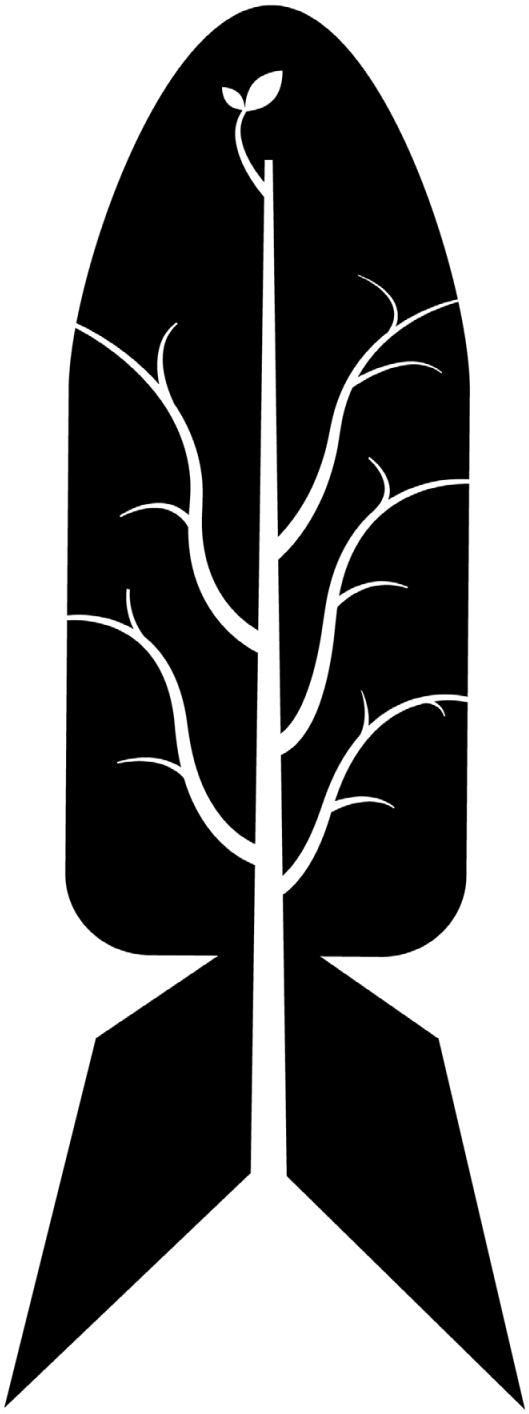


UWEC

Ukraine War Environmental Consequences Work Group

Issue #4

2022 UWEC work group

Dear Friends!

Over six months have passed since the war caused by Russia's invasion began in Ukraine. People and nature are suffering because of the hostilities, and the consequences affect not just the region but the entire world.

Here at UWEC Work Group we continue to track and analyze the war's negative impacts on the environment and climate. We are also assembling and proposing solutions to soften those impacts.

We recently joined the United Nations Environment Working Group in Ukraine, an effort to analyze the war's environmental consequences and exchange information. The UN Office for the Coordination of Humanitarian Affairs is coordinating this effort. We are also expanding our partnerships with both Ukrainian and regional environmental organizations.

For this issue, we interviewed Olha Boiko, coordinator of Climate Action Network – Eastern Europe Caucasus Central Asia (CAN EECCA) and climate change campaigner at Ecoaction. She spoke about efforts to strengthen collaboration between European and Ukrainian environmental organizations working not just to end the war, but also to minimize its consequences for the environment and climate.

• **Tracking impacts on nature while winning the war: an interview with Olha Boiko**

One clear example of such cooperation is Greenpeace International's investigation into the consequences of the Russian invasion in the Chornobyl Exclusion Zone. Together with Belarusian independent environmental media Green Portal, we review the investigation's key findings.

• **Influence of Russia's military intrusion on the Chornobyl Exclusion Zone: Results of an independent investigation by Greenpeace International**

The war and accompanying sanctions are seriously affecting global climate policy. Against the backdrop of an unprecedented drought in Europe and weather anomalies in Southeast Asia, we are reminded that we must work together to reduce greenhouse gas emissions and adapt to climate change. At the same, Russia is becoming more isolated and acting to dilute or cancel a number of climate policy measures. What look at what this means and how it affects the global climate agenda.

