Ukraine wildfires soar as war rages

Russia's full-scale war against Ukraine has led to an increase in forest and wildland fires across the country. Fighting them is all the more difficult in the midst of a war that has tied up all resources and left unexploded mines littering the territory. And the environmental consequences go far beyond the country.

Published on 20 September 2023

Marilen Martin - Osservatorio Balcani e Caucaso Transeuropa (Trento)

Emad Hajjaj | Cartoon Movement

Wildfires have increased in frequency and intensity over the past decades across Europe and will surge further with rising global temperatures. Ukraine is no exception: more and more wildfires have been recorded since the 2000s. However, the exorbitant rise in fires in the country since 2022 is not due to climate change – it is a consequence of Russia's large-scale invasion.
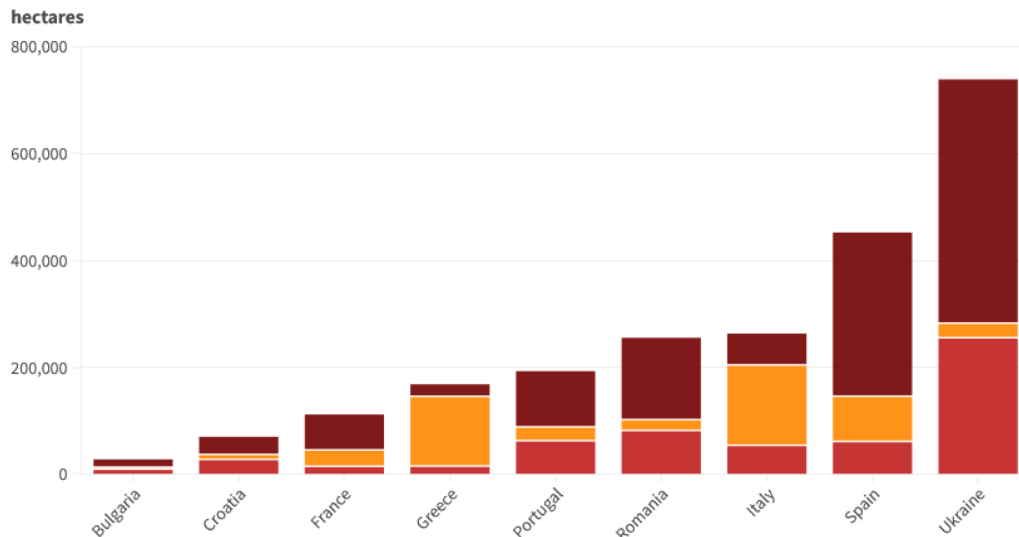
Ukraine one of the most burned countries in Europe

Even before Russia's war against Ukraine, the nation grappled with burning forests. "18.5 percent of Ukraine's territory is covered by forests, and nearly a third of these forests consist of highly flammable pine trees," says Johann Goldammer from the Global Fire Monitoring

Center (GFMC). Ukraine witnessed a greater area of land burned between 2020 and 2022 than all EU countries, mainly due to large fires in 2020 and the Russian invasion in 2022.

Most burned area in Ukraine

Overall area (in hectares) burned between 2020 and 2022 in the most burned EU countries and Ukraine

■ 2020 ■ 2021 ■ 2022

Source: Copernicus

The primary cause of fires in Ukraine has traditionally been the burning of agricultural residues, which is illegal but widespread. While people in many European countries have been abandoning the tradition of burning agricultural waste thanks to EU incentives promoting alternative disposal methods, the practice still persists in Ukraine. It remains particularly popular among small landowners who lack the financial means to adopt alternative approaches.

Over 70 percent of the country's land is dedicated to agriculture, hence, the spring and post-harvest periods in late summer serve as prime ignition points. Uncontrolled agricultural burnings often spread to nearby forests, resulting in widespread devastation. Therefore, the threat of wildfires in Ukraine tends to arise more from negligence rather than arson, as insufficient awareness of the environmental consequences of burning agricultural residues prevails.

