



The Hague, 27.05.2016

# EnviCrimeNet

(Environmental Crime Network)

## Report on Environmental Crime

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## Introduction

In February 2015 the IPEC Team<sup>1</sup> finished its Report on Environmental Crime in Europe. This unique cooperation between Europol and the Environmental Crime Network started at the beginning of May 2014 and was scheduled to finish at the end of April 2015. The project was designed to research and therefore increase knowledge on the types of environmental crimes impacting on EU Member States (MS), their extent, and the obstacles that exist to fight these crimes. The project also aimed at identifying the involvement of organised crime groups (OCGs) and threats to the EU and at developing recommendations on how to improve the situation. Based on a review of existing and available material, interviews and meetings with experts in the field and a questionnaire sent to all EU MS and to a number of non-EU jurisdictions, the IPEC Report represents the main outcome of the project. However during the project, certain time related parameters changed. As a result the team decided to focus only on the actual survey, thus allowing for publication of the report at the end of February 2015. A large amount of material, provided to the project by numerous agencies, organisations, projects and persons, could therefore not be used as initially intended. This EnviCrimeNet Report on Environmental Crime is primarily based on the unused materials provided to the project. The Report is a companion to the IPEC Report providing a more in-depth overview on environmental crimes and trafficking of endangered species, the problems and most relevant international legislation and treaties. As with the complimentary IPEC Report, this EnviCrimeNet Report aims to increase awareness on this important subject.

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## Environmental Crimes: an Overview

The area of ‘environmental crime including endangered species of flora and fauna’ is **broad** and, for the time being, **a universally accepted definition does not exist**<sup>2</sup>: any illegal action with a negative, harming impact on the environment can be regarded as environmental crime, as well as any offence in relation to endangered species (usually referred to under different names such as wildlife or CITES<sup>3</sup> crime). In some jurisdictions, crimes in relation to the food chain or to food safety are also considered to be environmental crimes, as well as the emerging threat represented by illegal sand mining<sup>4</sup>. The European Commission suggests that the concept of “environmental crime” covers acts which “breach environmental legislation and cause significant harm or risk to the environment and human health”<sup>5</sup> and the Directive 2008/99/EC covers crimes in relation to pollution, waste, use or release of dangerous substances, protected species and habitats. Therefore, there are different possibilities to categorise these crimes<sup>6</sup>, but it is important to realise potential overlaps: illegal dumping of waste will usually put soils and ground water at risk; the use of fuel oil mixed with waste oil will cause air pollution, etc.

Notwithstanding their broad and uncertain extension, environmental crimes share some peculiarities. Similarly, the approach to fighting environmental crimes has similar features in most jurisdictions.

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<sup>2</sup> An interesting summary of the attempts to define environmental crime under international law can be found in Marchisio S (2012) *Environmental Crimes and Violations of Human Rights*. Speaking notes at the UNICRI-UNEP International Conference on Environmental Crime – “Environmental Crime – Current and Emerging Threats”, held in Rome on 29-30 October 2012.

<sup>3</sup> Convention on International Trade in Endangered Species of Wild Fauna and Flora also known as the Washington Convention.

<sup>4</sup> “The illicit removal and subsequent trafficking of sand is an emerging crime phenomenon and entails significant environmental damage to the coast lines of affected states. The off-shore removal of sand from the seabed can cause the collapse of coastal areas and loss of habitable land along coastlines” (Europol (2013) *Threat Assessment 2013. Environmental Crime in the EU*, p. 16).

<sup>5</sup> <http://ec.europa.eu/environment/legal/crime/> (last accessed April 29, 2015).

<sup>6</sup> For example, the EFFACE (European Union Action to Fight Environmental Crime) project aimed for soils, waste, pollution, fisheries, CITES, protected areas, chemicals, fires, marine and timber, whereas the EnviCrimeNet (Environmental Crime Network) experts distinguish them by topics such as chemicals, endangered species, energy, pollution, waste and others (e.g. fires, biodiversity, coastal and protected areas, or food safety).

### **Lack of reliable data**

Firstly, it is extremely **difficult to estimate the real dimension and impact of environmental crimes**: “the data on environmental crime are usually highly dispersed with limited detailed data collations. The most likely sources of consolidated data are international institutions (such as Conventions and the EU). However, even here data are often limited”<sup>7</sup>.

This lack of reliable data can lead both to underestimating the seriousness of such crimes and to an **inadequate awareness** on their dramatic effects, which consequently is followed by a lack of political will to invest resources in the fight against them: it is probably not a coincidence that in the 2013 Europol Serious and Organised Crime Threat Assessment (SOCTA) environmental crimes are not regarded as “key threats” but as “emerging threats”<sup>8</sup>. It is neither surprising that in the European Union’s (EU) Seventh Environment Action Programme, which was approved in November 2013 and will be in force until 2020, no reference at all has been made to environmental crime nor to the criminalisation of actions which can damage the environment<sup>9</sup>.

### **The deceptive concept of ‘victimless’ crimes and the violation of human rights**

Environmental crimes are traditionally perceived as ‘**victimless**’, because the damages caused are often part of an accumulative process or not immediately visible. This definition is misleading, as, firstly, many species (flora and fauna) are the direct ‘victims’ of these crimes: they are on the verge of extinction and the continued illegal trade with them (or commodities derived from them) needs to be stopped to avoid unforeseeable consequences on different ecosystems. Subsequently, damages to ecosystems and the environment pose the risk to cause **diseases, environmental disasters, irreversible climate change, contamination of the food chain, reduced life expectancy** and ultimately the **death of human beings**, who are, therefore, also victims of the crimes at stake. In this view, it has

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<sup>7</sup> Illes A, Newman S, Watkins E, Farmer A, Porsch L, Germani AR, Reganati F, Imbriani C, Morone P, Lucifora A, Bianco F, Philipsen N, Kubovicova K, Rigamonti A, Faure M (2014) *Understanding the damages of environmental crime*. Study in the framework of the EFFACE research project. For similar considerations see Elliott L (2013) *The Challenges of quantifying TEC* (transnational environmental crime), in Saydan S (2014) *Report of the Transnational Environmental Crime Project Workshop*, held at the Australian National University, Canberra, on 13 February 2013, pp. 2-3.

<sup>8</sup> Europol (2013) *EU Serious and Organised Crime Threat Assessment*, p. 39.

<sup>9</sup> Fajardo T (2015) *EU Environmental Law and Environmental Crime: An Introduction*. Study in the framework of the EFFACE research project, Granada: University of Granada, pp. 11-12.

been suggested that victims of environmental crimes should have more importance in the 2008/99/EC Directive on the protection of the environment through criminal law, also in light of an increasing consideration of the role of victims in modern criminal justice<sup>10</sup>.

This consideration mirrors the growing attention paid to the **violations of human rights** linked with infringements of environmental law: such violations have been increasingly ascertained, even though “most human rights treaties either make no explicit reference to the environment at all – such as the European Convention on Human Rights – or they do so only in relatively narrow terms focused on human health”<sup>11</sup>. The case-law of the **European Court of Human Rights** (ECtHR) is a clear example of such a trend, as in different cases a violation of Article 2 (right to life), Article 8 (right to private and family life) and Article 1 of the First Additional Protocol (right to property) has occurred as a consequence of infringements of environmental law: in the *Guerra* case, for example, the ECtHR ruled that “severe environmental pollution may affect individuals’ well-being and prevent them from enjoying their homes in such a way as to affect their private and family life adversely”<sup>12</sup> and held that Italy did not fulfil its obligation to secure such an applicants’ right<sup>13</sup>. Of course, this is an **anthropocentric understanding** of the environment, which could be abandoned in favour of a proper “environmental right”, i.e. the one to a satisfactory or decent environment. However, as it has been correctly underlined, “the virtue of looking at the environmental protection through other human rights, such as life, private life or property, is that it focuses attention on what matters most: the detriment to important, internationally protected values from uncontrolled environmental harm”<sup>14</sup>.

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<sup>10</sup> Cardwell PJ, French D, Hall M (2011) *Tackling environmental crime in the European Union: the case of the missing victim?*, in *Environmental Law and Management*, 23(3).

<sup>11</sup> Boyle A (2007) *Human Rights or Environmental Rights? A Reassessment*, in *Fordham Environmental Law Review*, vol. XVIII, available at <http://www.law.ed.ac.uk/> (last accessed April 29, 2015), p. 6. Visible exceptions are represented by the African Charter on Human and Peoples’ Right (1981) and especially by the 1998 Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, which however focuses only on **procedural** rights of the public in environmental matters.

<sup>12</sup> ECtHR, *Guerra and others v. Italy*, 19 February 1998, par. 60.

<sup>13</sup> For more details on this topic, see Boyle A (2007) *Human Rights or Environmental Rights?*, cit.; Marchisio S (2012) *Environmental Crimes and Violations of Human Rights*, cit.; Scalia V (2015) *The European Court of Human Rights and Environmental Crime*. Study in the framework of the EFFACE research project, Catania: University of Catania. In this context, it is appropriate to mention the issuance, by the Council of Europe, of the *Manual on human rights and the environment* (2006, with a second edition in 2012).

<sup>14</sup> Boyle A (2007), *Human Rights or Environmental Rights?*, cit., p. 33. The author also underlines the intrinsic difficulty to find an agreed definition of the notion of “satisfactory or decent” environment.

## **Involvement of Organised Crime Groups and links with other crimes**

The main motivation in committing environmental crimes is to **gain illicit profits**, which can be as high as in illegal drugs trafficking, but with much lower sanctions (if those are applied at all) and a lower detection rate as well. As a consequence the “high profit-low risk” nature of environmental crimes is highly attractive for **Organised Crime Groups (OCGs)**.

Nowadays, their involvement in this form of criminality, is a matter of fact, especially in the illegal **trafficking of waste** and in the **trafficking in endangered species (TES)**<sup>15</sup>, whose proceeds may also have been used to finance terrorist groups in certain areas<sup>16</sup>. In the case of organised environmental crime, it is not unusual that traditional OCGs (such as Camorra or Chinese groups) resort to the **same *modus operandi*** and the **same routes** they use for their other activities<sup>17</sup>.

According to a recent study, three out of the twelve most financially rewarding transnational criminal activities are linked to environmental crime: **illicit wildlife trafficking** (for an estimated annual value between **7.8 and 10 billion USD**), **illicit timber trade (7 billion USD)** and **illicit fish trade (between 4.2 and 9.5 billion USD)**<sup>18</sup>. Overall, transnational environmental crime has been estimated to be worth between **70 and 213 billion USD per year**<sup>19</sup>. Therefore, it is not surprising that the need to address “different forms and manifestations of transnational organized crime that have a significant impact on the environment, including trafficking in endangered species of wild fauna and flora” has been mentioned in a 2012 Resolution of the UN Economic and Social Council (ECOSOC)<sup>20</sup>.

The involvement of OCGs in environmental crime can allow the use of **international and European legal instruments** to tackle such groups. The United Nations Convention on

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<sup>15</sup> The Eurojust (2014) *Report of the Strategic Project on Environmental Crime* mainly deals with these two forms of criminality, along with surface water pollution, in which the involvement of OCGs is not so common.

<sup>16</sup> Luna M, Veening W (2014) *EFFACE Policy Brief 2: Organised Environmental Crime*.

<sup>17</sup> Patrignani A (2012) *Transnational Environmental Crime: Possible Application of International Legal Instruments on Organized Crime and Corruption*. Presentation at the UNICRI-UNEP International Conference on Environmental Crime – “Environmental Crime – Current and Emerging Threats”, held in Rome on 29-30 October 2012.

<sup>18</sup> Haken J (2011) *Transnational Crime In The Developing World*, Global Financial Integrity. According to another study, the global annual losses for IUU fishing can be estimated between 10 and 23.5 billion USD per year (see *infra*).

<sup>19</sup> <http://www.stimson.org/enviro-crime/> (last accessed April 29, 2015).

<sup>20</sup> ECOSOC (2012) “Strengthening international cooperation in combating transnational organized crime in all its forms and manifestations”, Resolution 2012/19.

Transnational Organized Crime (**UNTOC**) can be applied<sup>21</sup> for example. Also, the adoption of EU directives in this field, establishing minimum rules concerning the definition of criminal offences and sanctions, can be envisaged based on Article 83 of the Treaty on the Functioning of the European Union (TFEU)<sup>22</sup>.

In addition, environmental crimes are **linked to other crimes**<sup>23</sup>, and **corruption** appears to be one of the most common crimes in this area. Indeed, environmental crime has been defined as a “**catalyst for corruption**”, because “in the same way that criminals perceive environmental crime as an easy option, so individuals in corporate or official positions of authority and power view environmental crime as a chance to cash in”<sup>24</sup>. Acknowledging that environmental crime is a “haven for corruption” could lead to a greater use of the instruments provided for in the United Nations Convention against Corruption (**UNCAC**)<sup>25</sup>.

**Counterfeiting** and **fraud** are also often committed along with environmental crimes, especially in those cases where some activities need specific documentation or certificates to comply with the existing regulations.

As far as **money laundering** is concerned, environmental crime is considered as a predicate offence in the FATF Recommendations and it has been suggested to focus on money laundering aspects of environmental organised crimes as an instrument to enhance the fight

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<sup>21</sup> The UNTOC can be taken into consideration if the relevant crime meets the following requirements: a) the crime should be **serious** (i.e. punishable by a maximum deprivation of liberty of at least four years or a more serious penalty); b) it should be **transnational** (see Article 3, par. 2 UNTOC); c) it should involve an **organised criminal group** (i.e. a structured group of three or more persons, existing for a period of time and acting in concert with the aim of committing one or more serious crimes or offences established in accordance with the UNTOC, in order to obtain, directly or indirectly, a financial or other material benefit).

