

# Unlawful prosecution in the case regarding the destruction of a forest ecosystem

## *Persecução ilegal em casos relacionados à destruição de um ecossistema florestal*

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**ABSTRACT:** The overall complexity of the subject matter and the required high level of expertise make environmental crime investigations quite a challenging task for law enforcement. The clandestine nature of environmental offences combined with the environmental law's intricacy is among the reasons behind prosecutorial failures. The authors analyze a criminal case regarding illegal deforestation, which eventually ended up in an acquittal. By retracing the steps that led to wrongful prosecution and accusations in this criminal case, the authors reflect on some legal and practical challenges concerning environmental crime investigations in Europe and in Poland, including the problem of timely detection of environmental infringements, the use of proper evidence-gathering procedures, as well as the issues related to the methodology of environmental damage assessment. In this regard, the

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authors analyze the provisions of the Environmental Compliance Assurance Guidance “Combating environmental crimes and related infringements” adopted by the EU Commission in 2021.

**KEYWORDS:** environmental crime; illegal deforestation; environmental damage; unlawful prosecution; crime scene examination; evidence gathering procedures.

**RESUMO:** *A complexidade geral do tema e o alto nível de especialização exigido tornam as investigações de crimes ambientais uma tarefa muito desafiadora para a aplicação da lei. A clandestinidade das infrações ambientais combinada com a complexidade da lei ambiental está entre as razões das falhas de persecução. Neste artigo, analisa-se um processo criminal sobre desmatamento ilegal, que acabou em absolvição. Ao reconstituir os passos que levaram a persecuções e acusações injustas neste caso criminal, os autores refletem sobre alguns desafios jurídicos e práticos relativos às investigações de crimes ambientais na Europa e na Polônia, incluindo o problema da detecção em tempo de infrações ambientais, o uso de procedimentos adequados de obtenção de provas, bem como as questões relacionadas à metodologia de avaliação de danos ambientais. Nesse sentido, os autores analisam as disposições da Orientação de Garantia de Conformidade Ambiental “Combating environmental crimes and related infringements” adotada pela Comissão da UE em 2021.*

**PALAVRAS-CHAVE:** *crime ambiental; desmatamento ilegal; dano ambiental; acusação injusta; corpo de delito; meios de obtenção de provas.*

## INTRODUCTION

Worldwide, forests are regarded as an irreplaceable source of considerable ecological and economic benefits, playing a pivotal role in maintaining a positive carbon balance and biodiversity<sup>3</sup>. Poland is among six European countries with the largest forested areas, alongside

<sup>3</sup> Studies showed that Poles are aware of the problem of deforestation and its far-reaching consequences (LATAWIEC, A. E.; PENNA-FIRME, R.; PENA, I.A.B. et al. Perception-Based Study on the Value of Nature to People and Land Sparing for Nature in Brazil and Poland. *Sustainability*, 12, p. 8860, 2020. On the issue of the perception of environmental crime seriousness see also: SHELLEY, T. O’C.; CHIRICOS, T. GERTZ, M. What about the environment?

Sweden, Finland, Spain, France and Germany. Polish forests overgrow 9.1 million hectares occupying 29.4% of its territory<sup>4</sup>. In European Union, the country also stands out for the number of protected forested areas, which include some unique forest complexes such as the Białowieża Forest designated in 1979 a UNESCO World Heritage Site, the Bory Krajeńskie area, Tuchola Forest and Carpathian Forest<sup>5</sup>. When speaking about the economic side, it should be noted that wood and wood products account for 9.3% of the value of Polish exports, positioning the wood sector as a key element of the Polish economy<sup>6</sup>.

Most of the Polish forests are owned by the state and managed by the State Forests National Forest Holding or State Forests in short. Administratively, State Forests have a multiple-tier structure. There are 430 forest districts in the country, which are divided into smaller forest units, as well as 17 regional directorates supervising the districts and coordinating their activities. State Forests entities conduct forest management based on the forest management plan - a legal document required by the Polish Forests Act of 1991. The plan specifies, among others, the conditions of commercial tree felling. Based on the general forest management plan, a local forest service unit issues a simplified forest management plan responding to the landowner's permission request. The representatives of the unit then monitor the fulfilment of the conditions set out in the plan issuing official reports in the case of violations. They might also terminate tree felling if necessary<sup>7</sup>.

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Assessing the perceived seriousness of environmental crime. *International Journal of Comparative and Applied Criminal Justice*, 35, 4, p. 307-325, 2011.

<sup>4</sup> POLISH FOREST SERVICE. *Polish forests*. Available at: <<https://www.lasy.gov.pl/en/our-forests/polish-forests>>. Access on: July 11, 2022

<sup>5</sup> SNARSKI, S. J. Supervision of the district governor over forest management in forests not owned by the state treasury in Poland. *Acta Sci. Pol. Administratio Locorum*, 21(2), p. 232, 2022.

