

# Legal measures to combat and prevent forest fires in the EU and Ukraine



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## Abstract

Forest fires are a widespread and dangerous natural phenomenon in EU Member States and Ukraine. Fires often occur due to people violating the rules of safe behaviour in the forest, and these fires are identified as environmental crimes. These environmental crimes often have severe consequences over large areas. The search for effective technical means of detecting and stopping forest fires, fire prevention methods, and creating effective rules and laws to combat forest fires are important issues for Member States and Ukraine. In this article, the author provides statistical data on the number of recorded fires, reviews the legal mechanism for combating forest fires in Member States and Ukraine, and reviews the means of forest fire monitoring and prevention. The author also provides statistical data on the number of administrative and criminal offences recorded in Ukraine and compares the severity of punishment for arson and forest fires with the criminal laws of Member States. The article presents conclusions based on the results of an analysis of the shortcomings of the national legal system for combating violations of forest fire safety rules and forest fire prevention, as well as recommendations for positive changes in the environmental laws of Ukraine and for solving problems related to forest fire prevention.

**Keywords:** criminal code, environmental legislation, fine, forest protection, forest fires, offence, wildfires.

## Introduction

Wildfires and forest fires can have a significant impact on people's mortality and morbidity. Smoke and wildfire ash can significantly affect those with pre-existing respiratory diseases or heart disease. Firefighters and emergency response workers are also significantly impacted by injuries, burns and smoke inhalation. Wildfires release significant amounts of mercury into the air, leading to impaired speech, hearing and walking, muscle weakness and vision problems among people of all ages.

The European Forest Fire Information System (EFFIS) <sup>(83)</sup> observed fires in 45 countries in 2022. These countries suffered 16 941 fires that burned 1 624 381 hectares (ha), about the size of Montenegro (due to methodological differences, the Ukraine totals are excluded). Records show a 4 % increase in burned area and a 48 % increase in the number of fires between 2021 and 2022. Excluding Ukraine, Spain was the most affected by wildfires, with 315 705 ha burned. Romania (162 518 ha), Portugal (112 063 ha), Bosnia and Herzegovina (76 473 ha) and France (74 654 ha) were also among the countries that were most affected <sup>(84)</sup>.



**Figure 7.1.** Natura 2000 protected sites were hit particularly hard.

Since the beginning of the Russian war of aggression against Ukraine, a significant increase in the number of fires has been recorded. Not the most extensive and evident among them is the spread of landscape fires caused by ammunition explosions in relatively dry weather. According to Serhii Zibtsev, Director of the Regional Eastern Europe Fire Monitoring Center, by autumn 2022 fires covered about 2.4 million ha, of which 330 000 ha were forested. In particular, thousands of hectares of forest burned in the national parks in the east of Ukraine: Kremin Forests and Holy Mountains, Biloberezhya Svyatoslav and Chornobyl Biosphere Reserve (Zhuravel, 2022).

For Member States and Ukraine, the main negative impacts of fires are the death of a vast number of individuals of various species of fauna and flora; atmospheric air pollution with sulfur compounds, nitrogen and unburned hydrocarbons; heavy metals accumulating in biomass; and emissions of large volumes of carbon dioxide (CO<sub>2</sub>).

The data show that forest fires are a severe problem for Member States and Ukraine. According to the World Health Organization, forest fires are often caused by human activity or natural phenomena such as lightning, and they can happen anytime, anywhere. In 50 % of recorded forest fires, it is not known how they started (WHO, 2019).

<sup>(83)</sup> <https://forest-fire.emergency.copernicus.eu>.

<sup>(84)</sup> [https://joint-research-centre.ec.europa.eu/jrc-news-and-updates/eu-2022-wildfire-season-was-second-worst-record-2023-05-02\\_en](https://joint-research-centre.ec.europa.eu/jrc-news-and-updates/eu-2022-wildfire-season-was-second-worst-record-2023-05-02_en).