<sup>22</sup> Grasso G, Sicurella R, Scalia V (2015) *Articles 82-86 of the Treaty on the Functioning of the European Union and Environmental Crime*. Study in the framework of the EFFACE research project, Catania: University of Catania, p. 31.

<sup>23</sup> See, among others, D'Angelo E (2012) *Environmental crimes as an emerging form of crime managed by transnational organized networks*. Presentation at the UNICRI-UNEP International Conference on Environmental Crime – “Environmental Crime – Current and Emerging Threats”, held in Rome on 29-30 October 2012.

<sup>24</sup> Banks D, Davies C, Gosling J, Newman J, Rice M, Wadley J, Walravens F (2008) *Environmental Crime. A threat to our future*, Environmental Investigation Agency (EIA), p. 3. The extensive use of corruption in the illicit waste trafficking has been pointed out also in the Europol (2013) *Threat Assessment 2013*, cit., p. 17.

<sup>25</sup> Banks D, Davies C, Gosling J, Newman J, Rice M, Wadley J, Walravens F (2008) *Environmental Crime*, cit., p. 24. The Fourth Conference of States Parties to the United Nations Convention against Corruption has been indeed focused the topic of “Impact of corruption on the environment and the United Nations Convention against Corruption as a tool to address it”. More in depth, see the paper presented by Van Dinh TT (2012) *Addressing Corruption in the Environmental Sector: How the United Nations Convention against Corruption Provides a Basis for Action*, pp. 34-50 (available at [http://www.unodc.org/documents/corruption/Publications/2012/Corruption\\_Environment\\_and\\_the\\_UNCAC.pdf](http://www.unodc.org/documents/corruption/Publications/2012/Corruption_Environment_and_the_UNCAC.pdf), last accessed April 29, 2015).

against environmental crime, given its **profit-driven** nature<sup>26</sup>. For the same reason, a successful fight against environmental (organised) crimes should also resort to **confiscation** of illicit assets and criminal proceeds<sup>27</sup>.

The connection of environmental crimes with “traditional” forms of criminality can have a downside from an “operational” point of view, as national authorities prefer – as a matter of convenience but also due to higher fines and sentences – to investigate and prosecute such crimes rather than the environmental ones<sup>28</sup>. For this reason, there is a certain risk that some of them do not find a proper punishment, in this way increasing the rate of **impunity** in this field, which might encourage legal business, criminals and OCGs to go on with their violations. In addition, those cases will typically not be counted as environmental crimes in national statistics.

### **Different actors**

A **multitude of management and supervisory agencies** operate in the field of environmental law. Most jurisdictions, have introduced some form of legislation to protect the environment. Certain actions are prohibited, or only permissible under particular conditions. Administrative regulations have been put in place to ensure that there is a balance between economic and industrial activities and the protection of nature, environment and ultimately human health. Therefore, a number of bodies are needed to ensure compliance with the relevant rules.

Each state has its own peculiarities in this field. In some countries **environmental crime** or **wildlife crime units** have been established, be it on national or regional level; an alternative has been identified in the creation of a **National Environmental Security Task Force** (NEST). However, a survey has pointed out that – among the Law Enforcement Agencies (LEAs) – usually the **police** and **customs authorities** are the main players in this field, the latter

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<sup>26</sup> Eurojust (2014) *Report of the Strategic Project*, cit., p. 36.

<sup>27</sup> Fajardo T (2015) *Organised Crime and Environmental Crime: Analysis of EU Legal Instruments*. Study in the framework of the EFFACE research project, Granada: University of Granada.

<sup>28</sup> Chin S, Gerstetter C, Veening W (2014) *EFFACE Policy Brief 1: Limitations and challenges of the criminal justice system in addressing environmental crime*, p. 3.

especially in the investigation of crimes related to endangered species<sup>29</sup>. In some instances environmental crimes may be detected by members of the public making observations of suspicious behaviours, or by NGOs and even the media with a particular focus on environmental issues and security.

Therefore, an **effective cooperation** among all the actors involved in this field is needed to better tackle environmental crimes. Such cooperation, however, is often unsuccessful, especially between regulation and law enforcement agencies, as legal restrictions inhibit the sharing of information or due to the absence of legislation for information exchange.

Also, on an international level, organisations and institutions are called on to work together. In such a context, informal **networks** among competent authorities can play an important role<sup>30</sup>, as well as the supranational agencies operating in the field of police or judicial cooperation (e.g. Europol, Interpol, Eurojust). An example of the former is the **EnviCrimeNet** (Environmental Crime Network), an “informal network connecting police officers and other crime fighters in the field of environmental crime, learning from each other about the extent and nature of environmental crime, the best practises to handle it, etcetera”<sup>31</sup>. With regards to the latter, it can be pointed out that inside **Europol** there is a small detail devoted to environmental crime, but for priority reasons<sup>32</sup> a specific Focal Point has not been established. This basically means that Europol is not tasked with analysing personal data and limits its active support for national investigations in this field, apart from cases that overlap with other crimes for which a ‘Focal Point’ does exist. At **Interpol** a dedicated sub-directorate has been set up to deal with different environmental issues. **Eurojust** recently nominated a ‘Contact Point’ for Environmental Crime, with the view to coordinating the efforts of this body in the fight against these crimes, while the primary responsibility to support domestic investigations in this area fall within the competences of each National Desk.

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<sup>29</sup> Similarly it has been pointed out that the three most involved agencies in the fight against transnational environmental crime are **environmental regulatory agencies, customs and port authorities** and **police agencies** (Pink G, *Law enforcement responses to transnational environmental crime: Choices, challenges and culture*, in Saydan S (2014) *Report of the Transnational Environmental Crime Project Workshop*, cit., p. 4). A complete overview on the competent police, judicial and specialised units in the field of environmental law in the EU Member States can be found in Eurojust (2014) *Report of the Strategic Project*, cit., pp. 23-30.

<sup>30</sup> Geysels F, Johnson N (2013) *Environmental Networking Handbook*, Themis Network.

<sup>31</sup> <http://envicrimenet.com/> (last accessed April 29, 2014).

<sup>32</sup> Environmental crime and trafficking of endangered species is not a priority within the EU Policy Cycle; however, waste trafficking as an emerging crime is on the ‘watchlist’ for the next Europol SOCTA.

A useful tool for authorities dealing with transnational environmental crimes is represented by **Joint Investigation Teams (JITs)**, even though for the time being this instrument has been neglected in this particular crime area<sup>33</sup>.

### **Deficiencies of the relevant legislation**

The legislation to tackle environmental crime is deemed to be inadequate in many countries. Usually, investigating environmental crimes is **complex** and requires for **specialist knowledge**, which is not very common among the LEAs and the prosecution services. Therefore, specific training would be needed. Often, next to a lack of expertise in the field, the more serious problem is a **lack of personnel**. This is a consequence of the **low priority** of environmental crimes in most countries, which in turn is linked to the previously mentioned lack of data on detected and undetected cases.

Criminal law should play a pivotal role in the matter, especially when OCGs are involved<sup>34</sup>. However, **not every infringement of environmental regulation is already a crime** or covered by the criminal code. In civil law jurisdictions minor infringements are called ‘contraventions’ and most often punished through an administrative procedure, usually a fine. Common law jurisdictions use similar methods to contrast such violations, which are usually called ‘infractions’ or ‘summary offences’.

In general, most cases of non-compliance or infringements of environmental regulations are below the threshold of a crime and will not come to the attention of LEAs, as with many other areas of incorrect human behaviour. Nonetheless, both non-compliance and infringements can qualify an incident as a crime through accumulated activities. The absence of criminal sanctions and comparatively low fines are an obstacle to the effective fight against these crimes. On the one hand it does not usually allow for the use of special

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<sup>33</sup> Eurojust (2014) *Report of the Strategic Project*, cit., p. 34. JITs can be set up on the basis of Article 13 of the 2000 Convention on Mutual Assistance in Criminal Matters between the Member States of the European Union, as well as on the basis of the Council Framework Decision 2002/465/JHA. On the international level, the possibility to establish joint investigative teams (especially in the fight against trafficking in endangered species) has been mentioned in the United Nations Office on Drugs and Crime (UNODC) (2012) *Wildlife and Forest Crime Analytic Toolkit*, p. 107.

<sup>34</sup> Giardi G (2015) *Fighting the European Ecomafia: Organised trafficking in waste and the need for a criminal law response from the EU*, MCEL Master Working Paper 2015/1, p. 47; UNICRI-UNEP (2012) *Report of the Expert Groups of the UNICRI-UNEP International Conference on Environmental Crime – “Environmental Crime – Current and Emerging Threats”*, held in Rome on 29-30 October 2012.

**investigative techniques** (e.g. wiretapping); on the other it hampers the use of some **international cooperation instruments**<sup>35</sup>. It is therefore not surprising that the idea of a European Public Prosecutor's Environmental Office, as well as enlarging the mandate of the International Criminal Court or creating a specialised European or International Criminal Court<sup>36</sup>, have been put forward. The need for a **common, coordinated and effective approach** to this matter is obvious<sup>37</sup>.

In order to provide a stronger legal basis to combat environmental crimes, some countries (Armenia, Belarus, Ukraine, Vietnam, etc.) have included the crime of "**ecocide**" into their penal code. This refers to the extensive destruction of ecosystems, which has been defined by some scholars as the "fifth international crime against peace"<sup>38</sup>.

As far as Europe is concerned, **EU legislation** should **harmonise** the criminal systems of the MS, putting an end to the existing impressive discrepancies in this field: "for example, French law provides for a maximum fine of EUR 9,000 for a CITES violation by legal entities whereas in the Netherlands the maximum fine is EUR 810,000. In Finland a maximum of two years imprisonment can be imposed for the same violation whereas in the Czech Republic, the maximum is eight years"<sup>39</sup>. Such difference, indeed, can facilitate the crimes at stake, allowing the possible *forum shopping* of the criminals. Currently Directive 2008/99/EC only requires the MS to punish the listed conduct with "**effective, proportionate and dissuasive criminal penalties**" (Article 5): this leaves enough discretion to MS in the subsequent implementation<sup>40</sup>.

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<sup>35</sup> Eurojust (2014) *Report of the Strategic Project*, cit. E.g., a European Arrest Warrant (EAW) can be issued only if the crimes at stake are punishable with sanctions which exceed the thresholds listed in Article 2 of the Council Framework Decision 2002/584/JHA. However, so far the EAWs have been used very rarely in the area of environmental crime (see Salazar L (2014) *European judicial cooperation in the fight against environmental crime*. Summary of the Workshop "Environmental Crime and the Criminal Justice System", held in Catania on 23 June 2014, p. 6).

<sup>36</sup> Eurojust (2014) *Report of the Strategic Project*, cit., p. 12.

<sup>37</sup> See also Chin S, Veening W (2015) *Actors and Institutions Relevant to Fighting Environmental Crime*. Study in the framework of the EFFACE research project, The Hague: Institute for Environmental Security, p. 47; Fajardo T (2015) *Organised Crime and Environmental Crime*, cit.

<sup>38</sup> Gauger A, Rabatel-Fernel MP, Kulbicki L, Short D, Higgins P (2012) *Ecocide is the missing 5<sup>th</sup> Crime Against Peace*, Human Rights Consortium, School of Advances Study, University of London.

<sup>39</sup> Chin S, Gerstetter C, Veening W (2014) *EFFACE Policy Brief 1*, cit., p. 2. For the same point of view, see Vagliasindi GM (2015) *Directive 2008/99/EC on Environmental Crime and Directive 2009/123/EC on Ship-source Pollution*. Study in the framework of the EFFACE research project. Catania: University of Catania.

<sup>40</sup> Meeus R (2010) *Fill in the Gaps: EU Sanctioning Requirements to Improve Member State Enforcement of EU Environmental Law*, in *Journal for European Environmental & Planning Law*, 7(2), p. 159.

However, for the time being, the number of **sentences** relating to environmental crimes is considered **too low**, and most are **too mild or limited**. This can also be linked to a **general lack of awareness** of the seriousness of the crimes at stake representing one of the most relevant obstacles, which have to be overcome in the near future.

## Waste

Waste-related crimes have raised major concerns in recent years and are most likely the only type of environmental crime where the seriousness has been adequately perceived. “Waste-related crime” is, once again, a broad concept. Issues related to **asbestos**, for example, fall within this area. Asbestos represents a serious threat to human health<sup>41</sup>. Therefore, its use has been prohibited in Europe since 2005<sup>42</sup>. It goes without saying that waste-related crime partially overlaps with other environmental crimes, as for example pollution: Offences of fly-tipping can be clustered as pollution or waste dumping. Irrespective of what is the more appropriate allocation, what is accepted is that such crimes have dramatic environmental effects and that they pose an extremely grievous burden on the economic balance of the involved countries. In the UK alone it has been estimated that “local authorities spent **£51.6 m on fly-tipping clearance and enforcement** in 2012/2013”<sup>43</sup>. For the purpose of this report, however, mainly the **illicit trafficking in waste** will be addressed. The legislation in this field is quite complex and often hampers an effective fight against this serious crime. The main international act is represented by the 1989 **Basel Convention** on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. Among its main rules, the following can be noted, bearing in mind that the definition of “hazardous wastes” and “other wastes” can be found respectively in Annex I and Annex II of the Convention<sup>44</sup>:

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<sup>41</sup> Some studies have estimated that the deaths caused by asbestos, in Europe, amount to 500.000 (European Commission (2012) *Practical Guidelines for the information and training of workers involved with asbestos removal or maintenance work*, p. 9).

