however, the proliferation and fragmentation of these platforms complicate data sharing and coordination (Malochet, 2023, pp. 87–90).

Two smartphone applications have been developed internally by the Gendarmerie in recent years. The first, Gend’Élu, launched in late 2021 in partnership with the Association of Mayors of France (AMF), provides mayors with an interactive tool featuring chat functions, documentation, and resources relevant to environmental policing, including memos and fact sheets on illegal dumping (Malochet, 2023, pp. 19–20). The second, Enviro Gend, released in late 2023, is designed for police personnel and offers operational support on environmental matters through access to directories, legal guidance, and action sheets (Malochet, 2023, p. 20). Fieldwork data confirm that the Enviro Gend app is now operational. It provides all Gendarmerie members with a user-friendly mobile platform offering operational assistance in the field. The application facilitates the assessment and management of environmental crime scenes and allows users to identify their operational networks, access information on ongoing cases, and consult relevant reference documents. Monthly usage ranges between 1,500 and 1,700 connections (Interviewee 33).

Another development is the web-based tool Protect’Envi designed to support the Gendarmerie and other actors such as local authorities when combating the problem of illegal waste dumping (“dépôts sauvages”). It offers a streamlined workflow for repor-

ting, documenting, and initiating administrative or judicial procedures.⁷⁰ Key features include:

- A user-friendly form to report an illegal waste site, capturing details such as location, waste type, and photographic evidence.
- Automatic generation of compliant, pre-filled procedural documents (e.g., notification letters, inspection reports) based on the submitted information.
- The ability for users to personalise and sign these documents before forwarding them to the relevant authorities to begin the follow-up procedure.
- Access to personalised guidance and support from a dedicated team for any additional questions or case-specific assistance.

The pilot phase began on 26 April 2024 and full deployment began on 1 January 2025 (ibid.).

Other technological tools complement these digital initiatives. Investigators occasionally rely on helicopters for aerial mapping, as well as satellite imagery and drones for surveillance and spatial analysis. Drones are being particularly used to detect illegal irrigation uses or private swimming pools in times of drought. Ground-penetrating technologies—such as devices that emit electromagnetic waves—are used to locate subsurface waste disposal sites (Interviewee 33).

Although the adoption of new technologies in environmental enforcement is expanding steadily, as Magnin and colleagues (2024) caution, the multiplicity and incompatibility of digital tools used to record environmental offences risk exacerbating institutional fragmentation and hindering coordination among agencies.

7.5.5 *International presence and collaboration*

The French Gendarmerie is a well-established and active actor on the international stage as far as policing environmental crimes are concerned. In 2018, OCLAESP has served as France's lead agency for the EMPACT EnviCrime programme, collaborating with a wide range of partners to combat environmental offences; one of the European Union's ten key security priorities at the time. In this role, OCLAESP coordinated multinational operations targeting crimes such as the trafficking of glass eels, reptiles, and timber, as well as illegal fishing. These operations are conducted under a framework led by Europol and supported by several European and international institutions (Gendarmerie Nationale, 2022).

OCLAESP/CESAN also participate in the FIEP Network, the *International Association of Gendarmeries and Police Forces with Military Status*, which brings together forces sharing similar organisational and military structures. Each year, FIEP designates a thematic focus; in 2024, the chosen theme was environmental crime. Within this framework, a dedicated subgroup comprising the French, Spanish, Italian, and Portu-

⁷⁰ <https://protect-envi.beta.gouv.fr/>

guese gendarmeries facilitated the further exchange of expertise, investigative tools, and operational know-how in this field (Fieldwork notes, 31 January 2025).

Furthermore, OCLAESP/CESAN is a member of EnvicrimeNet, an EU-wide network that promotes cooperation among law-enforcement bodies specialised in environmental crime. OCLAESP/CESAN are also part of the JAGUAR Network (Network of Police Forces in Charge of Environmental Crime in South and Central America), the aim of which is to increase the political and strategic scope of cooperation in the fight against environmental crime in Latin America.

OCLAESP/CESAN has also been actively involved in EU-funded initiatives aimed at strengthening cross-border cooperation and information exchange (Interviewee 21). It led the AMBITUS project, an EU-funded programme coordinated by the French Gendarmerie to enhance collaboration and intelligence sharing among Member States in combating organised environmental offences such as waste and wildlife trafficking (Colantoni & Bianchi, 2020). The office actively participates in projects financed by the Internal Security Fund (ISF). OCLAESP also participated in the UNITE project, which sought to improve enforcement capacities and coordination across Europe in addressing environmental crimes, including wildlife and timber trafficking.⁷¹ More recently, CESAN, in collaboration with other actors forming the French environmental enforcement model, served as a driving force behind an international conference that addressed multiple dimensions of environmental crime and law enforcement, reflecting an emerging emphasis on capacity-building, coordination, and knowledge exchange.⁷²

France, and especially the efforts of Marie Toussaint (Greens/EFA, France), were instrumental in driving the recent revisions to the EU Environmental Crime Directive (Interviewee 21).⁷³ At the national level, France's Gendarmerie plays an essential role in ensuring compliance with EU environmental directives and legal obligations, thereby helping to protect the French state from potential fines resulting from non-compliance (Magnin et al., 2024, p. 28). CESAN contributes to this effort, for example through its involvement in the working group dedicated to the implementation of the EU Environmental Crime Directive (Fieldwork notes, 31 January 2025).

7.6 Conclusions

Opinions among French study participants differed regarding the extent to which the government takes the policing of environmental crimes seriously and the degree of progress achieved to date. What emerges clearly, however, is the complexity and deep fragmentation of the environmental crime enforcement model. This fragmentation operates across multiple dimensions: between central and local authorities, administrative, and judicial/criminal domains of policing, and technical versus generalist ap-

71 <https://climate-diplomacy.org/uniting-efforts-defeat-wildlife-timber-and-waste-trafficking-unite>

72 <https://univ-droit.fr/recherche/actualites-de-la-recherche/manifestations/60050-la-criminalite-organisee-environnementale-etat-de-la-menace-reponse-judiciaire-en-france-et-perspectives-transnationales>

73 <https://ieep.eu/news/eu-lawmakers-agreed-on-a-new-directive-to-protect-the-environment-through-criminal-law/>

proaches. It also extends to the thematic scope of environmental protection itself—whether concerning water, forests, or industrial pollution among others. Within this multilayered enforcement web, various initiatives focus either on prevention or repression.

New institutional actors and locally driven innovations have become defining elements of the contemporary configuration of security governance in France (and elsewhere). The field is now characterised by interwoven networks and institutions that cut across the traditional public–private boundary, producing hybrid arrangements involving a wide range of agencies, professional groups, and civil-society actors. This reflects a form of state-steered police pluralisation (de Maillard and Skogan, 2020; Barone, 2025).

During the fieldwork it was observed that the model of environmental enforcement in France has neither been the exclusive domain of state police forces, but rather a field historically managed by specialised occupational groups such as rural wardens (*gardes champêtres*), hunting and fishing wardens (*gardes de chasse, gardes de pêche*), and technical inspectors focused on water and species protection. The model in fact has emerged through a plural and professionalised assemblage of actors rather than through centralised state control. While the current landscape of environmental policing appears to be evolving, these developments largely build on long-standing, fragmented traditions of environmental governance rather than constitute a fundamentally new model (Interviewee 24; Malochet, 2023).

Unsurprisingly, such institutional complexity often produces uneven enforcement capacity, overlapping mandates, blurred role boundaries, and a persistent need for effective inter-agency coordination. Two interviewees noted that the French administration, including for example the *Conseil d'État*⁷⁴, does not attempt to produce an official list of categories of agents endowed with police powers in environmental matters, given the complexity and fragmentation of the field (Interviewees 23 & 33).