• **How has Russia's climate policy changed since the beginning of the war against Ukraine?**

Renewal of the Cold War discourse is leading states to enclose their territories with barriers and minefields. Białowieża Forest (Belovezhskaya Pushcha) was recently divided by an impervious fence along the border of Poland and Belarus. There is also recent news about new minefields on the Ukraine-Belarus border in the Polesie forest area. Although these actions are politically justified, they can be detrimental for wildlife. It is absurd to build fences while simultaneously discussing wildlife corridors.

• **Can the Iron Curtain Be Green? Europe's nature is being divided by fences and fortifications**

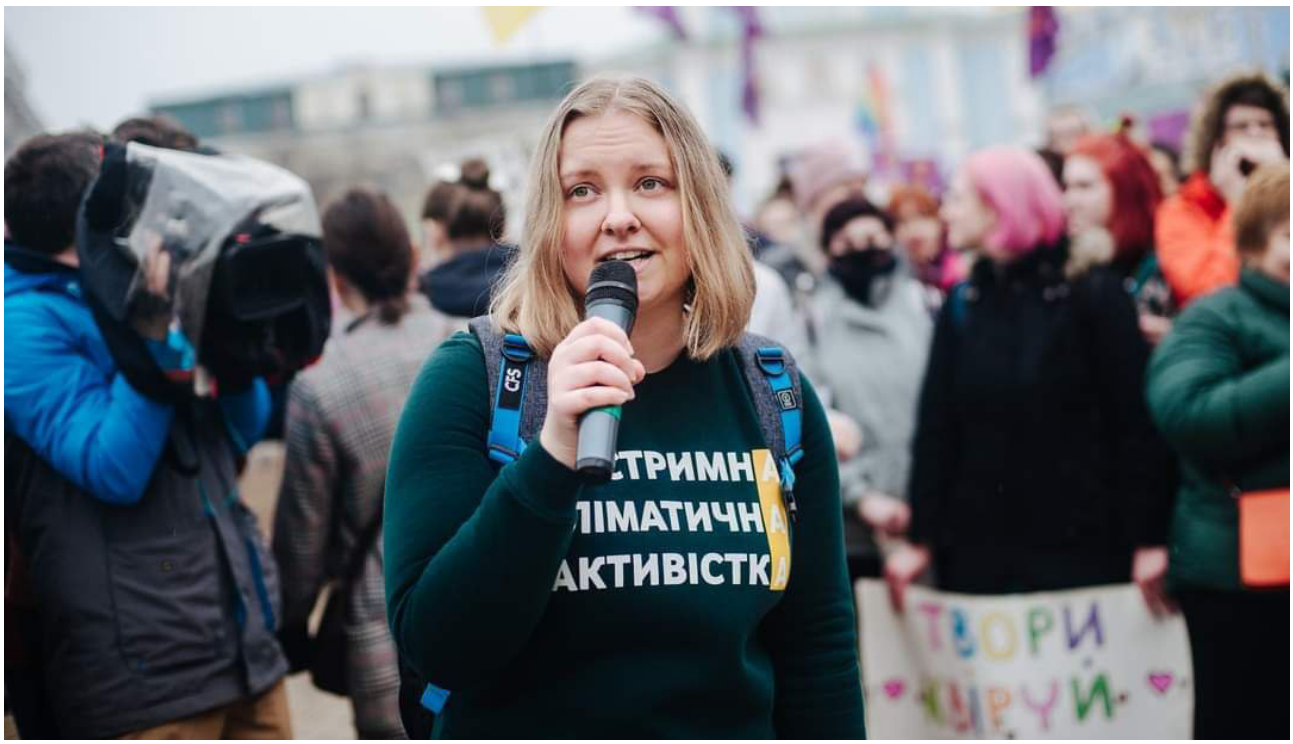
While the war rages, Ukrainian and Russian governments are actively "reforming" environmental legislation – mostly for the worse, but sometimes for the better. This summer, both countries updated rules for legitimizing secondary forests that have grown on disused agricultural lands. Our experts assess these reforms.

• **Restoring nature on agricultural lands: a comparative analysis of legislative innovation in Ukraine and Russia**

Stay tuned as UWEC continues to analyze the war's impacts through an environmental lens not only in Ukraine but around the globe.

Read the latest on our website (where you can sign up for our mailing list) and follow us on Twitter and Facebook!

Peace be with us all!
Alexei Ovchinnikov
Editor-in-chief, UWEC Work Group



Tracking impacts on nature while winning the war: an interview with Olha Boiko

We continue our series interviewing the Ukrainian environmental activists, experts, and scientists dealing with the war's environmental consequences. Our latest conversation is with Olha Boiko, coordinator of Climate Action Network Eastern Europe Caucasus Central Asia (CAN EECCA) and climate change campaigner at Ecoaction.