<sup>42</sup> See the Commission Directive 1999/77/EC. In 2009, the Directive 2009/148/EC on the protection of workers from the risks related to exposure to asbestos at work has also been issued.

<sup>43</sup> Taylor S, Jones P, Ettlinger S, Hudson J (2014) *Waste Crime: Tackling Britain’s Dirty Secret*, p. 25.

<sup>44</sup> Examples of “hazardous wastes” are: clinical wastes from medical care in hospitals, medical centers and clinics; waste pharmaceuticals, drugs and medicines; wastes from the production, formulation and use of biocides and phytopharmaceuticals; wastes from the manufacture, formulation and use of wood preserving chemicals; wastes of an explosive nature not subject to other legislation; wastes having as constituents copper compounds, zinc compounds, arsenic or arsenic compounds, mercury or mercury compounds, asbestos (dust and fibres) and other substances. Examples of “other wastes” are wastes collected from households and residues arising from the incineration of household wastes.

- State Parties can **prohibit the import** of hazardous wastes and other wastes for disposal, but they have to inform the other States accordingly (Article 4, par. 1, let. a);
- The export of hazardous and other wastes to a State Party has to be **previously notified** to it; then, the State of import has to **reply in writing** consenting to the movement with or without conditions, denying permission for the movement or requesting additional information (Article 6, par. 1-2);
- **Illegal traffic** in hazardous wastes or other wastes has to be regarded as a **criminal offence** by the State Parties (Article 4, par. 3); for the purpose of the Convention **illegal traffic** occurs in case of “any transboundary movement of hazardous wastes or other wastes: (a) **without notification** pursuant to the provisions of this Convention to all States concerned; or (b) **without the consent** pursuant to the provisions of this Convention of a State concerned; or (c) **with consent obtained** from States concerned **through falsification, misrepresentation or fraud**; or (d) that **does not conform** in a material way **with the documents**; or (e) that results in **deliberate disposal** (e.g. dumping) **of hazardous wastes** or other wastes **in contravention of this Convention and of general principles of international law”**.

The Basel Convention has been transposed in the EU with the **Waste Shipments Regulation**<sup>45</sup>, which therefore regulates the procedure of **prior written notification and consent** relating to the following categories of shipments of waste: “(a) between Member States, within the Community or with transit through third countries; (b) imported into the Community from third countries; (c) exported from the Community to third countries; (d) in transit through the Community, on the way from and to third countries” (Article 1, par. 2).

The EU approach to this matter, mirrored in this Regulation, is based on four main principles: “[i] **waste for final disposal** is considered to be a bigger **environmental burden** than waste for recovery, where waste is used as a resource. The EU’s Waste Framework Directive<sup>46</sup> (...) therefore provides that the EU must be self-sufficient in waste disposal

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<sup>45</sup> Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste, which has been recently amended by the Regulation (EU) No 660/2014 of the European Parliament and of the Council of 15 May 2014.

<sup>46</sup> Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives. According to Article 3 of this piece of legislation, **recovery** means “any operation

capacity (...) [ii] In principle, waste for disposal should be handled in one of the nearest appropriate installations. [iii] **Shipments of waste for recovery are subject to less restrictive regulation** and in general these wastes can be shipped within the EU. However, for hazardous and certain other wastes special procedures must be followed. [iv] **Exporting hazardous waste from the EU to non-OECD countries for recovery is prohibited**, since these countries usually do not have proper and sufficient treatment capacity”<sup>47</sup>.

The data on hazardous waste trade is quite impressive: in 2009, for example, EU MS generated **74 million tonnes** of waste, and 10 % of it was exported (mainly to other MS), whereas the **imported hazardous wastes** amounted to **8.9 million tonnes**<sup>48</sup>.

Also the trade in **non-hazardous waste** is quite relevant, as the EU is nowadays the world’s largest exporter and importer of non-hazardous waste for recovery: in 2013, its share amounted to **39.4 % of the world’s imports** and to **32 % of the world’s exports**, of which 55 % was represented by exports to non-OECD countries with a value of **7.1 billion Euro**<sup>49</sup>.

Notwithstanding the efforts to regulate such a complex matter, this legislation cannot prevent criminality to intrude in this area. The illicit trafficking in waste is nowadays a serious threat and it roughly amounts to **20 % of all the waste shipments in the EU**<sup>50</sup>. Overall, illegal management of waste “can occur at any of the three different stages in the waste cycle”<sup>51</sup>: **origin** (i.e. from producers to companies specialised in waste management),

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the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy (...)”, whereas **disposal** means “any operation which is not recovery even where the operation has as a secondary consequence the reclamation of substances or energy (...)”.

<sup>47</sup> European Environmental Agency (EEA) (2012) *Movements of waste across the EU’s internal and external borders*, p. 10. The rule mentioned under iv) is enshrined in Article 36 of the EU Waste Shipments Regulation and it implements the so called 1995 “**Ban Amendment**” to the Basel Convention.

<sup>48</sup> EEA (2012) *Movements of waste*, cit., p. 11.

<sup>49</sup> <http://ec.europa.eu/trade/import-and-export-rules/export-from-eu/waste-shipment/> (last accessed April 29, 2015). If non-OECD countries have agreed and they assure that the wastes will be recycled, EU MS can ship the non-hazardous wastes to them. The relevant rules can be found in Commission Regulation (EC) No 1418/2007 of 29 November 2007 concerning the export for recovery of certain waste listed in Annex III or IIIA to Regulation (EC) No 1013/2006 of the European Parliament and of the Council to certain countries to which the OECD Decision on the control of transboundary movements of wastes does not apply.

<sup>50</sup> According to some IMPEL (European Union Network for the Implementation and Enforcement of Environmental Law) data, related to a project carried out between 2008 and 2010, violations of the Waste Shipment Regulation’s requirements or related national requirements were detected in the 21 % of the cases of inspected waste transports (IMPEL (2011) *IMPEL-TFS Enforcement Actions II. Final Project Report October 2008 – February 2011*, available at <http://impel.eu/wp-content/uploads/2012/01/IMPEL-TFS-EA-II-Project-Final-report-adopted-v1-4.pdf>, last accessed April 29, 2015, p. 21).

<sup>51</sup> Luda di Cortemiglia V (2013) *Combating transnational trafficking of waste: lessons learnt from Italy*. Presentation at the 22<sup>nd</sup> session of the CCPCJ (Commission on Crime Prevention and Criminal Justice), held in Vienna on 22 April 2013.

**transit** (which includes transportation and storage activities) and **destination** (which includes treatment, recycling and final disposal). The complexity of relevant legislation, the lack of expertise of competent authorities and insufficient cooperation amongst them, the differences in penalties among MS and difficulties linked with the collection of evidence make this area **highly attractive for OCGs**<sup>52</sup>. They can take advantage of the need for private factories to get rid of waste, offering them competitive prices with no intention to dispose of waste legally. OCGs' involvement in this business is well demonstrated, both for intra- and extra-EU trafficking. In the latter cases, EU MS are country of origin or transit for wastes that are shipped mostly to West Africa and South-East Asia<sup>53</sup>. The growing **international nature** of this crime has been underlined in different studies, as well as the consequent needs to foster awareness on it and to promote cooperation among all the countries involved and among the different LEAs to adequately deal with it<sup>54</sup>.

In this area, links to the legal economy are quite evident. Sometimes OCGs can use **legal business structures** (LBS) to cover their activities and to give them a façade of legitimacy<sup>55</sup>; in other cases LBS might decide to deal with their waste without resorting to OCGs, by illegally disposing it within other jurisdictions, taking advantage of the differences in price for their disposal across MS<sup>56</sup>. LBS can also engage themselves in crimes such as **fraud, forgery** and **tax evasion**. The Italian experience has shown a steady use of the “Girobolla System”, i.e. “the **fictitious declassification of waste** through the falsification of transport documentation and analytical certification. This behaviour enables those involved to fraudulently dispose of such waste – following channels which are more or less legitimate – or use waste as secondary raw materials, eliminating the costs of disposal, entering them

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<sup>52</sup> Eurojust (2014) *Report of the Strategic Project*, cit., pp. 16-20.

<sup>53</sup> Europol (2013) *Threat Assessment 2013*, cit., p. 9.

<sup>54</sup> Europol, Arma dei Carabinieri (2014) *European action against the involvement of Organized Crime and Mafia-related crime in Waste Trafficking, in cooperation with Europol, owing to the emergence of trans-national phenomenon*, Council doc. n. 16605/14, p. 25.

<sup>55</sup> Europol (2013) *Threat Assessment 2013*, cit., p. 10.

<sup>56</sup> *Ivi*, p. 6. In a case study reported in Taylor S, Jones P, Ettliger S, Hudson J (2014) *Waste Crime*, cit., p. 26, the example of an English company is mentioned: it “appeared to be a legitimate waste business, supplying their customers with what looked to be genuine invoices and consignment notes. These showed that hazardous waste had been taken to an Oxfordshire landfill site”. However, the Environment Agency discovered 361 tonnes of asbestos stored in 72 large skips. Moreover, “the company’s waste transfer notes were found to be forged, and they were implicated in widespread fly-tipping of this dangerous material” (*ibid.*). Even though the business had an **annual turnover of more than 400,000 £**, “the director and the manager were **fined just £3,000 each** while receiving suspended sentences. They were required to pay back less than £50,000 of the proceed of their crimes, while the director paid £13,00 towards the site owner’s clean-up costs” (*ibid.*): this example shows, once again, the “**low risk-high profit**” nature of these crimes.

into the circuit of commodities such as fertilizers, for use in agriculture or environmental restoration”<sup>57</sup>.

Due to the frequent involvement of public authorities in the waste sector, especially as legislation requires different authorizations and licenses to deal with it, a variety of **corruption** cases have been detected in connection with waste-related crimes<sup>58</sup>.

Within the context of waste-related crimes, two serious emerging threats are represented by **end of life vehicles** (ELVs) and “**waste electrical and electronic equipment**” (WEEE or e-waste), which cover partially overlapping fields.

As far as the first is concerned, it was estimated that in 2010 there were **7,823,211 ELVs** in the EU (including Norway and Liechtenstein)<sup>59</sup>. According to other sources, ELVs produce annually **between 8 and 9 million tonnes of waste** in the EU<sup>60</sup>. Even though reliable and precise data is missing, “there is evidence suggesting that **considerable numbers of ELVs are exported illegally from European Member States**; predominantly to Africa and the Middle Eastern countries”<sup>61</sup> and that this is probably due to the profit that vehicles’ owners can obtain from selling them to car dealers for further export.

Aiming to reduce the production of waste coming from vehicles and to promote their reuse, recycling and other forms of recovery, in 2000 the EU adopted the so-called “**ELV Directive**” to regulate this phenomenon<sup>62</sup>. In Article 2 of this Directive, an ELV is defined as a vehicle that is a waste within the meaning of the Directive 2008/98/EC (which has replaced the previous Directive 75/442/EEC), i.e. a vehicle which the holder does, intends to or is required to discard. The concept of vehicle, in turn, is defined by referring to other Directives<sup>63</sup>. However, notwithstanding the above-mentioned problem of illegal exports of

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<sup>57</sup> Europol, Arma dei Carabinieri (2014) *European action*, cit., p. 28.

<sup>58</sup> D’Alisa G, Falcone PM, Germani AR, Imbriani C, Morone P, Reganati F (2015) *Victim in the “Land of Fires”: A case study on the consequences of buried and burnt waste in Campania, Italy*. A study compiled as part of the EFFACE project. Rome: University of Rome “La Sapienza”, p. 25. See also Europol, Arma dei Carabinieri (2014) *European action*, cit., p. 29.

<sup>59</sup> Sakai S and others (2014) *An international comparative study of end-of-life vehicle (ELV) recycling systems*, in *Journal of Material Cycles and Waste Management*, vol. 16, issue 1, p. 3.

<sup>60</sup> Mudgal S, Kong MA, Mitsios A, Pahal S, Lecerf L, Van Acoleyen M, Lambert S, Fedrigo D, Watkins E (2014) *Ex-post evaluation of certain waste stream Directives. Final report*, p. 115.

<sup>61</sup> Schneider J, Karigl B, Neubauer C, Tesar M, Oliva J, Read B (2010) *End of life vehicles: Legal aspects, national practices and recommendations for future successful approach*, p. 10.

<sup>62</sup> Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end of life vehicles.

<sup>63</sup> Council Directive 70/156/EEC of 6 February 1970 on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers (amended several times) and Council Directive

ELVs, the evaluation of this Directive has been quite positive: “it has significantly **reduced the environmental impacts of ELV** waste and spurred innovation. Some manufacturers have changed the design of their cars to enable the achievement of high recycling and recovery targets at the vehicle end-of-life and integrate more recycled materials. Recyclers, on the other hand, have increased treatment efficiency”<sup>64</sup>.

As far as WEEE is concerned, trade has grown in this area over the years, and the EU is seriously involved. In 2006, **1.3 million tonnes** of the global WEEE export were estimated to be generated in the EU<sup>65</sup>. If e-waste is not adequately treated, the possible dramatic impacts on the environment are quite evident. As it has been meaningfully pointed out, “around 50 million tonnes of old PCs are thrown away worldwide each year. This creates enormous recycling and disposal problems and has led to what has been described as a **‘toxic time bomb’**”<sup>66</sup>. Therefore, the EU has adopted a Directive (**the WEEE Directive**, recently repealed<sup>67</sup>) with similar objectives to the ELV Directive.