According to the Confederation of Fire Protection Associations Europe, fires are often intentionally lit in places where people typically spend time: in homes, gardens, parks and on streets. Wildfires are often lit near populated areas or roads (CFPA Europe, 2022, p. 11).

Very often, careless handling of fire leads to significant losses. A clear example of the careless handling of fire occurred in south-west France in the summer of 2022. The Bordeaux public prosecutor said a man was taken into police custody in connection with a probe into a fire in the Landiras area, where 12 800 hectares were burned (Vidalon, 2022).

Reports about arson are often found in the press. For example, the Associated Press reported in March 2023 that there were 100 wildfires in northern Spain and that officials said arson was behind most of them (Associated Press, 2023).

According to information from the Ukrainian Nature Conservation Group, in the first four months of 2022, 43 % of fires (30 205 fires in total) occurred in other regions of Ukraine. According to several local cases of Russian missiles hitting oil depots, all these fires occurred in the area under the control of the Ukrainian authorities. In addition, during the war, Ukraine had the highest number of dry vegetation fires in Europe. Many natural territories were damaged, including areas covered by the Nature Reserve Fund (Tatana, 2022).

In the spring of 2022, 86 fires were extinguished in the forests of Ukraine, covering an area of 438 ha, which is 11 times higher than the number of fires and an area 7 times larger than recorded in the same period of 2021. The Head of the State Agency of Forest Resources of Ukraine, Yuri Bolokhovets, noted that among the reasons for this was people burning dry matter in fields and on their property, as well as Russian army shelling and sabotage<sup>(85)</sup>.

## Legal background (national and European regulations)

Forest protection in the Member States is regulated by internal administrative, land and forest legislation, taking into account the fact that the legal acts of the EU establish common standards in the field of environmental protection, which directly relate to the processes of forest use and protection. The EU has developed a unified environmental policy, which is the basis for harmonised pan-European legislation on protecting the natural environment and the rational use of natural resources. The range of EU legal acts regulating forest protection includes the forest Strategy<sup>86</sup> and accompanying multiannual implementation plan<sup>87</sup>, the bioeconomy strategy<sup>88</sup> and the strategy on adaptation to climate change<sup>89</sup>.

Most of the environmental legislation of the EU is in the form of directives addressed to the governments of the Member States. According to Article 249 of the EU Treaty, a directive 'shall be binding on each Member State to which it is addressed, regarding the result to be achieved, but leaves to the national authorities the choice of the form and implementation methods. The Member State is obliged to transpose the directive into national legislation. Some EU environmental legislation takes the form of a regulation, which, according to Article 249 of the

<sup>(85)</sup> Ukrainian Forest. [State Forest Resources Agency of Ukraine]. Facebook, 29 march 2022, <https://www.facebook.com/forestUKR/posts/305587291680646>.

<sup>(86)</sup> Forest strategy–European Commission [https://environment.ec.europa.eu/strategy/forest-strategy\\_en](https://environment.ec.europa.eu/strategy/forest-strategy_en).

<sup>(87)</sup> Multi-annual Implementation Plan of the new EU Forest Strategy <https://ec.europa.eu/transparency/regdoc/rep/10102/2015/EN/10102-2015-164-EN-F1-1.PDF>.

<sup>(88)</sup> Bioeconomy for Europe 2012 A sustainable bioeconomy for Europe–Publications Office of the EU.

<sup>(89)</sup> EUR-Lex–52021DC0082–EN–EUR-Lex <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2021:82:FIN>.

treaty, is legally binding and applicable to all Member States. Obligations may be imposed directly on any natural or legal person subject to the jurisdiction of a Member State. Lastly, some EU environmental standards, such as recommendations, reference notes and technical instructions, are set out in non-binding forms. Depending on the context and purpose, such documents are issued jointly by the European Commission, the Council and the European Parliament or by EU agencies <sup>(90)</sup>.

