EFFACE

European Union Action to
Fight Environmental Crime

ENVIRONMENTAL CRIME AND THE EU

Synthesis of the Research Project "European Union Action to Fight Environmental Crime" (EFFACE)

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All errors remain ours.

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ABBREVIATIONS

CITES	Convention on International Trade in Endangered Species of Flora and Fauna
COSI	Committee on Operational Cooperation on Internal Security
CSR	Corporate Social Responsibility
DNA	Deoxyribonucleic acid
ECD	Environmental Crime Directive
EFFACE	European Union Action to Fight Environmental Crime Project
EFFIS	European Forest Fire Information System
EIA	Environnemental Investigation Agency
ELD	Environmental Liability Directive
ENPE	European Network of Prosecutors for the Environment
EnvCrimeNet	European Network for Environmental Crime
EUFJE	European Union Forum of Judges for the Environment
EU-TWIX	European Union Trade in Wildlife Information eXchange
ETIS	Elephant Trade Information System
EUTR	European Timber Reguation
FTE	Full Time Equivalent
GPS	Global Positioning System
IFAW	International Fund for Animal Welfare
IMPEL	European Network for the Implementation and Enforcement of Environmental Law
INECE	International Network for Environmental Compliance and Enforcement
MARPOL	International Convention for the Prevention of Pollution from Ships
MASP	Multi-Annual Strategic Action Plan
NGO	Non-Governmental Organisation
NWCU	National Wildlife Crime Unit
OAP	Operational Action Plan
OECD	Organisation for Economic Co-Operation and Development
OCLAESP	L'office central de lutte contre les atteintes à l'environnement et à la santé publique
PCB	Polychlorinated biphenyl
PEBA	Planning and Environmental Bar Association
SEPA	Scottish Environment Protection Agency
SOCTA	Serious and Organised Crime Threat Assessment
WWF	World Wildlife Foundation

1 INTRODUCTION

In 2009, numerous cases of illegal disposal of highly toxic waste in disbanded open pits were discovered in the German state of Brandenburg. In 2015, bridge workers illegally dumped hundreds of tons of concrete into a Scottish river. In Italy, organised crime groups have been involved for more than two decades in the illegal dumping and trafficking of millions of tons of hazardous waste. Thousands of birds have been killed in Spain and other EU Member States through illegal poisoning in the last decades. In 2010, a caustic waste reservoir at the Ajka aluminum plant in Hungary collapsed. More than one million cubic meters of highly alkaline red sludge flooded several nearby villages, killing several people, and eventually polluting local rivers. The illegal trade in wildlife is one of the fastest growing organised criminal activities worldwide with an estimated annual turnover of USD 18.5 billion. Europe is both a consumer of illegally traded wildlife and endangered species as well as an important point of transit. It is estimated that illegal wildlife trade threatens a third of the world's species. Moreover, it is known to overlap with organised crime and money laundering.

These are just a few examples of an uncountable number of one-time and continuous offenses against the environment committed year-to-year within the European Union (EU) and elsewhere. Many offenses are of a local nature such as the dumping of concrete in Scotland. Other offenses have a transnational component such as trafficking in wildlife, electronic waste, timber, and toxic materials, involving several EU Member States, their neighbouring states, and states in Latin America, Africa or Asia. Some offenses are committed by groups of people over longer periods of time and may involve corrupt transactions. For instance, transnational environmental crime is often organised, involving dozens of private actors and sometimes public officials. In other cases, environmental crime is largely unorganised, consisting of offenses committed by individuals such as the dumping of smaller amounts of waste oil into streams and lakes.

Individuals and companies usually commit crimes against the environment for monetary gain. The profit margin ranges from just a few euros to millions of euros. What makes environmental crime so lucrative is that few perpetrators are actually caught and even fewer are eventually punished. Sentences that are handed down are often light. Fines are negligible compared to the profits and few perpetrators are sentenced to jail. Given the extent of harm that environmental crime can inflict on humans, animals, and plants, law enforcement efforts and sentencing often seem inadequate, failing to deter potential offenders. However, there may also sometimes be other

motivations for certain types of environmental crime, such as the lack of adequate facilities for proper waste dumping or collectors' interests in certain protected species.

Quantifying the consequences of environmental crime is not an easy task. There are currently large gaps in the available data. However, in some specific areas of environmental crime data has recently become available and the numbers are illustrative of significant harm. The illegal export of electronic waste to China and other countries has led to an estimated economic loss of almost 30 000 jobs in the European recycling industry in 2012 alone. In Italy, arson of forests killed over 50 people and injured almost 450 people between 2003 and 2012.

In light of the tremendous damage that environmental crime inflicts on the environment and the tragic loss of human and animal life it causes, and in response to uneven enforcement of environmental laws in Member States, the EU has begun to address the matter more actively. In 2008, it passed the Environmental Crime Directive (ECD). The ECD emerged in response to the growing realization among EU policymakers that traditional forms of enforcement of environmental law through administrative sanctions were insufficient to curtail environmental crime. According to the EU Commission, only "criminal sanctions for the most serious environmental offences [seem] adequate, and dissuasive enough, to achieve proper implementation of environmental law".[1]

Moreover, although the criminal law of some Member States included environmental offenses even before the ECD was adopted, definitions of environmental crimes and the level of sanctions differed greatly. The ECD attempts to address some of these shortcomings.

The ECD requires Member States to implement some minimum standards on environmental crime in their national legislation. It contains a list of environmental offences that must be considered criminal offences by all Member States if committed intentionally or with serious negligence. The Directive does not prescribe the specific sanctions Member States are to incorporate in their national legislation, but does require that the sanctions must be "effective, proportionate and dissuasive".

However, many questions in relation to environmental crime in the EU and beyond remain unanswered. For example: What do we know about the impacts of environmental crime and its costs? To what degree has the ECD achieved its objectives? Which sanctions have shown success in curtailing environmental crime? Where is room for

Box 1: The EFFACE project

To fill existing gaps in knowledge EFFACE has conducted a comprehensive analysis of public and private actors, institutions, and instruments related to the fight against environmental crime at the national, EU, and international level. EFFACE researchers have conducted more than a dozen case studies, covering particular environmental crimes related to the EU. Furthermore, the project has undertaken an analysis of the strengths, weaknesses, opportunities, and threats of existing measures taken against environmental crime, covering criminal, administrative, and civil sanctions. Translating these research findings into tangible policy recommendations, EFFACE has developed a set of recommendations that the EU and its Member States should consider to better fight environmental crime in and outside the EU.

To ensure policy relevance, EFFACE researchers have also reached out to various stakeholders, giving EFFACE a strong trans-disciplinary component. In regular meetings with public officials, policymakers, and other researchers, EFFACE has disseminated its research findings widely and learnt from the practical experiences of stakeholders involved in the fight against environmental crime to arrive at viable policy recommendations.

1 See http://ec.europa.eu/environment/legal/crime

improvement of enforcement? To address these questions, the research project "European Union Action to Fight Environmental Crime" (EFFACE) was funded under the EU's 7th Framework Programme for Research and Innovation. The project lasted from December 2012 to March 2016.

Coordinated by Ecologic Institute, EFFACE brought together researchers from eleven universities and research institutes in six European countries. These researchers have addressed the issue of environmental crime in a multidisciplinary manner, representing several academic fields such as criminology, law, political science and economics. This report presents their most important results and conclusions.

In assessing the origins and impacts of environmental crime and policies to address criminal offenses, EFFACE has left the definition of environmental crime largely open (see Box 2). It has employed several methodologies to research environmental crime and measures to address it (e.g., legal analysis, case study research, and quantitative analysis). Considering the diverse research traditions of different academic fields proved to be an asset to the study of complex societal phenomena such as environmental crime.

This synthesis report presents the most important results and recommendations of the EFFACE research project. It is written for a non-academic audience, notably policy-makers. References are kept to a minimum and they point, mainly, to the research results of EFFACE.

The report is structured as follows: Chapter 2 presents insights on the available data on environmental crime and what we know about its impacts in quantitative and financial terms. Chapter 3 presents an overview of the EU's and Member States' efforts to fight environmental crime – including relevant laws and other instruments. Chapter 4 summarises problems and shortcomings that EFFACE has identified concerning the EU's and Member States' efforts to combat environmental crime. Chapter 5 presents the most important policy recommendations produced by EFFACE.

Box 2: Defining environmental crime

The European Commission defines environmental crime as "acts that breach environmental legislation and cause significant harm or risk to the environment and human health"[2]. It thereby adopts a legal approach to the definition of environmental crime, focusing on environmentally harmful acts that are subject to legal prosecution and sanctions. However, other scholars such as criminologists are wary about legal definitions that they consider to be too narrow, constraining our ways of thinking about and fighting environmentally harmful behaviour. A harm-based definition would accordingly consider any act that negatively affects ecological and/or biological systems for the purpose of securing material gains an environmental crime. EFFACE has abstained from imposing a standard definition on its researchers, acknowledging the merit of thinking creatively about environmentally harmful behaviour and ways to combat it.

2 See http://ec.europa.eu/environment/legal/crime

2 EU-RELATED ENVIRONMENTAL CRIME AND ITS IMPACTS – WHAT DO WE KNOW?

Data on the impacts of environmental crime is needed for a variety of reasons that include the following:

- To help target actions and the limited resources of enforcement bodies: One criterion to target those resources is to focus them on the impacts of environmental crime that are greatest or most severe. This might not be the same as numbers/levels of crime, which is also a legitimate criterion for targeting resources. In any case, understanding the impacts is important for guiding enforcement strategies.
- To help understand impacts on victims and thereby guide attention to liability and restoration.
- To design welfare maximizing sanctions that internalize the external effects associated with environmental crime, i.e. make perpetrators bear the costs of their acts and prevent them from benefiting from the profits of environmental crime.
- To help guide policy review and development.

The EFFACE project has undertaken an evaluation of data and information sources for many types of environmental crime to determine what hard data is available. The results are presented in the following sections. We will first explain the different impacts that environmental crime can have and then present the results of applying the relevant methods to certain types of environmental crime. The focus is on environmental crimes committed within the EU or elsewhere, but due to demand from within the EU for certain products such as timber.[3]

2.1 How can we describe the impacts of environmental crime?

Environmental crime can have negative impacts of various types:

- **Environmental**, such as loss of species illegally hunted and collected; destruction of ecosystem or habitat from illegal activity (e.g. illegal waste dumping or clearing of forest for timber)

3 This chapter is based mainly on the following EFFACE reports: Farmer 2015; Farmer et al. 2014; Geeraerts/Mutafoglu/Illes 2015; Smith/Porsch 2015b; di Fonzo et al. 2015.

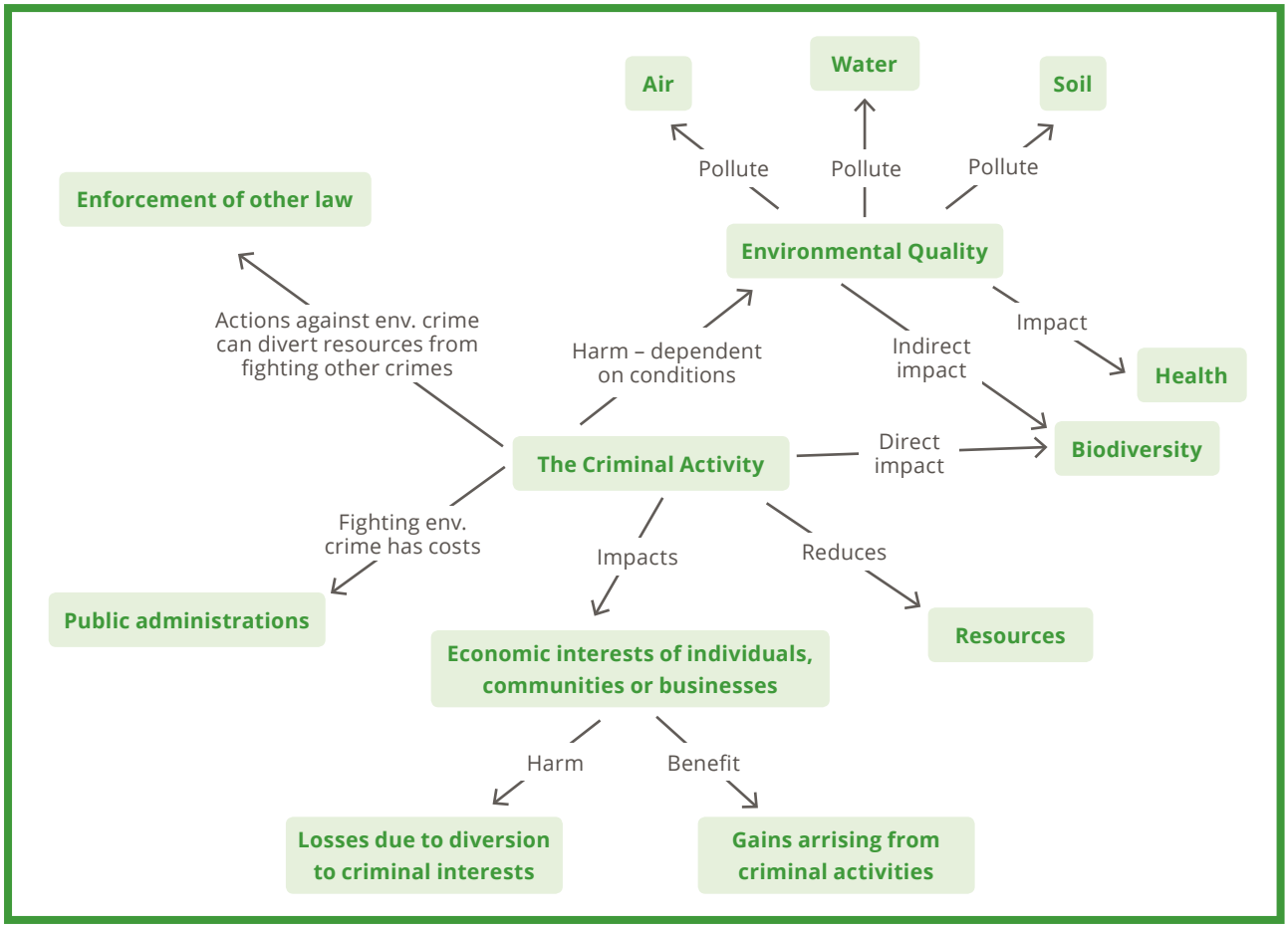
- **Economic**, such as loss of income to legitimate businesses or loss of tax revenue
- **Social**, such as health impacts, e.g. harm caused by toxic pollution