In many cases, the shipment of WEEE to other countries, rather than processing it in the Member States, is preferred from an economic point of view. For example, “in 2009, it was estimated that it is **four times more expensive to incinerate waste in the Netherlands** than to ship it to China”<sup>68</sup>. China is probably the main destination for WEEE. It has been estimated that 80% of global e-waste is shipped to Asia, and that 90% of it is destined for China<sup>69</sup>. In the Eastern Asia and Pacific region alone, the potential value of trade in WEEE has been estimated at around **3,5 billion dollars** per year<sup>70</sup>.

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92/61/EEC, repealed by the Directive 2002/24/EC of the European Parliament and of the Council of 18 March 2002 relating to the type-approval of two or three-wheel motor vehicles.

<sup>64</sup> Mudgal S, Kong MA, Mitsios A, Pahal S, Lecerf L, Van Acoleyen M, Lambert S, Fedrigo D, Watkins E (2014) *Ex-post evaluation*, cit., p. 127.

<sup>65</sup> Zoeteman BCJ (2006) *Global Waste Electrical and Electronic Equipment (WEEE) streams estimates*, available at <http://library.certh.gr/libfiles/PDF/GEN-PAPYR-3211-GLOBAL-WASTE-ELECTRICAL-by-ZOETEMAN-in-WEEE-Paper-maart-PP-13-Y-2007.pdf> (last accessed April 29, 2015).

<sup>66</sup> IMPEL (2009) *Transfrontier Shipment of Electronic Waste. IMPEL Project Report*, p. 5.

<sup>67</sup> Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE), repealed by the Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE).

<sup>68</sup> Geeraerts K, Illes A, Schweizer JP (2015) *Illegal shipment of e-waste from the EU: A case-study on illegal e-waste export from the EU to China*. A study compiled as part of the EFFACE Project. London: IEEP, p. 37.

<sup>69</sup> UNODC (2013) *Transnational Organized Crime in East Asia and the Pacific. A Threat Assessment*, p. 105.

<sup>70</sup> Ivi, p. 101.

WEEE crimes share most of the above-mentioned features of environmental crimes, e.g. the frequent **links with other crimes**<sup>71</sup> and **discrepancies among** (often insufficient) **sanctions** in the EU MS, which facilitate criminal activity. Even more so, **OCGs** can of course be involved in this trade, but in many cases they appear to be less structured than the traditional organisations: “the illegal export of e-waste is less structured and centralised than other organised pollution crimes. Rather than demonstrating the traditional hierarchical, centralised structure of organised crime, the involvement of organised criminality in illegal e-waste shipments is **more loosely structured**”<sup>72</sup>.

Finally, legislation in this field is often extremely technical and complex, resulting in difficulties assessing compliance with law: “the illegal market for electronic waste is closely interwoven with the legal industry. Criminal acts are often carried out within a company structure and motivated primarily by **financial gain**. The line between legal and illegal is easily blurred, especially in cases where compliant and non-compliant actors transact with each other”<sup>73</sup>. LEAs are therefore called to accurately investigate WEEE crimes in order to detect this “grey area” and, in particular, **customs** can play a seminal role against the illegal international trade in e-waste<sup>74</sup>.

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<sup>71</sup> “The nature of criminal activity makes it very secretive but from ongoing investigations it would appear to be a vast lucrative industry. The criminal activity involves theft, fraud, drugs, smuggling, conspiracy, firearms and money laundering” (IMPEL (2009) *Transfrontier Shipment*, cit., p. 16).

<sup>72</sup> Geeraerts K, Illes A, Schweizer JP (2015) *Illegal shipment*, cit., p. 34. “In addition to organised crime, **opportunistic crime** or crime that is committed **out of ignorance of the controls** was also reported” (INTERPOL (2014) *Definition of Organised Crime applied to WEEE*, p. 13).

<sup>73</sup> INTERPOL (2014) *Definition of Organised Crime*, cit., p. 20.

<sup>74</sup> IMPEL (2009) *Transfrontier Shipment*, cit., pp. 9-10.

## Trafficking in Endangered Species

TES is one of the most serious and widespread environmental crimes. Sometimes, it is referred to as “**wildlife crime**”, or even “wildlife and forest crime”, and it encompasses “the taking, trading (supplying, selling or trafficking), importing, exporting, processing, possessing, obtaining and consumption of wild fauna and flora, including timber and other forest products, in contravention of national or international law”<sup>75</sup>. This broad concept also includes Illegal, Unreported and Unregulated (IUU) fishing, which will be dealt with in a separate paragraph.

Although it is very hard to estimate the exact value of TES, due to the inevitable “difference between how much crime actually occurs and how much crime is reported to or discovered by the authorities”<sup>76</sup> (the so-called “dark figure of crime”), some interesting data have been collected. As previously indicated, the estimated global annual value for wildlife trafficking (excluding IUU fishing) and illegal **timber** trade is **between 14.8 and 17 billion USD**<sup>77</sup>. The value of **rhino horn** on the black market is estimated between **40,000 EUR/kilogram**<sup>78</sup> and **65.000 EUR/kilogram**<sup>79</sup> (the price of gold is around 30.000 EUR/kilogram), whereas a black eagle can be bought for around **15,000 EUR**<sup>80</sup>; raw ivory reaches **620 EUR/kilogram** and tiger bones **900 EUR/kilogram**<sup>81</sup>. The annual global market in illegal **bear parts** is estimated around **2 billion USD**<sup>82</sup>.

Therefore, this market is **very profitable** and the global demand for such commodities is high, insofar as they can be used either as luxury items (in “Western” countries) or in traditional medicine (as in China and Vietnam<sup>83</sup>). This makes TES very attractive for **OCGs**<sup>84</sup>,

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<sup>75</sup> UNODC (2012) *Toolkit*, cit., p. 2.

<sup>76</sup> *Ivi*, p. 172.

<sup>77</sup> Haken J (2011) *Transnational Crime In The Developing World*, cit.

<sup>78</sup> European Commission (2014) *Communication on the EU Approach against Wildlife Trafficking*, p. 3.

<sup>79</sup> <http://www.stimson.org/enviro-crime/> (last accessed April 29, 2015).

<sup>80</sup> Europol (2013) *Threat Assessment 2013*, cit., p. 12.

<sup>81</sup> European Commission (2014) *Communication on the EU Approach*, cit., p. 3.

<sup>82</sup> INTERPOL (2014) *Assessment on Illegal Bear Trade*, p. 5.

<sup>83</sup> See Nguyen Dao Ngoc V, Nguyen T (Comps) (2008) *An overview of the use of plants and animals in traditional medicine systems in Viet Nam*. TRAFFIC Southeast Asia, Greater Mekong Programme. Ha Noi: Viet Nam, where it is stated that approximately the 25% of commune-level health stations provide traditional medicine practices (p. 22).

<sup>84</sup> Europol (2013) *Threat Assessment 2013*, cit., p. 15; Eurojust (2014) *Report of the Strategic Project*, cit., pp. 14-15.

who can intervene in the phase of harvesting, stealing and/or distributing this type of commodity<sup>85</sup>.

The increase in Internet use over the last years has also facilitated criminal activity in this field. Therefore, **online trade in endangered species** has raised several concerns, because it makes the fight against TES even more difficult<sup>86</sup>. During the 63<sup>rd</sup> meeting of the CITES Standing Committee, this topic has been specifically dealt with, underlining that its scale is “considerable” and requires **specialist knowledge** to be adequately tackled. To keep pace with new challenges in facing TES crimes, new tools have been (or will be) used, such as **aerial surveillance** by a Wildlife Air Service, which will be started soon<sup>87</sup>.

Even though most of the TES-related activities apparently do not affect the EU directly (poaching mainly takes place in Africa, the biggest forests are in South America, etc.), the available data shows a different situation. As an example, 96% of the value of trade in python skins is destined for the European fashion industry<sup>88</sup>. Several European countries have been identified as the place of **origin, transit and destination** of various wildlife products<sup>89</sup>. In some studies the European Union has been proved to be the “**major consumer and transit point**”<sup>90</sup> for illegal wildlife trafficking.

In 2013, **1468 seizures** were reported by 15 EU countries, more than a half with an “international dimension” involving non-EU countries<sup>91</sup>. The main types of commodities

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<sup>85</sup> Ayling J (2012) *What Sustains Wildlife Crime? Rhino Horn Trading and the Resilience of Criminal Networks*. Transnational Environmental Crime Project, Australian National University, Working Paper 2/2012, pp. 5-7 (available at SSRN: <http://ssrn.com/abstract=2152776>, last accessed April 29, 2015).

<sup>86</sup> Milieu Ltd., Orbicon Consulting (2006) *Study on the Enforcement of the EU Wildlife Trade Regulations in the EU-25*, pp. 4-5. See also Europol (2011) *OC-Scan Threat Notice 006-2010*.

<sup>87</sup> Alberts EC (2015) *Wildlife Air Service spreads its wings*, in <http://www.theecologist.org/campaigning/2709967/wildlife-air-service-spreads-its-wings.html> (last accessed April 29, 2015).

<sup>88</sup> Kasterine A, Arbeid R, Caillabet O, Natusch D (2012) *The Trade in South-East Asian Python Skins*. International Trade Centre (ITC), Geneva, p. XV. The profits coming from such a trade are impressive: “the skin is sold by the collector to slaughterhouses for US\$ 10 per metre. Prices for finished leather handbags can reach US\$ 10,000, a product based on one 3 metre skin” (*ibid.*).

<sup>89</sup> Europol (2013) *Threat Assessment 2013*, cit., p. 14. For other data on EU wildlife trade see TRAFFIC (2014) *Briefing paper on wildlife trade in the European Union*.

<sup>90</sup> Sollund R, Maher J (2015) *The Illegal wildlife trade: A case study report on the illegal wildlife trade in the United Kingdom, Norway, Colombia and Brazil*. A study compiled as part of the EFFACE project. Oslo & Wales: University of Oslo and University of Wales, p. 2.

<sup>91</sup> TRAFFIC (2014) *Overview of important international seizures in the European Union. January to December 2013*, available at <http://ec.europa.eu/environment/cites/pdf/Overview%20significant%20seizures%202013.pdf> (last accessed April 29, 2015).

seized were **medicines** (both plant- and animal-derived), **ivory**, **corals** and **live reptiles**. Statistics showed that **China** has been the main country of departure of these products and, after Hong Kong, also the main country of destination<sup>92</sup>. Even though the seizures of birds (both live birds and parts of them) were limited (5 % of the total seizures), other surveys have shown that the EU has been massively involved also in the **illegal bird trade**<sup>93</sup>.

In addition, “OCGs involved in TES in the EU are usually dominated by EU nationals”<sup>94</sup> and some of the **crimes usually linked** to this form of criminality (money laundering, corruption, fraud) take place in Europe, therefore calling for a punitive intervention of the involved Member States<sup>95</sup>. Finally, apart from the devastating impact on ecosystems and biodiversity, TES can in some cases facilitate the **diffusion of diseases**<sup>96</sup>. This is for example the case for trafficking of “**bush meat**”, which is the meat of wild animals used by some populations as their primary nutrition; bush meat hunting itself is a threat for wildlife populations, contributing to their decimation.

As far as regulation is concerned, the main legal instrument in the field is the above-mentioned **CITES**, which was signed in **1973** and entered into force in July 1975; the State Parties to it are currently **181**<sup>97</sup>. It aims to regulate the international trade of about **35.000 endangered species** (both fauna and flora, with a ratio of 1:6)<sup>98</sup>, which are divided into **three Annexes**. The first one lists species threatened with extinction, whose trade must be subject to particularly strict regulation and must only be authorized in exceptional circumstances; Annex II includes all species which may become threatened with extinction, whose trade is therefore subject to strict regulation; the last Annex lists all species which

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<sup>92</sup> *Ibid.*

<sup>93</sup> “Illegal bird trade is a very significant issue in the EU, and compared to the rest of the world. In the period of 1996 to 2003, the EU15 MS were by far the largest reported importers of CITES-listed live birds globally (...). The EU15 trade accounted for 77% of global imports, far ahead of Japan (20 times more) and the USA (100 times more)” (BIO Intelligence Service (2011) *Stocktaking of the main problems and review of national enforcement mechanisms for tackling illegal killing, trapping and trade of birds in the EU*. Final report prepared for European Commission (DG Environment), p. 25).

<sup>94</sup> Europol (2013) *Threat Assessment 2013*, cit., p. 15.

<sup>95</sup> For the case of an Irish OCG specialising in theft and illegal trade of rhino horn see Europol (2011) *OC-Scan Threat Notice 009-2011*.

<sup>96</sup> <http://blogs.worldbank.org/voices/trafficking-wildlife-and-transmitting-disease-bold-threats-era-ebola> (last accessed April 29, 2015).

<sup>97</sup> <http://www.cites.org/eng/disc/parties/index.php> (last accessed April 29, 2015). The EU has been the last one to join, on 9 April 2015.

<sup>98</sup> *Ibid.*

any Party identifies as being subject to regulation within its jurisdiction, in order to prevent or restrict exploitation, so that their trade needs cooperation of other Parties.

CITES has been transposed in the EU through the adoption of **Council Regulation No 338/97** (“Basic Regulation”), which has been followed by some Commission Regulations<sup>99</sup>. Differences between the three Annexes of CITES are mostly mirrored in Annexes A, B and C of the Basic Regulation, whereas Annex D of the Regulation contains other species imported into the Community in such numbers that call for monitoring.

However, even though the Regulation shall have general application and shall be binding in its entirety and directly applicable in all Member States (art. 288 TFEU, par. 2), the relevant political decisions on wildlife crimes have to be taken by each MS: this has led to the usual problematic **discrepancies among MS legal systems**<sup>100</sup>, posing the risk that the European legal framework to tackle TES will be highly ineffective.