<sup>6</sup> REFEROWSKA-CHODAK, E. The Organization of Nature Conservation in State-Owned Forests in Poland and Expectations of Polish Stakeholders. *Forests*, 11 (8), p. 796. 2020.

<sup>7</sup> See more: RACZKOWSKI, M., ZĘBEK, E. Forest management plan as a legal instrument for the protection of forest resources. In: ZĘBEK E., HEJBUDZKI M. *The Responsibility for the Environment in Terms of Normative Standards*, Olsztyn: University of Warmia and Mazury in Olsztyn, 2017. p. 265-287.

The analyzed case concerned the crime penalized under Article 187 of the Penal Code, i.e., the destruction or essential reduction of natural areas and objects, which provides that, “whoever destroys, considerably damages, or essentially reduces the natural values of a protected area or an object, causing considerable damage shall be subject to a fine, the penalty of restriction of liberty or the penalty of deprivation of liberty for up to 2 years”. In addition, courts are allowed to order a compensation payment of up to 100 thousand zloty – the equivalent of approximately 22 thousand euros, which should be transferred directly to the National Fund for Environmental Protection and Water Management and allotted to the purposes of environmental protection and environmental management.

The case was analyzed based on data from documentary records, the authors did not participate in the case in any form. The defendant was acquitted by a district court due to insufficient evidence of guilt. The court questioned the fact of the environmental crime being committed. The case provides a few insights into the typical challenges faced by the criminal investigators in such cases– the clandestine nature of the offence, delayed police response, the lack of direct victims, the dependence on forensic experts and their opinions in establishing constitutive elements of a crime. In our opinion, it can be safely assumed that, if the investigators used adequate methodology and reflected on foreseeable defence strategies, the final result of the case might have been different, i.e., favourable to the prosecution. We included some discussion on possible remedies to increase the efficiency of the prosecution in environmental crime cases, with the hope that the study would provide some useful insights and contribute to the advancement in this complex area of modern law enforcement<sup>8</sup>.

## 1. EUROPEAN LAW

Over the past twenty years, the protection of the natural environment has come to occupy a prominent space on the global agenda<sup>9</sup>

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<sup>8</sup> ALVES-MAZZOTTI, A.J. USOS E ABUSOS DOS ESTUDOS DE CASO. Usos e abusos dos estudos de caso. *Cadernos de Pesquisa*, 36, 129, p.637-651, 2006.

<sup>9</sup> As it was noticed by A. Spada Jimenez, “state powers do not take into account that what is at stake is the very survival of human beings, having shown

stimulating law-making activity on both international and UE levels. To achieve effective protection of the environment and facilitate assistance between the Member States, a dedicated Directive on the protection of the environment through criminal law was adopted by the European Parliament and the Council of Europe on 19 November 2008<sup>10</sup>. In the Preamble, European legislators expressed concerns about the rise in environmental offences and their effects extending beyond the borders of the states in which the offences were committed. They drew attention to the fact that such offences posed a threat to the environment calling for an appropriate response emphasizing that the existing systems of penalties were insufficient to achieve complete compliance with environmental protection laws. Such compliance is needed to be “strengthened by the availability of criminal penalties, which demonstrate a social disapproval of a qualitatively different nature compared to administrative penalties or a compensation mechanism under civil law” (the Preamble, vol. (3)). Member states were expected to transpose the provisions of the Directive introducing effective, dissuasive, and proportionate criminal penalties by December 2010<sup>11</sup>.

According to Article 3, unlawful conduct committed intentionally or with at least serious negligence should constitute a criminal offence if it causes or is likely to cause substantial damage to the quality of air, soil, water, animals or plants. There is also a list of environmental offences that Member States are expected to criminalise, which includes:

1. “the discharge, emission or introduction of a number of materials or ionising radiation into the air, soil or water, which causes or is likely to cause death or serious injury to

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them-selves to be incapable of protecting their natural resources, nor are they capable of looking beyond the economic consequences of their actions” (SPADA JIMENEZ, A. The need for effective climate justice to protect the environment. *Annal of Bioethics & Clinical Applications (ABCA)*, 4, 3, p. 2, 2021. <https://doi.org/10.23880/abca-16000200>).

<sup>10</sup> Official Journal of the European Union L 328/28, 6/12/2008.

<sup>11</sup> Directive 2008/99/EC was implemented by the law of 25 March 2011 on the amendment of the Penal Code and other legal acts (Journal of Laws, 94, 2011, position 549).