We spoke about the biggest environmental challenges facing Ukraine today, how NGOs can conduct environmental activism during wartime and how international and regional organizations (including CAN EECCA) continue their efforts to address environmental and climate challenges in the region.

Olha, you were in Ukraine at the beginning of the invasion, and that you still live there now. When did you start to understand the environmental consequences of Russia's invasion? When did you realize that this invasion is a disaster not only for Ukraine as a state, but also for Ukraine in terms of nature and ecosystems?

When the full-scale invasion happened, the first priority for every Ukrainian was to get to a safer place than where we were at that moment. After we did that we started thinking about how we can leverage our strengths, our knowledge, and platforms to help Ukraine fight. At Ecoaction, a Ukrainian NGO, one of the working groups we created in the beginning of March was documenting environmental crimes. It was obvious that Russia was targeting energy infrastructure and fuel storage, both of which caused a lot of pollution, but it was also anticipated that bombing, fires, and disturbances of Chornobyl's soils are all environmental risks.

You participated actively in creating a petition to "end the global fossil fuel addiction that feeds Putin's war machine." The goal was to stop import of Russian fossil fuels in the EU. Can you tell us more about this initiative? Did you achieve any results?

In the climate movement, one of our strengths is campaigning and international networking. We have activated every asset we have, easily identifying the connection between the EU's dependence on Russian fossil fuels and the arrogance with which the Russian state invaded Ukraine. The money used to produce and buy weapons comes mainly from fossil fuels and this connection was highlighted in the petition. The letter was signed by more than 800 organizations in 57 countries. Since then, there has been a huge push by activists, journalists, NGOs, and governments to embargo Russian fossil fuels. I believe the speed with which these decisions were taken to the EU Commission was unprecedented.

Of course, for Ukrainians, every extra day of waiting is an additional chance of being bombed, so there was a lot of concern regarding the speed with which the sanctions were implemented. We were asking for a full embargo on all Russian fossil fuels and uranium. The US banned oil, liquified natural gas, and coal on 8 March, but the EU highlighted its dependence by moving much, much more slowly. However, on 1 August, Europe's embargo on Russian coal finally came online and an oil embargo will begin at the end of the year for most imported oil. Natural gas is the biggest

challenge for countries like Germany, which relies heavily on Russia for that fuel. Nevertheless, we are a long way from stopping our advocacy. A ban on Russian fossil fuels must be permanent and must be only the first step in the global fossil fuel phase out.

As coordinator of CAN EECCA, tell us about the positions of CAN International, CAN Europe and other member organizations of the Climate Action Network regarding Russia's invasion of Ukraine? Does CAN have any instruments for influencing Russia or any programs that help address the war's environmental and climate consequences?

There are two sides to this story. I believe CAN fell into a trap similar to that of the EU, where a large coalition and many stakeholders made them slower to react and less radical than smaller NGOs. CAN Europe published a statement on March 4th, while CAN International did not publish any statement at all. The situation was further complicated by the fact that both Ukraine and Russia are part of the EECCA region. The issue became even more complicated as the sanctions began to hit, and many Russian NGOs, our members, started to flee the country and seek support alongside millions of Ukrainian women and children running from the war and also seeking help in the EU. International organizations tried to support both Ukrainian and Russian activists at the same time. As an institution, CAN had never previously actively condemned any specific war or conflict and had mostly focused on drawing connections between the climate crisis and military conflicts and their impacts on people. That said, I can hardly think of another war on this scale with such huge implications for global energy security and food security as Russia's current war on Ukraine.

On a more positive note, the network has helped immensely in reaching out to news media and politicians both in the EU and the US. I was also able to travel to Brussels and meet CAN Europe members to personally discuss the need for embargo advocacy. Connections between NGOs based in the EU and in Ukraine have strengthened and now we have more ways to advance our messages. So connections strengthened through CAN are extremely valuable. We're not talking about concrete reconstruction projects yet, but I can't rule out more joint projects between CAN Europe and CAN EECCA members from Ukraine in the near future, especially given that Ukraine is now a candidate for EU membership.

What was the reaction of environmental organization members

of CAN EECA to the war? I know there are many Russian NGOs in your network. What was their first reaction, and what is their position now?