France's model of environmental crime enforcement illustrates both institutional innovation and structural fragmentation. The Cour des Comptes' findings on water policing reinforce this conclusion. France has developed numerous specialised bodies, coordination mechanisms, and legal tools, yet the effectiveness of enforcement remains constrained by legal complexity, limited resources, weak follow-up, and political contestation (Cour des Comptes, 2026). The administrative route remains dominant, with most infractions handled through warnings, fines, or regularisation, rather than through criminal prosecution. Judicial pathways are hindered by limited prosecutorial prioritisation and a lack of specialised magistrates. The expansion of OCLAESP, the creation of CESAN, the merger of OFB signal a growing recognition of environmental harms, however, these policy developments require coordinated, intelligence-led policing. Yet the system remains shaped by a pluralistic and multi-level governance struc-

74 The Conseil d'État is France's supreme administrative court and the government's main legal adviser, ensuring that public authorities act within the law and that proposed legislation complies with constitutional and legal principles.

ture, where administrative, judicial, and local authorities coexist without a single centre of gravity.

Staffing capacity is insufficient in all the organisations discussed in this report. However, human-resource and capacity challenges extend beyond staffing levels to the cultural and professional diversity of the personnel involved in environmental policing. There is a high heterogeneity in the environmental enforcement sector. Profiles range widely, from municipal workers nearing retirement with no formal qualifications who originally joined decades ago, to graduates with master's degrees in ecology, and to young ASVP officers with vocational diplomas in security professions (Malochet 2023). The OFB employs inspectors with very different educational backgrounds and skill sets, which requires careful management to make effective use of individual strengths and ensure consistent training standards (*ibid.*). In general, some officers arrive into the enforcement web via traditional law-enforcement pathways; they tend to identify with a policing ethos, are more comfortable with legal work, and embrace enforcement functions. Others come from environmental or maintenance roles; they are typically less oriented toward sanctioning, do not necessarily operate with a policing mindset, and prioritise communication and prevention (*ibid.*).

Despite the high degree of fragmentation and the multiplicity of actors involved, the OFB provides specialised expertise, while the French Gendarmerie contributes generalist capacity; together, these two institutions constitute the core of France's environmental law enforcement model. When considering which of these two institutions most effectively embodies environmental policing, the answer ultimately depends on the perspective adopted. In terms of technical expertise and specific legal competencies, the OFB is the principal point of reference. However, when evaluated through the lens of institutional capacity, its limited staffing levels appear markedly disproportionate to the scale of environmental challenges, rendering the question of resources both critical and unavoidable (Interviewee 24).

France, as a case study, also serves as a reminder of how fragile environmental policing is to politics. The topic of policing environmental crimes has attracted increasing media attention, partly due to growing resistance from French farmers and other actors who are subjects of environmental inspection. Inspectors have reported being threatened with violence, experiencing vandalism of equipment or office facilities, and facing accusations of excessive or arbitrary enforcement practices. While there are no statistical data to confirm or refute this trend, regulatory pressure in the agricultural sector is evidently high, particularly due to the influence of EU subsidy and compliance requirements (Magnin et al., 2024, pp. 47–53). A few days before the start of fieldwork (mid-January 2025), French Prime Minister François Bayrou publicly criticised the French Biodiversity Office and its role in farm inspections during a major policy speech. The statement, supported by agricultural trade unions, significantly heightened tensions between enforcement authorities and the farming sector.

8 Discussion

This objective of this study was to examine how environmental crime enforcement is organised and prioritised within national policing systems, how police roles and mandates are positioned within multi-actor governance arrangements, and how police organisational structures, resources, and strategic choices shape enforcement capacity. The comparative analysis of France, Sweden, and Spain and the Netherlands as a primary case study reveals four distinct environmental crime enforcement models shaped by divergent policing traditions, institutional legacies, legal architectures, geographical and administrative dispositions, political climate, and organisational capacities. This finding reflects earlier comparative work emphasising the context-dependent nature of environmental enforcement systems and the decisive influence of national legal and policy frameworks and environmental crime landscapes (Sundari Akella & Cannon, 2009; Philipsen & Faure, 2015; Spapens, 2025).

Despite this variation, the cases also converge around a set of inherent pressures that oscillates around the complexity of environmental crimes, increasing regulatory complexity, multi-actor involvement, growing EU demands, growing ecological and climate vulnerability in general, intensifying forms of environmental criminality, and persistent vulnerabilities in detection, expertise, and coordination in this domain. These pressures have been widely documented in the literature as characteristic challenges for environmental enforcement across jurisdictions (UNODC, 2025; Neve, 2023). The persistence of vulnerabilities in detection, specialised expertise, and inter-agency coordination observed across all four cases, although to different extents, further corroborates earlier critiques concerning capacity gaps and systemic fragmentation in environmental law enforcement (Sundari Akella & Cannon, 2009; Nurse, 2023).

Many of the conclusions reached in this study align with findings from earlier research in this field. At the same time, our findings offer additional nuance by grounding these observations in contemporary practice and operational realities. By doing so, we respond to calls in the literature to move beyond abstract or legalistic assessments and to better account for how environmental crime enforcement is experienced and negotiated in practice (Spapens, 2025). It is my hope that these refinements will provide readers with insights that are both analytically valuable and directly applicable to professional practice.

8.1 Towards a comparative understanding of enforcement models

Our study highlights both the convergences and divergences observed across jurisdictions, underscoring the value of comparative analysis for revealing shared structural challenges as well as country-specific dynamics and dispositions. Although France, Sweden, Spain and the Netherlands diverge in their exact enforcement models and institutional arrangements, each enforcement configuration embodies a particular set of features that significantly shapes the role of the police in this domain.

A number of indicators emerged as being particularly salient in differentiating the enforcement models examined in this study. The first of these is the *degree and configuration of fragmentation*, both horizontally, in terms of the number and dispersion of actors involved in the enforcement model, and vertically, in terms of the flow of information and the depth of interdependence between governance/institutional layers. In Sweden and Spain, the formal positions of the Swedish National Police and Spain's SEPRONA appear similarly well-defined within their respective enforcement landscapes. Yet a closer analysis reveals divergent institutional weight and operational independence and autonomy. SEPRONA's role has been shaped by decades of sustained capacity building, specialised training, and organisational continuity, which has led to a strong internal mandate and outward influence within the broader enforcement network. By contrast, the Swedish Police, despite having a clearly assigned role, operates with a comparatively weaker knowledge base and is structurally more reliant on case inflow from administrative agencies and on prosecutorial guidance to shape investigative processes. These differences illustrate how seemingly comparable institutional placements in the model can mask substantial variation in actual investigative authority, dependency, and the ability to steer enforcement processes.

Second, the *clarity and structure of the interface between the administrative and criminal domains* varies considerably across jurisdictions. In some cases, hybrid or intermediary entities blur this boundary. Further exploration of their inspection and investigatory mandates offers a more nuanced understanding of this development. For example, France exemplifies a highly fragmented and pluralised enforcement landscape, characterised by a unique semi-hybrid position of the Office Français de la Biodiversité (OFB) in the model. The depth and extent of this type of fragmentation resonate strongly with the Dutch experience, and in particular with the similar hybrid role of Special Investigative Services - BODs (Bijzondere Opsporingsdiensten).

Third, the *relationship between police and prosecution*, often treated as a background variable, can be viewed as a critical but under-examined determinant of investigative capacity and successful case handling. Across all four countries, environmental crime investigations are formally prosecution-led, but the practical modalities of this arrangement differ markedly. The study reveals varying degrees of flexibility, discretion, and interpretive space available to police investigators within these prosecution-centred models. Unlike in Spain or France, Sweden exemplifies a setting in which prosecutorial direction is particularly strong, resulting in a comparatively narrow operational

bandwidth for the police and a heightened dependency on prosecutorial decisions to shape investigative strategies.