- any person or substantial damage to the quality of air, the quality of soil or the quality of water, or to animals or plants;
2. the collection, transport, recovery or disposal of waste, including the supervision of such operations and the after-care of disposal sites, and including action taken as a dealer or a broker (waste management), which causes or is likely to cause death or serious injury to any person or substantial damage to the quality of air, the quality of soil or the quality of water, or to animals or plants;
  3. the shipment of waste, where this activity falls within the scope of dedicated European legislation and is undertaken in a non-negligible quantity, whether executed in a single shipment or in several shipments which appear to be linked;
  4. the operation of a plant in which a dangerous activity is carried out or in which dangerous substances or preparations are stored or used and which, outside the plant, causes or is likely to cause death or serious injury to any person or substantial damage to the quality of air, the quality of soil or the quality of water, or to animals or plants;
  5. the production, processing, handling, use, holding, storage, transport, import, export or disposal of nuclear materials or other hazardous radioactive substances which causes or is likely to cause death or serious injury to any person or substantial damage to the quality of air, the quality of soil or the quality of water, or to animals or plants;
  6. the killing, destruction, possession or taking of specimens of protected wild fauna or flora species, except for cases where the conduct concerns a negligible quantity of such specimens and has a negligible impact on the conservation status of the species;
  7. trading in specimens of protected wild fauna or flora species or parts or derivatives thereof, except for cases where the conduct concerns a negligible quantity of such specimens and has a negligible impact on the conservation status of the species;

8. any conduct which causes the significant deterioration of habitats within a protected site;
9. the production, importation, exportation, placing on the market, or using ozone-depleting substances” (Article 3 of the Directive).

It is worth mentioning that later there were propositions to extend the list of criminal offences to as many environmental infringements as possible<sup>12</sup>.

The analysis of the implementation of the Directive by Member states highlighted a number of practical issues, one of which is the fact that the Directive does not specify key terms such as “substantial damage” or “non-negligible amount” leaving the definition to Member states. As a result, some states consider the financial value of the resulting environmental damage often calculated as the summation of financial benefits for the offenders, environmental remediation costs, and the value of the damaged natural assets. Legislators in other states, including Poland, focus on the ecological aspect of the infringements, their duration, as well as the irreversibility of the inflicted damage. Under the current wording of the Directive, such differences would be considered acceptable as long as member states are able to achieve the purposes of the Directive, despite the inevitable diversity in the interpretation of the elements of environmental crimes between them and the use of different investigative methodologies. However, judging by the reports of the European Commission, the overall effectiveness of the protection mechanisms adopted by Member states as a result of the transposition of Directive 2008/99/WE has not been as high as expected<sup>13</sup>. Decentralized national systems of environmental protection,

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<sup>12</sup> The proposition was put forward by the European Economic and Social Committee during a plenary session on 23 March 2022 (Available at: <<https://www.eesc.europa.eu/en/our-work/opinions-information-reports/opinions/improving-environmental-protection-through-criminal-law>>. Access on: July 11, 2022).

<sup>13</sup> The EU Environmental Implementation Review Package Communication: The EU Environmental Implementation Review: Common Challenges And How To Combine Efforts To Deliver Better Results Annex: Guidance To Member States: Suggested Actions On Better Environmental Implementation adopted on 02 March 2017. Available at: <[http://ec.europa.eu/environment/eir/index\\_en.htm](http://ec.europa.eu/environment/eir/index_en.htm)>. Access on: July 11, 2022; FAURE M., WEBER F. The

the lack of effective cooperation between environmental protection and law enforcement agencies, and the failure to apply proper investigation techniques are among the common shortcomings. Experts also noticed that the imposed criminal sanctions have a little deterrent effect. In the Member states with higher sanction levels, judges do not make full use of the available sanction range. In some criminal cases, prison sentences are handed down but suspended in practice or not fully served<sup>14</sup>.

## 2. POLISH LAW

In Polish criminal law, crimes against the environment are covered by Chapter XXII of the Penal Code adopted in 1997 r.<sup>15</sup> The list includes the destruction of plant or animal life of considerable dimensions (Article 181), water, air or ground pollution of considerable dimensions (Article 182), inappropriate storage, disposal or processing of harmful waste (Article 183), inappropriate storage of nuclear materials or other sources of ionizing radiation (art. 184), improper maintenance or use of the equipment protecting water, air or ground from pollution, improper

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Diversity of the EU Approach to Law Enforcement – Towards a Coherent Model Inspired by a Law and Economics Approach. *German Law Journal*, 18, p. 823–880, 2017; LUTTENBERGER A., LUTTENBERGER, L. R. Challenges in regulating environmental crimes. *7th International Maritime Science Conference*, April 20th-21st, Solin, Croatia, 2017. p. 213–220; PEREIRA, R. Towards Effective Implementation of the EU Environmental Crime Directive? The Case of Illegal Waste Management and Trafficking Offences. *Review of European Comparative & International Environmental Law*, 26, 2017, p. 147–162; ZĘBEK, E., SOLODOV D. Environmental Forensic Examinations in Poland, a Case Study. *Journal for European Environmental & Planning Law*, 18, p. 103-123, 2021; SPADA JIMENEZ, A. *Justicia climática y eficiencia procesal*, Aranzadi, Pamplona, 2021.

