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THE PROBLEM OF ECOCIDE THROUGH THE LENS OF THE RUSSIAN INVASION OF UKRAINE: LEGAL DIMENSION

Policy brief



The problem of ecocide through the lens of the Russian invasion of Ukraine: legal dimension

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Executive summary

The problem of ecocide in the conditions of war. Russia's full-scale invasion has had a devastating impact on Ukraine's environment, including destruction of biodiversity, soil, water and air pollution, and loss of unique ecosystems. The scale of the damage indicates the need to qualify these actions as ecocide.

International challenges. Despite the long debate and various initiatives, recognition of ecocide as an international crime is still in question. The Rome Statute of the International Criminal Court envisages responsibility for environmental damage in wartime, but the difficulty of its application is related to high criteria for proving environmental damage and vagueness of certain legal definitions, which makes it difficult to punish the guilty at the international level.

Weaknesses of the national legislation. Article 441 of the Criminal Code of Ukraine "Ecocide" needs to be reformed, as its wording is too general and does not make it possible to clearly qualify this crime. The lack of clear criteria for such terms as "mass destruction" or "environmental disaster" leads to legal uncertainty and limits the possibilities of effective investigation and justice.



Intermediate conclusions and proposals:

At the international level the following steps are recommended: recognize ecocide as a separate crime in the Rome Statute of the ICC to prosecute for deliberate destruction of ecosystems, establish clear criteria for ecocide qualification, amend Additional Protocol I to the Geneva Conventions highlighting the environment as an object of protection and specifying the requirements for its preservation, clarify Article 8(iv)(b) of the Rome Statute by

removing the ambiguous part about military superiority, develop an effective mechanism of responsibility for violations of international humanitarian law.

At the national level the following steps are recommended:

Within the block of reforms No. 1: Improve Art. 441 of the Criminal Code of Ukraine defining ecocide as a crime that covers damage to flora and fauna, water resources and the atmosphere, defining the evaluative terms contained in it, establish this crime as exclusively intentional that can be committed both by actions and inaction. Distinguish ecocide from war crimes and incorporate ecocide into the system of criminal offenses against the environment. It is worth harmonizing the terminology in Art. 441 of the Criminal Code of Ukraine and other environmental laws, to develop methodological recommendations for documenting and investigating environmental criminal offenses, including ecocide.

Within the framework of the block of reforms No. 2: Establish a new, nature-centric composition of the crime "Ecocide", enshrine in the legislation a clear concept of "biotope" and the criteria for an act that can be considered ecocide. Increase the efficiency of state environmental control and the system of investigative bodies.



Introduction. As a result of the hostilities, the environment of Ukraine has suffered numerous impacts - at least 330 thousand hectares of forest resources have been damaged by fires, explosions and passing of heavy equipment, chemical pollution of air, soil and water, destruction of biodiversity, pollution with demolition waste and military waste. 30% of the country's territory is polluted with explosives, it is not possible to manage natural

territories, about 800 territories of the Nature Reserve Fund and 160 sites of the Emerald Network are occupied. The ecosystem of the Kakhovka reservoir was completely destroyed and the aquatic biota of the Black Sea was damaged. The most serious and destructive illegal impacts on ecosystems should be qualified as ecocide. However, the aggression of the Russian Federation once again demonstrated the problems of legal regulation of qualifying an act as an ecocide and investigating ecocide both at the national level in Ukraine and at the international level. The war has a catastrophic effect on the climate and without stopping the war it is impossible to talk about any progress in combatting climate change. Climate agreements should contain a reference to the impact of war on the climate and provisions on the validity of these agreements during wartime. It is important to strengthen accountability mechanisms for ecocide, particularly through enforcement mechanisms within these agreements.