From an organisational point of view, CITES and the EU Regulation have requested any Party to set up both a **Scientific Authority** (SA) and a **Management Authority** (MA), which are involved in the procedure of authorising trade in endangered species. The nature and organisation of SAs and MAs vary according to the implementation of the different Member States. Focusing attention briefly on MAs, they may be located within national environment ministries or other ministries, or in separate bodies<sup>101</sup>. Although MAs are generally involved in enforcement, their role varies considerably: “in several Member States, including the Netherlands and Germany, the MA helps to develop overall goals and participates in enforcement discussions. In some cases, the MA is directly involved in enforcement work: in Slovenia, the MA coordinates and provides training for enforcement officials and provides advice on possible seizures (...). In some Member States, including Denmark and Malta, MA officials visit border points to check shipments”<sup>102</sup>.

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<sup>99</sup> Commission has adopted: the **Implementing Regulation** (Commission Regulation No 865/2006, as amended by Commission Regulation No 100/2008, Commission Regulation No 791/2012 and Commission Implementing Regulation No 792/2012), the **Permit Regulation** (Commission Implementing Regulation No 792/2012) and the **Suspensions Regulation** (Commission Implementing Regulation No 578/2013).

<sup>100</sup> European Commission (2014) *Summary of the Responses to the Stakeholder Consultation on the EU Approach against Wildlife Trafficking*, p. 3; Eurojust (2014) *Report of the Strategic Project*, cit., pp. 12-13.

<sup>101</sup> Milieu Ltd., Orbicon Consulting (2006) *Study on the Enforcement of the EU Wildlife Trade Regulations*, cit., p. 11.

<sup>102</sup> *Ibid.*

As far as LEAs are concerned, a major role is played by the **police** and especially **customs**, which in some countries have also established units specifically devoted to CITES enforcement<sup>103</sup> (e.g. the London Heathrow Airport unit); in other Member States however other entities have been empowered to guarantee the respect of CITES rules, as in Spain and Italy (*Guardia Civil* and *Corpo Forestale dello Stato*, respectively). Moreover, in some countries **forest services** and **wildlife inspectorates** can also be called on to enforce CITES regulations. Finally, all the listed authorities can be assisted by **veterinary inspectorates**, especially at border points, for the relevant checks<sup>104</sup>. In this context, the need for a **multi-agency approach** in the fight against wildlife crime has been stressed<sup>105</sup>.

MS' competent agencies can also exchange information about illegal wildlife trade through **EU-Twix** (EU-Trade in Wildlife Information eXchange), a mix of mailing lists and a database, supporting both operational and strategic activities in the field<sup>106</sup>.

Another aspect of TES relates to the **timber trade**. In 2011 the EU was the **second largest single importer of timber products**<sup>107</sup>. As it has been correctly pointed out, “**forest crime** appears to take place in four forms: 1) **illegal exploitation** of high-value endangered (CITES listed) wood species, including rosewood and mahogany; 2) **illegal logging of timber** for sawn-wood, building material and furniture; 3) illegal logging and laundering of wood through plantation and agricultural front companies to supply pulp for the paper industry; and 4) utilisation of the vastly unregulated wood fuel and charcoal trade to conceal illegal

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<sup>103</sup> “(...) the CITES Management Authority is also charged with the enforcement of law and regulations relating to species protection, but in most countries, **CITES enforcement remains within the jurisdiction of Customs services**” (UNODC (2012) *Toolkit*, cit., p. 71). When CITES MAs and Customs are separated, the cooperation and the information exchange have to be fostered, as it is stated in the 1996 Memorandum of Understanding between the WCO and the CITES Secretariat.

<sup>104</sup> Milieu Ltd., Orbicon Consulting (2006) *Study on the Enforcement of the EU Wildlife Trade Regulations*, cit., pp. 22-23.

<sup>105</sup> Sellar JM (2014) *Policing the trafficking of wildlife: Is there anything to learn from law enforcement responses to drug and firearms trafficking?* Part of the Global Initiative against Transnational Organized Crime series on Environmental Crime, p. 38.

<sup>106</sup> “The main section of the database is designed to become a unique source of **centralised data on seizures and offences** reported by all 28 EU Member States. Additionally, it has a section with information on technical, scientific, economic and other fields to help with the identification, valuation, disposal, etc. of seized or confiscated specimens” (<http://www.eutwix.org/>, last accessed April 29, 2015).

<sup>107</sup> Oliver R (2013) *2011 Statistics - EU Totals. Timber trade monitoring in support of effective, efficient and equitable operation of the EU Timber Regulation (EUTR)*. Forest Industries Intelligence Ltd., report prepared for the European Timber Trade Federation, p. 4.

logging in and outside protected areas, conduct extensive tax evasion and fraud, and supply fuel through the informal sector”<sup>108</sup>.

Illegal logging is a serious threat to the **environment** in terms of damage to habitat, loss of biodiversity and deforestation, with the following consequences linked to irreversible climate change; to **society**, mainly because of the conflicts which can arise “around the allocation of specific concession areas or illegal logging outside concessions”<sup>109</sup>, through the involvement of OCGs and the frequent links with other crimes (especially corruption<sup>110</sup>); and to the **economy**, due to the huge loss of state revenues.

In this field, based on the 2003 EU action plan on Forest Law Enforcement, Governance and Trade (FLEGT) the European Parliament and the Council have adopted regulation No 995/2010 (**EU Timber Regulation**, EUTR), which entered into force on 3<sup>rd</sup> of March 2013. It lays down the following rules:

- i) the placing on the market of **illegally harvested timber** or timber products derived from such timber shall be **prohibited** (Article 4, par. 1);
- ii) operators shall exercise **due diligence** when placing timber or timber products on the market (Article 4, par. 2); it means that they have to adopt and use a framework of procedures and measures which can guarantee some information concerning the operator’s supply of timber placed on the market and which shall contain procedures enabling the operator to analyse and evaluate the risk of illegally harvested timber being placed on the market (Article 6);
- iii) **obligation of traceability**, as regulated in Article 5.

Finally, each Member State has to designate a **competent authority** responsible for the application of the Regulation (Article 7). Once again, each country has implemented this rule according to its need and peculiarities. One very recent survey has shown that 15 MS have not yet adequately transposed the EUTR in their legal systems<sup>111</sup>.

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<sup>108</sup> Nellemann C, Henriksen R, Raxter P, Ash N, Mrema E (eds) (2014) *The Environmental Crime Crisis – Threats to Sustainable Development from Illegal Exploitation and Trade in Wildlife and Forest Resources*. A UNEP Rapid Response Assessment. United Nations Environment Programme and GRID-Arendal, Nairobi and Arendal, p. 61.

<sup>109</sup> Saunders J, Hein J (2015) *EUTR, CITES and money laundering: A case study on the challenges to coordinated enforcement in the global forest products sector*. A study for the EFFACE project. Chatam House: London, p. 6.

<sup>110</sup> Goncalves MP, Panjer M, Greenberg TS, Magrath WB (2012) *Justice for Forests. Improving Criminal Justice Efforts to Combat Illegal Logging*, pp. 5-6.

<sup>111</sup> [http://barometer.wwf.org.uk/what\\_we\\_do/government\\_barometer/](http://barometer.wwf.org.uk/what_we_do/government_barometer/) (last accessed April 29, 2015).

Even if this bird's-eye view is synthetic, the challenges posed by TES are quite evident. This emerges also from some recently adopted international acts<sup>112</sup>. Several **ECOSOC Resolutions** for example are specifically devoted to TES and they urge states to adequately tackle TES and to effectively cooperate to tackle it<sup>113</sup>; with the same view, the UN Commission on Crime Prevention and Criminal Justice (**CCPCJ**) has issued a Resolution on illegal timber trade<sup>114</sup>.

Similarly, the **European Parliament** has urged the Commission to establish, without delay, an EU plan of action against wildlife crime and trafficking using **Resolution 2747/2013**<sup>115</sup>. The added value of an EU action plan, apart from ensuring consistency in the European fight against TES, would be to show political commitment and to reflect “the significance of the problem which has **all the hallmarks of organized and sophisticated crime** and shares many of the characteristics of other **transnational criminal activities** where such Action Plans exist, such as human trafficking and trafficking in fire arms”<sup>116</sup>.

With a view towards better coordination in the fight against the crimes at stake, the International Consortium on Combating Wildlife Crime (**ICCWC**) was created in 2010. It is composed of Interpol<sup>117</sup>, CITES Secretariat, UNODC, the World Bank and the World Customs Organization (WCO). ICCWC supports law enforcement agencies in the fight against wildlife crime. As mentioned on the CITES website, ICCWC's mission is “to usher in a new era where perpetrators of serious wildlife and forest crime will face a formidable and **coordinated response**, rather than the present situation whereby the risk of detection and punishment is all too low”<sup>118</sup>.

Within the framework of ICCWC, the UNODC – with the support of the other four bodies – has elaborated the aforementioned **Wildlife and Forest Crime Analytical Toolkit** (2012),

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<sup>112</sup> For an overview on the growing recognition of the wildlife crime threat by the international community see EIA (2014) *In Cold Blood. Combating organised wildlife crime*, pp. 5-6.

<sup>113</sup> ECOSOC (2011) “Crime prevention and criminal justice responses against illicit trafficking in endangered species of wild fauna and flora”, Resolution 36/2011; ECOSOC (2013) “Crime prevention and criminal justice responses to illicit trafficking in protected species of wild fauna and flora”, Resolution 40/2013.

<sup>114</sup> CCPCJ (2014) “Strengthening a targeted crime prevention and criminal justice response to combat illicit trafficking in forest products, including timber”, Resolution 23/1.

<sup>115</sup> European Parliament (2014) Resolution on wildlife crime (2747/2013).

<sup>116</sup> European Commission (2014) *Summary of the Responses*, cit., p. 4.

<sup>117</sup> Interpol has also set up the **Wildlife Crime Working Group** to support the fight against this form of criminality.

<sup>118</sup> <http://www.cites.org/eng/prog/iccwc.php> (last accessed April 29, 2015).

which gives a comprehensive overview of wildlife crime, dealing with the relevant legislation and its enforcement, some judiciary and prosecution aspects and with data, drivers and prevention of this crime. Such a toolkit could be used as a “comprehensive resource with relevant tools and measurement to ensure a consistent and joined-up approach”<sup>119</sup> to respond to illegal wildlife trade.

One of the listed instruments to which the national competent authorities can resort is **ENVIRONET**, an initiative launched by the WCO “as a new **global real-time communication tool** for use in the fight against cross-border environment-related offences. ENVIRONET provides a secure, Internet-based platform for Customs officials, other law enforcement authorities and international organizations, as well as their regional networks, to cooperate with one another and **share information in the course of their daily operations**. Information related to all commodities that have the potential to damage the environment and that are covered by trade-related multilateral environment agreements can be exchanged via ENVIRONET”<sup>120</sup>. Of course, it also includes endangered species of flora and fauna.

It should be stressed that illicit trafficking in endangered species of wild flora and fauna is explicitly mentioned in the preamble of **UNTOC** as a crime against which the Convention may provide an effective tool and the necessary legal framework for international cooperation among states. However, as in most countries the above-mentioned threshold of penalties for TES crimes is not reached<sup>121</sup>, for the time being UNTOC is applied rarely in this field. For this reason, it has been envisaged to adopt an **additional Protocol**, devoted

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<sup>119</sup> Sollund R, Maher J (2015) *The Illegal wildlife trade*, cit., p. 36.

<sup>120</sup> UNODC (2012) *Toolkit*, cit., p. 101. The WCO also maintains the **Customs Enforcement Network (CEN)**, “an Internet-based seizure database (...) with a wildlife seizure database as one of the 13 commodities since 2002. The database contains **non-nominal seizure information** such as date, location, species, quantity, departure, destination, conveyance, concealment and CITES documentation. Customs services worldwide report their seizures on a **voluntary basis**. Regional intelligence liaison offices analyse the data and publish analytic reports on a regular basis. The data are also available to all WCO member Customs administrations for analytic purposes” (*ivi*, p. 178).

<sup>121</sup> It is a common view that penalties against TES are **too lenient almost everywhere**: see, among others, Sollund R, Maher J (2015) *The Illegal wildlife trade*, cit., p. X.

particularly to environmental crime (or only to TES)<sup>122</sup>, in order that it may be applied notwithstanding the **discrepancies** among the various legal systems<sup>123</sup>.

Finally, given its profit-driven nature, **money-laundering** activities linked to TES need also to be tackled, if necessary with due cooperation of the Financial Intelligence Units (FIUs) and other competent authorities<sup>124</sup>. For the same reason, it is necessary to **trace the proceeds** derived from TES and to **seize** and **confiscate** them, also because this “sends a message to criminals that this activity is not high profit”<sup>125</sup>, hopefully deterring them from committing such crimes in the future. Of course, given the transnational nature of most serious forms of TES, international cooperation with a view to **cross-border asset recovery** is needed. Once again, UNTOC and UNCAC can provide an important legal basis for this<sup>126</sup>.

In the EU, a recent directive on confiscation has been adopted<sup>127</sup>, but unfortunately it applies only to those criminal offences covered by the listed acts (Article 3): quite surprisingly, the Directive 2008/99/EC has not been included, therefore it can only be applied to TES if it falls under the rules of Council Framework Decision 2008/841/JHA on the fight against organised crime (which has been instead mentioned in Article 3)<sup>128</sup>.