<sup>14</sup> European Commission, Brussels, 28.10.2020 SWD (2020), Evaluation of the Directive 2008/99/EC of the European Parliament and of the Council of 19 November 2008 on the protection of the environment through criminal law. Available at: <[https://ec.europa.eu/info/sites/default/files/environmental\\_crime\\_evaluation\\_report.pdf](https://ec.europa.eu/info/sites/default/files/environmental_crime_evaluation_report.pdf)>. Access on: July 11, 2022; SOLODOV, D., ZĘBEK, E. Environmental criminal enforcement in Poland and Russia: Meeting current challenges. *Utrecht Law Review*, 16 (1), p. 140-141, 2020.

<sup>15</sup> Law of 6 June 1997 – the Penal Code, the consolidated text (Journal of Laws, 2021, position 2345).

maintenance or use of the protection equipment (Article 186), destruction or essential reduction of the natural values of protected areas or other protected natural objects (Article 187), unlawful construction or extension of existing facilities threatening the environment (Article 188).

Most of these crimes are material ones, which means that the prosecution is required to establish the connection between the environmental damage and the defendant's activities. The environmental damage must also reach the threshold of significance. The significance of the damage as an evaluative hallmark has not been explicitly specified by law. As a result, law enforcement authorities have broad discretionary power considering this key element of a crime. In Polish case-law, the significance of the damage is judged on the basis of reparability and the scale, i.e. terms, which in turn might be subject to different interpretations.

Criminal investigators and prosecutors rely entirely on expert opinions in determining the size of the damage<sup>16</sup>. The problem is the lack of unified, standardized methodology considering environmental damage assessment. Thus, environmental forensic experts might apply different techniques and methods to examining similar objects and obtain variable results.

The assessment of the experts' opinions might be challenging for the investigators, prosecutors, and criminal judges due to the complexity of the subject matter and the required high level of specialization. Polish law does not provide for the assistance of forensics consultants in this regard and also limits the use of private forensic specialists. Unlike the so-called court-appointed forensic experts, the opinions of partisan experts are treated as the information about evidence (potential source of evidential information), not as self-sufficient and admissible evidence<sup>17</sup>.

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<sup>16</sup> Similar phenomenon could be observed in other countries, including Brazil (see more: GARRIDO, R.G., ARARIPE, I. Y. D. S., MENDES, M. C. Desencontros nas Perícias Ambientais. *Revista Magister de Direito ambiental e Urbanístico*. 100, p. 110-127, 2022).

<sup>17</sup> This limitations might generate potential disbalance in the prosecution-defence relationships hindering the so-called defence investigation. On the concept of defence investigations see more: SILVA, F. R. A. A investigação criminal direta pela defesa – instrumento de qualificação do debate probatório na relação processual penal. *Rev. Bras. de Direito Processual Penal*, 6, 1, p. 41-80, 2020.

Private (partisan) experts in the field of environmental forensics also face methodological challenges. In Poland, private forensic experts do not have direct access to case materials, crime scene documentation or collected material evidence. Their opinions are often based on the opinions (written reports) of the court-appointed forensic experts. The defence hires such an expert later in the case when the scene of the alleged criminal wrongdoing may change to some extent due to natural or anthropogenic environmental factors. Thus, it might limit the usefulness of a repeat on-site inspection, which results would probably be questioned in any case by the prosecution from formal perspective. Some of the above-mentioned issues correspond to the known reasons behind unlawful prosecutions and wrongful convictions, such as faulty, unreliable forensic evidence and the effects of the prosecutorial tunnel vision<sup>18</sup> and can be seen in the subject case.

### 3. CASE FACTS AND PROCEDURE

The defendant was accused of the destruction of a forest ecosystem, which included of mixed boron, wet boron, and typical oak-hornbeam forest<sup>19</sup>. The forest occupied an area of about 9 hectares and included tree species of varied ages.

The defendant, being the representative of the landowner, was responsible for the day-to-day forest management, harvesting and timber selling. Acting as such, he applied to the County Office for qualifying part of the forest as suitable for felling. The permission was granted, and a simplified forest management plan (SFMP) was issued. According to the SFMP, it was allowed to carry out tree thinning on an area of about 5 ha on one of the forest plots. On another plot, thinning of forest trees was authorized on an area of 1 ha. The defendant was then instructed by the representative of local forest service on proper felling procedures. The representative explained how to mark trees selected for felling. After

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<sup>18</sup> FINDLEY, K.A., SCOTT, M. S. Multiple Dimensions of Tunnel Vision in Criminal Cases, *Wisconsin Law Review*, 2, p. 292-294, 2006.