Additionally, given the complex and dynamic nature of environmental crimes, the *presence, maturity, and strategic use of environmental crime intelligence* constitutes another distinguishing feature across the models. (Police) Intelligence capacity directly shaped each jurisdiction's ability to detect emerging patterns, prioritise risks, and respond proactively rather than reactively. Although to some extent it was addressed through so-called government assignments to prepare risk assessments of environmental crimes, Sweden represents the lower end of this spectrum as the near absence of dedicated intelligence support was identified as one of the major structural deficiencies in the Swedish case study. By contrast, SEPRONA's integrated intelligence capability, embedded within investigative and specialised environmental teams (GIMA), constitutes a distinctive model in this regard. The Netherlands has a more fragmented (intelligence) configuration, with environmental intelligence distributed across the VTH system and the National Police, resulting in valuable but dispersed information flows that require coordination mechanisms to translate into operational effect. One example of an effort to centralise and synthesise this dispersed intelligence in the Dutch context is the preparation of the four-year Environmental Risk Assessment, developed through cooperation between the intelligence departments of the Dutch National Police and the BODs (personal communication, Dutch Police Academy, 7 February 2026).

Fourth, differences are observable in the extent and quality of *police collaboration with civil-society actors*. France and Spain have developed selective yet functional partnerships with some civil-society organisations. In Sweden, this type of collaboration was largely absent, whereas the Netherlands showed a different pattern: limited engagement with civil society but comparatively strong ties with universities and knowledge institutions.

Another observation relates to the *degree of civilianisation* within police environmental crime units, which also shapes access to expertise and the permeability of organisational boundaries. Police civilianisation refers to the deployment of non-sworn personnel (civilians) within police organisations to support the delivery of policing tasks (Kiedrowski, Ruddell & Petrunik, 2017). Evidence from British policing scholarship suggests that this practice dates back to the early nineteenth century (ibid.). Police civilianisation has attracted sustained interest from police management, not only as a means of improving the quality and efficiency of police services, but also in response to budgetary constraints and uncertainties, reductions in sworn personnel, rising public expectations, and the ever-expanding scope of police responsibilities (ibid.). Sweden is notable for its extensive integration of civilian environmental specialists into police investigative teams, which can be considered a significant organisational innovation that strategically mitigates gaps in technical expertise among sworn police officers. Other jurisdictions maintain more traditional models, relying primarily on uniformed police personnel or external expert consultation.

Table 7. Comparative overview of Environmental Crime Enforcement Models in France, Spain, Sweden and the Netherlands

	France	Spain	Sweden	The Netherlands
Model of EC enforcement – degree & configuration of fragmentation	Deep fragmentation	Moderate fragmentation	Moderate fragmentation	Deep fragmentation
Interface between the administrative and criminal domains	Blurred interface (OFB)	Relatively clear interface	Relatively clear interface	Blurred interface (BODs)
Relationship between Police & Prosecution	Balanced prosecution-police model	Balanced prosecution-police model	Strong prosecution-led enforcement model	Balanced prosecution-police model
Environmental Crime Intelligence	Moderate intelligence presence	Strong intelligence-led policing model	Weak intelligence presence	Moderate intelligence presence but dispersed across many agencies (administrative & criminal)
Collaborations with civil society/civilianisation	Conditional collaboration - three ways of responses to civil society organisations: open, semi-open, and forbidden (Piquet's study).	Need-based collaboration within SEPRONA (Environmental Damage Assessment Unit)	No collaboration with civil society, but high civilianisation of police environmental crime units.	No available data
International presence and engagement	Moderate international presence	Strong international presence	Weak international presence	Moderate international presence
Academic (environmental policing) scholarship	Strong emerging scholarship	Very limited scholarship	Limited (but gradually emerging) scholarship	Moderate scholarship

Finally, the *international presence and engagement* of police organisations emerges as an important driver of national expertise development, intelligence exchange, and the setting of operational priorities. In this respect, Spain and France are noteworthy as both demonstrate sustained and institutionally embedded participation in international fora, contribute actively to international training and capacity-building initiatives, and play leading roles in the design and coordination of multi-country operations. Although an unintended consequence of this can be the upward mobility ('brain drain') of investigators moving to EU agencies, as in the case of Spain, an interesting contrast arises when considering linguistic capacity. Although international cooperation in this domain is predominantly conducted in English, and Sweden and the Netherlands are generally recognised for their strong command of the language, it is Spain and France that have cultivated more continuous and structured international engagement. In comparison, the involvement of Swedish Police and Dutch mainly VTH actors tends to be more intermittent, often reliant on individual officers' initiatives or participation in specific projects rather than being anchored in stable organisational commitments.

8.2 Revisiting the New Environmental Governance framework

Conceptually, this study occupies the space between two extensive scholarly domains, policing studies on the one side and green criminology on the other. Among the numerous conceptual frameworks developed within both fields, the New Environmental Governance (NEG) framework introduced by Holley and colleagues (2011) was considered as the most suitable for bridging these domains (and their concerns) and for providing a coherent lens through which to examine and compare different environmental crime enforcement regimes.

The NEG framework is a valuable tool for understanding the plurality of actors involved in contemporary environmental enforcement and the shifting balance between "steering" and "rowing" across this governance landscape. In this respect, NEG helps to provide an understanding of the structural complexity observed in all four case-study countries, where police organisations operate alongside regulators, inspection services, administrative authorities, civil society organisations, scientific institutions, and occasionally, private actors. NEG's emphasis on polycentric coordination, information-sharing, and adaptive problem-solving offers an initial conceptual toolkit for interpreting how these diverse nodes interact and where gaps in capacity or communication have led to enforcement challenges.

However, our empirical findings also demonstrate clear limitations in NEG's capacity to capture the realities of environmental crime enforcement. At its conceptual core, NEG proceeds from a relatively optimistic assumption: that collaborative, participatory, complementary and deliberative arrangements will emerge, and that all actors will be both willing and able to contribute to shared environmental objectives. This normative orientation does not always reflect the conditions faced by police and regulatory agencies on the ground. For example, the framework pays limited attention to how

configurations of “steering” and “rowing” can generate institutional instability, disrupt organisational performance, or diminish the resilience of the governance network at large. The situation of the OFB in France illustrates this gap. At the time of fieldwork, the agency was undergoing substantial political pressure and public criticism, to the point that discussions about its potential dissolution were circulating. Such turbulence not only undermined OFB’s operational capacity but also weakened the stability of the collaborative arrangements on which NEG presumes environmental governance depends.

The inherent “administrative–criminal dance” remains a defining feature of this field, generating both opportunities for complementarity and coordinated action, but also bringing pressures arising from divergent mandates, organisational cultures, operational rivalries, and evidentiary thresholds. In short, the anticipated complementarities between administrative and criminal domains often fail to materialise. Even in countries with more mature enforcement models such as Spain and France, interaction between different governance nodes remains selective, and is constantly negotiated, conditional, or strategically constrained.

NEG also underestimates the extent to which environmental crime enforcement continues to be shaped by coercive, hierarchical, and state-centric mechanisms, as evident in the nature of the revised EU Directive that mandates sanctions, reinforces investigative obligations, and enhances vertical coordination between EU and national authorities, yet offers relatively little guidance on fostering deliberative, community-based, or non-state forms of engagement that NEG views as being essential for flexible and agile environmental governance. Furthermore, horizontal learning and shared deliberation, central to NEG, are not materialised in the way police organisations collaborate with civil society organisations. Civil society engagement, where it exists, tends to be instrumental and episodic rather than embedded in routine governance structures.

To conclude, NEG is analytically useful for mapping actor plurality and for foregrounding the importance of coordination and capacity conditions. However, its “normative optimism” contrasts sharply with the enforcement realities observed in this study, where fragmentation, competition, limited trust, poor communication, and resource scarcity remain defining features of the environmental crime enforcement landscape. A more critical, practice-sensitive adaptation of NEG may therefore be required to better reflect the operational constraints and institutional dynamics that shape environmental policing in Europe.