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<sup>122</sup> Sellar JM (2014) *Policing the trafficking of wildlife*, cit.; Maher J, Sollund R, Fajardo del Castillo T (2014) *Response to the EU Commission’s consultation on wildlife trafficking*. Statement on behalf of the research project EFFACE.

<sup>123</sup> “In some countries only small fines and short prison terms are possible. In others, fines can be very heavy and prison terms can be as long as five years (in Australia and Zimbabwe) or seven years (in Tanzania). In China, life imprisonment and even the death penalty can be imposed for serious crimes such as illegal trade in pandas or other highly endangered species” (de Klemm C (1993) *Guidelines for Legislation to Implement CITES*. IUCN, Gland, Switzerland and Cambridge, UK, p. 65). Although more than twenty years have passed since this study has been published, the above-mentioned discrepancies continue to exist: see, among others, Milieu Ltd., Orbicon Consulting (2006) *Study on the Enforcement of the EU Wildlife Trade Regulations*, cit., pp. 27-28; UNODC (2012) *Toolkit*, cit., pp. 44-46.

<sup>124</sup> European Commission (2014) *Summary of the Responses*, cit., p. 7; Goncalves MP, Panjer M, Greenberg TS, Magrath WB (2012) *Justice for Forests*, cit., p. 32.

<sup>125</sup> UNODC (2012) *Toolkit*, cit., p. 132. The importance of asset tracing, freezing and confiscation in fight against the most serious forms of (organised) environmental crimes, such TES indeed, is underlined also in: Eurojust (2014) *Report of the Strategic Project*, cit.; Luna M, Veening W (2014) *EFFACE Policy Brief 2*, cit., pp. 8-9.

<sup>126</sup> UNODC (2012) *Toolkit*, cit., p. 133.

<sup>127</sup> 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.

<sup>128</sup> This “missed opportunity” for the EU regulation to be enriched with an additional tool to adequately contrast with TES has been correctly pointed out in Maher J, Sollund R, Fajardo del Castillo T (2014) *Response to the EU Commission’s*, cit.

## Illegal, Unreported and Unregulated (IUU) Fishing

In a nutshell, IUU fishing has been defined as follows: “**illegal** fishing [...] includes fishing without a valid license, fishing in a closed or prohibited area, or fishing that violates national laws or international obligations; **unreported** fishing [...] refers to fishing activities that have been underreported or not reported at all to the relevant authorities; and **unregulated** fishing [means] that a vessel fishes within the regulatory zone of a Regional Fisheries Management Organisation to which it is not a party, or that a vessel fishes outside of regulated zones”<sup>129</sup>.

The global annual losses due to IUU fishing have been estimated around **10-23.5 billion USD per year**<sup>130</sup>. The European Union is the **world’s largest single market** for fisheries and aquaculture products, with about 40 % of global imports in 2010, whereas in the same year the EU catches amounted to 5 % of the global total<sup>131</sup>. The illegal import of fishing products in the EU has been estimated to be worth **1.1 billion EUR per year**<sup>132</sup>.

The effects of IUU fishing are devastating from several points of view. First of all, the impact on **marine ecosystems** and **habitats** can be really serious<sup>133</sup>. The overfishing of some species can lead to their extinction, with unpredictable effects on the overall environmental balance. In particular, “fishing with prohibited methods can result in a high proportion of

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<sup>129</sup> Efface Action Guide on Illegal Fishing, available at <http://actionguide.info/t/9/> (last accessed April 29, 2015).

<sup>130</sup> Agnew DJ, Pearce J, Pramod G, Peatman T, Watson R, et al. (2009) *Estimating the Worldwide Extent of Illegal Fishing*. PLoS One 4(2): e4570.doi:10.1371/journal.pone.0004570. This study has also underlined the relation between the illegal fishing activities and the **poor governance** of some countries, which are not able to adequately control neither such activities nor their ports and vessels. The results of this research are consistent with those of another recent study, which has estimated that the IUU catches represented 20-32 % of wild-caught seafood imported to the USA in 2011, with a value between 1.3 and 2.1 billion dollars (Pramod G, Nakamura K, Pitcher TJ, Delagran L (2014) *Estimates of illegal and unreported fish in seafood imports to the USA*, in *Marine Policy* 48).

<sup>131</sup> *European fisheries in figures*, retrieved from [http://www.europarl.europa.eu/aboutparliament/en/displayFtu.html?ftuld=FTU\\_5.3.9.html](http://www.europarl.europa.eu/aboutparliament/en/displayFtu.html?ftuld=FTU_5.3.9.html) (last accessed April 29, 2015). Excluding intra-EU trade, the percentage of EU imports is 26 % of the global total.

<sup>132</sup> European Commission (2007) *Staff working document – Accompanying document to the Proposal for a Council Regulation establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing – Impact Assessment*.

<sup>133</sup> “Illegal, unreported and unregulated fishing remains one of the greatest threats to marine ecosystems and continues to have serious and major implications for the conservation and management of ocean resources” (United Nations General Assembly (2007) *Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*, Resolution 61/105 of 6 March 2007).

unwanted species being taken as by-catch and then discarded. Such by-catch includes not only fish species, but other species, such as seabirds or turtles, the vast majority of which will not survive. Fishing in protected areas may also be the direct cause of irreversible damage to vulnerable marine habitats, such as coral reef<sup>134</sup>.

Secondly, the impact on the **food chain** can be dramatic as well. Illegal fishing not only provides for products which are not regularly controlled but also contributes towards a reduction in fish availability on local markets, with a serious risk of increasing malnutrition in some areas<sup>135</sup>.

Moreover, **fair competition** is clearly distorted and hampered to the detriment of those fisheries which operate legally; in some developing countries, direct or indirect conflicts between IUU industrial and artisanal or semi-artisanal fishers have become frequent<sup>136</sup>. Of course similarly to serious environmental crimes in general, IUU fishing is often linked with **other forms of criminality**, such as tax fraud<sup>137</sup>, forgery (in order to falsify the relevant documents), corruption and sometimes also trafficking of human beings and drugs (which can be transported with the same ships undertaking illegal fishing activities)<sup>138</sup>. In the latter cases, the involvement of transnational **Organised Crime Groups** is common<sup>139</sup>.

One of the most serious problems in this field is represented by “**Flags of Convenience**” (FOC, also known as “Flags of Non-Compliance”), i.e. when a vessel is registered in a country known for loose controls on vessels and their compliance with the relevant laws (including

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<sup>134</sup> European Commission (2007) *Communication on a new strategy for Community to prevent, deter and eliminate Illegal, Unreported and Unregulated fishing*, p. 3. On the same topic, see also FAO, UNEP (2009) *Report of the FAO/UNEP Expert Meeting on Impacts of Destructive Fishing Practices, Unsustainable Fishing, and Illegal, Unreported and Unregulated (IUU) Fishing on Marine Biodiversity and Habitats*, held in Rome on 23-25 September 2009, in FAO Fisheries and Aquaculture Report No 932.

<sup>135</sup> Agnew DJ, Barnes CT (2004) *Economic aspects and drivers of IUU fishing: building a framework*, in *Fish Piracy. Combating Illegal, Unreported and Unregulated Fishing*, OECD, p. 197.

<sup>136</sup> MRAG (2005) *Review of Impacts of Illegal, Unreported and Unregulated Fishing on Developing Countries*.

<sup>137</sup> See OECD (2013) *Evading the Net: Tax Crime in the Fisheries Sector*, which points out the different forms of tax crimes in this sector.

<sup>138</sup> Haken J (2011) *Transnational Crime In The Developing World*, cit., p. 45.

<sup>139</sup> European Parliament, Committee on Fisheries (2011) *Report on combating illegal fishing at the global level – the role of the EU*, pp. 16-17. On the involvement of OCGs in the fishing industry see UNODC (2011) *Transnational Organized Crime in the Fishing Industry*, which mainly focuses on trafficking in human beings, smuggling of migrants and illicit drug trafficking.

the labour-related ones). A report has shown that 12 % of large-scale fisheries vessels flagged to the top 13 FOC registries are owned by EU companies<sup>140</sup>.

Different initiatives have been undertaken on an international level in order to address the phenomenon of IUU fishing, In 2001, for example, the FAO Council endorsed the **International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing**, and in 2009 the FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing was adopted. In addition, the online portal Fishing Vessels Finder has been established, with a view “to disseminate publicly available information on individual fishing vessels”<sup>141</sup>, however the proposal to set up a Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels has not been yet implemented. Interpol has also established the **Fisheries Crime Working Group**, aimed at providing operational and analytical support to competent LEAs and to foster their cooperation.

As far as the EU is concerned, **Council Regulation No 1005/2008** (“IUU Regulation”) merits a particular mention, along with **Commission Regulation No 1010/2009**<sup>142</sup>. In addition to the **definition of IUU fishing** (Article 2), these documents list rules on:

1. **Inspection** of third country fishing vessels in MS’ ports (Articles 4-11);
2. **Catch certification** for importation and exportation of fishery products (Articles 12-22);
3. The development of a **Community Alert System (not yet established)**: Article 23 states that the Commission shall publish an alert notice on its website and in the *Official Journal of the European Union* when there is the well-founded doubt that some vessels or fisheries products do not comply with the relevant legislation on the matter; Article 24 describes the actions following the issuance of this alert;

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<sup>140</sup> EJF (2012) *Pirate Fishing Exposed: The Fight Against Illegal Fishing in west Africa and the EU*. However, there is no universally agreed definition of FOC (see more in: Global Ocean Commission (2013) *Illegal, unreported and unregulated fishing*, Policy Options Paper #8, pp. 3-4).

<sup>141</sup> FAO (2014) *The State of World Fisheries and Aquaculture*, p. 135.

<sup>142</sup> The Council Regulation No 1005/2008 is one of the three pillars of the European Union fisheries control system, together with the Council Regulation No 1006/2008 concerning authorisations for fishing activities of Community vessels outside Community waters and the access of third country vessels to Community waters (“Regulation on Fisheries Authorisations”) and the Council Regulation No 1224/2009, establishing a Community control system to ensure compliance with the rules of the common fisheries policy (“Control Regulation”).

4. **Identification of fishing vessels engaged in IUU fishing** (Articles 25-30): the existing IUU vessel list is based only on the IUU vessels identified by the different Regional Fisheries Management Organisations (RFMOs)<sup>143</sup>;
5. Identification of **non-cooperating third countries** and consequent measures against them (Articles 31-36): for the time being, the Kingdom of Cambodia, the Republic of Guinea and the Democratic Socialist Republic of Sri Lanka have been identified as non-cooperating countries, whereas Belize has been removed from the list<sup>144</sup>;
6. Measures in respect of fishing vessels and non-cooperating third countries involved in IUU fishing (Articles 37-38).

In April 2014, DG MARE published a Report on the implementation of the IUU Regulation, pointing out that 24 MS have changed their legislation and their administrative organisation to comply with the EU regulation<sup>145</sup>. The UK, for example, has created a specific IUU coordinating unit, whereas in many other MS' competences are shared by **different authorities**<sup>146</sup>. Usually, Ministries of agriculture, transport, internal affairs and even defence can play a role in this field, according to their remits<sup>147</sup>.

As far as LEAs are concerned, IUU fishing calls for an intervention of **police, port authorities, customs and tax authorities**, as well as other agencies (e.g. Agency for Health and Food Safety in Austria, Danish AgriFish Agency, sometimes also veterinary authorities, as in Germany and Denmark, etc.)<sup>148</sup>. Some of these bodies take also part in **Aquapol**, a network which strives to strengthen law enforcement's cross-border cooperation in the field of waterborne transport.

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<sup>143</sup> These "black lists" are not very reliable, because they "are known to be slow, cumbersome and political" (Lutchman I, Newman S, Monsanto M (2011) *An Independent Review of the EU Illegal, Unreported and Unregulated Regulations*, Institute for European Environmental Policy, p. 20). This review also underlines other weak points of the Regulation (e.g. the catch certification scheme can be easily subject to fraud), as well as a general lack of transparency in this matter.

<sup>144</sup> Council Implementing Decision 2014/170/EU; Council Implementing Decision 2014/914/EU; Council Implementing Decision (EU) 2015/200.

<sup>145</sup> European Commission (2014) *Study on the state of play regarding application and implementation of Council Regulation (EC) no 1005/2008 of 29 September 2008, establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing (IUU Regulation)*.

<sup>146</sup> Lutchman I, Newman S, Monsanto M (2011) *An Independent Review*, cit., pp. 16-17.

<sup>147</sup> Beke M, Blomeyer R (2014) *Illegal, Unreported and Unregulated Fishing: Sanctions in the EU*, Study for the European Parliament, pp. 45-46.

<sup>148</sup> European Commission (2014) *Study on the state of play regarding application and implementation of IUU Regulation*, cit., pp. 6-15.

However, without prejudice to the autonomy of the MS, it has been suggested to adopt standard procedures and practices in carrying out the obligations of control and identification provided for by the Regulation<sup>149</sup>. Such a consistency would most likely lead to improvements in the fight against IUU fishing.

As far as statistical data are concerned, between 1 January 2010 and 31 December 2011 **4283 landings and transhipments** by third country fishing vessels have been reported, whereas a total of **1547 inspections** have been conducted in the same period<sup>150</sup>. Most of the occurred infringements have been punished with **financial penalties**.