A few members from Russia cautiously reached out to me, saying that they are very sorry about what is going on. One member reacted immediately [with a position] on 25 February, but it was heavily criticized by Ukrainian members as it wasn't concrete and bold enough. A lot of relationships have now been broken forever, and the trauma Ukrainian civil society is currently experiencing will be in people's memories for a long while. To complicate things, as I mentioned earlier, Russian NGOs were starting to face additional problems now too and some were deciding whether to stay in the country. This resulted in greater focus by Russian activists on their own situation, leaving no resources for public statements.

In general, due to the fact that Russia's role in the EECCA region is of colonial nature, NGOs from all other neighboring countries have expressed their full support to Ukraine's fight and many are still actively helping the refugees, advocating for phase out of Russian fossil fuels or donating.

You are also a member of Ukrainian environmental organization Ecoaction which is also actively monitoring the war's environmental and climate impacts. Tell us more about your activities? How can our international readers get involved and help your work?

Ecoaction is one of the biggest environmental NGOs in Ukraine. We advocate for energy efficiency, renewable energy, countering climate change, clean air for all and sustainable development of transport and agriculture in Ukraine. My role is engagement of NGOs through networking (namely CAN EECCA and Ukrainian Climate Network). Our work has changed substantially since 24 February. We launched three new directions of work: sanctions on Russian fossil fuels, environmental impacts of the war, and Ukraine's green post-war recovery. We continue advocating against nuclear energy, especially having had two of our nuclear power plants occupied by the Russian army. We covered the issue of food security when it became obvious that the Russian army was deliberately destroying wheat storage facilities and blocking grain exports. In general, all our topics are still relevant and are now united under the umbrella of a green post-war recovery. We have been fighting for a climate-neutral Ukraine for many years, and we're continuing to do so while responding to the urgent need to stop the war as soon as possible. You are welcome to support us and subscribe to our Twitter account.

Today, a number of international initiatives monitor the direct and indirect environmental/climate impacts of the war in Ukraine. Are there any aspects or sectors being overlooked by the international community? Which ones are the most important for your work?

It's hard to say if anything is being overlooked, but the data we're currently trying to collect is the volume of greenhouse gas emissions caused by Russia's full-scale invasion. We know that, in theory, wars are bad for the climate, and I would additionally argue these emissions are Russia's responsibility and should be counted as such.

The most relevant impacts for us are, of course, long term; they will determine Ukraine's capacity to develop as a climate-responsible country and set the stage for recovery. The fewer fields burn, the more food we can produce next year; the less energy infrastructure is damaged, the more we can plan our own fossil fuel phase-out and modernize the nation. All of this depends on how quickly Ukraine can win and launch a full-scale recovery. So, I would say that even when collecting data on environmental impacts we still need to actively help Ukraine win this war and prevent those consequences from even occurring. •

Influence of Russia's military intrusion on the **Chornobyl Exclusion Zone:** Results of an independent investigation by Greenpeace International

By GreenPortal Belarus

Note from UWEC: *In July 2022, representatives of Greenpeace Germany, together with Ukraine's State Agency for the Management of the Exclusion Zone, carried out an investigation of the consequences of Russia's military invasion of the Chornobyl zone. The results were presented in Kyiv at a joint press conference that took place on 20 July. We are publishing our translation of independent environmental resource Green Belarus' article summarizing the results of this investigation.*

Greenpeace investigated radiation levels in the 30-kilometer Exclusion Zone near the Chornobyl Nuclear Power Plant with the approval and cooperation of Ukraine's State Agency for the Management of the Exclusion Zone (SAMEZ) and the Ukrainian Ministry of Foreign Affairs,