8.3 Strengthening capacity without a fully formed identity

A further set of critical reflections centres on the development of capacity, expertise and professional identity within police organisations to respond to environmental crimes. This question lies at the heart of the project. As environmental crime enforcement continues to mature, questions still emerge about the cultivation of specialist expert knowledge, the establishment of credible career pathways for environmental-

ly-minded police officers, and the sustained institutional investment required to embed this domain within mainstream policing practice.

Our findings suggest that the long-standing narrative of pervasive enforcement gaps requires some revision. Across the jurisdictions we examined, concrete steps have been taken to address these gaps, reflecting an environmental enforcement landscape that is evolving and adapting. The detailed country case studies were intended not only to identify limitations and challenges, but also, if not primarily, to document this ongoing progress. A further indication of this development is that many of the study's recommendations for the Dutch Police closely align with the strategic orientation set out in *Environmental Policing 2.0 – Reliable and Sustainable (Politiemilieutaak 2.0 – Duurzaam betrouwbaar)*. Although this strategy was adopted during the course of the project, its content was only made available to the author at the final stage of the writing process. While the pace of change does not yet match the scale or urgency of environmental harms, the processes described across all case studies point towards incremental but meaningful improvement.

A distinct but related issue concerns police professional identity. The persistent question that I often heard throughout the project was: *Should environmental crime be a police responsibility?* This question continues to surface in policing scholarship, especially among those who argue that police should do less rather than more. Yet the evolving global ecological context, the increasing profitability of environmental exploitation, and the cumulative consequences of decades of environmental legislation effectively preclude police withdrawal at this stage. Environmental crime has become, by structural necessity, part of the policing mandate. Whether this shift is accompanied by deeper identity formation, an emerging “eco-police” mindset (Maczak, 2025), remains, for the time being, empirically underexplored.

Nevertheless, we show that where a recognisable organisational identity around environmental protection exists, it reinforces capacity and confidence. This was most visible in Spain, where SEPRONA's decades-long institutional continuity has embedded environmental protection into its organisational DNA, producing a palpable sense of pride, professional recognition, and mission clarity. By contrast, Sweden and the Netherlands represent countries where the police are still at early stages of internalising and operationalising their role in environmental crime enforcement. Police officers, unlike civilians, expressed a sense of adjustment rather than long-standing identity alignment, illustrating how organisational culture and identity evolve at different paces across policing contexts.

8.4 Environmental crime investigations as diagnostic practice

The environmental domain has long been characterised by extensive legislative development, and has been occasionally referred to as ‘legislative proliferation with unintended negative consequences’. As early as 2009, *Le Monde* highlighted “the existence of a gulf between the proliferation of legislation and the enforcement of environmental law on the ground” (Dupont 2009, cited in Malochet 2023:7). This gap is often caused

by those environmental cases typically requiring substantial resources, mainly in the form of considerable staff time, specialised expertise, advanced technical equipment, laboratory analyses, and the review of voluminous and often technically complex documentation. Even when a conviction or settlement is secured, additional oversight is frequently necessary to ensure compliance with mandated site-cleanup or remediation measures (Epstein & Hammett, 1995).

Although access to detailed information about environmental crime investigations varied across the countries examined in this project, investigative practice consistently emerged as the most revealing vantage point from which to understand both the (quickly evolving) nature of environmental crimes and the capacity of police organisations to address them. Investigations serve as a “living laboratory,” where operational realities illuminate the strengths and weaknesses of existing arrangements, the limits of technical and organisational capabilities, and the needs that are often masked at more strategic or policy-oriented levels. The conversations around environmental crime investigation revealed police officers’ reluctance to take samples, tensions and/or competition between administrative and criminal investigators, divergent attitudes toward the application of technological or AI-supported tools, or the classification challenges regarding waste or second-hand goods. These insights into investigations not only serve to provide case-specific insights, but also serve as a broader diagnostic picture of how environmental crime enforcement operates in practice and where developmental efforts are most pressing. The complexity of these cases should not be seen as a weakness, as one SEPRONA officer observed: the greater the number of steps in an environmental crime scheme, the higher the operational risks for offenders, and, correspondingly, the greater the opportunities for law enforcement to intervene and learn. Successful environmental crime investigations also possess a unifying effect within highly decentralised policing landscapes, as demonstrated in Sweden in the “Think Pink” case. Moreover, even small-scale investigations, regardless of their final legal outcome, carry significant learning value. This was repeatedly acknowledged during interviews in France and Spain, where practitioners emphasised that winning a case in court may satisfy legal requirements without fully addressing and responding to the environmental or ecological harm.

8.5 Limitations and further research

This study is based on qualitative data, and, as with any methodological approach, it carries inherent limitations. Examining four different national contexts within a constrained timeframe inevitably required breadth over depth. Although a substantial amount of information was gathered, the study should still be considered exploratory, or as an initial scoping exercise into a complex and conceptually challenging research problem. While the primary aim was to investigate capacity-building mechanisms within relevant police organisations, the research process was shaped by the availability of institutional access facilitated through police and academic gatekeepers, by uneven national scholarly coverage across countries, by the research team’s limited famili-

arity with certain cultural and organisational nuances, and by unexpected resource constraints following the completion of fieldwork.

Despite these limitations, we trust that our study, challenging as it proved, will offer valuable insights not only to the Dutch Police but also to other police organisations, across the European Union and beyond, seeking to strengthen their capacity and expertise in environmental crime enforcement. Further research in additional jurisdictions is required to identify whether similar dynamics emerge elsewhere or whether alternative models exist that diverge from those presented in this report.

Our study provides a helicopter-level overview of key identified patterns and mechanisms. Future research can build on this foundation by examining individual components in greater depth, whether through qualitative or quantitative methodological approaches. Further research could, for example, include police education and training on environmental crimes, the effectiveness of joint investigative critical reassessment of the New Environmental Governance framework, or the development of pro-environmental attitudes among police officers.

9 Recommendations

From the comparative perspective, the Dutch model shares a number of features with each of the models analysed, and it is not unique regarding its shortcomings and limitations, as all countries face these to varying degrees. The Dutch model resembles that of the dense and deeply fragmented environmental field as in France, prosecutorial reliance and dependence on (VTH) inspectors as in Sweden, without having the strong centralised specialist component characteristic of Spain. The Dutch Police currently operate within a system that is ambitious, yet structurally constrained. The strategic prioritisation of environmental crime is a major step forward, and many suggested actions have already been set in motion, but further development requires:

- stronger institutional clarity and identity for environmental policing within the National Police;
- improved intelligence capacity and information integration;
- deeper and more formalised collaboration with inspectors and BODs;
- specialist career pathways and multi-level training options;
- strategic coherence across regional and national levels.

These findings form the basis of the recommendations. These are divided into two sections: (1) overarching recommendations relevant to enforcement systems across Europe, and (2) specific recommendations for the Dutch Police based on lessons learned from France, Sweden, and Spain.

9.1 General Recommendations

9.1.1 *Improving the knowledge base on environmental crimes*

Given the complexity and dynamic nature of environmental crimes, it is critical that each country continuously develops its knowledge base in this field, and that the police actively contribute to this process. One aspect that must always be considered when analysing environmental crimes is their frequent convergence with other forms of offending, as well as the necessity to qualify them both ecologically and legally. Regardless of the terminology used, whether this relates to risk assessments, government assignments, police–academia research partnerships, or environmental crime intelligence, these efforts should be integrated to improve collective understanding of the nature and complexity of environmental crime. The Netherlands plays a vanguard role in this regard, particularly due to the Dutch Police’s long-standing contribution to

knowledge production and, more recently, the publication of their risk assessments in English. Moreover, all four case studies demonstrate that intelligence remains a critical yet often underdeveloped component of environmental enforcement. Effective environmental policing requires a strategic intelligence base, which helps to identify trends, and to inform targeted police interventions. Furthermore, the value of community policing and the significance of locally connected knowledge (also shared by civil society organisations) with the geographical disposition and diversity in the field of environmental crimes should not be neglected.