<sup>19</sup> Judgement of the District Court in Ciechanow of 23 December 2015, case number II K 813/13.

that, the defendant authorized one of his employees to directly monitor tree felling. Shortly after, the employee signed a contract with a private firm specializing in tree felling and selling timber. According to the contract, the firm was to cut down trees within a given area and purchase felled wood. In the contract, the contractor was explicitly instructed to follow the defendant's instructions and observe the conditions laid down by the SFMP.

Shortly after the firm started tree felling, a forest service representative made a control visit and discovered that tree thinning violated the conditions set out by the SFMP. The representative filed an official report demanding temporary halt of any activities within the area. Nonetheless, after a while, tree cutting was reassumed. A year later, the same representative issued a second report stating that tree cutting violated the conditions of the SFMP. Meanwhile, the defendant obtained from the head of the local commune additional permission allowing the landowner to cut down another 70 trees on one of the forested plots, which was granted. The permission contained a statement that trees on a given plot of land were partially broken, self-seeding, had numerous traces of fungus, and did not represent natural value. Overall, 9 ha of the forest were cut down by the firm acting on behalf of the defendant and landowner.

20 months after the start of the felling, the police initiated criminal proceedings based on the abovementioned reports. The investigators inspected the alleged crime scene collecting photographic evidence showing tree trunks and rotting pieces of wood left by the firm's employees. They interviewed workers engaged in tree felling, transport and selling of the wood. To assess the scale of possible environmental damage, an expert in the field of forest science was appointed. Based on crime scene documentation and other evidence, the expert came to the conclusion that the defendant's activities inflicted irreparable damage that affected local vegetation and a large number of animals. The defendant was charged with the crime under Article 187 §1 of the Polish Penal Code. It is worth mentioning that he did not plead guilty.

Three months later, the case was referred to a district court. The defence argued that the methodology applied by the expert was incorrect, non-scientific and resulted in wrong conclusions. First, the expert tried

to assess something that no longer existed. Trees in question had been cut down, processed and sold. In his opinion, the expert recreated the forest on both plots assuming without sufficient evidence that there used to be a mature forest ecosystem consisting of healthy tree species of at least 50 years old. Thus, cutting of these trees inflicted significant damage to the forest ecosystem. This conclusion, however, would have required convincing proof that there was a mature forest ecosystem, which the expert failed to provide. The defence argued that such damage could be assumed only if certain features might be assigned to the trees in question – certain age, normal condition, the lack of diseases. Second, the conclusions on the scale of the environmental damage were based solely on the estimated number of felled trees. The expert examined the remains of the trees, but only selectively. The defence pointed out that felling of the forest consisting of broken, diseased, dying, or dead tree species would have been rather desirable, as it was stated later in the additional permission. Third, in his opinion, the expert did not refer to the methods used to establish the age of the forest and its condition. The defence pointed out that under Article 187 §1 of the Polish Penal Code, it was not enough to state that a certain number of trees had been cut down. The mere statement that a relatively large number of trees had been cut down should not lead to automatic conclusions on the scale of the environmental damage.

The court, acting on its own initiative, inspected the site of the alleged crime, where, with the assistance of forest service officials, tried to estimate the density of the no-longer-existed forest. The inspection provided further evidence that the methods applied by the expert had been inadequate and misleading. It was found that the condition of the forest was recreated in a greatly simplified manner. The expert neglected to provide indications of the initial state of the forest. Instead of evaluating each tree and each trunk to identify tree species, their age, condition and health, he examined only a small, selected part of the forest extrapolating the obtained results to the rest of the forest. It was also noticed that according to the expert the size of the forested area in question was about 9 ha. However, in his written opinion the expert was unable to pinpoint the exact areas within forested plots, which combined occupied more than 32 ha of land. The expert failed to establish forestation density making it

impossible to and neglected to apply statistical methods. The fact that the defendant also obtained an additional permission from local authorities to cut down several dozen trees in the same area was recognized by the court as proof that the trees had no natural value. On top of that, one of the defence witnesses – a former forest service employee - testified that the forest in question had been planted in 1989 on post-agricultural and post-arable lands and consisted of young trees. This evidence, threw additional doubts on the expert's findings.