Understanding the nature and extent of the impacts of environmental crime enables enforcement authorities to focus on those crimes that cause the most harm. It also helps to raise awareness about the importance of criminal activity and to guide policy-making processes and legal review. Often the focus can be on the immediate or obvious impacts, such as the poaching of elephants. However, their loss also negatively impacts local communities that depend on tourism. Figure 1 provides an overview of some of the impacts that criminal activities can have.

Yet, identifying the impacts of environmental crime can be a challenge. In principle, there are three ways in which each impact of environmental crime can be described:

- **Qualitatively**, where the impact is described without putting figures on the impact. As long as some impact is known about, a qualitative description is always possible.
- **Quantitatively**, where the impact is described with figures referring to the scale of the impact. This could be tonnes of illegally traded waste, numbers of animals illegally killed, etc.
- On the basis of quantified data on impacts, estimates of the **financial or monetary impact** of environmental crime can be developed. Monetary figures express direct financial

Figure 1: Different types of impacts of environmental crime



Source: Farmer 2015

impacts (e.g., loss of trade for legitimate businesses). Other estimates would be based on methods to assess what value a certain function of nature or "service" has. For example, a healthy forest could provide an income to certain groups as well as reduce illness-related costs to the health system by providing cleaner air, cleaner water and a space for recreation. Health impacts can be monetized as well, relying on established methods.

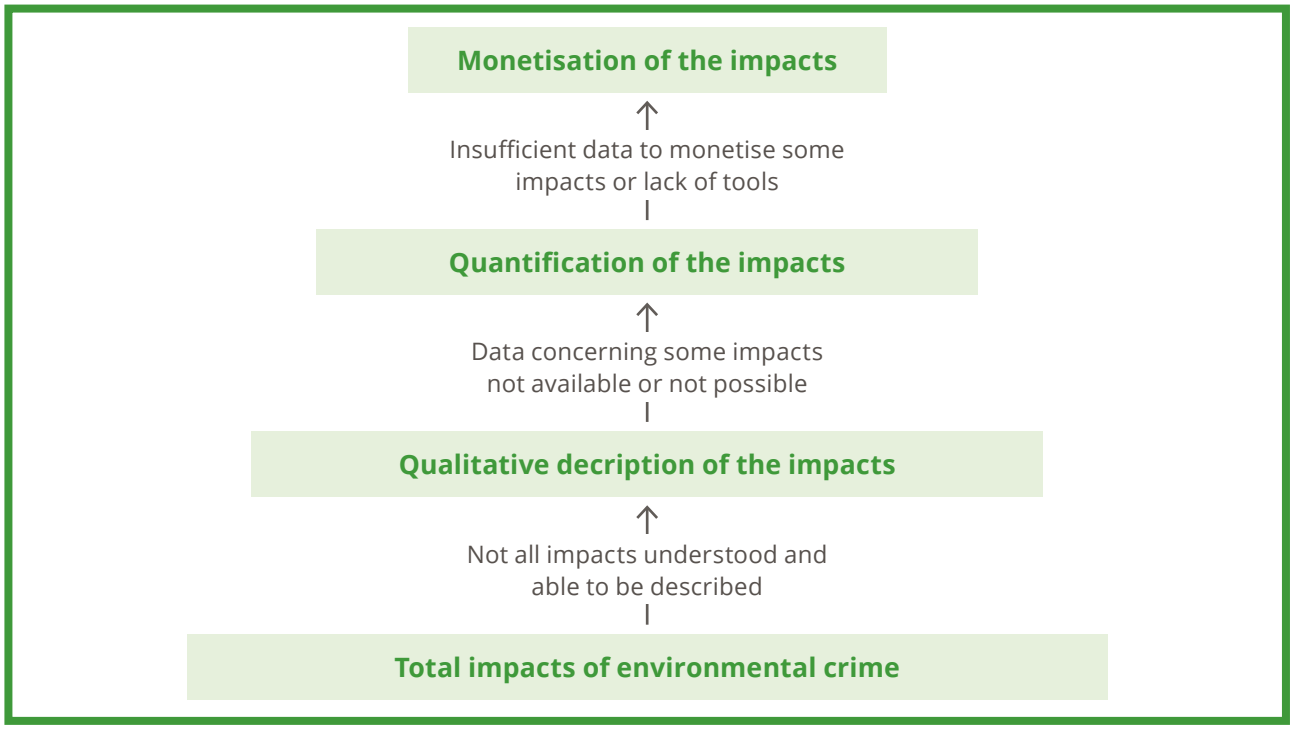
The different ways of describing the impacts of environmental crime and the difficulties associated with each step are shown in Figure 2.

It is also important to determine how impacts are distributed – between communities, geographically, over time, etc. Such information guides enforcement activities and priorities. Figure 3 below provides an example based on the illegal export of waste of electrical and electronic goods from Europe to developing countries. There is a range of different impacts, but some are seen in countries of origin and some in countries of destination.

A general problem with assessing the impacts of environmental crime, in whatever terms, is that it is difficult to establish what behaviour constitutes a crime in the first place. As pointed out in the introduction, environmental crime can be defined in different ways; not all of them require a certain act to be illegal in order to be considered a "crime". And even if one adopts a definition whereby an environmental crime necessitates illegal behaviour, it is often not easy to determine whether a certain act was actually illegal or not. Even where crime levels are known, the impacts of such crimes may be mixed with those from legal activities, so that differentiating between the impacts of legal and illegal activities respectively is difficult.

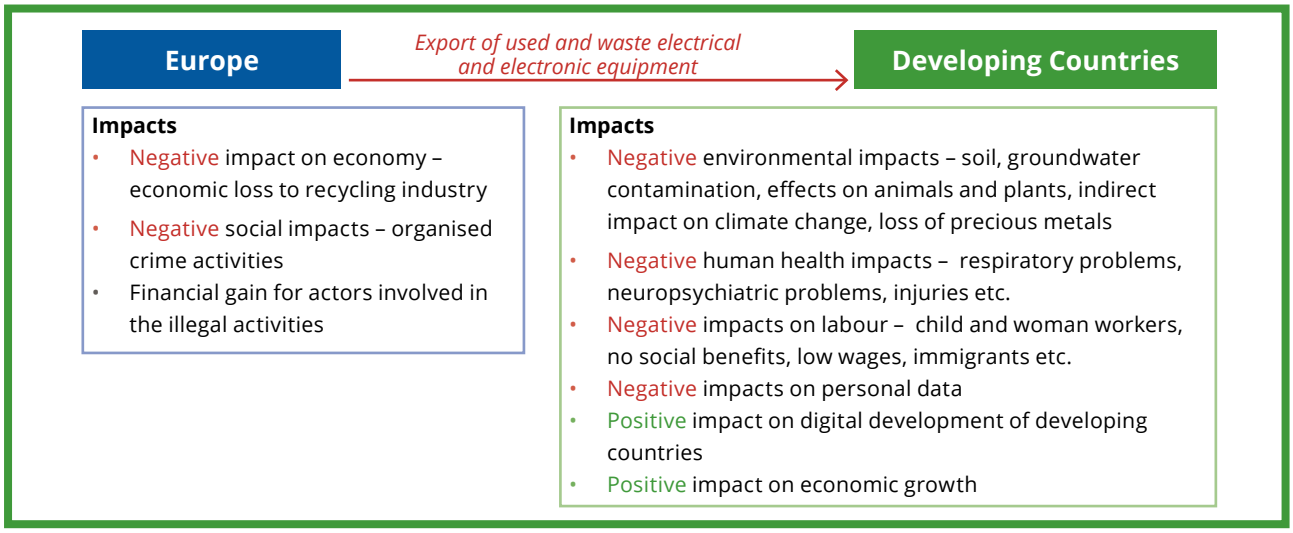
EFFACE's research results indicate that a **qualitative description** of the impacts of environmental crime is able to cover a wider range of impacts than a quantitative description. Good evidence is available in this respect for many types of impacts, even though, for example, the impacts of environmental crime on public security or governance may be more difficult to describe than other types of impacts.

Figure 2: Different ways to assess the impacts of environmental crime



Source: Farmer 2015

Figure 3: Impacts resulting from the illegal export of waste electrical and electronic goods from Europe to developing countries



Source: Based on Geeraerts/Mutafoglu/Illes 2015

Quantitative estimates on the impacts of environmental crime with EU Member States are much more difficult to make. There are various reasons for this. Firstly, data on illegal activities are inevitably more difficult to obtain than data on legal activities, because the illegal activities are carried out with the intention that they should not be detected. Therefore, crime statistics only cover detected crimes which represent only a proportion of all crimes committed. Secondly, there is no EU wide-system for collecting, recording, classifying etc. data; EU-wide systems exist only for specific types of environmental crime (see Box 3 below). Thirdly, there is often poor monitoring and recording of changes to environmental quality, health, etc.; therefore quantitative impacts of criminal activities may not be known even where levels of criminal activity might be relatively well recorded.

The research in EFFACE has found that there are good examples of information that can be used to understand the impacts of environmental crime. The most useful are good, coherent databases with information about the scale of illegal events. In other instances, data from different sources can be combined. This is the case for elephant and rhino poaching; data from an international database such as CITES can be complemented with EU level data from for example EU TWIX, and species specific databases such as the Elephant Trade Information System (ETIS). Such data enable conclusions to be drawn on how the criminal activity is affecting populations in the wild.

Generating estimates on the **monetary impacts** of environmental crime is more difficult as it requires a sound methodology for translating ecological, economic, social, health and other impacts into sums of money. This sometimes involves complex methodological and even ethical decisions. Many impacts cannot be assessed in quantitative or monetary terms; i.e. the loss incurred by current and future generations due to irreparable damage of ecosystems, forests and species extinction. EFFACE has used existing methods, but recognizes the complexities of their interpretation.

A key message from the analysis of impacts within EFFACE is that where it is possible to generate robust qualitative and even monetary data on the impacts of environmental crime, care must be taken with communicating those results. If criminal activities cause large financial costs to legitimate businesses, the case for putting resources into enforcement is relatively straightforward. However, the "pyramid" set out in Figure 2 above must not be forgotten. The impacts quantified or monetized may not be enough on their own to convince

Box 3: Two examples of EU level databases recording data relevant to environmental crime

Illegal wildlife trade

Data on illegal wildlife trafficking in the EU is collected within EU-TWIX, which stands for European Union Trade in Wildlife Information eXchange. It is managed by the NGO, TRAFFIC. Introduced in 2005, EU-TWIX is a database of information on wildlife seizures in the EU and an associated mailing list that allows quick and efficient information sharing between designated enforcement officers from all 27 EU Member States, plus Croatia, Montenegro, Norway, Serbia, Switzerland and the Ukraine. The database currently holds over 31 000 wildlife seizures as well as information on prices of wildlife specimens in trade. It currently connects around 800 CITES enforcement officials across the EU. Access to the data is normally restricted to enforcement officials. However, as an EFFACE case study on wildlife crime points out not all enforcement agencies dealing with illegal wildlife trade engage with the database.[4] This was the case in the UK where law enforcement agents reported limitations in the database due to the failure of other EU agents to engage with EU-TWIX. In Norway, in many cases, law enforcement officers had not even heard of the EU-TWIX database.