The author conducted an analysis of data on the types of punishment for arson set out in the environmental legislation of the EU. The results of the analysis show that committing arson is defined as a crime regulated mainly by criminal law. An analysis of the criminal legislation of the Member States shows that, among the 27 Member States, responsibility for arson or forest fires is established in only 13 countries: Bulgaria (Art. 330, Criminal Code of Bulgaria), Estonia (Sect. 352, Penal Code of Estonia), Cyprus (Art. 316, Criminal Code of Republic of Cyprus), Germany (Sect. 306, 306f, Criminal Code of Germany), Greece (Art. 265, Penal Code of Greece), Spain (Art. 351, Criminal Code of Spain), France (Art. 322-5–322-9, Criminal Code of France), Latvia (Sect. 107, Criminal Code of Latvia), Luxembourg (Art. 519, Penal Code of Luxembourg), Netherlands (Art. 157, Penal Code of Netherlands), Austria (Sect. 306, Criminal Code of Austria), Portugal (Art. 274, Criminal Code of Portugal), Finland (Sect. 22, Criminal Code of Finland).

The criminal laws of these countries provide severe punishments for committing arson or starting forest fires, often imprisonment for a term of between 1 and 10 years or a fine. In France, offenders are fined up to EUR 200 000.

In Ukraine, forest protection, following the example of the Member States, is governed by internal forest land, administrative and criminal laws. Forest protection laws are one area undergoing law reform and adaptation, to bring national laws in line with legislation of the EU. However, despite ongoing reforms, the national legislation of Ukraine has yet to meet the criteria for states that intend to join the EU. Since the signing of the association agreement between Ukraine and the EU in 2014, the harmonisation of national environmental laws with European standards has been very slow. According to a report of the Legislation Institute of the Verkhovna Rada of Ukraine (2021), the slow pace of harmonisation is due to national environmental problems that pose a high risk to natural ecosystems and the health of the population, finding a solution to which is a priority.

In Ukraine, offences that cause a forest fire are regulated by administrative and criminal laws. According to Article 77 of the Code of Ukraine on Administrative Offences, citizens can be fined from UAH 1 530 to 4 590 (EUR 39–115) and officials can be fined from UAH 4 590 to 15 300 (EUR 115–382) for violating fire safety requirements in forests. The fine for destruction of or damage to a forest due to careless handling of fire, as well as for the violation of fire safety requirements in forests that lead to the occurrence of a forest fire or its spread over a large area, is from UAH 4 590 to 15 300 (EUR 115–382) for citizens and UAH 10 710 – 30 600 (EUR 267–765) for officials. Criminal responsibility is also provided for the destruction of or damage by fire or other generally dangerous means to forests and green areas around settlements and along railways, as well as stubble, dry wild grasses, vegetation or its remains on agricultural lands (Article 245 of the Criminal Code of Ukraine). The committing of such an offence is punishable by a fine of UAH 91 800 to 153 000 (EUR 2 295–3 825) or imprisonment for a term of 2–5 years. If the offence results in the death of people, the mass death of animals or other serious consequences, it is punishable by imprisonment

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<sup>(90)</sup> Treaty establishing the European Community (Nice consolidated version) (OJ C 325, 24.12.2002, p. 132), <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex-%3A12002E249>.

for a term of 5–10 years. Under public pressure, in 2020 the Verkhovna Rada of Ukraine adopted Law 556-IX, which increased responsibility for forest fires by 10–15 times. Following Russia's unprovoked invasion of Ukraine, Decision No 0015525-22 of the National Security and Defence Council of Ukraine was enacted by Decree No 675/2022 of the President of Ukraine, dated 29 September 2022, and instructed the Cabinet of Ministers of Ukraine to develop draft laws regarding:

- the strengthening of administrative responsibility for failure to comply with legal orders or prescriptions of officials of bodies that exercise state control in the field of environmental protection;
- the revision of the size of the areas for forest planting and sanitary felling of the forest in the context of the application of environmental impact assessments <sup>(91)</sup>.