This recommendation is also underscored by an additional concern. As one of the French academics noted (Interviewee 34), without systematic documentation, we risk “environmental amnesia”, which is a concept in environmental ethics describing how each generation comes to view the increasingly degraded ecological conditions they inherit as ‘normal’, lacking any lived memory of healthier ecosystems (e.g., more abundant insects, greater biodiversity, cleaner rivers). This phenomenon may have direct legal and practical implications: environmental harm becomes harder to recognise, the burden of proof in environmental law increases, and authorities may come to accept compromised ecological baselines as the new norm, and in consequence reduce their efforts for restoration or enforcement.

9.1.2 *Measuring impact and performance*

We need to reconsider how police performance in this field is conceptualised and which indicators are used to assess it. Traditional performance metrics in this field follow a numbers-driven logic (Interviewee 34) and it would require considerable effort to consolidate data from the various environmental policing actors operating across different administrative and geographical levels (see Malochet 2023:108 for indicative figures; even these assume that all offences are systematically recorded and processed, which is not the case). To make basic statistics (such as resources allocated, investigations initiated, or fines issued) meaningful, they must be contextualised in relation to the number of officers involved, population size, territorial coverage, and the nature of local environmental issues. Moreover, while such metrics reflect enforcement activity, they do not capture the full extent of environmental offences, so this remains largely unavailable to authorities.

According to Ido Nap⁷⁵, an advisor in the Dutch Police who supported the establishment of a small team tasked with developing performance indicators for environmental crime enforcement, the selection of indicators should always be driven by clearly defined goals. These goals must first be articulated through questions such as: *What do we aim to achieve? Which problem are we addressing? How do we collaborate with other actors pursuing the same objectives?* Key performance indicators (KPIs) should never become ends in themselves, rather, they are tools to assess whether sufficient and appropriate efforts have been undertaken to achieve the intended outcomes. A recurrent

75 Personal communication, 2 December 2025.

challenge in police organisations is their case-driven orientation. What is needed instead is a shift towards an effect-driven approach, in which once KPIs are reached, work does not stop, and underlying strategic goals continue to guide practice.

9.1.3 *Environmental crime investigation as a systemic learning process*

Police organisations should institutionalise environmental crime investigations not only as enforcement activities but also as structured diagnostic and learning processes. Investigations routinely expose operational gaps, whether in sampling practices, coordination with administrative authorities, use of technology, or the classification of environmental goods and waste. To harness this diagnostic value, the police should implement mechanisms that capture lessons from both large and small cases, regardless of legal outcome. This can include after-action reviews, cross-disciplinary debriefings with administrative partners, and structured feedback loops that feed insights into training, intelligence development, and organisational strategy. By formalising investigations as sites of organisational learning, the police can strengthen their investigative capacity, enhance inter-agency complementarity, and continuously adapt to the evolving complexity of environmental crime. The learnings from the environmental crime investigations should have a strong financial perspective. This perspective underscores the fundamentally economic and financial nature of many environmental offences and suggests that the conventional distinction between “environmental” and “economic” crime is often artificial and counterproductive. If police organisations were to fully embrace this understanding, the composition of environmental investigative teams would necessarily reflect it, requiring the systematic inclusion of specialists in both financial analysis and investigations of legal and illicit entities.⁷⁶

9.1.4 *Strengthening international presence, cooperation and education at EU-level and beyond*

Although opinions may differ regarding its pace, progress has been made internationally in approaches to environmental crime. Collaboration has become a new policing paradigm at Europol, as acknowledged by the head of its environmental unit. Similarly, one of the key insights from the INTERPOL visit was that the majority of the environmental team’s time and effort is devoted to developing, facilitating, and maintaining cooperation with counterparts in national police organisations. Police services, facing constant resource and time constraints, can do better to benefit from work already undertaken by these two organisations. Moreover, at the EU level, the revised 2024 Environmental Crime Directive significantly broadens the range of criminalised behaviours and raises evidentiary and procedural requirements. As a result, all EU police

76 In the first study on environmental crime enforcement to be recognised as such, expertise in white-collar crime and the economic dimensions of environmental offences is identified as being particularly valuable within police-based environmental units (Epstein & Hammett, 1995).

organisations will require additional resources, specialised training, enhanced forensic capacity, and stronger intelligence integration to meet these new obligations. Despite its significance, the data collection process revealed how difficult it is to obtain clear or current information on how respective police organisations are preparing to meet these new obligations.

9.2 **Specific recommendations for the Dutch Police**

9.2.1 ***Strengthening data collection and accessibility***

The Dutch case study revealed significant limitations in access to systematic and reliable numerical data, particularly in comparison with other jurisdictions examined in this project. This constrained our ability to identify trends in the number and types of environmental crimes, as well as to assess police capacity, staffing levels, and resource allocation over time. We therefore recommend that the Dutch Police further develop a coherent and transparent data collection framework for environmental crime and enforcement activities, including standardised recording practices across units and improved accessibility for analytical and evaluative purposes. Strengthening data availability would not only support evidence-based policy-making and strategic planning, but also enhance accountability and the capacity to monitor the implementation of national environmental policing strategies.

9.2.2 ***Establish a cohesive environmental policing identity***

Drawing primarily on Spain's SEPRONA and, to some extent, on France's CESAN, the Dutch Police would benefit from strengthening its environmental policing profile. This entails a clearly defined mandate, an internal organisational strategy dedicated to environmental crimes, and a coherent branding approach that improves legitimacy, visibility, and internal coordination. Although progress has been made through the work of the Senior Advisor for Environmental Crime Strategy and the activities of the Sustainability and Environmental Safety Programme, additional recognisability could be gained through more direct engagement and practical exchanges between relevant actors within the Dutch Police and these services. This issue was also frequently raised and discussed during the exchanges between representatives of the Dutch HIEC team and the Swedish Police. This recommendation strongly resonates with the overall strategic orientation set out in *Politie milieutaak 2.0 – Duurzaam betrouwbaar* (Environmental Policing 2.0 – Reliable and Sustainable), which emphasises that the Dutch Police fulfils its (environmental crime investigation) role in a reliable, visible, and independent manner within the Dutch enforcement chain.

In this context, the analytical framework developed in this study can serve both as a comparative tool and as a set of internal benchmarks within the Dutch Police. The research questions as well as the operationalisation matrix (see Appendix I) can provide structured reference points for monitoring institutional development and assessing

progress in the formation of a coherent environmental policing identity within the Dutch Police.

9.2.3 *Consolidate specialist capacity and reduce organisational fragmentation*

Our comparative insights indicate that fragmentation within the Dutch system, as well as the relatively marginal position of the police, is not unique. However, the Dutch enforcement model of policing environmental crimes is fragmented not only externally but also within the police organisation itself. To strengthen investigative capacity in particular, specialised knowledge should be consolidated rather than dispersed across numerous units. The High Impact Environmental Crime Team (HIEC) and NXT could function as central nodes for national expertise, supported by regional specialist teams. At the central level, the establishment of the National Environmental Intelligence Unit and the Strategic National Coordinator of Environmental Intelligence is a highly welcome development. However, further improvements should be made to strengthen the intelligence cycle and better inform police operations, as demonstrated during the field visit to the SEPRONA headquarters.

9.2.4 *Exchanging practices about multi-level training and education pathways*

Despite obtaining some information during the fieldwork, little is currently known about how education and training on the policing of environmental crime are organised and delivered. Considering the complexity of environmental crime and its enforcement, this area of education merits increased attention and the application of more effective teaching and training methods. One possible initiative would be for the Dutch Police, together with the Dutch Police Academy, to organise international workshops aimed at sharing and comparing approaches to teaching environmental crime policing across jurisdictions.