Fires

The European Fire Database is an important component of the European Forest Fire Information System (EFFIS)[5] containing forest fire information compiled by EU Member States. This is required by the Forest Focus Regulation (EC) No 2152/2003. According to the implementing rules of the Regulation, forest fires in Europe are monitored and recorded in order to have comparable information on forest fires at the EU level. The forest fire data are provided each year by individual EU Member States; currently data from 21 Member States is included in the database. The database contains information about the time, location, size and cause of the fire. The database is accessible online to anyone interested.

enforcement bodies or policy makers to take action. Therefore, it is important to stress that the numbers describe only a sub-set of the impacts to ensure that the whole picture is presented and the totality of the impacts of the criminal activity is appreciated. Moreover, it should not be forgotten in political communication that the numbers that exist are uncertain to an extent.

2.2 Environmental crime and its impacts: examples

This section provides examples of the different types of environmental crime expressed in a quantitative way and in EUR.

Illegal poaching of elephant and rhino in Africa

EFFACE was able to use good data from CITES monitoring and a number of other specialist monitoring studies to examine illegal poaching of elephant and rhino. According to data from these sources, Central Africa lost a total of 100 000 individuals to poaching between 2010 and 2012, but the precise figures vary from country to country. For rhino, for example, South Africa showed the highest numbers of poaching and Namibia the lowest.

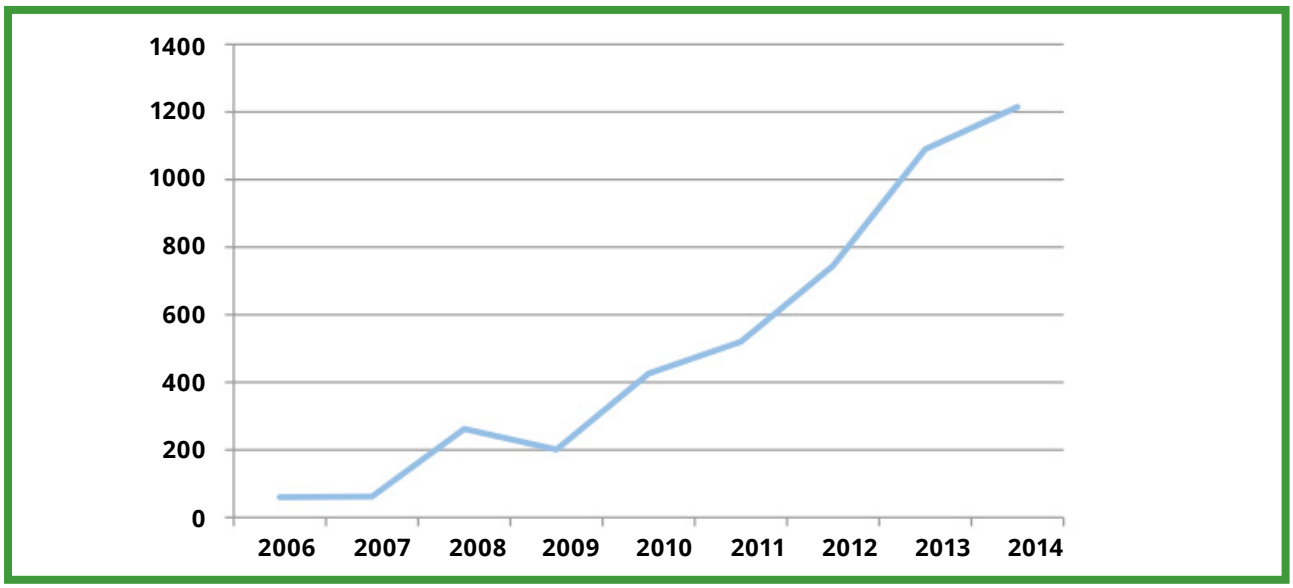
For poaching, impacts are critical when the level of loss of individual animals means that the overall population starts to decline. For elephants, in 2012, the poaching rate was 7.4% for the entire African continent compared to an average annual population growth of 5% (in the absence of poaching). This means that more animals are being killed than born – criminal activity is reducing elephant populations.

For rhino, from 1990 to 2007 poaching was limited with an average of 15 rhinos poached per year on the African continent. During this time, rhino populations grew steadily and were showing signs of recovery after decades of poaching. However, poaching then increased as shown in Figure 4.

4 Sollund/Maher 2015

5 Available online at http://forest.jrc.ec.europa.eu/effis

Figure 4: Number of rhinos poached per year on the African continent



Source: Smith/Porsch 2015b

The total population of white and black rhino in Africa increased by 17.5% between 2007 and 2012 with an average rate of population growth of 4.9% annually. This growth rate decreased from 2010 to 2012 to 0.9% annually. Thus, poaching is not yet reducing total rhino populations, but it is reducing population growth substantially.

The EFFACE analysis of the economic impacts of illegal poaching on elephant and rhino looked at two aspects of income provided by the ecosystem with elephants:

- Societal loss is valued by estimating the alternative legal income that the host country could reap from the animals through income from tourism, had they not been poached.
- If poaching reaches a level that leads to a reduction of the population, the loss is valued as a loss of natural capital[6]. The wildlife is the wealth of the source countries on which basis they can attract wildlife tourism and the associated annual income from it.

Table 1 on the next page provides the results of the EFFACE analysis for elephants, demonstrating the large economic loss due to poaching.

Obviously, the impact of illegal wildlife trade can also be described in a qualitative manner. Thus, the EFFACE case study on illegal wildlife trade links poaching to civil conflict, economic loss, poverty, climate change as potential consequence besides negative impacts on national security and stability, state authority, biodiversity and public health. However, it also concludes that the scale and costs of illegal wildlife trade are "difficult to measure as the nature and harms of the trade are complex and varied".[7] Furthermore the case study argues that illegal wildlife trade implies suffering and death for millions of animals every year, e.g. up to 90% die before they reach their destination when trafficked alive. This is a reason why the EFFACE case study adopts a harm perspective, acknowledging that not all environmental crimes can be economically assessed.

6 The use of the term natural capital does not mean that the EFFACE consortium does not recognise the intrinsic value of species or their importance for ecosystems.

7 Sollund/Maher 2015

Table 1: Economic value lost due to elephant poaching

	Africa
Total population of elephants in Africa 2010	500 000
Number of elephants poached 2010–2012	100 000
Lost potential legal income per elephant	EUR 22 331 –31 264
Total loss of potential legal income 2010–2012	**EUR 2.23 billion to 3.12 billion**
Total loss of population 2010–2012	25 000 (5% of population)
Value of 1% population loss	EUR 2.4 billion to 3.6 billion
Total loss of natural capital 2010–2012	**EUR 12 billion to 18 billion**
Total economic loss per year	**EUR 4.7 billion to 7 billion**

Source: Smith/Porsch 2015b

Illegal shipment of waste electrical and electronic equipment from the EU to China

EFFACE examined the impacts of illegal export of waste electrical and electronic equipment (WEEE) from the EU to China. Amongst the impacts examined are health impacts in China and economic impacts in the EU.

Researchers found that illegal exports from the EU have resulted in increasing incidences of chronic disease in China, threatening not just workers but also current residents living within the vicinity of e-waste recycling areas and adjacent regions and future generations. Illegal exports from the EU are dumped and recycled informally in China; this results in high prevalence of skin, gastric, respiratory, hematic, neurological, prenatal, natal and infant diseases. Select scientific studies in China show links between exposure to e-waste and physical health outcomes such as:

- decreased lung function
- decreased physical growth of children
- reduced reproductive health; and
- increased DNA damage.

There are also significant economic impacts in the EU. This is shown in Table 2.

A loss of 14 900 FTE jobs has an estimated loss of economic value added of around EUR 780 million.

Table 2: 2012 economic losses resulting from illegal exports of e-waste from the EU

	Amount of waste exports (tonnes)	Income lost in EU recycling industry (EUR)	Direct EU job loss (FTE)	Indirect[8] EU job loss (FTE)	Total EU job loss (FTE)
All illegal exports of e-waste from the EU	2.98 million	31.2–37.5 million	38 000	38 000	76 000
Illegal exports of e- waste from EU to China	1.16 million	12.2–14.6 million	14 900	14 900	29 800

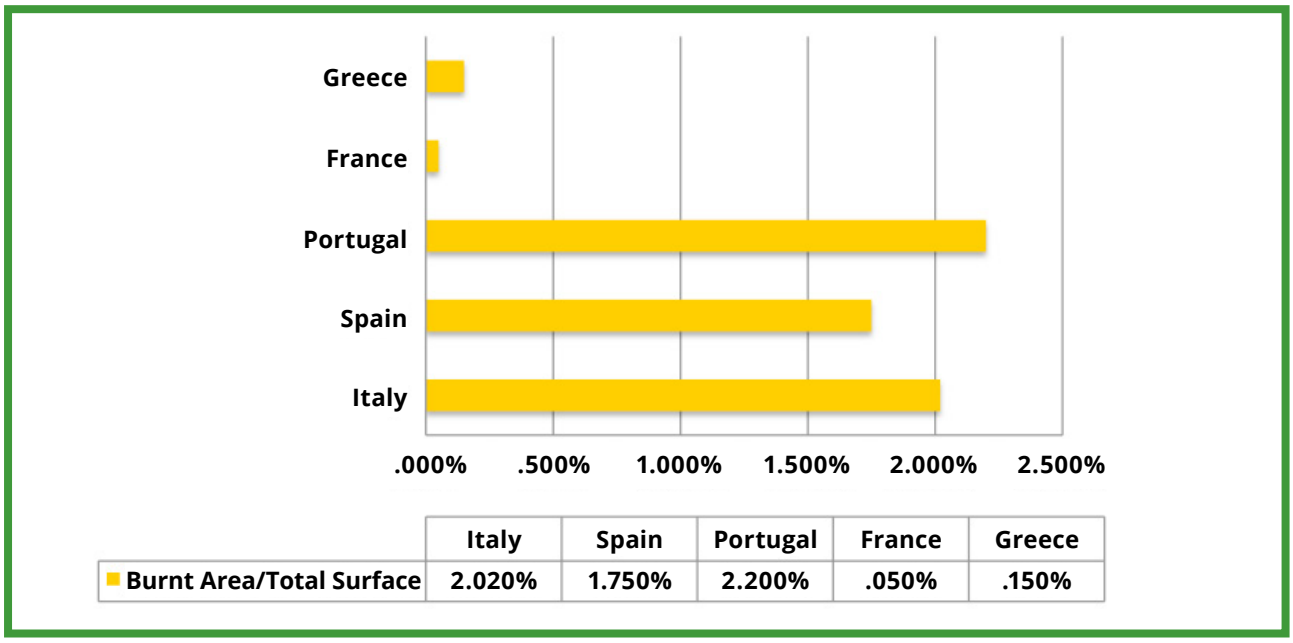
Source: Geeraerts/Mutafoglu/Illes 2015

Illegal fires

Arson is a major problem in the EU; fires have caused different negative impacts. However, these impacts generally are restricted to the areas subject to those fires. The extent of environmental, social, and economic impacts of arsons depends on several factors such as the size, intensity, location and cause (deliberate and negligence) of the event. Figure 5 shows how badly different Member States have been affected, considering the ratio between burnt area and total surface area over the last decade.

The impact of fires, beyond that of areas burnt, depends in part on the damage caused and related economic impacts. There may be important biodiversity impacts through destruction of habitat, although this is highly dependent on the particular areas burnt. EFFACE examined several individual cases of fires and calculated the monetary impacts. One example is the Rocca Romana forest fire. The forest fire crime occurred in the Lazio region, on 7–10 August 2003. It affected an area of 22 ha with a predominance of oaks, chestnuts and hornbeams and was caused by negligent behavior. To assess the damage caused by this fire, EFFACE used an analytical approach based on the economic assessment of forest fire damage relating to the loss or reduction of the economic, social and environmental utility of forests. In particular, the environmental damage concerned seven forest functions. These were the loss of wood production, of non-wood production, of tourism/recreation and of hunting activity as well as negative effects on the soil, climate change and biodiversity. The total value of environmental damage from these seven functions caused by this forest fire was estimated at EUR 202 353.