This decision was enacted based on an analysis of threats to the national security of Ukraine in the sphere of the protection, use and reproduction of the forests of Ukraine due to the inadequacies of the regulatory and legal framework, and insufficient financial and logistical support for the functioning of the forest industry during the Russian war of aggression against Ukraine.

## Data – experiences in investigations concerning this subtopic

Currently, the search for effective ways to investigate offences that cause forest fires and prevent them from being committed is essential for the EU and Ukraine. Countering forest fires is particularly important for Ukraine because of declining forest stock.

According to Article 89 of the Forest Code of Ukraine, the protection of forests in the territory of Ukraine is carried out by the state forest protection State Forest Guard of Ukraine and protection of other forest users. The State Forest Service has the status of a law enforcement body. However, it is not an independent state body or division, but only a list of forestry officials who are part of the staff of forestry enterprises, associations, forest seed inspections, regional forestry and hunting departments, and the State Forest Resources Agency of Ukraine.

Employees of the State Forest Guard of Ukraine protect forests from fires, illegal felling and pests and diseases, within the limits of current legislation. State forest protection workers' main tasks and powers are defined by Articles 90–92 of the Forest Code of Ukraine and the Regulation on State Forest Protection, approved by Resolution No 976 of the Cabinet of Ministers of Ukraine of 16 September 2009.

According to official data of the Head of the State Forest Resources Agency of Ukraine, 569 fires were extinguished in forests in 2021 (State Forest Resources Agency of Ukraine, n.d.). The cause of forest fires, in the majority of cases, was careless handling of fire by the population. In addition, in 2021 a total of 233 administrative protocols were drawn up for fire safety violators for a total of UAH 369 000 (around EUR 9 266) <sup>(92)</sup>.

<sup>(91)</sup> Decision of the Council of National Security and Defence of Ukraine of 22 September 2022 'On the protection, protection, use and reproduction of forests of Ukraine in a special period' (<https://zakon.rada.gov.ua/laws/show/n0015525-22?lang=en#Text>).

<sup>(92)</sup> See the official website, Minfin (<https://index.minfin.com.ua/ua/exchange/archive/ua/2023-05-15/>).

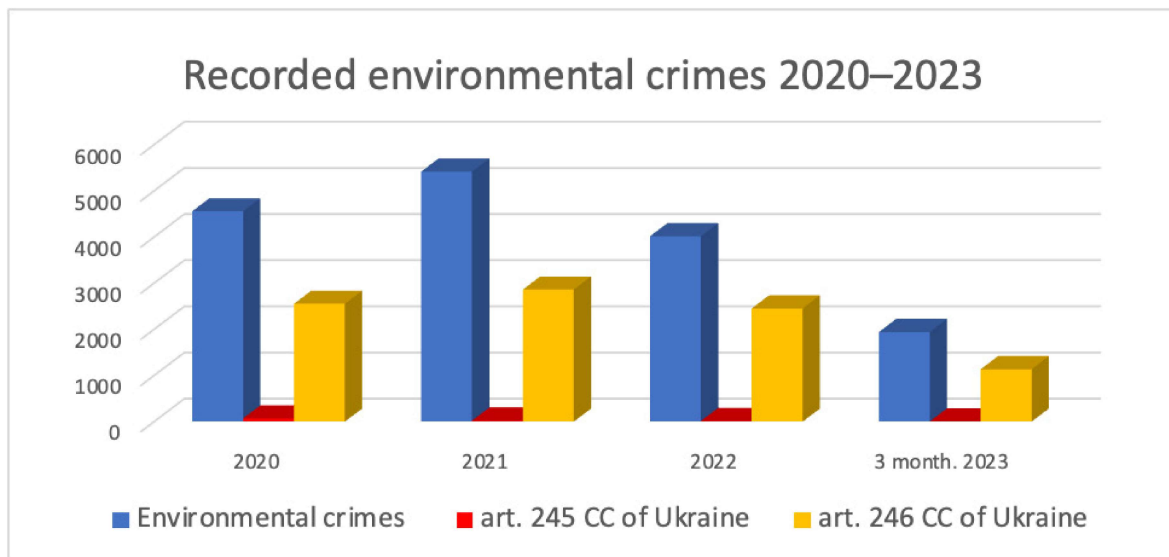
According to the Office of the General Prosecutor, in 2020, of the total number of environmental crimes recorded, more than 50 % involved the illegal felling or illegal transport, storage or sale of forest, under Article 246 of the Criminal Code of Ukraine (Office of the General Prosecutor, n.d.). The share of criminal offences related to the destruction of vegetation, including by setting fire to forest, did not exceed 1.6 % (Table 7.1).