On this note, an interesting study for the EU Parliament has recently pointed out that such monetary penalties (and sometimes even imprisonment) might not have a deterring effect when fishermen resort to IUU fishing due to their poor economic and social conditions<sup>151</sup>. Also, in most countries, the sanctions for fisheries infringements are imposed by **administrative authorities**, which often reach an out-of-court settlement with the offenders. The inherent discretion of this procedure is perceived as problematic, because it “could have a negative impact on the transparency of decision-making, which risks potential lack of public control, and violation of due process”<sup>152</sup>. In the same study, the differences in the sanctions for IUU infringements across the EU are seen as a possible cause for discrimination and unfair competition in the fisheries sector<sup>153</sup>.

Therefore, EU legislation in this matter is still unsatisfactory and unable to address all the problems. Enhanced monitoring, control and surveillance (MCS) activities in the Member States has been suggested to strengthen the international policy framework, to exchange information between countries on licensing and on the rules of procedure in cases of detected IUU infringements<sup>154</sup>. For the future, the fight against IUU fishing can benefit from the **2014-2020 European Maritime and Fisheries Fund**, which will promote sustainable fisheries and fund those fishing activities which will comply with the control obligations and

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<sup>149</sup> GOPA Consortium (2013) *Compliance of Imports of Fishery and Aquaculture products with EU legislation*, Study for the European Parliament, p. 112.

<sup>150</sup> European Commission (2014) *Study on the state of play regarding application and implementation of IUU Regulation*, cit., pp. i-ii.

<sup>151</sup> Beke M, Blomeyer R (2014) *Illegal, Unreported and Unregulated Fishing*, cit., p. 61.

<sup>152</sup> *Ivi*, p. 46.

<sup>153</sup> *Ivi*, p. 47.

<sup>154</sup> *Ivi*, pp. 63-64.

with the IUU Regulation<sup>155</sup>. The prevention of IUU fishing has also been mentioned by the European Commission as one of the key strategic maritime security interests of the EU<sup>156</sup>.

However, given the **intrinsic transnational nature** of the most serious forms of IUU fishing, a strict **cooperation** between the EU and all other countries and organisations involved is needed, as underlined in the **Joint Statements** on efforts to combat illegal, unreported and unregulated fishing, signed by the EU Commission, with the United States (2011) and with Japan (2012). Nevertheless, it is undeniable that such Joint Statements do not provide any concrete measures, so there is a serious need to transform them into action, otherwise they will only have a mere symbolic function<sup>157</sup>.

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<sup>155</sup> *Ivi*, p. 42.

<sup>156</sup> European Commission (2014) *For an open and secure global maritime domain: elements for a European Union maritime security strategy*.

<sup>157</sup> GOPA Consortium (2013) *Compliance of Imports of Fishery and Aquaculture products with EU legislation*, cit., p. 100.

## Chemicals

Pharmaceuticals, cosmetics, endocrine disruptors and pesticides fall within the broad concept of “chemicals”<sup>158</sup>. Sometimes, the expression “**plant protection product**” (PPP) is used instead of **pesticides**, even though pesticide is “a broader term that also covers non plant/crop uses, for example **biocides**”<sup>159</sup>. The latter are defined as those “chemicals used to suppress organisms that are harmful to human or animal health, or that cause damage to natural or manufactured materials. These harmful organisms include pests and germs (i.e. moulds and bacteria)”<sup>160</sup>.

Nowadays, pesticides are the chemicals of most concern. On the basis of **Regulation 1107/2009**<sup>161</sup>, their active substances have to be firstly approved according to the procedure described in Articles 4-24, which also involves the European Food and Safety Authority (EFSA). Then, pesticides can be placed on the market of a concerned EU MS only after a specific **authorisation** (Article 28), which is issued when they meet the requirements set out in Article 29. The contents of this authorisation are listed in Article 31: they include, for example, the definition of plants or plant products and non-agricultural areas (for example railways, public areas, storage rooms) on which, and the purposes for which, the PPP may be used and the requirements relating to its placing on the market.

Article 40 states that the holder of an authorisation granted in accordance with Article 29 may apply for an authorisation for the same PPP, the same use and under comparable agricultural practices in another Member State under the **mutual recognition** procedure, whereas Article 57 obliges the MS to **keep information electronically available to the public** on PPP authorised or withdrawn in accordance with the Regulation.

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<sup>158</sup> [http://ec.europa.eu/environment/chemicals/index\\_en.htm](http://ec.europa.eu/environment/chemicals/index_en.htm) (last accessed April 29, 2015).

<sup>159</sup> [http://ec.europa.eu/food/plant/pesticides/index\\_en.htm](http://ec.europa.eu/food/plant/pesticides/index_en.htm) (last accessed April 29, 2015).

<sup>160</sup> [http://ec.europa.eu/environment/chemicals/biocides/index\\_en.htm](http://ec.europa.eu/environment/chemicals/biocides/index_en.htm) (last accessed April 29, 2015).

<sup>161</sup> Regulation No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC. A similar legislation has been adopted also with regards to biocides (see Regulation No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products).

The trade in **illegal and counterfeit pesticides** has been estimated as worth **4.4 billion EUR per year** globally<sup>162</sup> and in some countries it provides **more than a quarter of the pesticides** in circulation<sup>163</sup>. Even though the overlaps with environmental crime are quite evident, this trade is mainly dealt with by units competent for counterfeiting, as for example at Europol, where such an area of crime falls within the competence of Focal Point COPY (within the Analysis Work File on Serious Organised Crime).

Apart from the economic losses, other consequences of the trade in illegal and counterfeit pesticides can be serious. As previously explained, farmers usually search for a “good deal”, thereby triggering criminal initiatives devoted to meet this demand. The risk of being detected is very low, but the profits can be quite high. Once OCGs have managed to introduce illegal or counterfeit pesticides in the EU, they are sold (even through the internet) to the farmers who use them on their fields<sup>164</sup>. Firstly, this means that such a trade adversely affects society due to the **massive intrusion of OCGs**. Secondly, “due to the **lack of traceability**, illegal pesticides are especially at risk of being used as precursors for **Home Made Explosives (HME)**”<sup>165</sup>. In addition, because these products are usually neither tested nor authorised, they can contain toxic substances which are **harmful for farmers’ health and for that of the end-users** of treated agricultural products. Finally, they decrease soil quality and damage the environment<sup>166</sup>.

The LEAs that play a major role in the fight against this crime are undoubtedly the **customs agencies**, empowered with controls at borders. The demand for pesticides is, depending on the country, higher during the first months of the year (January and February)<sup>167</sup>. However, once the trend for each state is identified, border controls can be increased accordingly. Adequate support by the private sector, other LEAs and pesticide regulatory agencies has

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<sup>162</sup> Europol (2011) *OC-Scan Threat Notice 011-2011*.

<sup>163</sup> *Ibid.*

<sup>164</sup> McHale T (2012) *Counterfeit products and illegal trade: the need for coordinated control and enforcement rules throughout Europe*, European Crop Protection Association. Presentation at the CEUREG Forum XVI, held in Vienna in October 2012.

<sup>165</sup> Europol (2011) *OC-Scan Threat Notice 011-2011*.

<sup>166</sup> Kutonova T, Malkov M (2014) *Detection and prevention of environmental crimes at border and pesticides counterfeit*, OSCE-ENVSEC presentation.

<sup>167</sup> *Ibid.*

been envisaged in order to better control this illegal trade<sup>168</sup>. In other words, **cooperation between competent authorities and interested actors** should be fostered. Important support in this area is provided by the **European Crop Protection Association (ECPA)**, “which supports law enforcement authorities in combating counterfeit and illegal pesticides”<sup>169</sup>.

As far as other chemicals are concerned, the so called “**fuel-oil fraud**” problem has to be mentioned. This fraud, which occurs when fuel oil is mixed with waste oil, is particularly dangerous for ships, as the mixture can heavily damage engines. Ship owners are typically not aware of the illegal composition of the fuel. The same can also happen to car owners. It is not unusual that car users find it more economical to refuel at illegal operators, even if the fuel at stake is substandard because it has been mixed with chemicals<sup>170</sup>. The fraud in question usually also includes **tax evasion**, as “in most of the European countries, the biggest part of the price of a litre of diesel is tax. Other fuels, like red diesel and kerosene, carry little or no tax”<sup>171</sup>. Therefore, the mixture of these different types of fuel can help to illegally lower the tax burden. **OCGs** can also be involved in these lucrative activities. They are paid for buying waste oil, pretending to take care of its disposal, and then they illegally re-use and sell it<sup>172</sup>. It goes without saying that the fumes of such mixtures are toxic, depending on how much waste oil is included. Diesel engines do not generate enough heat to incinerate waste oils.

Another relevant area of illegal trade in chemicals is linked to **ozone-depleting substances (ODS)**, which can also be seen as “chemicals”<sup>173</sup>. The risks posed by the uncontrolled use or trade of ODS are quite obvious, as the progressive depletion of the ozone layer allows

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<sup>168</sup> Europol (2011) *OC-Scan Threat Notice 011-2011*. As far as the private sector is concerned, the involvement of “companies with a capability for analysing suspicious chemicals, as well as storing and destroying hazardous materials” is highly encouraged.

<sup>169</sup> Europol, OHIM (2012) *Report and Conclusions of the Awareness Conference on Fake and Illicit Pesticides*, held in Alicante on 26-28 November 2012, p. 6.

<sup>170</sup> Crawford A (2013) *Illegal fuel: 48% rise in 'pop-up garages'*, available at <http://www.bbc.com/news/uk-22716007> (last accessed April 29, 2015). Some cases of mixed fuel in illegal filling stations have been discovered by customs officers in Wales in 2013 (see <http://www.itv.com/news/wales/story/2013-09-13/red-diesel-kerosene-illegal-fuel-wales/>, last accessed April 29, 2015).

<sup>171</sup> Vander Beken T (ed.) (2005) *Organised crime and vulnerability of economic sectors. The European transport and music sector*, Maklu, Antwerp-Apeldoorn, p. 106.

<sup>172</sup> In the second half of the twentieth century, such fraud was quite successfully undertaken in the US by some Italian criminals linked to powerful OCGs (see Duyne PC, Block A (1995) *Organized Cross-Atlantic Crime. Racketeering in fuels*, available at <http://www.portill.nl/articles/Van%20Duyne/GAS-ISRA1.pdf>, last accessed April 29, 2015).

<sup>173</sup> OECD (2012) *Illegal Trade in Environmentally Sensitive Goods*, OECD Trade Policy Studies, OECD Publishing.

increasing amounts of UV radiation to reach our planet's surface, with dramatic consequences for **human health**, which include “**suppression of the immunity system, photo-aging of the skin, cataracts and skin cancer**”<sup>174</sup>. **Plants and ecosystems** are at risk as well: “research has shown UV-B can significantly impair reproductive capacity and early developmental stages of aquatic organisms. In addition, increased exposure to UV light in terrestrial plants results in reductions in height, decreased shoot mass and reductions in foliage area”<sup>175</sup>.

The most dangerous ODSs are represented by chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs), the production and use of which have been regulated by the **1985 Vienna Convention** for the Protection of the Ozone Layer and especially by the following **1987 Montreal Protocol on Substances that Deplete the Ozone Layer**. Thanks to these successful treaties<sup>176</sup>, most of the substances in question have been phased out and alternatives introduced.

Substitutes, the so called “**F-gases**” (fluorinated gases, among which the hydrofluorocarbons, HFCs, are the most common) have been developed and promoted. However, even though they do not damage the ozone layer, they have a **high global warming potential**<sup>177</sup>. With the intent of reducing these emissions, the EU has adopted the “**F-Gas Regulation**” (No 842/2006), which has turned out to be ineffective and way too expensive to implement. Five years after its adoption, HFC emissions have increased by 20%<sup>178</sup>. On 01 January 2015 the Regulation has been repealed by a new one (No 517/2014), which should improve the present legislative framework<sup>179</sup>.

Notwithstanding the positive consequences of the above-mentioned treaties, the illegal trade of ODS is still a serious threat: most of the time, dangerous ODSs are **declared as**

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<sup>174</sup> EIA (2014) *New Trends in ODS Smuggling*. EIA Briefing to the 26<sup>th</sup> Meeting of the Montreal Protocol, p. 1.

<sup>175</sup> *Ibid.*

<sup>176</sup> They have been ratified by **197** States and “on 16<sup>th</sup> September 2009, the Vienna Convention and the Montreal Protocol became the first treaties in the history of the United Nations to achieve **universal ratification**” ([http://ozone.unep.org/new\\_site/en/treaty\\_ratification\\_status.php](http://ozone.unep.org/new_site/en/treaty_ratification_status.php), last accessed April 29, 2015).

<sup>177</sup> EIA (2011) *End in sight. Phasing out fluorinated greenhouse gases in Europe*. EIA Position Paper on HFCs in the Review of the EU F-Gas Regulation.

<sup>178</sup> *Ibid.*

<sup>179</sup> This new Regulation, aiming to reduce the quantity of HFCs allowed in the EU, has been defined as “the most ambitious HFC regulation in the world, setting out numerous use-restrictions including new product and equipment bans, by-product destruction obligations and a phase-down schedule. It will require businesses to rethink how they currently use HFCs and open up a huge market for HFC-free alternatives” (EIA (2014) *Chilling Facts VI: Closing the Door on HFCs*, p. 10).

**non-ODS alternatives**, this way circumventing the **strict licensing system** introduced by the Montreal Protocol<sup>180</sup>. Usually, western companies are the buyers of these illegal substances, produced in certain emerging countries<sup>181</sup>. Such trade “arose in part because of their [of the ODSs] staggered phasing out, with developing countries being given a longer timeframe in which to eliminate their production and use”<sup>182</sup>. Apart from mis-declaration, other smuggling methods used by criminals to deal in ODS include **false labelling, concealing** in cars, ships or trucks and **transshipment fraud**, that occurs when “consignments of ODS ostensibly destined for legitimate end markets are diverted onto black markets. This type of fraud often involves complex shipping routes, passing through transit ports and free-trade zones where customs procedures may be more relaxed”<sup>183</sup>. In some EU countries, therefore, unlawful trade in ODS is regarded as a crime and can be punished also with **imprisonment**<sup>184</sup>.