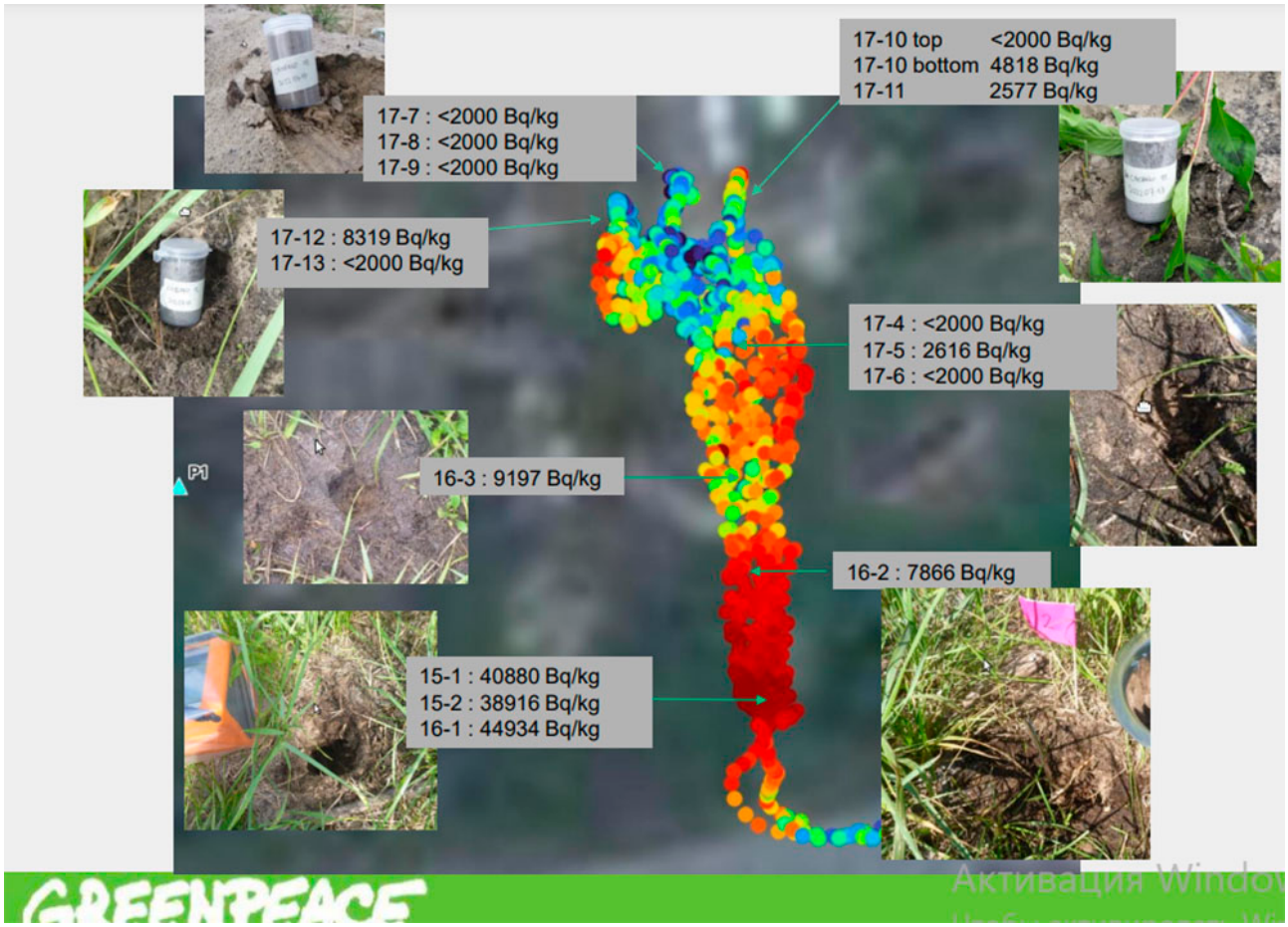
Their research showed that radiation levels in areas where Russian troops were stationed, dug trenches, and from whence they conducted active military operations are at least three times higher than the levels measured by the International Atomic Energy Agency (IAEA) in April 2022.

At a Russian military camp near Yanov Station, Greenpeace measured radiation dose rates ranging from 0.18 μSv/h (microSieverts per hour) up 2.5 μSv/h at a height of 10 centimeters above ground. The highest rate exceeds IAEA's measurement by three times. In another example, the dose rate reached 7,7 μSv/h at a site 1.5 km from the former Russian checkpoint and near the Red Forest, much higher than the IAEA reported.