Fire managing efforts

Ukraine's struggle to combat wildfires has long been exacerbated by insufficient training and outdated equipment, explains Sergiy Zibtsev, head of the Regional Eastern Europe Fire Monitoring Center . Another big problem remains that "agencies do not cooperate, so fires get out of hand," complains Zibtsev.
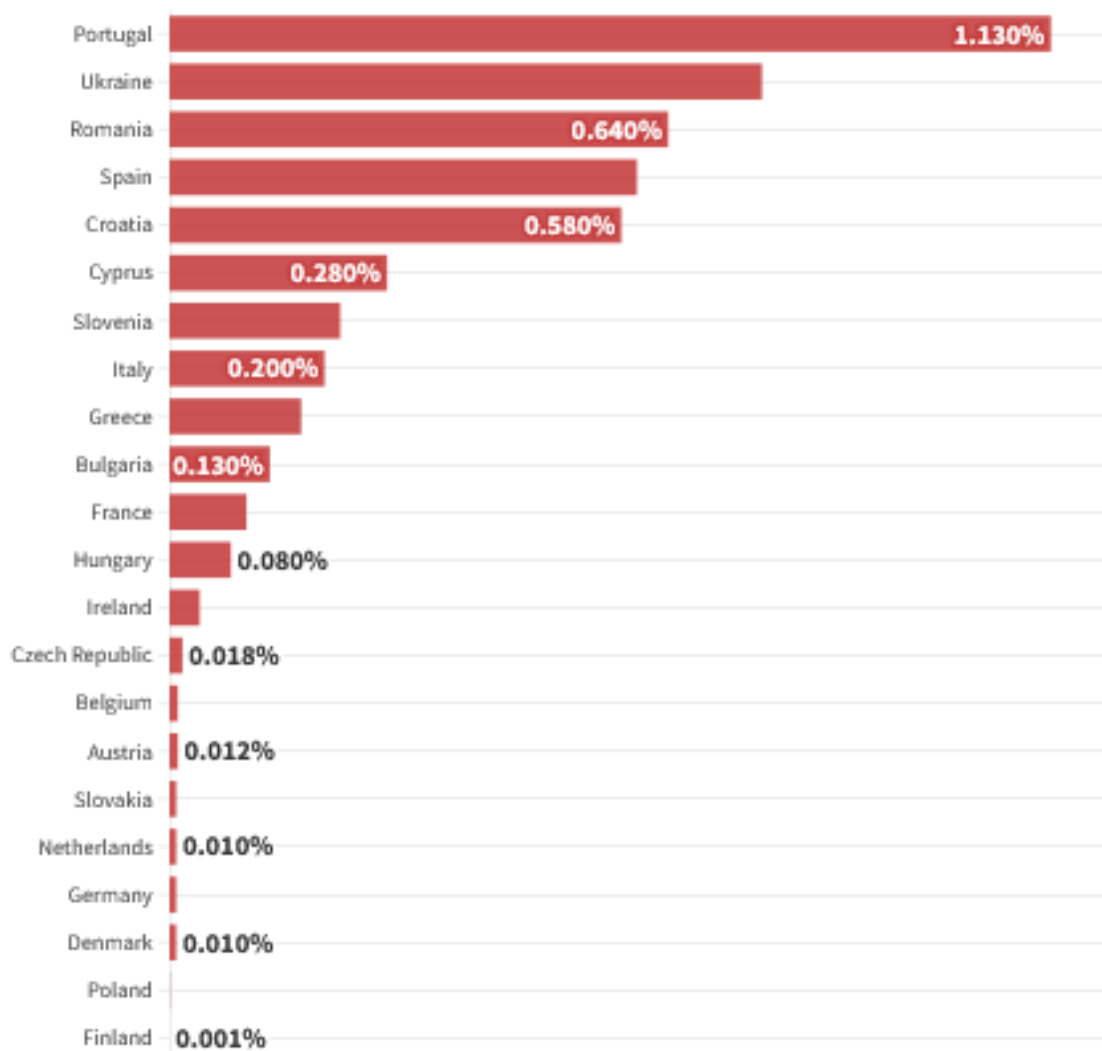
Acknowledging the severity of the situation, Ukrainian authorities have recently increased the penalty for violating forest fire regulations to 440 Euros. Furthermore, in a bid to address the mounting challenges, the Regional Eastern European Fire Monitoring Center was established in Kyiv in 2013, sponsored by the National University of Life and Environmental Sciences of

Ukraine, the Council of Europe and the GFMC. The organisation initiated crucial research into fire control and the collection of data about wildfires, but Ukraine still faces the need to improve its fire management practices.