Figure 5: Impact of forest fires on selected Members States 2003-2012, expressed as ratio of area burnt and total surface of the country



	Italy	Spain	Portugal	France	Greece
Burnt Area/Total Surface	2.020%	1.750%	2.200%	.050%	.150%

Source: Di Fonzo et al. 2015

8 Indirect and induced jobs are notably those using the recycled materials for manufacturing.

3 EU AND MEMBER STATES' EFFORTS TO COMBAT ENVIRONMENTAL CRIME

The EU and its Member States continue to combat environmental crime. In the following we first present an overview of the most important actors and institutions involved in the fight against environmental crime. Thereafter, we describe the most important elements of the legal frameworks on environmental crime at the EU level as well as at Member State level, including sanctions.[9]

3.1 Actors and institutions addressing environmental crime

In the fight against environmental crime, a great variety of actors and institutions are involved at various levels and stages, both at the regulatory level, i.e. in creating instruments to combat environmental crime, and in enforcement, i.e. using these instruments.

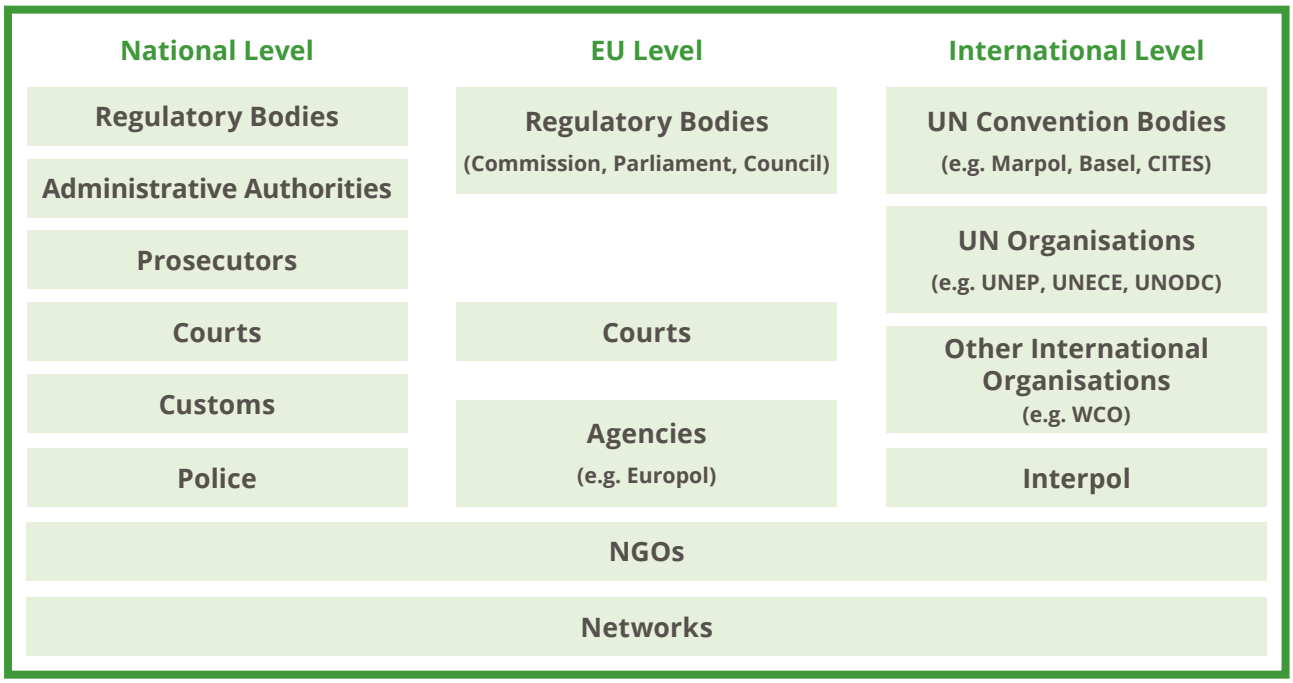
Actors and institutions at the Member State level play a key role in combating environmental crime, as they are mainly responsible for the implementation of instruments and enforcement of legal rules against environmental crime. The Member States still play the dominant role in the efforts to combat environmental crime, as criminal law is a core national competence; Member States have the responsibility to implement and enforce EU legislation. Similarly, States that are parties to international conventions relevant to environmental crime (e.g. CITES, the Basel Convention and MARPOL) are responsible for their implementation and enforcement. Thus, national level actors and institutions, such as the police, customs, public prosecutors, courts and administrative authorities, are mainly responsible for monitoring, investigating, prosecuting and sanctioning environmental crimes.

National actors are supported by those operating across all levels, such as NGOs and networks, which play a complementary and important role. Figure 6 provides an overview of important actors and institutions at the national, EU and international level involved in the fight against environmental crime.

The role of actors and institutions at the EU and international level can be considered as complementary to the predominant role of national actors.

9 This chapter is based mainly on the following EFFACE reports: Faure et al. 2015; Chin/Weening 2015; Smith/Klaas 2015; Vagliasindi 2015.

Figure 6: Important actors and institutions in the fight against environmental crime



Source: Faure et al. 2015

The EU provides a legislative framework, both relating to the criminal law of the Member States and to administrative environmental law, to be transposed and implemented by Member States. Various bodies of the EU are also involved in monitoring and ensuring compliance with the legislative framework and providing support to Member States in combating environmental crime.

Among the important **EU bodies** with regard to environmental criminal law is **DG Justice**, which is responsible for the development and monitoring of the implementation of the Environmental Crime Directive. It also provides judicial training, develops instruments for mutual cooperation on criminal matters and issues studies on environmental crime. Moreover, **DG Environment** plays an important role in the fight against environmental crime. It deals with improving inspections in Member States, can initiate infringement proceedings in case Member States do not properly implement EU environmental legislation and works on the implementation of legislation against crimes like illegal wildlife trafficking or logging.

Two of the most important EU institutions, especially regarding the cross-border dimension of environmental crime, are Europol and Eurojust, created for police and judicial cooperation respectively.

Eurojust is an EU agency created by the Council to deal with judicial cooperation in criminal matters, supporting the activities of national authorities and facilitating the cooperation between them. It can request Member States to investigate a case or institute a prosecution and set up joint investigation teams of several Member States in cross-border cases. Eurojust has the role of a mediator and facilitator, without any decision-making power with regard to national authorities. However, the involvement and consultation of Eurojust, especially in cases of cross-border environmental crime, can be highly valuable for national authorities. Eurojust can facilitate the exchange of information and provide legal advice as it has ample expertise on the different legal systems of all Member States. It can also provide advice on technical matters like investigative techniques and

assist with the management of joint investigation teams. Eurojust conducted a Strategic Project on Environmental Crime in 2013 to assess the issue and develop recommendations for an improved use of legal instruments.[10]

Europol supports Member States in fighting serious international crimes, including environmental crimes, and assists national enforcement authorities by collecting, analysing and spreading information. Europol also coordinates, organises and conducts investigations together with national enforcement authorities or within joint investigation teams involving several Member States. It is, however, not allowed to conduct operations independently of Member States.

Europol has also gained importance in the fight against organised (environmental) crime. In 2013, it issued a Threat Assessment on Environmental Crime in the EU, concluding that the trafficking in illicit waste and endangered species are the environmental crimes in which organised crime plays the most prominent role.[11]

Europol's Serious and Organised Crime Threat Assessments (SOCTAs) also inform EU decision-making on what are the most important types of serious and organised crime. They are part of the EU's multi-annual **policy cycle for organised and serious international crime** established in 2010. Its aim is to ensure that there is effective cooperation between Member States and EU institutions, targeting the most pressing criminal threats facing the EU. The SOCTAs compiled by Europol deliver a set of recommendations based on an in-depth analysis of the major crime threats facing the EU. The Council of Justice and Home Affairs Ministers uses these recommendations to define priorities for a period of four years. The Commission then convenes a meeting of representatives of the Member States and relevant EU institutions who agree on four-year Multi-Annual Strategic Action Plans (MASPs), which define the strategic goals for combating each priority threat. Based on these plans, yearly operational action plans (OAPs) are developed. Both the MASPs and the OAPs are approved by the Standing Committee on Operational Cooperation on Internal Security (COSI). The operational action plans are then implemented; implementation is monitored by COSI. Finally, based on input provided by Europol and the Commission, the plans and priorities are reviewed. Although environmental crime has serious impacts on ecosystems and people's lives, it has not been defined as priority at the EU level so far.

At the international level, in cooperation with Europol, **Interpol** supports enforcement agencies in combating environmental crime through operational tools and services, facilitating cross-border police operations and training, intelligence gathering and analysis. Through its Environmental Crime Committee and the Environmental Compliance and Enforcement Committee, Interpol has undertaken several global and regional operations. These were aimed at the development of practical cooperation and communication among national environmental law enforcement agencies and international organisations.

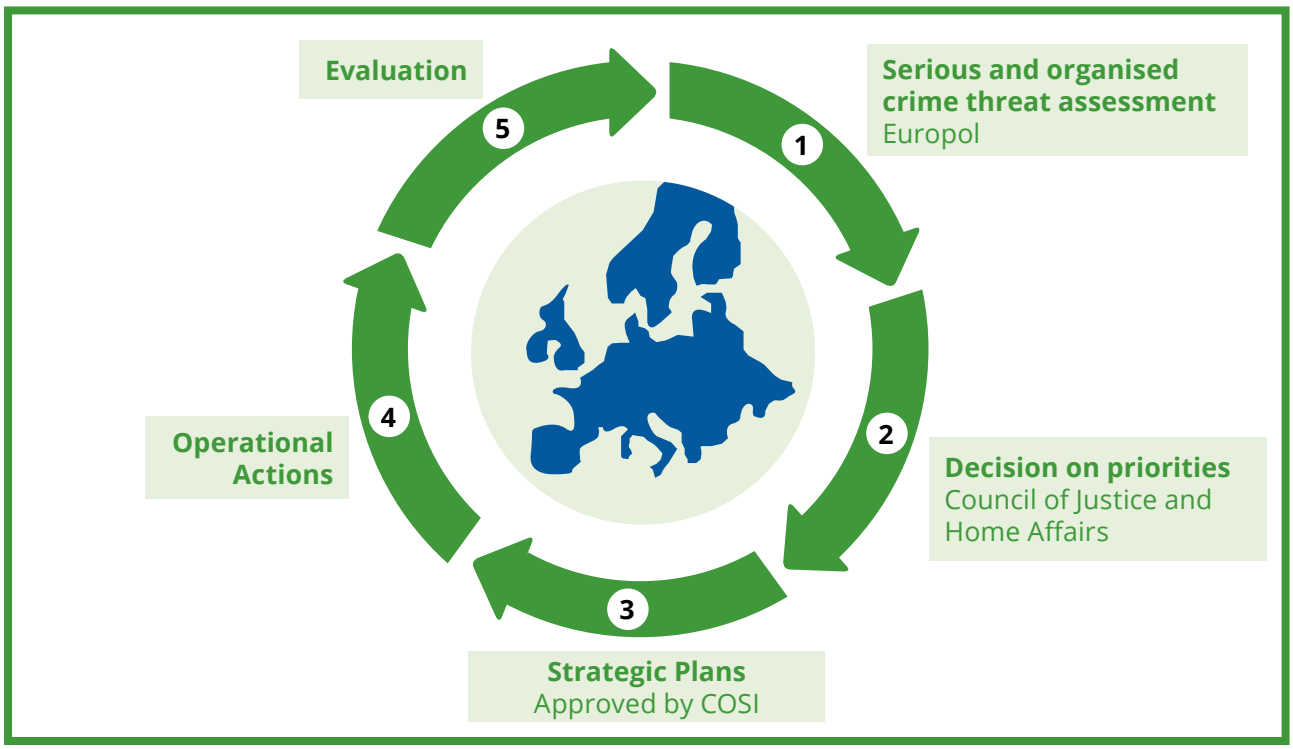
The activities of these actors and institutions are complemented by those of NGOs and environmental enforcement networks, which sometimes work across governance levels.

Environmental NGOs work at various levels, from the community to national and international level and are mostly known for conducting public awareness campaigns. Greenpeace, the World Wildlife Foundation (WWF) and the International Union for the Conservation of Nature (IUCN) are some well known examples of environmental NGOs with international scope, having a strong media presence, presenting detailed reports, videos and photos that in turn influence public opinion that can target policy makers and governments. Some NGOs also provide training and capacity

10 Eurojust (2014)

11 Europol (2013)

Figure 7: EU policy cycle on organised and serious crime



building. For example the International Fund for Animal Welfare (IFAW) has been cooperating with Interpol on issues related to the trafficking of endangered animals, funding an operation and providing training for officers. It has also published reports on online-trading of protected species. But NGOs also contribute to criminal enforcement, by gathering information and presenting it to officials or to the public. A prominent example is the Environmental Investigation Agency (EIA), which presents confidential briefings to assist officials in criminal investigations and submits information at the invitation of individual governments and intergovernmental organisations on specific issues or cases.