Problems of prosecution for the most serious and destructive illegal impacts on ecosystems in international law

1. Ecocide is not defined as an international crime, which complicates punishment for significant damage to the environment. There is no legal regulation of the concept of "ecocide" in international instruments.
2. The Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (1976) prohibits mainly large-scale "geophysical" methods (hurricanes, tsunamis) of warfare, paying insufficient attention to those effects on the environment that are often used in the course of hostilities.
3. The inconsistency of experts' positions regarding the definition of ecocide as an act that can be committed: 1) both in the course of hostilities and in "civilian life", 2) exclusively as a criminal act unrelated to hostilities.

4. The Rome Statute of the International Criminal Court: 1) provides responsibility for environmental damage as an element of a war crime but it is difficult to apply due to different approaches to environmental protection as an object of law, 2) Article 8(2)(b)(iv) requires simultaneous presence of "widespread, long-term and severe" damage to the environment, however, the terms do not have clear definitions, which complicates their application and damage assessment, 3) the principle of proportionality, which provides for correlation between military advantage and the damage caused, remains not entirely clear in terms of environmental destruction. Without uniform standards for proving that harm is "manifestly disproportionate," punishing guilty parties remains difficult.
5. Additional Protocol I to the Geneva Conventions (1949) sets a high threshold for environmental damage, which includes "widespread, long-term and serious" damage, a unanimous and clear definitions of these terms have not yet been formed.
6. The mechanism of responsibility of states for violations of international humanitarian law (IHL) norms is insufficient, and jurisprudence of the International Criminal Court (hereinafter - ICC) regarding destruction of the environment as a result of committed war crimes is practically absent.



Problems of prosecution under Art. 441 of the Criminal Code of Ukraine (hereinafter - Criminal Code of Ukraine) "Ecocide"

1. The current version of the article contains vague terms such as "mass destruction of flora and fauna" or "environmental disaster". Lack of definitions and/or clear criteria for these actions makes it difficult to qualify a violation as ecocide, especially in situations where damage is caused to several different elements of the environment at the same time.
2. Difficulties in determining the moment of completion of a crime: is it complete only after catastrophic consequences have occurred, or does it also include acts that only create a

threat of such consequences? The lack of a clear definition of "large-scale" and "long-term" damage allows for contradictory interpretations and complicates legal qualification of attempted ecocide or preparation for committing it.

3. Distinguishing between ecocide and war crimes: the current version does not provide a clear way to distinguish ecocide committed in wartime from war crimes. This creates legal uncertainty in the qualification of the aggressor's actions, especially in the context of a full-scale Russian invasion of Ukraine, which has been ongoing since 2022.

4. The risk of incorrect application of Article 441 of the Criminal Code of Ukraine for less dangerous environmental criminal offenses. Article 441 of the Criminal Code of Ukraine aims to criminalize actions that threaten global environmental security. However, due to the unclear formulation of its norms, they can be held responsible for ecocide even when in fact much less destructive offenses against the environment have taken place. Such an extended interpretation reduces the legal significance of ecocide, leading to the blurring of the concept of this serious crime.



5. Investigation problems due to the lack of material and human resources. The lack of expertise and equipment, especially in war-torn regions, makes it difficult to reveal, document and investigate ecocide. Lack of adequate laboratory equipment to analyze contamination levels or assess effects on the environment hinders the process of collecting evidence. Large area of mined and occupied land also creates difficulties with this regard.

Potential consequences of non-doing option

At the international level. Lack of accountability for ecocide creates threats of climate disasters, water and food shortage, new conflicts over resources and degradation of living conditions. International law will lose authority because international organizations do not

have sufficient leverage over violators. In the long run, this undermines trust in the UN and the ICC and provokes new conflicts and crimes. State impunity breeds anarchy, which leads to new conflicts and environmental degradation as a result of illegal logging, water pollution, industrial emissions.

In Ukraine. Intensive plowing and pollution are destroying biodiversity and turning fertile lands into deserts, harming the environment and the country's economy. The war and insufficient response to its consequences increase distrust in the national legal system, which does not provide sufficient punishment for environmental crimes. This will contribute to emigration, the outflow of personnel, a decrease in investment attractiveness and will slow down the reconstruction of the country.