Official reports indicate that, in 2021, 569 forest fires were recorded; officials of State Forest Protection of Ukraine drew up 233 administrative offence protocols for violations of fire safety requirements in forests (Article 77 of the Code of Ukraine on Administrative Offences); and 22 criminal offences were registered under Article 245 the Criminal Code of Ukraine. The data show that, for the vast majority of forest fires recorded, LEAs did not take legal response measures. Environmental crimes, such as illegal logging and forest fires, are widespread in Ukraine. The official environmental crime statistics for 2020–2023 show that more than 50 % of violations recorded were for illegal felling or the illegal transport, storage or sale of forest (Article 246 of the Criminal Code of Ukraine) (Table 7.1).

**Table 7.1.** Numbers of environmental crimes recorded in 2020–2023 (official data from the Office of the General Prosecutor).

Year	Environmental crimes	Crimes under Art. 245 of the Criminal Code (destruction or damage to vegetation, including wildfires)	Crimes under Art. 246 of the Criminal Code (illegal felling or illegal transport, storage or sale of forest)
2020	4 558	71 (1.6 %)	2 553 (56.0 %)
2021	5 416	22 (0.4 %)	2 862 (52.8 %)
2022	4 018	15 (0.4 %)	2 454 (61.1 %)
Three months of 2023	1 943	4 (0.2 %)	1 136 (58.5 %)

However, the number of offences recorded that led to forest fires is very low. Next, we will try to understand the reasons behind this by analysing the working methods of LEAs and existing obstacles.



Officials of State Forest Protection of Ukraine record fire safety violations in forests by conducting surprise inspections of forestry enterprises and other organisations and patrolling the service areas. In some cases, inspectors from State Forest Protection of Ukraine conduct inspections with the involvement of the National Police of Ukraine. According to official data from the Head of the State Agency of Forest Resources of Ukraine, in 2021, 26 600 checks were carried out regarding compliance with fire safety rules in forests, as a result of which a total of only 233 administrative offence protocols were drawn up (Office of the General Prosecutor, n.d.).

In the opinion of the author of the article, the low number of forest fires recorded (233) compared with the number of investigations (26 600) can be explained by several factors. Firstly, Ukraine's state forest protection authorities do not have the power to carry out operational investigative activities and conduct inquiries and pretrial investigations into environmental crime. Secondly, officials of State Forest Protection of Ukraine act as part of enterprises, institutions and organisations belonging to the sphere of management. Moreover, an official who is not a representative of the authority and acts on behalf of the state, being on the staff of economic enterprises of the State Forest Resources Agency of Ukraine, cannot be independent of this enterprise when performing their law enforcement functions. Thirdly, conducting a criminal investigation into forest arson is highly complex due to the difficulty in establishing the location and identity of the offender and collecting evidence at the scene of the crime. Fourthly, the officials of State Forest Protection of Ukraine lack sufficient experience in investigating criminal offences.

The prevention of forest fires is made difficult by inadequacies in criminal law. For example, forest fires that have resulted in the death of people or significant material damage are often classified as a violation of fire or artificial safety requirements established by law (Article 270 of the Criminal Code of Ukraine). Following a forest fire near the city of Sievierodonetsk in August 2020, in which people died and 90 ha of forest was destroyed, the investigative body of the national police initiated an investigation under part 2 of Article 270 the Criminal Code of Ukraine (LB. ua, 2020). In the opinion of the author, the practice of attributing forest fires to the category of criminal offences against public safety is wrong and therefore a change to criminal law is required.