Environmental enforcement networks operate at the national, regional and international level as well as across these levels. As environmental crimes often affect more than one country and do not stop at national borders, cooperation between national authorities and enforcement agencies is as important as cooperation between different countries and governance levels. The main goal of environmental enforcement networks is to facilitate cooperation, as well as promoting effective implementation and enforcement of environmental law. This is achieved by sharing information and experience among members, building relationships and contacts across jurisdictions, raising awareness, improving environmental compliance and developing best practices and procedures. The most important international network is the International Network for Environmental Compliance and Enforcement (INECE), with a broad range of members from governmental enforcement agencies to NGOs and business. At the EU level, enforcement networks have specific groups of actors as members. For example the European Network for the Implementation and Enforcement of Environmental Law (IMPEL) is composed of officials from environmental ministries and agencies, the European Network for Environmental Crime (EnviCrimeNet) of members of police and customs, the European Network of Prosecutors for the Environment (ENPE) of prosecutors and the European Union Forum of Judges for the Environment (EUFJE) of judges.

Box 4: NGOs in the "land of fires"

For the past thirty years, the Italian region of Campania has seen the sprawl of illegal waste disposal sites where toxic wastes are buried and burnt in violation of even the most basic health and environmental standards. The consequences for the environment are disastrous. Yet despite the tremendous environmental and human costs, illegal waste trafficking continued to grow largely unencumbered due to corrupt networks linking Italy's mafia to business people, state bureaucrats, and elected officials. Since environment regulations have increased the costs of waste management, illegal waste trafficking has become a multi-million Euro business, attracting and feeding organised crime. This business would have probably expanded even more, had it not been for the efforts of victim groups in the region to raise awareness about environmental crime in the waste management industry and bring perpetrators to justice. The link between the unregulated burning and dumping of toxic wastes and the catastrophic consequences for living beings had become too obvious for illegal waste trafficking to remain a "victimless" crime.

Since 2008, citizens in the region have shed the role of passive victims and have increasingly organised against illegal waste trafficking. Dozens of NGOs, coordinating the activities of a hundred thousand citizens, currently monitor illegal activities and related responses by law enforcement agencies, raise public awareness, and mobilise for tougher laws and enforcement. Their actions have resulted in several successful law initiatives. For instance, in 2014 Law Decree 136/2013 (the so-called Land of Fire Decree) was passed, declaring the burning of waste a crime. And in 2015, four news types of environmental crime were added to the Italian penal code through Law 68/2015: environmental contamination, environmental disaster, traffic and abandonment of highly radioactive materials, and obstacle to controls. The work of NGOs in the Land of Fires has therefore significantly increased the risk for organised criminals involved in illegal waste trafficking. The case demonstrates the need to empower victims by acknowledging the important role they can play in the fight against environmental crime.

Source: D'Alisa et al. 2015

3.2 Instruments used to fight environmental crime: the EU level

The most important EU instrument in relation to environmental crime is the Environmental Crime Directive (ECD)[12]. It requires EU Member States to criminalise certain acts that breach EU environmental legislation or national provisions that implement EU environmental legislation. The preamble of the ECD states that the existing systems of penalties in the Member States had not been sufficient to achieve complete compliance with laws protecting the environment. Such compliance should be strengthened by the availability of criminal penalties.

On these grounds, the ECD lists specific environmental offences, such as particular discharges or emissions, shipment of waste or operation of a plant with dangerous activities. It requires Member States to criminalise these acts if they are committed unlawfully and intentionally, or at least with gross negligence. The ECD requires Member States to punish the listed offences with "effective, proportionate and dissuasive" criminal sanctions. However, the Directive does not prescribe the specific sanctions Member States are to incorporate into their national legislation.

Another piece of EU legislation requiring Member States to incorporate into their national legislation criminal provisions relating to environmental offences is the Ship-Source Pollution Directive[13]. It requires Member States to regard discharges of polluting substances from ships as criminal offences under certain conditions. Like in the ECD, details of sanctions are not prescribed, but they need to be "effective, proportionate and dissuasive".

The **Environmental Liability Directive** (ELD) is another important piece of EU legislation of relevance for combating environmental crime. It was passed in 2004, after almost twenty years of deliberation by the EU. Its aim is to prevent and remedy environmentally harmful behaviour that harms protected species and natural habitats, waters, soil, and (to a more limited degree) biodiversity. Operators are required to take preventive action and bear the costs of clean-up measures. While not an instrument of criminal law, provisions on environmental liability can help prevent environmental crime by making perpetrators liable for the consequences of their action and clean-up measures.

Several of the EU's legal instruments in the area of environmental law, including environmental criminal law, serve to implement international environmental agreements. For example, the Ship-Source-Pollution directive implements the MARPOL Convention 1973/1978. The Convention was adopted after severe ship accidents, which led to the release of oil and other substances into the environment. So far, EU law contains only a limited number of rules on how Member States are to enforce environmental provisions (see Box 5). Normally, the decision on how to enforce environmental law is left to Member States.

Apart from legislation, the EU also uses softer approaches such as the already mentioned priority-setting on serious and organised crimes (see above section 3.2), but also non-binding strategies. For example, the Commission's "Agenda on Security"[14] mentions environmental crime and its severe negative impacts. The Commission announces that it will "consider the need to strengthen compliance monitoring and enforcement, for instance by increasing training for enforcement staff, support for relevant networks of professionals, and by further approximating criminal sanctions".[15]

12 Directive 2008/99/EC of the European Parliament and of the Council of 19 November 2008 on the protection of the environment through criminal law, OJ L 328, 6 December 2008, p. 28–37

13 Directive 2005/35/EC of the European Parliament and of the Council of 7 September 2005 on ship-source pollution and on the introduction of penalties for infringements, OJ L 255, 30 September 2005, p. 11–21

14 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: The European Agenda on Security , Strasbourg, 28 April 2015, COM(2015) 185 final

15 Ibid., p. 18

Box 5: EU rules on enforcing environmental legislation within Member States

The Industrial Emissions Directive (IED)[16] contains rules on certain emissions from industrial activities. Its Art. 23 defines rules on Member States' inspections of installations coming within the scope of the directive. Member States must come up with inspection plans that are regularly reviewed and updated. The timing of inspections is to be based on an analysis of environmental risks; the IED specifies the criteria to be taken into account when assessing the environmental risks.

In 2014, amendments to the EU's Waste Shipment Regulation were adopted to achieve more uniform implementation of the regulation throughout the EU. By 1 January 2017, Member States will have to establish inspection plans; these plans must include the objectives and priorities of the inspections, the geographical area covered by the inspection plans and the tasks assigned to each authority involved. The plans must be based on a risk assessment carried out for specific waste streams and sources of illegal shipments. They are to be regularly reviewed and updated at least every three years. In addition, the regulation now requires Member States to clarify if waste has been correctly classified, to identify if waste is being shipped to "environmentally-sound facilities", to give inspectors more power to demand documentary evidence from suspected illegal waste exporters and to include a minimum number of physical checks in waste shipment inspections.

A different model from the one of the IED and the Waste Shipment Regulation can be found in the EU's fisheries legislation. Here, an EU authority – the European Fisheries Control Agency – has been created.[17] It is based in Spain. One of the tasks of the Agency is to coordinate controls and inspections by Member States; it is also to assist Member States in these activities in various ways. Enforcement is hence no longer the exclusive domain of Member States. At the same time, there are also quite detailed EU rules on Member States' monitoring and inspections in the area of fisheries.[18]

Source: Geeraerts/Illes/Schweitzer 2015 and EU legislation

16 Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control), OJ L334, 17 December 2010, p. 17–119

17 The legal basis is Council Regulation (EC) No 768/2005 of 26 April 2005, OJ L 128, 21 May 2005, p. 1–14

18 Contained in Council Regulation No 1224/2009 of 20 November 2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy, OJ L 343, 22 December 2009, p. 1–50

3.3. Instruments used to fight environmental crime: the national level

As a result of the ECD, which had to be transposed by Member States by the end of 2010, there are rules on environmental criminal law in all Member States. Yet, given the diversity of legal systems, there are also differences in the transposition of the Directive into national environmental criminal law.

A first difference in national implementation is where the main instruments of environmental criminal law can be found. There are roughly three main models: A first one is the incorporation of the most important criminal provisions in a criminal/penal code. A second, and to some extent (comparable) model, is when provisions on environmental crimes can be found in an environmental code. A third model is the one whereby most criminal provisions can be found in sectoral regulation such as a water protection or waste statute. In the latter case, the criminal provisions would usually come at the end of a statute of largely administrative nature. In the different Member States, different models can be found.

Moreover, there are also differences with regard to how well Member States have transposed the ECD. The European Commission issued an evaluation of the implementation of the ECD by Member States which came to a mixed conclusion. Some Member States have successfully transposed all requirements of the ECD into national legislation (like Greece, the Netherlands or Slovenia), while in other cases the transposition was delayed or even incomplete (e.g. in the cases of Latvia, Portugal, Poland and Croatia), mostly because Member States were failing to include all offences listed in Art. 3 of the ECD into national legislation.[19] As a consequence, the list of environmental crimes is not identical in all Member States. Some exist only in some Member States and have been adopted independently of the ECD.

Other differences are related to whether only acts committed intentionally are criminalised or also those committed in a seriously negligent manner. There are also different interpretations of vague notions contained in the ECD, e.g. "substantial damage".

Moreover, there are significant differences in Member States' systems of sanctions which the ECD does not harmonise. This concerns the level of sanctions as well as the types of sanctions available. A good example of "toolbox" approach is the UK (see Box 6). Here, a variety of different instruments are available to enforcers to react to specific environmental harm in an appropriate and proportionate manner.

Box 6: Transition to a "toolbox" approach in the UK

As a result of recent regulatory reforms, the United Kingdom has moved away from a system that traditionally relied on criminal enforcement to a system of administrative fines (in the UK context referred to as civil sanctions). It is more particularly through the Regulatory Enforcement and Sanctions Act that administrative authorities can impose inter alia a Fixed Monetary Penalty for minor offences and a Variable Monetary Penalty for the more serious offences. Generally legal doctrine in the United Kingdom holds that those civil penalties are easier to administer, more flexible and more appropriate. There are only some questions as to whether the civil sanctions may not confer too much power on the regulatory agencies at the expense of the courts. Other sanctioning options available to environmental authorities include warnings and prohibition notices.

Sources: Faure et al. 2015; Mitsilegas/Fitzmaurice/Fasoli 2015b; Newman 2015

19 Milieu Ltd. "Evaluation Study on the Implementation of Directive 2008/99/EC on the Protection of the Environment through Criminal Law by Member States". 2015. National reports available at http://ec.europa.eu/justice/criminal/criminal-law-policy/environmental-protection/index_en.htm

4 PROBLEMS AND SHORTCOMINGS OF THE EU'S EFFORTS TO FIGHT ENVIRONMENTAL CRIME

As the previous chapter has shown, there are a variety of actors, institutions and instruments used to fight environmental crime within the EU. However, are they effective in preventing environmental crime? What is missing? In the following, we present answers to these questions. These insights are mostly based on an assessment of the strengths and weaknesses of the current EU approach to fighting environmental crime as well as opportunities for improvements and threats related to current efforts;[20] other sources are indicated in footnotes.

The EFFACE team has identified nine crucial areas: data and information management, the substantive legal framework on environmental crime at the EU level, the sanctions available, the functioning of enforcement institutions and cooperation between them, the role of victims and civil society in fighting environmental crime, the external dimension of EU action against environmental crime, rules on environmental liability, efforts to combat organised environmental crime and rules on corporate responsibility and liability.

4.1 Data and information management

In the area of environmental crime, the current state of data and information management is wanting. There are exceptions, though, providing examples of best practices. For instance, in some EU Member States information about contaminated sites is readily available. Data concerning the tracking of forest fires is available and shared between Member States; the same holds true for illegal fishing and wildlife trade (see also above Section 2.1). However, for other types of environmental crime, little data exists. For example, as far as illegal waste trade is concerned very little data is available; not all Member States have established a national inventory of contaminated sites. The current practice of sharing data in relation to enforcement or the EU timber regulation is illustrated in Box 7.

What is missing in particular is good data about the specific nature and consequences of environmental crime. For instance, little is known about the particular costs of environmental crime and the

20 Farmer et al. 2015

Box 7: Managing data in relation to trade in timber

The EFFACE case study on the EU's timber regulation (EUTR) has looked at data management and cooperation between authorities enforcing the EUTR. Each of the national enforcement agencies examined has an internal system for data collection and management to which all officials responsible for EUTR enforcement activities have access. Where investigation and prosecution require cooperation with other agencies inter-departmental arrangements are in place to share data. A six monthly meeting of enforcement officials, hosted by the European Commission has been established, but progress on developing a data sharing platform has been slow. A proposal has been made to establish a platform to allow EUTR enforcement officials from different Member States to communicate with each other and store data, akin to EU TWIX (see on TWIX Box 3).