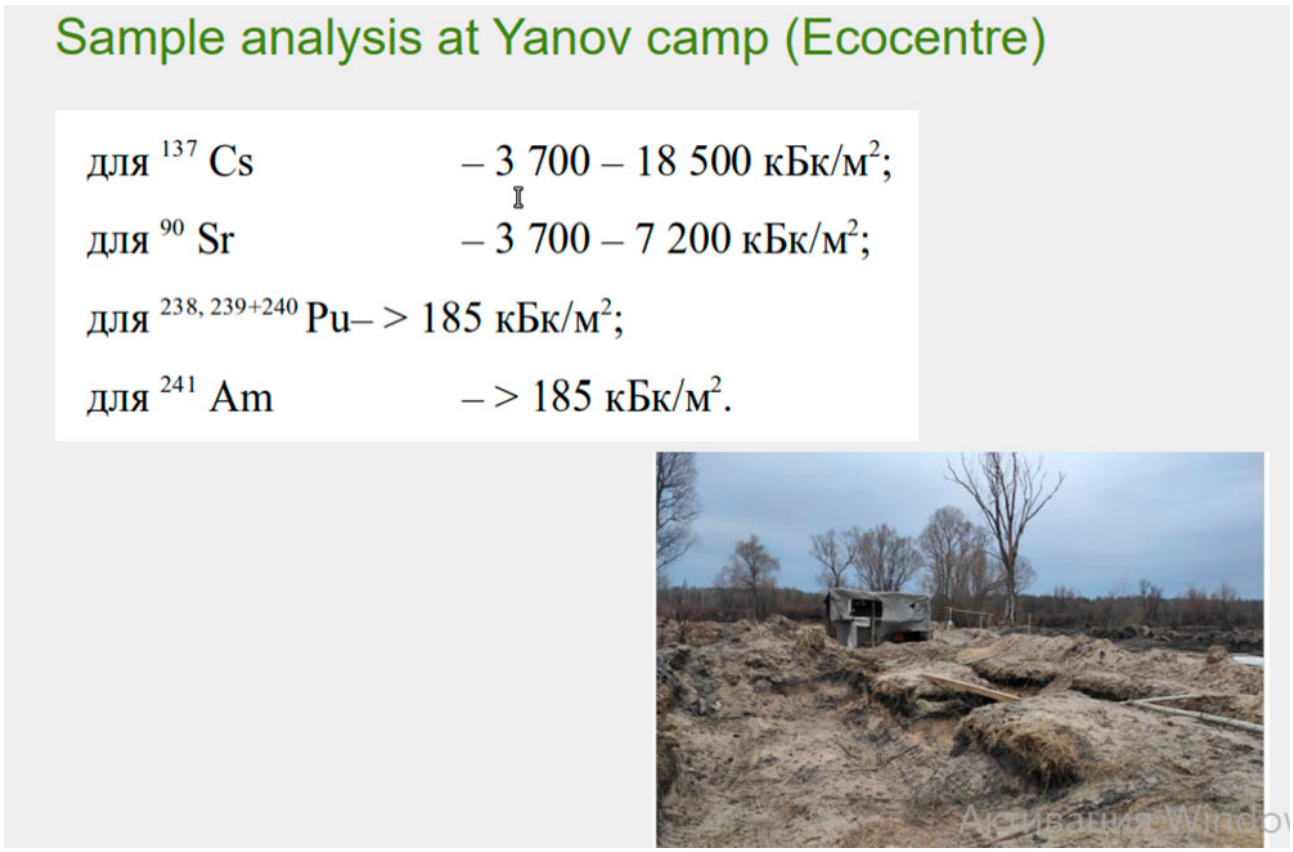
In April 2022, that agency presented very limited data on radiation levels in the area, describing them as "normal" and not presenting a serious problem for the environment or public safety.

Greenpeace is concerned that "the IAEA is seriously compromised in its nuclear safety role in Ukraine due to its connections with Russia's Federal Atomic Energy Agency (Rosatom), including the IAEA's current deputy director Mikhail Chudakov, a long-time former Rosatom employee," the organization noted in a press release.

"Understanding the complex radiation effects at Chornobyl is essential for the world and that means conducting