Ways of solving these problems



At the international level, the following is recommended: 1. Include ecocide as a separate crime in the Rome Statute of the ICC. This will make it possible to bring responsibility for deliberate destruction of ecosystems, which threatens biodiversity and human health. 2. Define specific criteria for qualifying actions as ecocide, for example, complete disappearance of species or destruction of unique biotopes, which will allow more effective investigation and punishment for such crimes. 3. Make changes to Additional Protocol I to the Geneva Conventions: define the environment as a separate object of protection, clarify the criteria for environmental damage, and specify the obligations to preserve nature during armed conflicts. 4. To clarify Article 8(iv)(b) of the Rome Statute, to amend Article 8(iv)(b) of the Rome Statute of the International Criminal Court by removing the part " which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated", which will prevent ambiguity in interpretation. 5. Provide an effective mechanism of responsibility for violations of international humanitarian law. 6.

Climate agreements should contain a reference to the impact of war on the climate and provisions on the validity of these agreements during wartime. It is important to strengthen accountability mechanisms for ecocide through enforcement mechanisms within these agreements.

National level



Since the criminal law is not retroactive, all previous criminal offenses against the environment will be considered under the current Article 441 of the Criminal Code, which does not sufficiently specify characteristics and scope of ecocide. Adoption of a new version of this article could improve the conditions for investigation and accountability for similar crimes in the future.

Block of reformation No. 1. First of all, it should be clarified that ecocide includes the impact on flora, fauna, atmosphere and water resources, regardless of whether the crime covers all these areas at the same time or only one. To avoid misapplication of Art. 441 of the Criminal Code of Ukraine, it is advisable to clarify evaluative terms contained in it and specify that actions that lead to environmental damage due to carelessness do not belong to ecocide. It should be noted that a crime can be committed both by actions and by inaction. It is important to harmonize the terminology in Art. 441 of the Criminal Code of Ukraine and other environmental laws in order to create a unified legal framework for environmental protection.

To ensure effective investigation of environmental crimes, it is necessary to develop clear methodological recommendations for the environmental inspectorate and law enforcement agencies on evidence collection in such cases, to create a procedure for involving

independent scientific institutions in the assessment of environmental damage. Ecocide should be included as the most serious crime in the section of criminal offenses against the environment, which will allow environmental crimes to be ranked by severity. Ecocide and war crimes should be clearly distinguished based on a person's intention to harm the environment.

Table 1

Differences between some characteristics of ecocide and war crimes

Ecocide	War crimes
The person's intention is aimed at destroying the environment	The person's intention is mainly aimed at obtaining a military advantage or related goals
The subject is general	Frequently a special subject of committing an act
There is no link to violation of international treaties, agreements, customs	There is a link to the violation of international treaties, agreements, and customs
It can be committed both in peacetime and in conditions of war and armed conflict	Committed in conditions of war, armed conflict
It is not typical for a person to use the status of an official	In most cases, it is committed through misuse of the status of an official
The moment of completion of the act depends on the objective circumstances	In the vast majority, there is a formal composition of a crime

Block of reformation No. 2.

For effective nature protection, it is important to ensure a systematic approach to defining and categorizing environmental crimes, in particular ecocide. This requires a more specific definition of ecocide in legislation. We propose to describe ecocide as a deliberate act of a person who may cause damage to a biotope, as a result of which this biotope on the territory of Ukraine loses its ability to self-recover. Qualifying characteristics of such a crime being committed should be as follows: a crime has been committed by a prior conspiracy of a group of persons, a crime is committed on a nature conservation area, a crime is committed by a person previously convicted of criminal offenses against the environment, a crime is committed by an official using his/her official status.

According to the definition given in the National Catalog of Biotopes of Ukraine¹, biotope (natural habitat) is a terrestrial or aquatic area, natural or semi-natural, which is determined by geographic, abiotic and biotic peculiarities.



In our opinion, the definition of ecocide, is closely related to quantitative and qualitative criteria. Enshrining the criteria of ecocide in legislation will help distinguish it from other criminal offenses against the environment and war crimes. Relevant criteria should be approved by adopting a law on amendments to the currently valid Law "On Environmental Protection", which would include a separate article devoted to ecocide and its criteria.