Source: Saunders/Hein 2015

character of environmental crime (e.g., whether it is transnational or not; organised or not). Member States are rarely obliged to transmit information about environmental crime to the EU where this data could be centrally managed and shared.

Information on the sanctions effectively imposed by the judiciary is also lacking. Such information is often not collected in a consistent way by Member States; as a consequence no reliable or comprehensive data is available for the EU, either. If that type of information is lacking, it becomes very difficult to judge to what extent criminal enforcement can be considered as "effective, proportionate and dissuasive" as required by the ECD.

Data and information management remains costly despite recent technological innovations such as GPS tracking and the implementation of geographic information systems. With public budgets feeling the pinch in almost all Member States, priorities might be given to measures that yield immediate results but that do not contribute to efficient campaigns against environmental crime in the long run. Such campaigns do need ready access to reliable and comprehensive data.

4.2 Substantive environmental criminal law at the EU level

The introduction of the two Directives on Environmental Crime and Ship-source Pollution raises questions of consistency and coherence between these instruments and pre-existing legal instruments in the field of environmental protection and in particular the Environmental Liability Directive that does not cover the environmental damage caused by ship-source pollution. A key question in this context is the relationship between criminal law and non-criminal law enforcement avenues to achieve the objective of environmental protection.

The question arises of whether the implementation of EU instruments in the field of the protection of the environment results in consistent outcomes in national law and legal certainty. The lack of legal certainty may also be a weakness in ECD which defines what constitutes an environmental crime by reference to a behaviour being unlawful under other (environmental) directives. The structure chosen implies that the definition of environmental crime depends upon the violation of national legislation implementing the environmental acquis (which, to complicate things, is in constant change). Moreover, ambiguous terms and vague notions, such as "non-negligible quantity", "significant deterioration" and "substantial damage", are present in many environmental directives. To sum up, the approach towards criminalising environmental harm of the ECD makes it difficult to determine which behaviour constitutes environmental crime. There are alternative ways of defining what an environmental crime is. For example, the Council of Europe Convention on the Protection of the Environment through Criminal Law of 1998 (which has never entered into force) has a different structure: the behaviour that has to be criminalised is described in a more direct manner in the Convention itself.

There is also a need to take a "big picture" approach and address existing gaps and inconsistencies in EU law on environmental crime. A key gap is the lack of a clear link between measures addressing environmental crime and measures addressing organised crime. Also environmental criminal law and anti-money laundering law are not linked. The EU and its Member States do not consider environmental crime as a predicate offence of money laundering as recommended by international instruments, e.g. the recommendations of the Financial Action Task Force of the Organisation for Economic Co-Operation and Development (OECD).

4.3 System of sanctions

One weakness of the system of sanctions, which is being defined by Member States in the absence of harmonized EU rules on the matter is that the mix of sanctions (administrative/criminal/civil) at Member State level is not always optimal. While some Member States do have possibilities for administrative authorities to impose specific measures, in others these powers seem either to be missing or are rarely applied. For example, in Poland and Spain, legal analysts consider the delineation between administrative and criminal sanctions unclear. The same is true concerning the system of administrative fines. In some legal systems, like Italy, administrative fines play a lesser role. This may lead to an excessive reliance on criminal law.

Table 3 provides an overview of the different types of approaches and sanctions to addressing environmental crime. Criminal law approaches will typically entail an investigation by the police triggered by monitoring efforts or a complaint, a referral to the prosecutor and proceedings before a criminal court. The most typical form of sanctions in criminal proceedings are prison sentences and fines, even though complementary sanctions (such as a prohibition to exercise a certain profession or activity, revocation of licenses, confiscation of proceeds) may also be imposed. An administrative approach towards environmental law will normally entail an authority detecting an infringement through monitoring (or a complaint by a citizen or NGO) and imposing an administrative measure, like an order to stop a certain activity, to take certain technical precautions, a clean-up order, or a decision to close down a business. Often, administrative authorities can also impose fines. Civil law suits are typically initiated by victims of environmental crimes claiming a certain amount of money for the harm done to them as damage; however, they may also request other actions from the perpetrator (e.g. restoration in kind of harm done).

One additional issue with the administrative law approach to those mentioned in Table 3 is that the risks exists that administrative agencies do not exercise their functions and discretion properly. For example, they might knowingly tolerate environmental offences, because they do not want to act against local business interest.

In light of the above advantages and disadvantages of different approaches towards dealing with environmental crime, it seems that the mere

Box 8: Active toleration of environmental crimes and criminal liability of administrations and law enforcement agencies

In Member States with a civil law system[21], administrative law and criminal environmental law co-exist. Criminal law depends heavily on administrative law, and in particular, on a diligent application of administrative law by the administrative authorities. For example, whether a conduct is punishable as crime or not, may depend on whether there is an administrative permit allowing the conduct in question. Lack of action, inappropriate behaviour and collusion by administrative authorities with operators have fostered environmental crimes. Such behaviour of officials may constitute an administrative infringement or criminal offence in some Member States, depending on the seriousness of the legal infraction or the environmental damage caused.

21 Most EU Member States have a civil law system. Important exceptions are the UK and Ireland.

Table 3: Criminal, administrative and civil law approaches to addressing environmental crime in comparison

	Criminal law approach	Administrative approach[22]	Civil law suits
Aim	Punishment and deterrence; sometimes restoration or prevention of future harm Expression of strong moral disapproval of action	Prevention of future harm and/or restoration; some deterrent effect	Compensation and/or restoration; deterrence; in some jurisdictions punishment
Who initiates proceedings	Public prosecutor	Administrative authorities	Victims of environmental crimes and in some cases NGOs suing those who caused damage
Length of proceedings	Up to several years	Often possible for authorities to react quickly	Depending on the complexity of case, up to several years
Possibility of participation for victims of environmental crime and NGOs	Typically certain procedural rights for victims as individuals; sometimes, possibilities to bring a civil liability claim in criminal proceedings or to trigger additional investigative measures for NGOs	Divergent approaches in Member States, whether judicial review of the administrative authorities' conduct can be initiated only by those whose interests are affected or also e.g. by NGOs	Full participation of victims as claimants in proceedings; NGOs can be claimants in some Member States for certain types of damage
Investigatory work	Primary responsibility for bringing evidence with prosecutor; investigation techniques that can be used (e.g. wire-tapping) depend on type of crime	Authorities need to be able to demonstrate that factual requirements of a legal norm allowing administrative action are fulfilled	Parties responsible themselves for producing evidence to support their claims; limited number of types of evidence accepted
Threshold of proof	Criminal proceedings usually require a high threshold of evidence for conviction ("*in dubio pro reo*")	Compared to criminal proceedings necessary threshold of proof is lower	Typically lower threshold of proof than in criminal proceedings
Costs	Costs of proceedings born mostly by state; relatively high costs for the state due, among others, to high threshold of proof and length/complexity of proceedings	Typically lower costs for the state than in criminal proceedings, among others because of less complex proceedings	Relatively low costs for the state, but often high costs for the parties, as they are responsible for producing evidence

Source: Authors' compilation based on Abbot/Ogus 2002; Faure et al. 2015; Germani/Gerstetter 2016

22 Regarding terminology, it should be noted that what is referred to as administrative sanction or measure in most countries, may be a called a "civil sanction" or similar in common law systems like in the UK.

reliance of the ECD on criminal law is problematic. The Directive clearly holds in its recitals that only criminal law can "demonstrate a social disapproval of a qualitatively different nature compared to administrative penalties or compensation mechanisms under civil law". As a result, situations where administrative sanctions such as fine or other sanctions can also provide an effective deterrent are not addressed in the Directive, even though they are contained in other pieces of EU environmental legislation. The exclusive focus of the ECD on criminal law has been criticized by scholars in some countries, such as Germany, who think that relying too strongly on criminal law could lead to over-criminalisation.

Moreover, some consider that fact that the ECD does not harmonise sanctions (e.g. by providing rules on minimum sanctions) a weakness. Historically, the EU had no competence to prescribe the use of minimum sanctions; however, this has changed with the Lisbon Treaty. There are indeed substantial differences with respect to what the law defines as maximum penalties for various environmental crimes in Member States. This is evident from Table 4 which presents the sanctions for certain offences listed in Art. 3 of the ECD as defined in national legislation implementing the ECD.

Table 4 provides an overview of the fines and prison sentences applicable for the offences contained in Art. 3 lit. b, d, and g of the ECD.[23] According to these clauses, the following actions shall constitute a criminal offence when committed intentionally or with at least serious negligence:

- the unlawful treatment and management of waste which causes or is likely to cause death or serious injury to any person or substantial damage to the quality of air, soil, water or to animals or plants (Art. 3 lit. b)
- the operation of a plant in which a dangerous activity is carried out or in which dangerous substances or preparations are stored or used and which, outside the plant, causes or is likely to cause death or serious injury to any person or substantial damage to the quality of air, soil, water or to animals or plants (Art 3 lit. d)
- trading in specimens of protected wild fauna or flora species or parts or derivatives thereof, except for cases where the conduct concerns a negligible quantity of such specimens and has a negligible impact on the conservation status of the species (Art. 3 lit. g).

Table 4: Fines and prison sentences for offences mentioned in the ECD in various Member States

Member State	Art. 3 lit. b ECD	Art. 3 lit. d ECD	Art. 3 lit. g ECD
Estonia	• Imprisonment of up to three years • Fine (for natural persons: 30–500 daily rates; for legal persons: EUR 3 200 to EUR 16 mio)[24]	• Imprisonment of up to one year • Fine (for natural persons: 30–500 daily rates; for legal persons: EUR 3 200 to EUR 16 mio)	• Imprisonment of up to five years • Fine (for natural persons: 30–500 daily rates; for legal persons: EUR 3 200 to EUR 16 mio)
France	• Imprisonment of up to seven years • Fine of up to EUR 150 000	• Imprisonment of up to two years • Fine of up to EUR 75 000	• Imprisonment of up to seven years • Fine of up to EUR 150 000

23 The table has been compiled on the basis of the sources indicated below. We have not double-checked the original legal provisions.

24 Fines generally depend on the daily rates and the individual amounts the court determines. The same applies for Germany, Slovenia and Slovakia.

Germany	• Imprisonment of up to five years • Fine[25]	• Imprisonment of up to five years • Fine	• Imprisonment of up to five years • Fine
Poland	• Imprisonment of up to five years • Restriction of freedom[26] • Fine (for natural persons: EUR 25 to 175 000; for legal persons: EUR 250 to 1 210 000)	• Imprisonment of between six months and eight years • Restriction of freedom • Fine (for natural persons: EUR 25 to 175 000; for legal persons: EUR 250 to 1 210 000)	• Imprisonment of up to five years • Restriction of freedom • Fine (for natural persons: EUR 25 to 175 000; for legal persons: EUR 250 to 1 210 000)
Slovakia	• Imprisonment of up to eight years • Fine (for natural persons: EUR 160 to 331 930; for legal persons: EUR 800 to 1 660 000)	• Imprisonment of up to ten years • Fine (for natural persons: EUR 160 to 331 930; for legal persons: EUR 800 to 1 660 000)	• Imprisonment of between six months and eight years • Fine (for natural persons: EUR 160 to 331 930; for legal persons: EUR 800 to 1 660 000)
Slovenia	• Imprisonment of between 30 days and twelve years • Fine[27]	• Imprisonment of between 30 days and twelve years • Fine	• Imprisonment of between 30 days and five years • Fine
Spain	• Imprisonment of between six months and two years[28] and • Fine from ten to 14 months	• Imprisonment of between six months and two years[29] and • Fine from ten to 14 months	Acts relating to flora: • Imprisonment of between six months and two years[30] or • Fine from eight to 24 months Acts relating to fauna: • Imprisonment from six months to two years or • Fine from eight to 24 months
Sweden	• Imprisonment of up to six years • Fine	• Imprisonment of up to six years • Fine	• Imprisonment of up to six years • Fine

Sources: Milieu Ltd. 2015, country reports/tables of correspondence for Estonia, the Netherlands, Poland, Slovakia and Slovenia); Sina 2015; Fajardo del Castillo et al. 2015; Philipsen/Faure 2015; Bianco/Lucifora/Vagliasindi 2015

25 See note 24 above.

26 Restriction of freedom is, in the Polish system of sanctions, not the same as imprisonment. Restriction of freedom can mean, for example, that the sentenced person may not change his/her permanent place of residence without the permission of the court.