The analysis of national methods for combating forest fires and for forest fire prevention, conducted by the author, shows that Ukraine uses traditional methods that involve outdated approaches to preventing and containing the spread of forest fires. Such methods include the patrolling of service areas; the technical arrangement of firebreaks, barriers and mineralised strips in forests; the placement of information boards with warnings in recreational areas; the organisation and conducting of comprehensive exercises on extinguishing forest fires; and the carrying out of inspections of forestry enterprises.

According to a European Commission report on forest fires in Europe in 2021, forest fires in Ukraine were mostly extinguished at the initial stage by the forces of the State Forest Guard of Ukraine (71 %), while the State Emergency Service of Ukraine was involved in 29 % of cases, which increased the cost of extinguishing them. Around 4 000 articles and adverts alerting the public to the danger of forest fires were distributed across the press, radio and TV, and social networks. In 2021, around 48 km of firebreaks and 53 000 km of fuel breaks was created, and 276 000 km of fuel breaks and firebreaks were restored (European Commission, 2022, p. 11).

Following the example of the EU, the state forest protection authorities of Ukraine and the State Forestry Agency of Ukraine are focused on implementing preventive measures. Ukraine also has the opportunity to use EU tools to monitor and prevent forest fires: EFFIS, the EU Civil Protection Mechanism and the forest information system of Europe. Recent advances in society have also had an impact on the development of the national forest fire prevention system. For example, the spread of digital technologies and internet use led to the introduction in 2021 by the State Forestry Resources Agency of the automated system 'Fires', which is used to collect and analyse data on forest fires (State Forest Resources Agency of Ukraine, 2023). Work on deciphering data from space surveys of the territory of Ukraine to determine the exact areas of forests and forest certification according to the international scheme of the Forest Stewardship Council is also ongoing. In the future, this will improve the ability to monitor and prevent forest fires.

## Conclusions

Forest fires have been an urgent problem for the EU and Ukraine over the past few years and have caused significant damage to society and the natural environment. In almost half of cases, forest fires occur due to violations of fire safety rules.

Currently, the criminal laws of most EU Member States contain provisions for strict liability for forest fires. Despite the difficult situation with forest fires and the government's initiatives to strengthen administrative and criminal liability for forest fires, the Criminal Code of Ukraine still does not contain a specific rule prohibiting forest fires. The State Forest Guard of Ukraine, an LEA, needs to be reformed and given the authority to investigate environmental crime. These facts are evidence of authorities' insufficient regard for the problem of forest fires.

Following the example of Member States, forest fire prevention in Ukraine is focused on implementing preventive measures. Ukraine also has the opportunity to use EU tools for forest fire monitoring and prevention: EFFIS, the forest information system of Europe and the EU Civil Protection Mechanism.

## Proposal for change

This article demonstrates severe shortcomings in the legal regulation of procedures for conducting forest arson investigations and preventing forest fires. The current state of affairs requires urgent intervention and the solving of urgent problems. The author has a few recommendations that may help to solve the current problems.

It is recommended that Ukraine's state forest protection guard be reorganised and given the authority to conduct investigative activities, inquiries and pretrial investigations into environmental crime.

It is proposed that a separate rule be added to Chapter VIII of the Criminal Code of Ukraine, 'Criminal violations against the environment', establishing responsibility for forest arson and forest fires due to carelessness.

The author also advises that measures are implemented to inform the public about the significant negative impact of forest fires on human health and the environment, and that valuable tips on fire safety in the forest are developed and shared.

The author proposes that representatives of local communities and nature protection organisations are involved in implementing forest fire prevention measures, and in collecting information about the causes of forest fires during pretrial investigations. For example, it would be appropriate to inform the public about the significant harm to health and the environment from burning dry grass and leaves in the spring.

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