There is a list of such criteria below². The list of criteria is not exhaustive, as the group of lawyers and scientists continue working on their elaboration.

Criterion 1. When the act is committed, the entire population(s) of at least one endemic species of biota that existed within the plant-climatic zone or subzone or altitudinal zone within Ukraine completely disappears, or there are fewer of them remaining 10% of individuals, which is insufficient for their natural recovery, and annual monitoring does not confirm their recovery.

Criterion 2. When the act is committed, unique groups of biota (associations) that existed within the vegetation-climatic zone or subzone or altitudinal zone within the borders of Ukraine completely disappear, or no more than 10% of the area of their distribution remains

¹National catalog of biotopes of Ukraine. Under the editorship A.A. Kuzemko, J.P. Didukh, V.A. Onyshchenko, Ya. Schaeffer. - K.: FOP Klymenko Yu.Ya., 2018. - 442 p.

²Ecocide in Ukrainian and international legislation: concept, characteristics and criteria. Didukh Y.P., Baran S.I., Kravchenko O.V., Kuzemko A.A., Moisienko I.I., Polyanska K.V., Khodosovtsev O.Y. Scientific perspectives: journal. 2024. No. 5(47) 2024. P.1139-1153

and annual monitoring of the species composition of the existing coenopopulations does not confirm recovery of destroyed groups.

Criterion 3. When the act is committed, unique biotopes that existed within the vegetation-climatic zone or subzone or altitudinal zone within Ukraine completely disappear, or no more than 10% of their area remains and annual monitoring of the destroyed biotope components does not confirm its recovery.



Criterion 4. As a result of the committed act, valuable biotopes included in the UNESCO World Natural Heritage or Resolution 4 of the Bern Convention were destroyed, or structural elements were destroyed on a large part of their area, and annual monitoring of the destroyed components of the biotope does not confirm their recovery to the initial state.

Criterion 5. When the act is committed, it causes destruction of biotopes that are a source of direct or indirect environmental services and more than a half of the country's population will not receive these services any more.

Criterion 6. When the act is committed, there is contamination with radionuclides or destruction of the area of a certain landscape, which caused serious environmental and socio-economic damage and lead to relocation of more than a half of the population of the district.

Criterion 7. When the act is committed, there is a change in the characteristics of the environment, which can cause adverse environmental consequences and cataclysms of a destructive nature. It should be noted that Criterion 1 may work better with animal populations and is more likely to be applied at a global level. Among the plants, an example

of criterion 1 can be a group of *Centaurea margaritacea*, in particular an endemic species of the sands below the Ingulets River. *Centaurea paczoskii* is known only from two locations that are in the zone of active hostilities since 2022 and in the area of the flood caused by destruction of the Kakhovka reservoir. For example, a sharp decrease in the number of populations of endemic species to 10% leads to a high probability that their natural recovery is not possible any more. The second criterion can be applied to plant groups that are included in the Green Book of Ukraine. In addition, we can consider as ecocide damage to unique documented groups that can exist only in specific conditions. For example, complete destruction of groups of the *Xanthorietum tendraensis* association, location of which is limited only to part of Bili Kuchuhury of the Tendra spit, will be considered ecocide.

Thus, application of these criteria will enable experts to propose, approve and apply certain methods for assessing crimes against nature and focus their efforts on collecting evidence of ecocide.

It is also important to increase effectiveness of state environmental control, provide it with modern monitoring tools, and provide specialized environmental training for those responsible for documenting and investigating such crimes. This ensures that the proposed legal changes will be correctly applied and will effectively protect the environment.



Conclusions. Effective protection of the environment requires updating legislation at the national and international levels, a clear definition of ecocide and its qualification criteria, as well as reforming the environmental control system. This will facilitate proper investigation and prosecution, particularly in times of war. This will make it impossible to evade responsibility for large-scale destruction of the environment in the future.