27 See note 24 above.

28 The Criminal Code provides for specific aggravating circumstances (for environmental reasons). If these occur, the maximum penalty can be raised to 16 years and 10 months of imprisonment.

29 The Criminal Code provides for specific aggravating circumstances (for environmental reasons). If these occur, the maximum penalty can be raised to 16 years and 10 months of imprisonment.

30 The system of specific aggravating circumstances allows raising the penalty of imprisonment, for example, to up to 3 years for offences involving fauna or flora.

In Table 4, a range of prison sentences is indicated as the sanctions depend on the form in which a crime is committed, notably intentionally or with negligence, by an organised group, a single person or legal person. Moreover, sanctions also depend on the seriousness of the crime. Sanctions other than deprivation of freedom or fines exist in some countries, but are not included in the table; examples are the confiscation of proceeds, a prohibition to exercise a profession, obligations to repair the damage done or the publication of a judgment.

However, it is not clear whether the existence of diverging levels of sanctions on paper between Member States needs to be qualified as a weakness. After all, the legally defined maximum sentence says relatively little on the sanctions that are effectively imposed by the judiciary. In countries with low maximum penalties, the judges could in reality impose sanctions close to the maximum; in countries with very high maximum sanctions, the judges could impose sanctions that are much lower than the statutory maximum. In the end, the result would not be that different.

In relation to complementary sanctions, a weakness could be seen in the fact that some Member States have an elaborate system of complementary sanctions whereas other Member States (probably) do not. To the extent that particular Member States would lack the possibility to impose sanctions aiming at remedying harm caused in the past or explicitly addressing the prevention of future harm that could certainly be considered a weakness. However, here one also has to be careful: it may be that in a particular Member State this possibility is not explicitly included in the criminal law, but is qualified differently (e.g. as an administrative or civil sanction). If that were the case, the mere fact that those sanctions are lacking in the criminal enforcement system should not necessarily be considered a weakness.

4.4 Enforcement institutions and cooperation between them

Various weaknesses in Member States' enforcement efforts in relation to environmental crime exist.

In many Member States there are no specialised police forces, prosecutors' offices and judges to deal with environmental crime. This absence of specialisation in most cases means that the general police as well as prosecutors and judges have to deal with environmental crime in addition to many other crimes. This may mean that they will not develop the expertise required to deal with environmental crimes in an appropriate way, given the complex and highly technical nature of environmental crime. The general police forces, with a lack of specialisation, are unlikely to be able to adequately detect environmental crimes through proactive monitoring.

Moreover, prosecutors who have to deal with environmental crimes along with many other types of crime may not grant environmental crime a high priority. This in turn can lead to frustration on the side of the environmental agencies that report the crimes, especially in countries where agencies cannot deal with cases themselves by imposing sanctions or fines (like in Germany) or bring prosecution actions themselves (like in England and Wales). The frustration of environmental agencies could then lead to less monitoring, lower detection and thus lower the dissuasive effect of environmental criminal law. Also, if non-specialised judges have to deal with environmental crimes and have no or little prior knowledge about environmental law, this bears the danger of flawed and incorrect decisions. However, there are also some examples of specialised enforcement institutions in Member States (see Box 9).

Lack of adequate funding for enforcement institutions is also a problem and it is exacerbated by the recent financial crisis. A survey conducted

Box 9: Examples of enforcement institutions specialised on environmental crime in Member States[31]

France has established a specialised inter-institutional unit (OCLAESP) in charge of investigations of environmental crime, public health and doping. Its tasks include the coordination of criminal investigations, the centralisation of information, the exchange of information and handling international requests for assistance by Europol or Interpol concerning environmental crime. In addition, specialised sections with judges and prosecutors are tasked with examining certain public health cases within certain courts ("*Tribunal de Grande Instance*") of Paris and Marseille. A feature of these courts is that they have specialised assistants (physicians, veterinaries, pharmacists).

In **Italy**, the *Comando Carabinieri per la Tutela dell'Ambiente* (and its local offices), a specialised branch of the Carabinieri police force, carries out the typical functions of the judicial police in environmental matters. However, scientific-technical assessments are carried out by other public bodies, e.g. the National Health Service. The *Comando* takes action, among others, in response to requests from the Ministry of the Environment, the judicial authorities and citizens.

In **Spain** there is a specialised **police force** for environmental crimes of the *Guardia Civil* called SEPRONA. It is in charge of the protection of soil, water and air, animal welfare and the conservation of fauna. The Prosecutor's Office at the Supreme Court has a coordinator for environmental crime (*Fiscal de Medio Ambiente y Urbanismo*). It is responsible for the coordination and supervision of the activity of all public prosecutors in relation to environmental crimes.

Specialised police forces also exist in regions of some Member States with a federal structure where police matters are within the competence of the respective region. One example is the police in Berlin, **Germany**. It has two divisions that deal exclusively with environmental crimes; in addition, the Berlin police force has its own scientific-technical department, which deals with environmental crimes and supports the investigating units.

A specialisation of the **prosecution service** exists in **Sweden**, where environmental prosecutors are brought together in one service unit which subsequently serves the entire country. Sweden is an interesting example also in relation to **courts**, with the possibility to appoint technical experts as judges in the criminal court.

The **United Kingdom** shows a mixed model with large investigative powers to the **administrative authorities** within the Environment Agency for England and Wales and the Scottish Environment Protection Agency (SEPA) for Scotland. In this model all public authorities, including environmental authorities, have competence to prosecute environmental cases, meaning that they have specialised technical knowledge on the matters investigated. Administrative authorities largely engage in pro-active monitoring, whereas the police is engaged in investigations, but rather reactive. For example, the National Wildlife Crime Unit (NWCU) investigates wildlife crime. Moreover, the Planning and Environmental Bar Association (PEBA) (an association of lawyers doing environmental and planning law cases) provides expertise in criminal cases to the judge or jury for testing the accuracy of their conclusions. However, the example of the NWCU also shows that it is often difficult to secure long-term funding for such specialized units; NGOs had to campaign to actually ensure its continued funding.

Sources: Bianco/Lucifora/Vagliasindi 2015; Fajardo del Castillo et al. 2015; Farmer et al. 2015; Faure et al. 2015; Mitsilegas/Fitzmaurice/Fasoli 2015b; Philipsen/Faure 2015; Sina 2015; Sollund/Maher 2015; Vagliasindi/Lucifora/Bianco 2015

by EnviCrimeNet among law enforcement institutions shows that a lack of technically capable staff and financial resources to use the most effective investigative techniques or appropriate forensic services is seen as a problem in several countries.[32]

Combating environmental crime is a lower priority in many Member States than combating other forms of crime. The EnviCrimeNet summarises the results of a recent survey among law enforcement institutions and practitioners as follows: "In only a few jurisdictions are environmental crimes a prior-

31 An overview of specialised environmental crime units is also presented in Eurojust 2014.

32 EnviCrimeNet 2015

ity, in most they are not; in some jurisdictions environmental crimes have a low priority."[33] One factor behind this may be that environmental crimes are often perceived as victimless, in the sense that there are no affected (human) victims that could rally and lobby in favour of better enforcement or that the harm emerges only after a long period of time. Another factor may be practical difficulties with finding enough evidence to bring a criminal case successfully to court. When police institutions with limited resources are interested in showing crime clearance rates, they might opt to invest limited resources rather in cases where prospects for success are higher. While the EU has put environmental crime on the political agenda in some documents of strategic importance, references to environmental crime are missing in other such documents. As noted in section 2.1, environmental crime is not among the EU priorities for the fight against serious and organised crime in the period 2014–2017.

Within countries, cooperation between different authorities is often an issue. The EnviCrimeNet survey collected responses from 16 Member States that cooperation between administrative and criminal enforcement institutions was problematic.[34] A report by Eurojust (2014) concludes that in the area of wildlife crime a "lack of coordination between administrative authorities leads the public prosecutor, in some Member States, to a situation where s/he does not receive the proper and necessary information".

In cases of trans-boundary crime, cooperation between different countries may also become necessary. The formal cooperation between police forces of different EU Member States can take the form of a request for mutual legal assistance through a rogatory letter, mainly concerning the interrogation of suspects or the hearing of witnesses, and only in rare cases does it take the form of a more thorough coordinated investigation. Yet such transboundary cooperation does not appear to happen as intensively as arguably needed. As documented in the literature, the sharing of information about cross-border environmental crime is random at best and investigations are rarely coordinated from the beginning. The problem concerning cross-border police cooperation is that police officers often see requests for mutual legal assistance as extra work and give it only a low priority. Visits of police officers in other countries are costly in terms of money and time and therefore happen only irregularly. Additionally, even simple requests for mutual legal assistance

Box 10: Problems in enforcing rules against illegal waste shipments in EU Member States

A report by the Netherlands Court of Audit (*Algemene Rekenkamer*) which summarises the findings of eight national audits identified significant weaknesses in the enforcement of the EU's Waste Shipment Regulation. The countries analysed were Bulgaria, Greece, Hungary, Ireland, Poland, Norway, the Netherlands and Slovenia.

According to the report, there are huge differences in the number and nature of inspections, the available resources, the enforcement actors involved and the existence of an enforcement strategy between these countries. The number of checks of (electronic) waste shipments varies from a dozen to several thousands per year (such as in the Netherlands).

In six countries enforcement policy is insufficiently underpinned by an explicit risk assessment. In five countries enforcement is impeded by a lack of well-trained staff and technical equipment. But even in Member States with more than average resources and staff such as in the Netherlands and Belgium, port authorities emphasize that personnel and financial limitations are severe obstacles to achieving better export control.

The involvement of multiple actors – customs, police services, environmental agencies, environmental inspectorates, etc. – creates challenges to coordination and cooperation in the enforcement of the EU's Waste Shipment Regulation.

Source: Geeraerts/Illes/Schweitzer 2015

33 EnviCrimeNet 2015

34 EnviCrimeNet 2015

can require a complex and time-consuming path through several agencies or ministries.

The problems in enforcing environmental legislation within EU Member States are shown, among others, in an EFFACE case study on illegal waste shipments (see Box 10).

4.5 Victims and civil society and their role in fighting environmental crime

Law enforcement is often understood as a task to be undertaken by official state agencies such as public prosecutors and police forces. Law enforcement agencies thereby also act on behalf of victims, in an attempt to bring justice to them. In this traditional way of thinking about law enforcement and victims, little consideration is given to the active role that victims can play to address injustices that have already been done and to prevent future wrongs. Yet actual and potential victims, especially when they organize collectively, can play an important role in fighting crime, including environmental crime. Victim groups and environmental NGOs, filling the gap between individuals and often overburdened state agencies, can add an important bottom-up approach to the fight against environmental crime, complementing the more traditional top-down approach of law enforcement. They do so by educating citizens about the nature and consequences of environmental crime, helping to detect perpetrators, imposing direct costs on business offenders through naming and shaming campaigns, and acting as legal representatives of individual victims.

Box 11: Protecting the environment: Armenia's civil society

After Armenia gained independence in 1991, an unholy alliance of top government officials and the country's business elite emerged. The fusion of economic resources and political power has undermined the development of democratic institutions and the rule of law; it has also led to oligarchic market structures that stifle competition and incentivize the pursuit of short-term gains at the expense of sustainable economic development. Systemic corruption has thereby become the biggest threat to Armenia's environment, which is nowhere more visible than in the mining sector.

The exploitation of several hundred mining sites proceeds with little regard to Armenia's flora and fauna and the health of Armenian citizens. Environmental crime thereby begins at the law-making stage. As numerous government officials have financial stakes in the mining industry, the protection of the environment enjoys little political support, leading to lax environmental regulations. These regulations allow mining companies to dispose highly toxic material in unsafe tailing ponds, cut down protected forests, and smelter the ore without effective emission filters. Endemic corruption in the justice system undermines the enforcement and proper adjudication of the few environmental laws that do exist. In short, political and administrative corruption has neutralized the state as an effective protector of the environment.

At this point, Armenian environmental movements and NGOs try to fill the void, but they face numerous hurdles. Although Armenia has signed the Aarhus Convention, state officials regularly deprive citizens of their rights to access public records, be involved in consultation processes, or take mining operators to court. Nevertheless, social movements and NGOs are not powerless. They monitor the issuing of mining licenses and the operation of existing mines, inform citizens and the media, stage public protests, and alert foreign governments and international organisations. Even a non-democratic regime like Armenia's cannot completely ignore public and diplomatic pressure for long. In a few instances, the country's environmental movements and NGOs have therefore achieved small victories. For instance, a local environmental movement put the exploitation of one of the biggest potential mining sites in the Teghut region is on hold. Yet it is also clear that the country's environmental groups need ongoing technical, financial, and diplomatic support from abroad. Armenia's system of corruption needs to be constantly fed with millions of dollars each year to sustain itself. A few environmental NGOs and social movements, as determined and brave as they might be, will not stop environmental crime in the Armenian mining sector without support from the European Union and its Member States.