The impact of the war

Now, amid an ongoing full-scale war that has wracked the nation, Ukraine grapples with the intensification of fires that multiply the risks faced by its people and territory. In 2022, Ukraine witnessed the largest amount of land area burned in its recent history, surpassing even the devastating fires of 2020. Even though, in relative terms, Portugal burned even more last year, Ukraine followed second and was by far the European country where most hectares burned in overall terms.

War makes Ukraine second most burned country in Europe
Area burned by forest and wildfires in the EU and Ukraine in 2022 as a percentage of the total area of each country.

Country	Percentage
Portugal	1.130%
Ukraine	
Romania	0.640%
Spain	
Croatia	0.580%
Cyprus	0.280%
Slovenia	
Italy	0.200%
Greece	
Bulgaria	0.130%
France	
Hungary	0.080%
Ireland	
Czech Republic	0.018%
Belgium	
Austria	0.012%
Slovakia	
Netherlands	0.010%
Germany	
Denmark	0.010%
Poland	
Finland	0.001%

Most of the forest fires occurred in the military combat zone. This is not a coincidence: according to Johann Goldammer, last year's spike in fires can be attributed primarily to
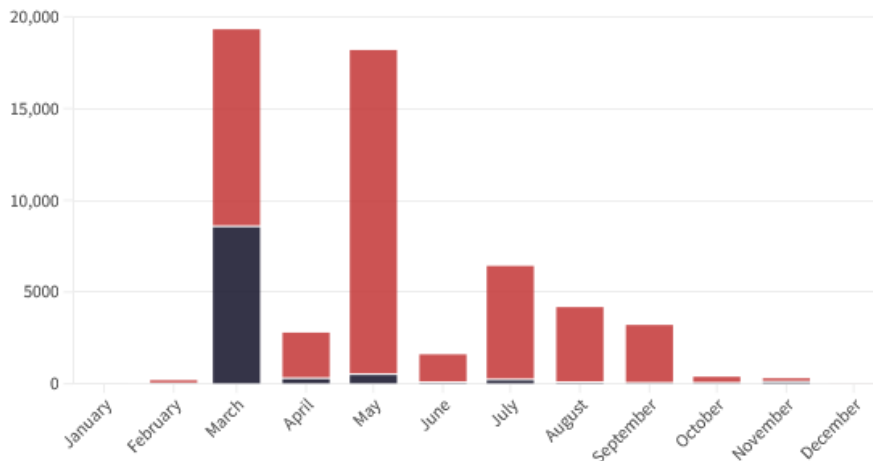
artillery and rocket launches, which unintentionally end up igniting forests and triggering wildfires, as well as rockets landing in forests.

Most forest fires in Ukraine are in the warzone

Forest fires in Ukraine in 2022, in the entire country and in the military combat zone, measured in hectares of burned land.