The defence also argued that it was not proved beyond reasonable doubt that the firm had not exceeded the limits and conditions of tree thinning specified by the defendant and his employee. There was no evidence that the defendant or his employee marked the trees that should be cut down. In this case, the defendant was not responsible for the actions of others as they had been carried on beyond his knowledge and without his tacit approval. According to the defence, the resulting environmental damage might have been inflicted at least to some extent by unauthorized activity on the part of the firm's employees. Another issue raised by the defence was whether third parties, who were not related to the defendant or the firm, cut down the trees and stole the wood. It was common knowledge that tree theft was quite common in this area. The defendant and his employees were not present in the forest daily. If it was true in this case, the actions of unidentified third parties would have contributed to the resulting environmental damage.

During the proceeding, the court appointed an expert in the field of forest management to establish the state of the forest in question. The expert stated that the age of the trees might have varied from 5 to 45 years. However, he was also unable to determine how many trees there had been and at what age. The expert testified that the stands were in good condition, which had been confirmed during the on-site inspection carried out by the court. He also testified on the approximate number and the value of the trees using forest management documentation from the mid-1990s. The defence, however, argued that between the time these documents had been issued and the time of the discussed events, a lot might have changed. It could be assumed that, there had been fewer trees as well as that young or sick specimen prevailed or constituted a significant percentage. It is worth noting that although the second expert

came to the same conclusions as the first one on the matter of the scale of the resulting environmental damage, the wording of his opinion was different from the wording of the indictment. This allowed the defence to further question the argumentation of the prosecution. The defence also argued that the second expert had not made an on-site inspection using instead the documentation provided by the court, which, as mentioned before, shown the state of randomly selected areas.

The prosecution's final argument was that the firm's financial documents showed how much wood had been sold by the firm. The court, nonetheless, agreed with the defence that it might have been problematic to establish how many trees the firm had cut down based on this documentation. It had carried out logging in several places, so at least some of the sold wood reflected in these documents might have come from other places.

After several months of trial, the court delivered an acquittal judgement stating that the argumentation of the defence had not been successfully challenged by the prosecution. The decision of the court was sustained in high-tier tribunals.

#### 4. CASE AND LAW ENFORCEMENT PRACTICE ANALYSIS

The described case shows that environmental crime investigation and prosecution require expertise in both environmental issues and criminal justice<sup>20</sup>. It is crucial for law enforcement to understand key elements of environmental infringements and know exactly how they might be detected and proved.

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<sup>20</sup> In 2022, the European Economic and Social Committee proposed to set up specialised police forces, which would deal with environmental crimes. It also proposed to extend the jurisdiction of the European Public Prosecutor's Office to environmental crimes creating the Green European Public Prosecutor's Office that would be able to support the fight against environmental crimes with known links to organised crime (Available at: <<https://www.eesc.europa.eu/en/our-work/opinions-information-reports/opinions/improving-environmental-protection-through-criminal-law>>. Access on: July 11, 2022). See also: WHITE, R. Environmental Crime, Ecological Expertise and Specialist Environment Courts. In: Gacek, J., Jochelson, R. (eds). *Green Criminology and the Law*. Palgrave Studies in Green Criminology. Palgrave Macmillan, Cham. 2022.

One of the main issues regarding environmental crime investigations is the question of early crime detection and timely application of appropriate evidence-gathering procedures. The clandestine nature of environmental infringements, the absence of human victims, who can report the crime might be the main reasons why it is not unusual in such cases to see long delays in police response<sup>21</sup>. As everything else around us, nature is in constant change. As forensic practitioners, we accustomed to see correlations between police response time and crime clearance rates. Regarding environmental crimes, the negative consequences of delayed police response are usually aggravated by seasonal and anthropogenic factors including ongoing illegal activity. One of the reasons why such delays in police response occur is the lack of effective cooperation and coordination between law enforcement and environmental protection agencies. In the described case, a few months passed after the first report had been issued regarding the violations of the SFMP and indicating possible environmental damage. By the time the police decided to initiate proceedings, some pieces of evidence had already been gone – the wood harvested from illegal logging had been transferred and sold, the remaining trunks and pieces of wood had been rotting for a few months making it impossible to establish the original state of the trees.

The identification of those responsible, the so-called association stage<sup>22</sup>, might also be an issue. It often happens in such cases that investigators violate the logical sequence of actions, which is from environmental violation to the perpetrator, from crime scene documentation to the culprits. Instead, the investigators concentrate on the identified suspect neglecting proper preservation of relevant evidence, as it was true in the abovementioned case. As a result, there were flaws in crime scene documentation, including the lack of precise measurements, partial photographic evidence. These errors combined

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<sup>21</sup> In Poland, there is a possibility to anonymously inform competent authorities about possible environmental violation. Unfortunately, there are no such effective mechanisms as Linha Verde adopted in Brazil in 2013 (see more: LINHA VERDE. *O Disque Denúncia do Meio Ambiente*. Available at: <<https://www.disquedenuncia.org.br/programas/Linha-Verde>>. Access on 11 July 2022).