Almost ten years ago, the illegal trade in ODS had already been estimated as representing between 10 and 20% of legitimate trade, which is between 7.000 and 14.000 tonnes per year, for an approximate annual value between **25 million and 60 million USD**<sup>185</sup>. More recent studies have shown that this **trend is increasing**. For example the illegal trade in ODS from East Asia and Pacific countries now amounts to **67.7 million USD** per year<sup>186</sup>.

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<sup>180</sup> EIA (2014) *New Trends in ODS Smuggling*, cit., p. 5.

<sup>181</sup> European Commission (2007) *The Montreal Protocol*, available at [http://ec.europa.eu/clima/publications/docs/montreal\\_prot\\_en.pdf](http://ec.europa.eu/clima/publications/docs/montreal_prot_en.pdf) (last accessed April 29, 2015), pp. 10-11.

<sup>182</sup> OECD (2012) *Illegal Trade in Environmentally Sensitive Goods*, cit., p. 21.

<sup>183</sup> UNODC (2013) *Transnational Organized Crime in East Asia and the Pacific*, cit., p. 117.

<sup>184</sup> Huglo Lepage & Partners (2007) *Study on environmental crime in the 27 Member States*, available at [http://ec.europa.eu/environment/legal/crime/studies\\_en.htm](http://ec.europa.eu/environment/legal/crime/studies_en.htm) (last accessed April 29, 2015).

<sup>185</sup> Chatam House, EIA (2006) *ODS Tracking. Feasibility study on developing a system for monitoring the transboundary movement of controlled ozone-depleting substances between the Parties*. Report produced according to the terms of reference of Decision XVII/16, p. 5.

<sup>186</sup> UNODC (2013) *Transnational Organized Crime in East Asia and the Pacific*, cit., p. 119.

Once again, **customs in particular** play an important role in dismantling this international trade, as they are at the heart of the **trade control systems** set out in the Montreal Protocol. It is therefore “crucial that customs officers and other border control personnel have the necessary training and information to implement the licensing system, control legal ODS trade, and **prevent illegal ODS trade**”<sup>187</sup>. Various initiatives have been undertaken, such as the issuance of the “**Green Customs Guide to Multilateral Environmental Agreements**” and the “Training Manual for Customs Officers: Saving the Ozone Layer - Phasing out Ozone Depleting Substances in Developing Countries” by the UNEP.

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<sup>187</sup> United Nations Environment Programme (UNEP) (2008) *Training Customs Officers to Protect the Environment*, information note available at [http://www.unep.fr/ozonaction/information/mmcfiles/6252-e-InfoNote\\_CTM\\_ICD.pdf](http://www.unep.fr/ozonaction/information/mmcfiles/6252-e-InfoNote_CTM_ICD.pdf) (last accessed April 29, 2015).

## Pollution

Pollution is a common threat for the environment affecting **soil, water and air**. In the EU, **noise pollution** is also included in this context<sup>188</sup>, which is perceived as a growing problem causing, among others, sleep disturbance, one of the “health effects of noise to which more than 30% of EU population may be exposed”<sup>189</sup>.

Compared to other environmental crime areas, pollution has a “vague” field of application for a number of reasons. First of all, pollution is usually linked to, or a consequence of, other environmental crimes. There is no doubt that illegal trafficking in waste or illegal smuggling of ODS, among other adverse effects, contributes to the pollution of the environment. Therefore **overlaps** are quite obvious in such cases. Secondly, various forms of behaviour with different orders of magnitude can be summarised under the concept of “pollution”. It is obvious that throwing a cigarette on the ground can be considered as pollution as well as the illegal dumping of waste ‘committed’ by a factory. However, it is clear that concerns mainly apply to the latter, i.e. those that exceed a certain degree of gravity (such as fly-tipping), are regarded as a crime in the EU, even though **massive discrepancies among penalties in MS** have been pointed out<sup>190</sup>.

As far as soil contamination is concerned, the European Commission adopted the **Soil Thematic Strategy**<sup>191</sup> in 2006, which “tackles the full range of threats and creates a common framework to protect soil. Its objective is to halt and reverse the process of soil degradation, ensuring that EU soils stay healthy for future generations and remain capable of supporting the ecosystems on which our economic activities and our well-being depend”<sup>192</sup>.

For the time being, however, no piece of legislation has been adopted in the EU on this topic. Nevertheless, in most MS, **unlawful dumping of waste** is punished with **penal**

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<sup>188</sup> See the Environmental Noise Directive (2002/49/EC).

<sup>189</sup> <http://ec.europa.eu/environment/noise/home.htm> (last accessed April 29, 2015).

<sup>190</sup> See Huglo Lepage & Partners (2007), cit.

<sup>191</sup> The Strategy is composed of three documents: a Communication, a Proposal for a Directive and an Impact Assessment, which contains an “analysis of the economic, social and environmental impacts of the different options that were considered in the preparatory phase of the strategy and of the measures finally retained by the Commission” ([http://ec.europa.eu/environment/soil/three\\_en.htm](http://ec.europa.eu/environment/soil/three_en.htm), last accessed April 29, 2015).

<sup>192</sup> Joint Research Center (JRC) (2012) *The State of Soil in Europe*. A contribution of the JRC to the European Environment Agency’s Environment State and Outlook Report-SOER 2010, p. 49.

**sanctions**, if committed either by a natural or by a legal person<sup>193</sup>. In some countries the **unlawful significant deterioration of a protected habitat** is also considered as a crime<sup>194</sup>.

Protection of soil is vital for many reasons, also because soil “is the medium that enables us to **grow food and animals**, natural fibres, timber for fuel and construction, and it supports wildlife (...) provides the foundation on which we construct buildings, roads and other infrastructures (...) is a biological engine where dead plant and animal tissues, and other organic wastes are decomposed to provide **nutrients that sustain life** (...) is a **natural filter** that neutralises certain pollutants by transforming them or accumulating and absorbing their toxicity”<sup>195</sup>. Therefore, it is symbolically meaningful that 2015 has been declared the International Year of Soils by the 68<sup>th</sup> UN General Assembly. However, notwithstanding the European and international efforts in the field, soil degradation still represents a growing, threatening trend<sup>196</sup>.

Soil degradation can also contribute to the on-going process of irreversible **climate change**. In the EU the soil carbon stocks are around **75 billion tonnes of carbon** and it has been stated that “the most effective option to manage soil carbon in order to mitigate climate change is to **preserve existing stocks in soils**, and especially the large stocks in peat and other soils with a high content of organic matter”<sup>197</sup>.

Soil degradation contributes to **air pollution**, which most of the time occurs through the effects of CO<sub>2</sub> and similar emissions into the atmosphere. These substances are known to speed up the process of global warming. The consequences of air pollution are quite dramatic. It has been estimated that, across the world, around **7 million people have died** as a result of air pollution exposure in 2012<sup>198</sup>. The EU has adopted a variety of legal instruments with the aim of reducing dangerous emissions into the air<sup>199</sup>, whereas on an

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<sup>193</sup> Huglo Lepage & Partners (2007) *Study on environmental crime*, cit.

<sup>194</sup> *Ibid.*

<sup>195</sup> Joint Research Center (JRC) (2012) *The State of Soil in Europe*, cit., pp. 7-8.

<sup>196</sup> European Commission (2012) *Report to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the implementation of the Soil Thematic Strategy and ongoing activities*.

<sup>197</sup> Climate Change. Soil Carbon (CLIMSOIL) (2008) *Review of existing information on the interrelations between soil and climate change*, p. 13.

<sup>198</sup> <http://www.who.int/mediacentre/news/releases/2014/air-pollution/en/> (last accessed April 29, 2015).

<sup>199</sup> Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control; Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe, which has repealed four previous Directives.

international level the most important document has been represented by the **Kyoto Protocol**, signed in 1997, entering into force in 2005 and due to expire in 2020.

The increasing attention given to the problem of air pollution and the **growing awareness** of the seriousness of this issue are symbolically mirrored by an interesting case filed against the Netherlands in 2014 by the Urgenda Foundation. The foundation demanded that “the Dutch state shall drastically, and no later than 2020, **reduce CO2 emissions** coming from within the boundaries of the Netherlands, with the aim of preventing the risk of dangerous climate change, or least reducing this risk”<sup>200</sup>.

Finally, water pollution should be briefly considered. The previously mentioned Eurojust *Strategic Project on Environmental Crime* has also focused, apart from TES and illegal trafficking in waste, on **surface water pollution**, pointing out that in this area the infiltration of OCGs is not so common. The main reason for dumping waste or other materials in the sea is an economic one, in terms of **saving or reducing the costs of the procedure of waste disposal**. However, water pollution shares other features of TES and illegal trafficking in waste, for example the **complexity and ambiguity of legislation**, the **discrepancies** in the penalty systems of the EU MS and **insufficient coordination** among national authorities. Furthermore, **this crime is not easy to investigate**, as the source of the pollution (or rather the sources in many cases) is (or are) difficult to detect and the more time passes from the illegal behaviour the more difficult it becomes to trace it back. For this reason, “prosecutors often choose to prosecute alternative crimes than surface water pollution”<sup>201</sup>.

Already in 2000 the EU adopted the EU Water Framework Directive (2000/60) with the purpose of “establishing a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater” (Article 1). In addition, Regulation No 1406/2002 has established the **European Maritime Safety Agency (EMSA)**. EMSA has the task – among others – to ensure prevention of, and response to, marine pollution caused by oil and gas installations and pollution caused by ships. EMSA also maintains the **CleanSeaNet**, “a European satellite-based oil spill and vessel detection service [which] offers assistance to participating States for (...) identifying and tracing oil pollution on the sea

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<sup>200</sup> Summons in the Case *Urgenda Foundation v. Kingdom of the Netherlands* (2014), available at <http://www.wijwillenactie.nl/wp-content/uploads/2014/06/FINAL-DRAFT-Translation-Summons-in-case-Urgenda-v-Dutch-State-v.25.06.10.pdf> (last accessed April 29, 2015), p. 86.

<sup>201</sup> Eurojust (2014) *Report of the Strategic Project*, cit., p. 22.

surface; monitoring accidental pollution during emergencies; contributing to the identification of polluters”<sup>202</sup>.

**Ship-source pollution** has raised the attention and the concerns of the international community after some tragically well-known disasters, such as the shipwreck of the “Torrey Canyon” (1967), “Erika” (1999) and “Prestige” (2002). In 1973 the International Convention for the Prevention of Pollution from Ships (**MARPOL**) was adopted. This Convention, at a later stage absorbed by the 1978 Protocol<sup>203</sup>, “requires all States parties to cooperate in detecting ship violations and to monitor vessel discharges”<sup>204</sup>.

At EU level, this serious threat has been dealt with by the Directive 2005/35/EC (amended with the Directive 2009/123/EC), which imposes a duty on Member States to sanction with **criminal penalties** ship-source discharges of polluting substances. It can also be pointed out that, in the Proposal for a Regulation on Europol, issued by the European Commission in July 2013, the competence of this EU agency on environmental crime has been confirmed but it has been expressly specified that this concept includes ship source pollution<sup>205</sup>.

Pollution is a serious threat for human health and for the environment, with obvious consequences for social and economic systems, also in terms of unfair competition, declines in property prices and local businesses in areas massively polluted<sup>206</sup>. The costs to reduce the consequences of pollution are extremely high. In some countries, in order to avoid such a grievous burden on public finances, the legislation resorts to the “**polluter pays principle**”, which is today enshrined in Article 191, par. 2 TFEU. Notwithstanding its uncertain extension<sup>207</sup>, this principle in sum “requires the polluter to bear the expense of preventing, controlling, and cleaning up pollution. Its main goals are cost allocation and **cost**

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<sup>202</sup> <http://www.emsa.europa.eu/operations/cleanseanet.html> (last accessed April 29, 2015).

<sup>203</sup> Sometimes, the text resulting from the Convention and the Protocol is also referred to as “MARPOL 73/78”.

<sup>204</sup> Giovannini S, Melica L, Cukani E, Giannotta M, Zingoni M (2013) *Addressing Environmental Crimes and Marine Pollution in the EU*, p. 11.

<sup>205</sup> See Proposal for a Regulation of the European Parliament and of the Council on the European Union Agency for Law Enforcement Cooperation and Training (Europol) and repealing Decisions 2009/371/JHA and 2005/681/JHA, available at <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52013PC0173> (last accessed April 29, 2015).

<sup>206</sup> Watkins E (2015) *A case study on illegal localised pollution incidents in the EU*. A study compiled as part of the EFFACE project. London: IEEP, pp. 17-20.

<sup>207</sup> For an overview of the problematic definition of this principle see Cordato RE (2001) *The Polluter Pays Principle: A Proper Guide for Environmental Policy*.

**internalization**<sup>208</sup>. Whereas this is more a civil law principle, in most serious cases also criminal law can be used to play a role against pollution, as pointed out before. Ordinary LEAs can be empowered to deal with specific issues linked to pollution (as happened in Germany with river pollution), but the rules on the matter at stake vary from country to country.

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<sup>208</sup> Grossman MR (2007) *Agriculture and the Polluter Pays Principle*, in *Electronic Journal of Comparative Law*, vol. 11.3, <http://www.ejcl.org>, p. 1.

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