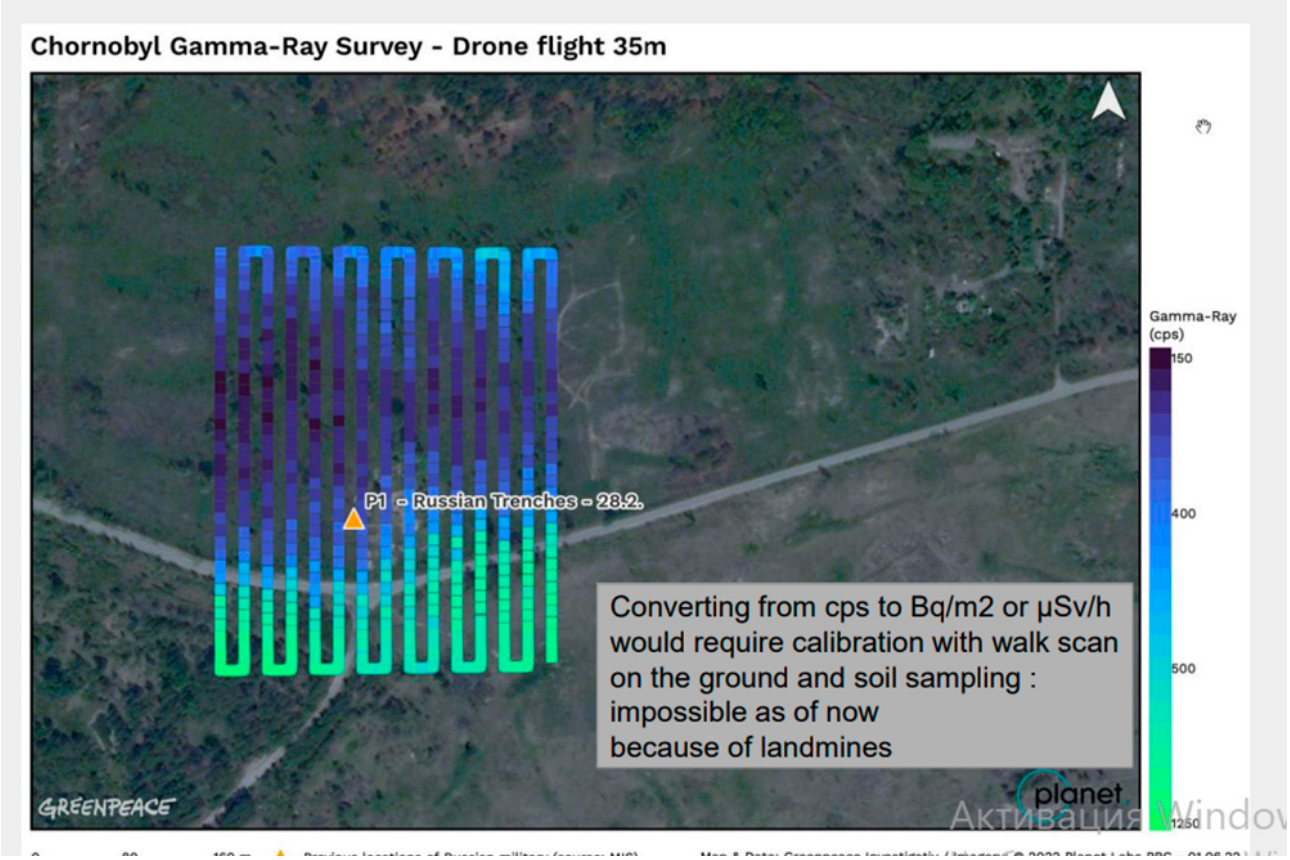


Screenshot of the presentation of the results of the investigation



Screenshot of the presentation

Credit: Greenpeace



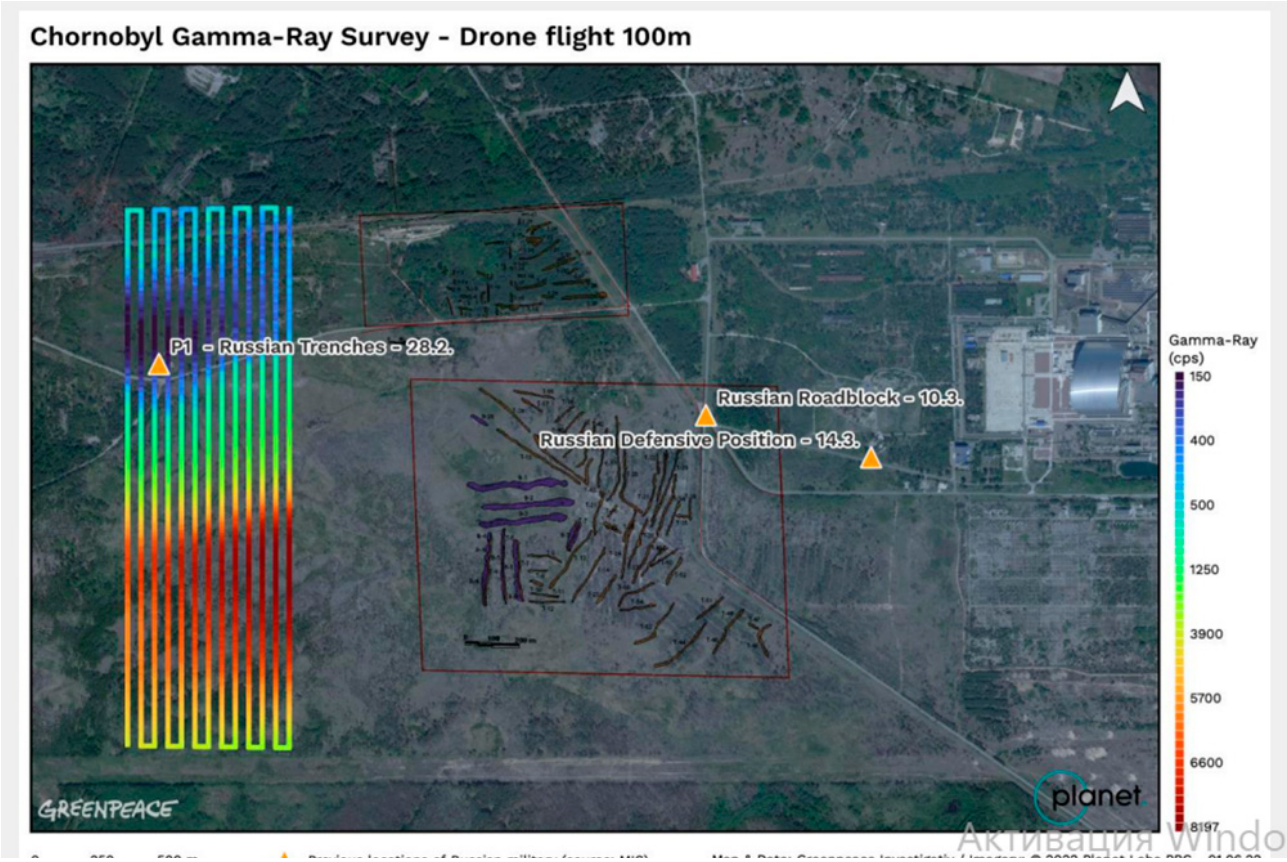
Screenshot of the presentation

research and working with international scientists. All of that has been put at risk by Russia's war against Ukraine," said **Shaun Burnie**, senior nuclear specialist at Greenpeace Germany, during the press-conference.

"Scientists and workers conducting essential radiation hazard monitoring are now threatened by an unknown number of Russian landmines and anti-personnel explosives. This is one further outrageous legacy of Russia's illegal war and a crime against the environment and global science. The IAEA appears reluctant to explain the scale of radiation hazards at Chornobyl and the impact of the Russian occupation," he added.

According to Burnie, the IAEA does not want to explain to the world the true aftermath of the intrusion of Russian troops into the exclusion zone and the Chornobyl Nuclear Power Plant itself.

Lead radiation specialist at Greenpeace Belgium Jan Vande Putte added: "We measured levels of gamma radiation inside the abandoned Russian trenches that qualify it as low-level nuclear waste. Clearly the Russian military was operating in a highly radioactive environment, but that's not what the IAEA is communicating. We can only conclude that the IAEA for some reason decided not to make an effort to fully investigate. It's clear from our survey that there is nothing normal about the radiation levels inside the Chornobyl Exclusion Zone, despite what the IAEA wants the world to believe."



Screenshot of the presentation

In their investigation, Greenpeace and Ukrainian experts used both data received from drones and satellites and analysis of samples taken directly in the Zone.