<sup>22</sup> INMAN, K., RUDIN, N. The origin of evidence. *Forensic Science International*. 126, 1, p. 11, 2002.

with unjustified confidence in the first expert, whose findings happened to coincide with the investigators' main and only version of events, might be the reasons behind the final prosecutorial failure. Such a one-sided approach may be characterized as a direct consequence of the so-called tunnel vision effect, which prevents criminal investigators and, later in the case, prosecutors from recognizing and addressing gaps in evidence. It affects not only criminal investigators or prosecutors, but also criminal judges making them "focus on a particular conclusion and then filter all evidence in a case through the lens provided by that conclusion"<sup>23</sup>.

Another major issue to be discussed in connection with the abovementioned criminal case is the question of the standardization of the expert methodology regarding environmental damage assessment. In Poland, there have been a lack of binding guidelines on the establishment of the significance of the damage as one of the *indicia* of the crimes covered by Chapter XXII of the Polish Penal Code. According to case-law, Polish courts want to see the ecological rather than financial impact of environmental infringements, which brings out the questions of the reversibility of the damage and its overall effect on ecosystems. However, the complexity of natural environment makes the application of this concept quite challenging. The reversibility of environmental damage may depend on different internal and external factors including regeneration cycles. To some extent the resulting environmental damage might be reversible after several decades or even centuries, while some damage could be repaired within a reasonable time. There is also a question of the identification of the valued components of the ecosystem, which makes it difficult to avoid diverging interpretations<sup>24</sup>. In the abovementioned criminal case, the first forensic expert conducted an on-site inspection without clear understanding of relevant facts and appropriate evidence-collection techniques using academic rather forensically sound methodology. His findings regarding the scale of the damage were successfully questioned by the defence during

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<sup>23</sup> RAEDER, M. What Does Innocence Have to Do With It? A Commentary on Wrongful Convictions and Rationality. *Michigan State Law Review*, 4, p. 1327, 2003.

<sup>24</sup> See more: SOLODOV, D., ZĘBEK, E. Environmental forensic inquiries in investigating environmental crimes in Poland and Russia. *Environmental Forensics*, 22:3-4, p. 315- 324, 2020.

court proceedings. The on-site inspection made later by the court was also erroneous in this regard. The opinion of the second, court-appointed expert, who had based his conclusions on the documentation provided by the court, was characterized as being faulty and misleading in the judgement. In both opinions, the scale of the damage was determined based on the age of the trees without proper information on their number, species, age or natural value. It was possible, however, to apply conventional statistical methods to the field data to recreate the original or near-original state of the forest.

Considering possible remedies, it should be noted that in 2021, the EU Commission issued the Environmental Compliance Assurance Guidance entitled “Combating environmental crimes and related infringements”<sup>25</sup>. The document provides insights into the methodology of environmental crime investigations. Regrettably, the Guidance has not been translated into the Polish language and has not been implemented by national law enforcement and environmental protection agencies.

The document offers recommendations and good practices to help authorities to make the right choices and use available resources in the best way possible. In the Guidance, there are three crime scenarios – problematic waste facility, illegal killing of wild birds, and illegal trade in wildlife – each presented as a cluster of circumstances capturing typical challenges faced by law enforcement when addressing such violations. Considering other environmental infringements, the document offers a series of applicable recommendations divided into five blocks or, using original terminology, parameters, in particular: a) the nature of the infringed obligations; b) environmental, economic and social impacts of the infringement; c) duty-holder and perpetrator; d) type of conduct; e) explanations and motivations for infringements. Each block (parameter) is linked with a non-exhaustive list of issues, which need to be considered by criminal investigators. For example, the Guidance provides that in assessing the impact of the environmental violation, competent authorities should take into account the following issues a) whether there

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<sup>25</sup> EU Commission. Environmental Compliance Assurance. *Guidance Document “Combating environmental crimes and related infringements”*. Available at: <<https://op.europa.eu/o/opportal-service/download-handler?identifier=e004a9c9-596a-11ec-91ac-01aa75ed71a1&format=pdf&language=en&productionSystem=cellar&part=>>>. Access on: July 11, 2022).

is measurable environmental harm resulting from the infringement, b) if the infringement endangers, but does not harm the environment, c) whether it is possible to quantify the damage to the environment, d) if the infringement leads to profits for the perpetrator and e) whether it is possible to quantify them, f) if the amount of the illegal benefit was significant<sup>26</sup>. In the case described above, we could see some of these issues being pointed out by the defence and later addressed by the court in the judgement, not in favour of prosecution.

