

Introduction

Thousands of victims, two million refugees; gas, bread, potatoes, and other commodity prices skyrocketing: these are the direct human, moral, and material effects of the war in Ukraine. But being extremely injured in ways that are not directly recognizable is also the environment.

Biodiversity, rivers and land are the collateral victims of the invasion that Putin unleashed on Ukraine, even if indirectly, since the situation on the ground also stops necessary monitoring and prevention activities.

First issues already appeared in late February

There is a worrying situation in the mines, especially those abandoned in the East of Ukraine, such as the Yunkol coal mine, where the satellites detected severe ground expansion caused by the water infiltrations.

According to OCSE, mine destabilizations could release 500 meters of contaminated water into groundwater.

In addition to the aforementioned consequences, the war between Russia and Ukraine has clearly had an influence in the agriculture. 'Russia and Ukraine account for over 30% of the world wheat and barley market, 17% of the maize market, and over 50% of the sunflower oil market,' according to an MEP paper. Seaports and commercial routes on Black Sea have also been blocked, stopping Ukrainian exports and creating problems for spring planting.

Without them, the soaring food prices and basic food shortages might set off a wave of instability that the world has not experienced since the Arab Spring of 2012. Wheat exports from both countries were effectively halted by the war. And since the two nations (along with Belarus, which is a Russian ally and therefore also subject to sanctions) are major fertilizers suppliers, Vladimir Putin's invasion of Ukraine could have consequences for the worldwide agricultural sector, this year and in the near future.

The Donbass and the destroyed ecosystems

Donbass has 222 coal mines, making it an economical strategic place; the UN estimates that, as a result of the conflict, over 530,000 hectares of ecosystems have been devastated and that 18 natural reserves have been wiped.

There have been conflicts in the region since 2014, caused by Russia's takeover of Crimea.

Nuclear threat: a second Chernobyl?

The nuclear threat is doubtlessly another very worrying factor for the world: Chernobyl and Zaperizhzhia are the most important nuclear power reactors in Europe, with the latter being the largest and most powerful, while Chernobyl is back in Ukrainian hands after having been taken by the Russians. A possible radiation leak, according to the United Nations, might pose a global threat. The International Atomic Energy Agency (IAEA) has even stated that the two power stations no longer send data.

Buildings and their destruction

As if that weren't enough, building explosions and collapses produce a considerable amount of fine particles, which pollutes the air: yet another environmental and health factor to consider, **even if it now seems a secondary problem**. According to the World Organization's guidelines, Ukraine is one of the most polluted countries in Europe.

The military vehicles

Military vehicles are also relevant, as a reconnaissance vehicle, such as the Humvee, consumes 40 litres of diesel every 100 kilometres and emits 260 kg of CO₂ per mission.

The Abrams M1 tank, for instance, burns 450 litres per 100 kilometres and emits more than 1100 kg of CO₂. The F-35 fighter jet uses 400 litres of fuel per 100 kilometres and emits 27800 kg of CO₂.

Consider the 1991 'Desert Storm' fight, in which the US-UK alliance burned 45 million litres of gasoline per day, emitting 112.4 million kg of CO₂, and causing more emissions in one month than a city does in a year.

According to some studies, armies are responsible for 5% of world emissions.

Indeed, human habits **have always been polluting**: keeping in mind what is happening today in Ukraine, one should remember that a civilian jet consumes the same amount of fuel as a military fighter jet; so one should not be hypocritical, just as one should not forget the habits that humans have had for 100 years and have never changed.

Conclusions

To date, it's been impossible to describe the enormity of what's going on in Ukraine, as well as the conflict's environmental and health effects.

What we already know is that the costs of ecological destruction caused by the ongoing war are enormous and beyond limits.

Everyone hopes that the dispute will be resolved as quickly as possible, and that there will be a motivation to work together to the greatest possible extent to limit the collateral (and non collateral) damage of an unnecessary war.