The lessons learned from the studied countries is that beyond technical knowledge, training should also address sampling, financial aspects, digital evidence, permit analysis, cross-border cases, and emerging EU legal obligations. Inspectorates, the police, and the prosecution should train together to reduce discrepancies in evidentiary standards. These training programmes should also be accessible to practitioners from other agencies as they are in Spain and France and, where possible, delivered in person. The latter suggestion is informed by the author's participation in numerous international (primarily online) workshops on environmental crime during the course of this project. Although aimed at practitioners, many of these workshops offered limited engagement or practical relevance and did not resemble the interactive nature traditionally associated with workshops. The field would benefit from more innovative learning

tools such as serious gaming⁷⁷, an approach also discussed during the visit to INTERPOL.

9.2.5 *Strengthen joint operational protocols and shared evidence standards*

This is an intrinsic issue in this field and the extent of it depends on the depth of the field's fragmentation. Environmental crimes find themselves at the boundary between regulatory oversight and criminal investigation. Sweden's case shows that rigid administrative-to-police referral systems risk producing a reactive model. France demonstrates that multiplicity without efficient and smooth coordination leads to inconsistency. Just as it was evident, mostly in the case of France, the Dutch administrative - criminal boundary suffers from unclear role descriptions, overlaps, differing evidentiary standards, and inconsistent communication. Genuine complementarity between administrative and criminal actors is achievable only when mandates, expectations, and operational boundaries are clarified through transparent and continuous communication. Joint operational protocols, events, training programmes, newsletters, and debriefing meetings between police, Omgevingsdiensten, BODs, ILT, and NVWA can reduce operational friction, and improve and unify the quality of case files submitted to the Functional Prosecutor's Office.

⁷⁷ During the course of the project, two prototypes of environmental-crime serious games were developed in collaboration with Safety and Security students at The Hague University of Applied Sciences and the HIEC team. Owing to time constraints and limited research capacity, these prototypes have not yet been refined to a level suitable for integration into police educational settings.

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Appendix I Operationalisation table

Research question	Level and unit of analysis	Data to be collected	Indicators
<i>How do police forces in Sweden, France, and Spain ensure they can handle the increasingly large and complex task of addressing environmental crimes?</i>	Police contextualisation – general but with emphasis on the EC trajectory	Police history, model, structure, most recent EC trends, state of preparation for key legislation	• Centralisation/decentralisation • Overall number of police employees • Staff shortages (general) • Recent trends in policing • Budget (cuts) • Environmental crime (EC) landscape and contextual analysis (top specific EC cases for the country) • Examples of high profile EC cases (investigated by the police) • Ecocide legislation (status) • Rights of nature (status) • EU Environmental Crime Directive (status of preparation/transposition) • Regulation (EU) 2024/1157 of the European Parliament and of the Council of 11 April 2024 on shipments of waste, amending Regulations (EU) No 1257/2013 and (EU) 2020/1056 and repealing Regulation (EC) No 1013/2006 (status of preparation / awareness)
	Organisational level - processes	Institutional structure and partnerships for tackling environmental crime Collaboration with other relevant stakeholders	• Local and/or national multidisciplinary collaborations between authorities and criminal justice services • Appointment of a special strategic advisor/coordinator • Implementation plan (and Theory of Change, implicit or explicit) • Budget allocation and capacity realisation • List of the main stakeholders involved in policing EC and their roles • Stage of their involvement in responding to EC violations • The role of the gendarmerie in responding to EC • The role of prosecution in responding to EC • Collaboration with civil society (formal and informal) • Collaboration with Victim Support (and whether there is any unit specialising in EC victimhood) • Collaboration with municipalities • Collaboration with private sector/industry • Collaboration agreements and incentive structures

Research question	Level and unit of analysis	Data to be collected	Indicators
		Police education and training in EC	• EC present in the curriculum of Police Academy • Special training programmes for EC police officers and content (e.g., number of modules, duration, class size, dropout rate, internal or external, teaching methods) • Opportunities to learn and expand EC knowledge on the job • Other forms of formal and informal training (e.g., on the job/ buddy systems, serious gaming, etc.) • Effectiveness of the training programme (based on evaluation reports, success rates, satisfaction levels, etc.)
		Police involvement in the prevention of environmental crimes	• Police prevention initiatives, projects, events
	Organisational level - outcomes	National police strategy on environmental crime	• Year of publication and evolution • Presence of a strategic figurehead • Implementation plan (and Theory of Change, implicit or explicit) • Budget allocation and capacity realisation • Incentive measures
		National police strategy on sustainability/climate change	• Year of publication and evolution • Presence of a strategic figurehead • Implementation plan (and Theory of Change, implicit or explicit) • Budget allocation and capacity realisation • Incentive measures
		Statistics on addressing environmental crime	• Official police/prosecution/court statistics • Climate change-related crimes • Government-commissioned studies on police work related to environmental crime • Trends in detection and enforcement of environmental crime (relevant KPIs, e.g., share of detected crimes prosecuted)
		Reports (including evaluation reports) on activities in international organisations and partnerships focused on reducing environmental crime (e.g., EnvCrime Net, the 4 Networks)	• Membership in an organisation and/or partnership • Number and scale of joint projects • Participation in EMERITUS and/or PERIVALLON • Level of activity and collaboration with/within EUROPOL

Research question	Level and unit of analysis	Data to be collected	Indicators
	EC investigations – processes and outcomes	Police capacity to investigate environmental crimes	- Existence of a specialised EC (units) - Number of trained EC police officers - Incentive structures (e.g., promotion opportunities, etc.) - Identifying internal expertise: e.g. database (or other platform) to track specific EC expertise within the police - Identifying external expertise (incl. universities) - Number of handled signals and investigations, and capacity used per crime for detection and enforcement (amount of hours/FTE spent on gathering information (signals), developing into an investigative proposal, and conducting investigations) - Criteria for investigations - Case development and evidence gathering for EC investigations (e.g., sources and quality of data, variety of data, use of geospatial data, templates for investigations, use of software for building a case) - EC case development when international and cross border - Intersection with financial/economic crimes - Intersection with organised crime - Innovative tools used in EC crimes, new methods in EC MO - Use of technology in investigations - Use of big data, OSINT in investigations - Diversity of actors involved in EC police investigative work (what is possible to do together with the police) - Possibilities of working together with other regulatory agencies but beyond the application of criminal law

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51b. Het effect van langdurige opsluiting van veelplegers op de maatschappelijke veiligheid

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M.C.M. Gordijn, Rijksuniversiteit Groningen, 2012

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65. Wapengebruik. Van inzicht in modus operandi naar een effectieve aanpak

M.S. de Vries, Universiteit Twente, Enschede, 2013

66. Politieverhalen. Een etnografie van een belangrijk aspect van politieculturen

M.J. van Hulst, Tilburg University, Tilburg, 2013

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L. van Reemst, T. Fischer & B. Zwirs, Erasmus Universiteit, Rotterdam, 2013

71. Vertrouwen in de politie: trends en verklaringen

L. van der Veer, A. van Sluis, S. Van de Walle & A. Ringeling, Erasmus Universiteit, Rotterdam, 2013

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73. De ontwikkeling van de criminaliteit van Rotterdamse autochtone en allochtone jongeren van 12 tot 18 jaar. De rol van achterstanden, ouders, normen en vrienden

F.M.H.M. Driessen, F. Duursma & J. Broekhuizen, Bureau Driessen, Utrecht, 2014

74. Speciaal blauw. Verschijningsvormen en overwegingen van specialisatie en despecialisatie binnen de Nederlandse politieorganisatie

R.J. Morée, W. Landman & A.C. Bos, Twynstra Gudde, Amersfoort, 2014

75. Gevangene van het verleden. Crisissituaties na de terugkeer van zedendelinquenten in de samenleving

M.H. Boone, H.G. van de Bunt & D. Spiegel, m.m.v. K. van de Ven, Erasmus Universiteit, Rotterdam, Universiteit Utrecht, 2014