Source: Stefes/Weingartner 2015

Yet certain obstacles limit the role of victims and civil society in the fight against environmental crime. First, environmental crime is often considered a "victimless" crime because the wrongdoing frequently goes undetected; the harmful effects only unfold over years and cannot clearly be linked to a specific act. This does not mean that there are no victims. Instead, it means that victims might not identify themselves as victims. Their motivation to come forward and organize against environmental crime is therefore weak. Second, this motivation is especially limited if at the end of a long fight against environmental crime, perpetrators escape unpunished to other jurisdiction or the sentences that are handed down are lenient. Finally, trust between public and private actors, which serves as the foundation of fruitful cooperation, is only built over a long period, causing public and/or private actors to back out of cooperative agreements if no immediate positive results of cooperation materialize. In short, successfully enlisting victims and civil society organisations in the fight against environmental crime depends on progress made in the other areas discussed in this section such as successful data management and information sharing and more effective law enforcement.

Moreover, there are also legal obstacles for victims and NGOs if they want to proceed against environmental crime and its perpetrators in civil courts. Victims often experience in proving the causality between pollution and health effects; some experts believe that the majority of environmental crime victims will never be recognized as victims in a legal context or receive restitution for the harm caused by the environmental crime.[35] Given the difficulty to prove the causal relationship between environmental crime and the damage and/or the harm on victims, conviction of perpetrators is unlikely. This is not motivating when launching a complex investigation.

Moreover, there is an issue with how victims of environmental crime outside the EU can make their voices heard and can claim their rights in cases where there is link with an EU actor (see below section 4.9).

4.6 The environmental liability directive (ELD)

The ELD entered into force on 30 April 2004 after a long drafting process; the European Commission had issued a Green Paper in 1993 and a White Paper in 2000.

According to the 2010 Commission report on the ELD, there are diverging national transposing rules which could potentially create difficulties; for example, there is an uneven implementation of the permit and state of the art defences and an uneven extension of the biodiversity scope to cover species and natural habitats protected under domestic law.

The European Commission has carried out an evaluation of the effectiveness of prevention and remediation of damage to the environment on the basis of gathered experience; the purpose is to suggest practical measures and/or legislative adaptations at EU level to increase effectiveness. The result is that the number of ELD cases per Member State varies considerably from 95 annual cases to less than one annual case; the duration of remediation varies between one day and more than six years, with an average duration of approximately two years. The evaluation also identifies some weaknesses, such as low awareness of operators and authorities of the provision implementing the ELD; lack of expertise and resources in financial, economic and liability matters; difficulties in establishing causality and identifying the liable op-

35 Jarrell and Ozymy 2014

36 Vagliasindi, Grazia Maria, Floriana Bianco, and Annalisa Lucifora, Summary of the EFFACE Workshop on "Environmental Liability and Environmental Crime", held in Brussels on 6 November 2014; Lopatta, Hans, Presentation at the EFFACE Workshop, available at http://efface.eu/efface-workshop-environmental-liability-and-environmental-crime

erator; no mechanisms (insurance etc.) in place to remedy large scale damage; use of undefined legal terms. According to the ELD implementation study 2012, the transposition of the ELD into national law did not result in a level playing field but a patchwork of liability systems due to variations in procedural and substantive law.[36]

The enforcement of the ELD, and its potential to contribute to remedy the damage caused by environmental crime, can be also hampered by enforcement problems related to other directives. For instance, an EFFACE case study on mining concludes: "The Kolontar case shows that even though Hungary complied with the Environmental Liability Directive (ELD), the incorrect enforcement of the waste management directive undermined the enforcement of the former and other directives".[37]

Different approaches exist in the ECD and the ELD concerning the identification of the "liable" person or entity. In the ECD the offender (who can be anyone, including under certain conditions a legal person) is liable when the conduct, falling within the list of Article 3 of the ECD, is unlawful and committed intentionally or with serious negligence. In the ELD, only the "operator" which can be a natural or legal person, is liable if he is in fault or the activity is dangerous for health or the environment.

The term "significant" in respect of environmental damage in the ELD probably does not have the same meaning as "substantial" damage in the ECD. Both terms refer to the result of an activity or conduct, but the term "significant" in the definition of land damage in the ELD refers to human health; on the contrary the ECD uses the term "death or serious injury" and not the word "substantial" in respect of human health. Moreover, the ELD includes criteria to determine whether the biodiversity damage is significant, while no criteria are provided in this respect in the ECD but references to specific environmental legislation. In sum, although the ELD and ECD have been referred to by commentators as "sister directives", complementing each other, more differences than similarities exist concerning their scope and application.[38] The need for more coherence between the two instruments has been stressed.

A major weakness of the ELD is under-deterrence in case of insolvency. Operators that are insolvent cannot be made to pay for damage caused. This is linked to the issue of financial security (e.g. through insurances). Art. 14 ELD merely states in respect of financial security: "Member states shall take measures to encourage the development of financial security instruments and markets by the appropriate economic and financial operators, including financial mechanisms in case of insolvency, with the aim of enabling operators to use financial guarantees to cover their responsibilities under this directive". The lack of strong rules on financial security reduces the chances that the ELD contributes to remedy the damage caused by environmental crime.

4.7 The external dimension of EU action against environmental crime

Generally, the fight against international crime at the international level suffers from a number of weaknesses, despite some EU efforts on the matter. One issue is the lack of a common definition of environmental crime in international law. International legal agreements address only some types of environmental crime such as wildlife trafficking.

Moreover, environmental crime is not a priority in many countries, not only in the EU. Institutions addressing environmental crime at the interna-

37 Fajardo/Fuentes Osorio 2014

38 Vagliasindi et al., note 36; Valerie Fogleman, presentation at the EFFACE Workshop, available at http://efface.eu/efface-workshop-environmental-liability-and-environmental-crime

38 Fajardo/Fuentes Osorio 2014

tional level (e.g. the secretariats of some multilateral environmental agreements) do not always have sufficient resources and staff to effectively address the issue.

Moreover, international peace-keeping operations do not have a mandate to address environmental crime or if there is a mandate, do not have the means to address it. For example, the mandate of EU Operation Atalanta to control piracy on the coasts of Somalia that is based on the Security Council Resolutions was reformed to introduce as a new task the control of illegal fishing. However, the EU forces have no tools to counter those activities; however, their presence is considered to have a dissuasive effect on illegal fishing activities.

4.8 Action on organised environmental crime

As environmental awareness in Western industrialized countries has sharply risen since the 1970s, environmental standards have increased as well. Complying with these new standards comes with a price tag, incentivizing private individuals and companies to violate environmental laws. The market for illegal activities harming the environment has therefore steadily expanded, causing the rise of organised crime groups that have found a new and highly lucrative business segment in the illegal disposal of waste, trade in endangered species and timber as well as other criminal activities. Transnational environmental crime is particularly prone to organised crime, as it requires the cross-border cooperation between various public and private actors. Transnational and organised environmental crime has become one of the most lucrative illegal markets in the world, on par with the illegal trade in drugs, firearms and human beings.

Yet environmental criminal law is only integrated to a very small extent into organised crime legislation at the international, European and national level (with the exception of Italy). In addition, neither a unanimous and precise definition of "organised crime" nor a legal definition of "organised environmental crime" exist in international, EU and national instruments. There is no consensus on the concept of "environmental crime", either.

The Palermo Convention on Organised Crime and the Council Framework Decision 2008/841/JHA on the fight against organised crime do not deal directly with the phenomenon of organised environmental crime. The possibility of according relevance to environmental crime in light of the concept of "serious crime" used in both instruments is hampered by the fact that most States Parties of the Convention and EU Member States do not provide maximum penalties of at least four years imprisonment for environmental crimes; the latter is required by both instruments for the crime to be considered "serious".[39] Directive 2014/42/EU of the European Parliament and of the Council of 3 April 2014 on the freezing and confiscation of instrumentalities and proceeds of crime in the European Union does not include environmental crime within the criminal offences covered by the Directive; the inclusion of the Framework Decision

39 Vagliasindi 2015

Box 12: Non-compliance with environmental laws and its consequences: the case of the ILVA steel plant

The ILVA steel plant in Southern Italy is the largest steel plant in Italy and one of the largest such plants in the EU. Its economic significance is evident from the fact that it employs more than 11 000 people in a region with very high unemployment rates and accounts for 75 % of the economic production in Taranto province. It is located very close to the city of Taranto.

The plant has not always operated in compliance with applicable environmental legislation. This has led to numerous actions by Italian authorities and courts, but also to infringement proceedings being initiated by the European Commission.

The operation of the plant has had serious negative environmental and health impacts, which are documented in various scientific studies. The negative environmental impacts on the air, water and the soil result, among others, from the release of pollutants such as dust, nitrogen dioxide, sulphur dioxide, benzene, polycyclic aromatic hydrocarbons and PCBs. Some of these substances are carcinogenic. As a consequence, above the average mortality rates from, among others, various types of cancer and respiratory diseases have been observed in the region. Authorities have repeatedly ordered the slaughtering of animals such as sheep and goats due to the high amount of toxic substances found in these animals. Certain agricultural activities have been prohibited by the authorities in some areas affected by emissions from the plant.

Sources: Lucifora/Bianco/Vagliasindi 2015; Vagliasindi/Gerstetter 2015

2008/841/JHA is, for the reason mentioned above, practically unable to indirectly cover organised environmental crime.[40]

It should also be emphasized that there may be an interest of the police to consider environmental crime as organised crime because of the more extended competences of the prosecution authorities in cases of organised crime. Allegedly cases of environmental crime are not prioritised by enforcement bodies if they are not related to organised crime. In a similar perspective, an Italian anti-mafia prosecutor lamented "the inadequate attention given to those cases where the mafia member is not present, even if those crimes imply criminal organisation".[41]

4.9 Corporate responsibility and liability

Looking at the conduct of EU-based businesses abroad, EU-based companies have little to fear if they commit environmental crimes in third countries that for various reasons are unwilling or unable to fight these crimes. Under the existing EU and national rules, the principle of separate legal personality as well as practical obstacles such as time limitations, costs and evidence make it very difficult to sue EU corporations for environmental crimes committed by their subsidiaries and contractors based outside the EU before Member States' courts.

While the EU has promoted voluntary compliance with corporate social responsibility (CSR) standards, these often lack binding enforcement mechanisms.

The negative consequences of a lack of compliance of companies with applicable environmental legislation are illustrated by the EFFACE case study on the ILVA steel plant (see Box 12).

40 Vagliasindi, in: Farmer et al. 2015

41 D'Alisa et al. 2015

5 POLICY RECOMMENDATIONS

Based on its research, the EFFACE consortium has developed a number of policy recommendations for EU and Member State policy-makers. In the following, only the core recommendations are included. Explanations on these, supplementary recommendations as well as recommendations for further research are contained in the EFFACE document "Conclusions and Recommendations".[42]

The following are the core recommendations of EFFACE:

- The fact that environmental crime has been committed in the context of organised crime should be considered an aggravating circumstance in the Environmental Crime Directive.
- Rules on the confiscation and forfeiture of the proceeds of environmental crime should be adopted at the EU level.
- An obligation should be imposed on Member States to provide data on the number of violations, prosecutions and imposed sanctions for violations of national provisions implementing European environmental law, commonly referred to as the environmental *acquis*.
- Member States should promote effective sanctions, including civil and administrative sanctions (also fines).
- Member States should introduce and use complementary sanctions and measures, in addition to the classic criminal sanctions, prison sentences and fine.
- Non-binding guidelines concerning prosecution and sentencing policy should be developed that can be applied throughout the EU. Ideally, these guidelines should be developed in a bottom-up manner by networks of practitioners from various EU Member States.
- Environmental crime should be made a priority both at the EU and at the Member State level.
- Member States should provide for specialisation of prosecution and adjudication.
- The EU should set minimum criteria for inspections and monitoring.

42 Available at http://efface.eu/efface-conclusions-and-recommendations

- The role of Eurojust, the European Public Prosecutor's Office, environmental enforcement networks and Europol should be enhanced and networking at the domestic level should be stimulated.
- In international forums, the EU should take a leading role in advocating for a tougher approach to environmental crime.
- The EU and its various agencies involved in the fight against environmental crime should seek close cooperation with national and international environmental and police agencies to coordinate the fight against environmental crime across borders.

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EFFACE

European Union Action to
Fight Environmental Crime

ENVIRONMENTAL CRIME AND THE EU

Synthesis of the Research Project "European Union Action to Fight Environmental Crime" (EFFACE)

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