■ Forest Fires ■ Forest Fires within Military Combat Zone

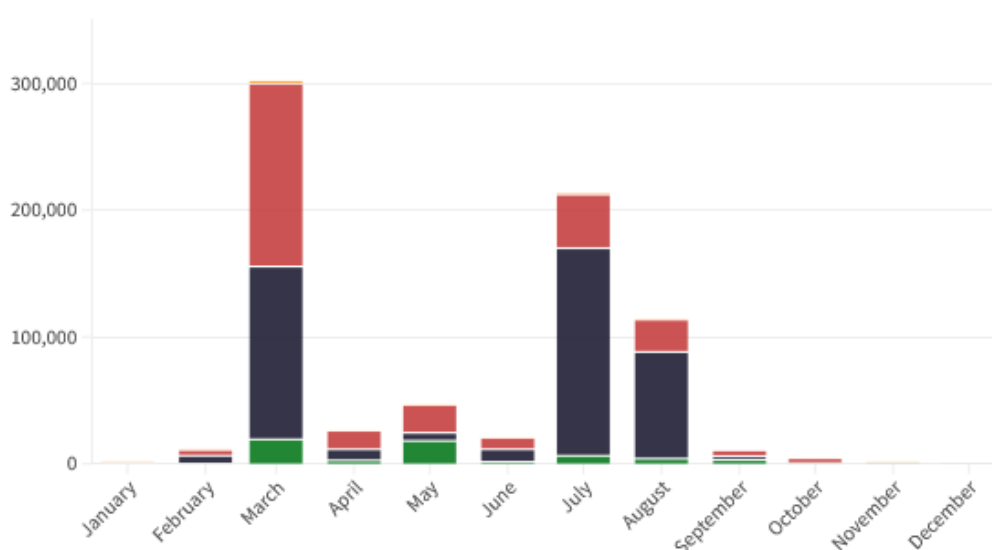

Source: Regional Eastern Europe Fire Monitoring Center

But it is not only forests that have been burning. The agricultural burnings which tend to take place in spring and post-harvest periods could also be observed in 2022 – but their scale was similarly exacerbated by the war.

Agricultural lands in Ukraine are the most affected by the war

Wildland and war-related fires in Ukraine in 2022, by type of area impacted.

■ Forests ■ Agricultural Lands ■ Other Natural Landscapes ■ Settlements

Source: Regional Eastern Europe Fire Monitoring Center

Decreased firefighting capacity

In addition to increasing fire risk, the war has made extinguishing fires more difficult. Crucial resources and personnel have been redirected towards military use. "Firefighters were among the first to be mobilised due to their knowledge of the territory," says Sergiy Zibtsev – and many qualified forest firefighters lost their lives.

More : [How timber smugglers are destroying Europe's last primeval forests. Part I: The Romanian Eldorado](#)

Furthermore, as the government's priority is to save work and lives, extinguishing fires in agricultural land and settlements takes precedence over forest preservation. This makes Ukraine even more vulnerable to large-scale wildfires. According to Goldammer, the country was relatively lucky in this respect last year: "Only due to fortunate weather conditions did the fires not escalate even further." says the professor. Large-scale fires are expected soon however.

A long-term challenge: explosive remnants of war

An additional and long-term challenge emerges from the remnants of conflict: mines and other unexploded ordnance. According to Goldammer, their presence presents a grave threat to future firefighting efforts, rendering the control and extinguishing of fires a dangerous endeavour.

Fire engines face a heightened risk of explosions as they navigate territories contaminated with explosive remnants. To address this danger, secure fire engines are needed, such as modified tanks or armoured vehicles capable of withstanding potential blasts; some donations of vehicles have started to arrive in Ukraine. In order to minimise the risks, the safe clearance of affected areas must also be ensured – a long and complex task.

> **Chernobyl's legacy**
> The aftermath of the Chernobyl disaster in 1986 has made it harder to manage fires in Ukraine. The area around the former power plant in the north of the country, known as the 'exclusion zone', still has high levels of radioactive particles. In fact, this happened in 2020 when a series of fires threatened Kyiv, which is nearby. It is important to prevent and manage fires in this part of the country, due to the extreme circumstances.

Impact beyond Ukraine's borders

Higher fire risk and lower firefighting capacity will concern Ukraine for the decades to come, threatening the health and lives of communities and hurting important economic assets for the country, such as its fields and forests, or protected natural areas.

Crucially, the consequences of wildfires do not stop at the borders of a country. Beyond air pollution and charred landscapes, wildfires release emissions that amplify global warming. In particular, "emanating smoke particles from wildfires in Ukraine, particularly black carbon, are transported North to the Arctic region where they alter the albedo, meaning the ice's reflective properties, thereby accelerating the ice melting process and exacerbating global warming," says Sergiy Zibtsev. Supporting Ukraine in combating fires is thus of interest for all countries.

[Original article](#) on *OBC Transeuropa*