76. Brandstichters onder vuur. Een empirisch onderzoek naar zaken van brandstichting en hun daders

L. Dalhuisen & F. Koenraadt, Universiteit Utrecht, 2014

77. Van stadswacht naar nieuwe gemeentepolitie? Gemeentelijk toezicht en handhaving in de openbare ruimte

T. Eikenaar & B. van Stokkom, Radboud Universiteit, Nijmegen, 2014

78. Politie mensen over het strafrecht

J. Kort, M.I. Fedorova & J.B. Terpstra, Radboud Universiteit, Nijmegen, 2014

79. Kijken, luisteren, lezen. De invloed van beeld, geluid en schrift op het oordeel over verdachtenverhooren

M. Malsch, R. Kranendonk, J. de Keijser, H. Elffers, M. Konter & M. de Boer, NSCR, Amsterdam, 2015

80. De mentale gesteldheid van de familierechercheur. Een onderzoek naar werkgerelateerde stress en secundaire posttraumatische groei binnen een bijzondere groep politieambtenaren

L.J.A. Bollen, M.C. Saan, M.J.J. Kunst, B.W.C. Zwirs & K.F. Kuijpers, Universiteit Leiden, 2015

81. Na de vrijlating. Een exploratieve studie naar recidive en re-integratie van jihadistische exgedetineerden

D.J. Weggemans & B.A. de Graaf, Universiteit Leiden, Universiteit Utrecht, 2015

82. Dat heeft iemand anders gedaan! Een studie naar slachtofferschap en modus operandi van identiteitsfraude in Nederland

L. Paulissen & J. van Wilsem, Universiteit Leiden, 2015

83. Demonstratieve kampementen

Roorda, Rijksuniversiteit Groningen, 2015

84. Private ordebewaarders bij betogingen

Roorda, Rijksuniversiteit Groningen, 2015

85. Spelen met weerbaarheid. Belemmerende patronen en doorbrekende handelingsperspectieven bij het ontwikkelen van basisteams

W. Landman, R. Kouwenhoven & M. Brussen, Twynstra Gudde, Amersfoort, 2015

86. 'Onnodige' bureaucratie binnen het basispolitiewerk. Onderzoek naar de achtergronden van een hardnekkig verschijnsel

J. Kort & J.B. Terpstra, Radboud Universiteit Nijmegen, 2015

87. Politie en GHB-problematiek op het platteland

T. Nabben & D.J. Korf, Universiteit van Amsterdam, 2016

88. Basisteams in de Nationale Politie. Organisatie, taakuitvoering en gebiedsgebonden werk

J. Terpstra, I. van Duijneveldt, T. Eikenaar, T. Havinga & B. van Stokkom, Radboud Universiteit Nijmegen, 2016

89. Samen of apart. De invloed van overleg tussen agenten bij het opstellen van het proces-verbaal

Vredeveldt, L. Kesteloo & P.J. van Koppen, Vrije Universiteit Amsterdam, 2016

90. Overvallen in beeld. Gedrag van daders, slachtoffers en omstanders

M.R. Lindegaard, W. Bernasco & T. de Vries, Nederlands Studiecentrum Criminaliteit en Rechtshandhaving, Amsterdam, 2016

91. Boeven vangen. Een onderzoek naar proactief politieoptreden

W. Landman & L. Kleijer-Kool, Twynstra Gudde, Amersfoort, 2016

92. VVC onder de aandacht. Een onderzoek naar ZSM en de gevolgen voor het politiewerk

R. Salet & J. Terpstra, m.m.v. P. Frielink, Radboud Universiteit Nijmegen, 2017

93. De mogelijke meerwaarde van bodycams voor politiewerk. Een internationaal literatuuronderzoek

S. Flight, Sander Flight Onderzoek & Advies, Amsterdam, 2017

93A Focus. Evaluatie pilot bodycams Politie Eenheid Amsterdam 2017-2018

S. Flight, Sander Flight Onderzoek & Advies, Amsterdam, 2019

93b Evaluatie bodycams Landelijke Eenheid; Proeftuin bodycams Dienst Infrastructuur 2018

S. Flight, Sander Flight Onderzoek & Advies, Amsterdam, 2019

94. Criminele families in Noord-Brabant. Een verkenning van generatie-effecten in de georganiseerde misdaad

H. Moors & T. Spapens, EMMA, Den Haag; Tilburg University, Tilburg, 2017

94a. Intervenieren in criminele families

Boer, R. Ceulen, H. Moors, T. Spapens, EMMA/Tilburg University, 2020

95. Effectiviteit van het verdachtenverhoor. Een veldstudie naar de relatie tussen verhoortechnieken, de verklaring van verdachten en de aanwezigheid van de advocaat in zware zaken

W.J. Verhoeven & E. Duinhof, Erasmus Universiteit, Rotterdam, 2017

96. Van meerdere markten thuis? Overlap in markten van zware en georganiseerde misdaad en de consequenties voor de opsporing

T. Spapens, m.m.v. M. Bruinsma, Tilburg University, Tilburg, 2017

97. Horen, zien en zwijgen. Opsporing in dorpen en stadsbuurten met een gesloten leefgemeenschap

Bervoets & M. Bruinsma, Bureau Bervoets, Amersfoort, 2017

98. Geweld tegen hulpverleners in de psychiatrie. Aard, omvang en aangifte bij de politie

J.M. Harte, I. van Houwelingen & M.E. van Leeuwen, Vrije Universiteit, Amsterdam, 2017

99. Geëiste en opgelegde straffen bij de strafrechtelijke afhandeling van georganiseerde criminaliteit. Rapportage in het kader van de vijfde ronde van de Monitor Georganiseerde Criminaliteit

C.G. van Wingerde & H.G. van de Bunt, Erasmus School of Law, Rotterdam, 2017

100. Doorgroeiers in de misdaad. De criminele carrières en achtergrondkenmerken van jonge daders van een zwaar delict

V. van Koppen, V. van der Geest & E.R. Kleemans, Vrije Universiteit, Amsterdam, 2017

101. Profielen van Nederlandse outlawbikers en Nederlandse outlawbikerclubs

Blokland, W. van der Leest & M. Soudijn (m.m.v. E. Kleinheerenbrink & I. van Die), Leiden Law School, Leiden, 2017

102. Verdachten van terrorisme in beeld. Achtergrondkenmerken, 'triggers' en eerdere politiecontacten

Thijs, E. Rodermond & F. Weerman, Nederlands Studiecentrum Criminaliteit en Rechtshandhaving, Amsterdam, 2018

103. Burgemeesters in cyberspace. Handhaving van de openbare orde door bestuurlijke maatregelen in een digitale wereld

W. Bantema, S.M.A. Twickler, S.A.J. Munneke, M. Duchateau & W.Ph. Stol, NHL Stenden Hogeschool, Leeuwarden; Rijksuniversiteit Groningen, Groningen, 2018

104. Een bittere pil. Het fenomeen en de aanpak van illegale medicijnenhandel

van Leiden, A. Lenders & H. Ferwerda, Bureau Beke, Arnhem, 2018

105. Vastzitten zonder straf. Over verzekeringsstellingen en schadevergoedingen op basis van artikel 89 Sv

P. Kruize & P. Gruter, Bureau Ateno, Amsterdam, 2018

106. 'Ik hou het hier wel uit, hoor'. Mentale weerbaarheid binnen de districtsrecherche

H. Sollie, Twynstra Gudde, Amersfoort, 2018

107. Bestuurlijke bevoegdheden, politie en de lokale aanpak van onveiligheid

R. Salet & H. Sackers, Radboud Universiteit, Nijmegen, 2019

108. Politie en actief burgerschap: een veilig verbond? Een onderzoek naar samenwerking, controle en (neven)effecten

V. Lub & T. de Leeuw, m.m.v. A.S. Leerkes & R.J. Kleinhans, Bureau voor Sociale Argumentatie, Rotterdam; Erasmus Universiteit, Rotterdam; Bureau voor Maatschappij, Veiligheid & Deviantie, Rotterdam, 2019

109. Wijkagenten en veranderingen in hun dagelijks werk. Verslag van een onderzoek

J. Terpstra, m.m.v. A. Evers, Radboud Universiteit, Nijmegen, 2019

110. Naar een efficiëntere noodhulp? Een verkennend actieonderzoek

Scholtens & I. Helsloot, m.m.v. S. Kraaijenbrink, J. Vlagsma, M. Jürgens, D. Mouris & M. Eising, Crisislab, Renswoude, 2019

111. Bestrijding van Outlaw Motorcycle Gangs. Een rechtsvergelijkende studie naar de aanpak van onrechtmatige organisaties in rechtsstatelijk perspectief.