The Guidance highlights typical challenges presented by environmental infringements. These challenges are grouped into three stages:

- *discovery*, which covers the confirmation of whether infringements have occurred and the identification of those responsible,
- *assessment*, which involves weighing the seriousness of individual and linked infringements and identifying the liabilities of individual suspects, and
- *acting against individual suspects*, which involves the establishment the chain of command within the corporation, the roles of the individuals involved and the particular drivers, motives.

Regarding the discovery stage, the Guidance differentiates a few possible scenarios:

- *entirely illegal and clandestine activity* with illegal landfills and illegal deforestation given as typical examples,
- *apparently legal activity with clandestine illegality involved* referring to the situation when formal requirements appear to be observed, but cheating takes place through false representation and misreporting,
- *openly illegal activity being tolerated and left unaddressed*, and
- *one-off unreported incidents*<sup>27</sup>.

<sup>26</sup> EU COMMISSION. Environmental Compliance Assurance. *Guidance Document “Combating environmental crimes and related infringements”*, p. 10-11.

<sup>27</sup> *Ibidem*, p. 38-39.

Addressing initial evidence-gathering stage, the document emphasizes the need for technical expertise, which might arise in cases regarding environmental infringements. The task is to collect and preserve evidence, which is necessary to clarify the circumstances that point to the infringement<sup>28</sup>. Thus, during the examination of the possible crime scene, consideration should be given to the equipment and the experts. It is crucial to properly document the site using different types of forensic equipment including, if available, 3D scanners and UAVs. The investigators need to ensure the forensic analysis of each destroyed or damaged natural object. Due to the complex nature of environmental criminal infringements, the participation of the experts in the field of environmental protection and environmental forensics in the crime scene examination should be considered as well. Such assistance should be preferred over the presence of forest service employees, who usually lack proper training and expertise in criminal matters. In Poland, such experts could be found on the lists of court-appointed experts maintained by the chairmen of the circuit courts. It should be noted that under current Polish law the expert's previous participation in the proceedings, including crime scene examinations, is not considered to be an obstacle to being appointed later to conduct the expertise. There are no formal legal obstacles preventing future experts from the active participation in the processing of the alleged crime scene.

Finally, it is important to mention that in Polish law, crime scene examinations are not considered obligatory in every case. Criminal investigators are granted broad discretionary power in this regard, which might make sense in some situations. For example, in the case of tax-related or some other white-collar crime, there might be no crime scene in traditional sense. Instead, pieces of relevant evidence are scattered in different places. Thus, it is more practical to identify and work with different sources of evidential information. On the other hand, in cases like the one described above, crime scene examinations should be considered obligatory whereas most of the evidence could be found at the site of the violation and within surrounding area. Therefore, in such cases, crime scene examinations need to be considered as a central and irreplaceable source of evidential information.

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<sup>28</sup> Ibidem

## CONCLUSIONS

The analysis allows the following conclusions.

1. Illegal practices in exploitation of environmental resources tend to occur because corresponding legal rules are not properly enforced. Thus, effective prosecution is crucial for the prevention of environmental crimes.

2. The prosecutorial failure in the described case might only be partially blamed on the delayed police response or the effects of the so-called tunnel vision. It originated from the lack of proper understanding of the concept of environmental damage and its key elements, as well as how the one should identify and prove them in criminal proceedings.

3. Specialization and environmental education should be encouraged among law enforcement personnel dealing with environmental infringements and their consequences. The education might be done through training on the specificities of environmental damage and appropriate investigative techniques. Special attention should be paid to the initial stage of criminal proceedings, which might be, as practice shows, the most challenging and demanding part of the investigation. In this regard, the Environmental Compliance Assurance Guidance “Combating environmental crimes and related infringements” issued by the EU Commission in 2021 should be implemented as a source of best practices and used as a basis for the creation of effective investigative methodology.

4. During the examination of the alleged crime sites, special attention should be paid to crime scene documentation. It is advisable to use different forensic equipment, including 3D scanners and UAVs to fully document resulting changes. Crime scene examiners should devise and follow a precise plan of the examination with attention to relevant forensic recommendations and best practices.

5. During the examination of a possible crime scene, consideration should be given to the presence of forensic experts in the field of environmental protection and environmental forensics. The ongoing practice of inviting forest service employees instead may not ensure the required level of assistance considering evidence collection, evidence preservation and initial evaluation.

6. Crime scene examinations should be considered obligatory in the case of possible environmental crimes including criminal deforestation.

As of today, in Poland, crime scene examinations are not considered obligatory, which gives broad discretionary powers to the police. The failures in evidence collection and preservation might lead to the failures in establishing the fact of the crime being committed and the responsibility of particular individuals.

7. There has been a need to standardize the methodology of environmental damage assessment in Poland, including the cases of criminal deforestation. The lack of precise criteria in this regard leads to the situation, where different forensic experts are applying different methods and obtaining variable results while studying the same objects.

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