The War in Ukraine: Crimes against the Environment (part 1)

During the three months of the war, 245 eco-crimes committed by the Russian army in the territory of Ukraine, the Black Sea, and the Sea of Azov were documented. Rocket attacks caused large-scale fires in critical infrastructure, especially oil depots and chemical plants. This led to significant damage to ecosystems and pollutes the environment, reducing the populations of many plant and animal species. The Ukrainian government records Russian army's crimes against the natural environment and will use every opportunity to bring Russia to justice, specifically through the mechanisms of the 1969 Vienna Convention on the Law of Treaties.

International protection. According to Protocol Additional to the Geneva Conventions of August 12, 1949 for the Protection of Victims of International Armed Conflicts (Protocol I), adopted on June 8, 1977, warring states are required to protect the natural environment against "widespread, long-term and severe damage". They are also prohibited from employing methods or means of warfare which are intended or may be expected to cause such damage and thereby to prejudice the health or survival of the population. A similar position can also be found in the Rio Declaration on Environment and Development of 1992, which contains the basic principles of environmental law. Principle 24 of this Declaration states that warfare inevitably has a destructive effect on the process of sustainable development. That is why states should respect international law that protects the environment in times of armed conflicts and should cooperate in its further development, as necessary. The three months of the war has shown that Russia does not intend to adhere to the requirements of international conventions defining the rules of warfare which allow to protect the environment.

Documentation and types of environmental crimes. The state authorities of Ukraine and public organizations dealing with environmental protection quickly mobilized and began work on registering environmental crimes and preparing lawsuits and appeals to international institutions. A large number of applications are being created to help both specialists and ordinary citizens in registering and collecting information about the damage caused to the environment by Russia. The Ministry of Environmental Protection and Natural Resources of Ukraine documents and publishes this information on an ongoing basis.

Since the beginning of the large-scale Russian invasion, 245 crimes by the Russian military against the environment have been recorded in Ukraine and in the Black Sea. According to preliminary estimates, losses already amount to UAH 201 billion, i.e. approx. USD 6.8 billion. The largest number of cases of ecocide was documented in Kyiv (34), Donetsk (28), and Dnipropetrovsk and Luhansk regions (22 each). In total, over 1,500 facts of negative impact on the environment have been recorded on the territory as a result of the hostilities (missile explosions – especially those containing phosphorus, forest burning, chemical pollution, etc.).

According to monitoring by the Ministry of Environmental Protection and Natural Resources of Ukraine, the following environmental crimes have been reported so far:

- damage to nuclear facilities and the potential threat of radiation and nuclear danger;
- destruction and damage to infrastructure and industrial facilities, which led to significant pollution;
- the emergence of so-called "military waste" and chemical pollution as a result of hostilities;
- destruction of reserves and other explicitly protected areas;
- mining and pollution of waterways.

At the same time, martial law does not release Ukraine from its obligation to comply with environmental requirements under international law.
Damage to nuclear facilities. On the first day of the invasion, February 24, 2022, the Russian military seized the Chornobyl Nuclear Power Plant and other nuclear facilities in the Chernobyl Exclusion Zone. The passage of heavy military vehicles through the contaminated area led to the rise of radioactive dust from the soil. At the same time, plant workers have been held hostage for more than three weeks. Some of them were able to leave by March 20.

The Spent Nuclear Fuel Storage Facility (SNFSF), which stores over 22 thousand spent fuel assemblies from reactors, is another dangerous object in the Chornobyl zone. On March 9, Russian forces damaged the power supply of a nuclear power plant and the SNFSF. The prolonged power cut-off could consequently lead to overheating of items under storage and evaporation of radioactive substances that could contaminate Ukraine, Russia, Belarus, and other European countries. Four days later, Ukraine managed to reconnect electricity and stabilize the situation.

However, Russia's disrespectful attitude to potential threats posed by radiation ultimately led to the radiation exposure of the Russian military, which entered the exclusion zone without adhering to the rules of radioactive safety. In addition, they carried out numerous fortification works in the Red Forest, i.e. in the most contaminated part of the exclusion zone, which led to the release of strong radioactive dust and increased radiation background. On March 31, 2022, Russian forces left the exclusion zone and withdrew towards the border of Ukraine and Belarus. According to preliminary estimates, losses caused by the occupation of this area have already exceeded UAH 2.5 billion (around USD 84.6 million).

An even greater threat is posed by Russia's seizure of the largest plant operating in Europe and the ninth most powerful in the world, the Zaporizhzhia Nuclear Power Plant (ZNPP). The plant consists of six 1,000 MW generating units. The invasion of the power plant began on March 4 with the shelling of the first power unit and administration building by Russian tanks. As it turned out later, critical security systems were not breached and no radiation was emitted. Russia has in fact transformed the power plant into a military base in which, in addition to the Russian military, members of the Russian state-owned nuclear energy corporation "Rosatom" have been illegally staying. Russian soldiers repeatedly blew up ammunition in the station square and near nuclear reactors, which could have disastrous consequences for the population living nearby. Currently, all ZNPP power units are operated by Ukrainian personnel and generate electricity for the needs of Ukraine.

The target of the Russian forces was also the South Ukrainian Nuclear Power Plant near Mykolaiv, towards which on April 16, 2022, three missiles were launched, probably from the territory of Belarus. In experts' opinion, the threat of hitting a nuclear reactor was then high. Ukraine constantly keeps the International Atomic Energy Agency (IAEA) informed about the situation at nuclear facilities, including the Zaporizhzhia NPP. However, despite numerous requests and appeals by Ukrainian officials for assistance in the withdrawal of Russian troops from the plant and the establishment of demilitarized zones around Ukrainian nuclear power plants, the IAEA has not taken any decisive steps to ensure the safety of Ukrainian nuclear facilities.

Destruction and damage to infrastructure and industrial facilities. Rocket attacks cause large-scale fires at critical infrastructure, especially oil depots, storage terminals, and chemical plants. Currently, the State Register of Potentially Dangerous Objects of Ukraine contains detailed information on over 23,000 facilities, including 2,987 warehouses that store highly toxic pesticides. The largest number of them are in the Donetsk, Dnipropetrovsk, Zaporizhzhia, Kharkiv, and Lviv regions. Some of these facilities are located in the combat zone.

The value of damage to the infrastructure of Ukraine during the war has already reached USD 97.4 billion, while the entire destruction and damage to enterprises amounted to USD 10.6 billion. In total, at least 216 plants, factories, and enterprises have suffered since the beginning of the war. All this destruction causes essential damage to ecosystems and leads to significant environmental pollution – poisoning the air, land, rivers, ground and surface waters, the Black Sea and Azov Sea waters, reducing the population of many plant and animal species.

Pollution directly caused by hostilities. Since the beginning of the full-scale invasion, Russian forces have launched more than 2,100 rockets at Ukraine, 633 of which have probably been launched from Belarus. During this period, Ukrainian forces destroyed over 4,700 units of Russian military equipment of various types, including several ships. In addition, dozens of tanks and other heavy equipment have become trapped in swamps near natural
water bodies and in wetlands. According to estimates, 10-25% of all Russian military equipment has been slowed down or blocked by water reservoirs.

The State Emergency Service of Ukraine reported that in the period from February 24 to May 18, 2022 110,593 explosive devices, including 1,975 aerial bombs and around 600 kg of explosives, were neutralized in Ukraine. An area of 21,700 hectares was examined. Destroyed military equipment and ammunition, as well as detonated rockets and aerial bombs, constitute toxic and carcinogenic waste that contaminates the atmosphere, soil, and groundwater of Ukraine with chemicals, including heavy metals.