J. Koornstra, B. Roorda, M. Vols & J.G. Brouwer, Rijksuniversiteit Groningen, 2019

112. Politiestraatgezag en (on)gehoorzaam burgergedrag

Scholtens, M. Helsloot, I. Helsloot, Crisislab, Renswoude, 2019

113. Verkeershandhaving op Nederlandse autosnelwegen; Evaluatie van de werkwijze van het Team EVT, de effecten en de acceptatie van politiecontroles

Ch. Goldenbeld, A. Stelling-Kończak, S. van der Kint, SWOV, Den Haag, 2019

114. Virtual reality als onderzoeksmethode om inbrekers te doorgronden

van Sintemaartensdijk, J.L. van Gelder, P.A.M. van Lange, M. Otte, J.W. van Prooijen, Vrije Universiteit Amsterdam, 2019

115. Wanneer blaffende honden bijten. Een vergelijking tussen fataal en niet-fataal huiselijk geweld

P. Aarten, C. Boelema Robertus, L. Alink, M. Liem, Universiteit Leiden, 2020

116. Kijk naar het systeem. Begrijpen en beïnvloeden van opsporingspraktijken

W. Landman, R. Kouwenhoven, M. Brussen, Twynstra Gudde, Amersfoort, 2020

117. Verbeelding in de verhoorkamer. De invloed van het gebruik van beeldmateriaal in het verhoor op verhoortechnieken en proceshouding

W.J. Verhoeven, G. Vanderveen, L. van Dillen, S. Kruit, Erasmus Universiteit, Universiteit Leiden, 2020

118. Met gepast geweld. Politiegeweld in Nederland in 2016

M. Kuin, F. Kriek, J. Timmer, m.m.v. Y. Bleeker en E. Verbeek, Regioplan, Amsterdam en Vrije Universiteit Amsterdam, 2020

119. De rol van bodycambeelden in de opsporing en bewijsvoering

Vredeveltdt, L. Kesteloo, A. Hildebrandt, Vrije Universiteit Amsterdam, 2020

120. Slachtoffer van onlinecriminaliteit, wat nu?

S.G.A. van de Weijer, E.R. Leukfeldt, S. van der Zee, Nederlands Studiecentrum Criminaliteit en Rechtshandhaving, Amsterdam, 2020

121. Een alternatief voor jeugdige hackers? Plan- en procesevaluatie van Hack_Right

J.A.M. Schiks, M.S. van 't Hoff-de Goede, E.R. Leukfeldt. De Haagse Hogeschool, Centre of Expertise Cybersecurity, Den Haag; Nederlands Studiecentrum Criminaliteit en Rechtshandhaving, Amsterdam, 2021

122. Criminaliteit en huiselijk geweld: twee kanten van dezelfde medaille? De relatie tussen criminaliteit en huiselijk geweld

S. van Deuren, J. Kroese, M. van Dijk, V. Eichelsheim, A. Blokland, S. van de Weijer. Nederlands Studiecentrum Criminaliteit en Rechtshandhaving, Amsterdam, 2021

123. Oververtegenwoordiging verder ontcijferd. Een kwantitatief onderzoek naar sociale verschillen in verdenkingskans en zelfgerapporteerd crimineel gedrag onder jongeren in Nederland

W. Bezemer, A. Leerkes. Erasmus Universiteit, Rotterdam, 2021

124. Gebiedsgebonden politiewerk in ontwikkeling. Onderzoek naar basisteams in een digitale en superdiverse samenleving

J. Terpstra, R. Salet, I. van Duijneveldt, T. Havinga, Radboud Universiteit 2021

125. Slimme(re) opsporing, Een verslag van de ontwikkeling en pogingen tot implementatie van een handreiking voor efficiënte opsporing door de politie

Helsloot, P. van Lochem, C. Kijne, Crisislab, Renswoude 2022

126. Politiewerk op het web. Een verkennend onderzoek naar online gegevensvergaring door de politie

Wouter Landman, Sanne Groothuis, Twijnstra Gudde, Amersfoort, 2022

127. Living apart together? Publiek-private relaties in de bestrijding van interne financieel-economische criminaliteit

Dr. C.A. Meerts, Prof. dr. mr. W. Huisman, Prof. dr. E.R. Kleemans, m.m.v. M. van Straten, MSc, VU-Universiteit, Amsterdam, 2022

128. Politiestraatwerk onder corona. Verbinding tussen landelijk beleid en lokale gemeenschap

Wouter Stol, Litska Strikwerda, Saskia Westers, Wendy Schreurs, NHL Stenden Hogeschool, 2023

129. Moreel kompas

Anton van Wijk, Marjan Olfers, Mark van Vugt, Ard Barends, Juno van Esseveldt, Den Haag, 2023

130. Liquidaties in Nederland. Ontwikkelingen & achtergronden van schutters en andere betrokkenen

Sheila Adjiembaks, Frank Boerman, Robby Roks, Ewout Stoffers, RIEC Midden-Nederland, onderzoeksbureau ESSA Research, Erasmus Universiteit Rotterdam, Landelijke Eenheid Nationale Politie, 2023

131. Goed-fout. Criminele verdringing in legale (ketens)processen; een verkennend onderzoek met voorbeelden uit de hout-, afval- en fruitketen

Bureau Bervoets, Eric Bervoets, Mirjam Corsel, Tim Boekhout van Solinge, m.m.v. Sabine Hellemons, maart 2024

132. Van opsporing tot bewijsvoering. Plaats delict-onderzoek voor de hele strafrechtketen

M. de Gruijter, A.J. Loeve, C.J. de Poot en M. Zuidberg, april 2024

133. Ongekend. Een onderzoek naar de impact van dreiging vanuit georganiseerde criminaliteit op politiewerk

S. Mehlbaum, J. Broekhuizen, K. van den Akker, m.m.v. S. van Ruiten, T. te Beest en J. de Boer, Halfweg, mei 2024

134. Criminele familienetwerken. Subculturele factoren en clan-achtige kenmerken

T. Spapens, H. Moors, L. de Veen, S. van Nimwegen, R. Bredo, S. Vriends, C. Jacobs, Tilburg University, EMMA (Experts in Media en Maatschappij, Nationale politie), oktober 2024

135. Polarisation, escalatie en alledaagse vrede. Aandachtswijken onder een vergrootglas

L.A. Slooter, Universiteit Utrecht, Politie & Wetenschap, januari 2025

136. Gerichtte invitaties tijdens het kindverhoor. De meerwaarde en timing van gerichtte invitaties in het verkrijgen van een uitgebreide verklaring van kinderen

D.J.H. Smeets, L.R.A. Alink, m.m.v. K. Dekens, R. Haak, I. Rispens en J. van der Sleen, Universiteit Leiden, 2025

137. Politiestraatwerk en informatiegebruik. Een longitudinale studie (1991-2023) over gevolgen van digitalisering

W. Stol, L. Strikwerda, J. Jansen, W. Schreurs, mei 2025

138. Herinneringen aan misbruik van langer geleden. De betrouwbaarheid van (hervonden) herinneringen aan misbruik

M. ter Beek, H. Otgaar, B. Verschuere, september 2025

139. Politieagent worden. Socialiseren in de wereld van de politie

W. Landman, H. Solle, m.m.v. V. König, maart 2026

140. Van mens tot mens. De 'soevereinen-beweging' in Nederland

L. de Veen, M. van Rees-van Bakkum, H. Moors, juli 2026