In samples that were measured in a mobile field laboratory, there was a sharp contrast in Cs-137 concentrations, ranging from 45,000 Bq/kg to less than 500 Bq/kg.

Measurements collected by a purpose-built drone working at a height of 100 meters revealed even higher radiation levels in a wider area toward the south.

Greenpeace specialists noted that they were unable to reach all parts of the Zone because some of these sites have not yet been cleared of landmines. However, it is already clear that disturbance of soil layers in the Zone can expose more polluted soils from other layers, which can, in turn, "lead to a higher level of radionuclide migration in the environment."

Russia's military operations have inflicted serious damage to the Zone's unique scientific infrastructure that was developed in cooperation with the world scientific community. It also puts further research on the consequences of the Chornobyl catastrophe in question. •

Translated by Jennifer Castner

Images credit: Greenpeace

How has **Russia's climate policy changed** since the beginning of the war against Ukraine?

By Vera Kuzmina

Russia's military invasion has environmental consequences not only for Ukraine, but also affects its own environmental and climate policies. Russia remains the fifth largest emitter of greenhouse gasses in the world following China, the United States, the European Union, and India.

In their official statements Russian authorities continue to formally declare their adherence to the goals of the Paris Agreement as well as remain on course toward decarbonizing the country's economy. Is that just window-dressing? Do real actions correspond to political statements? What developments can

we expect in environmental and climate terms in the years to come?

In June, UWEC covered Russia's weakening environmental legislation following the beginning of its military attack against Ukraine.

Today, the "Sustainable Russia" project (initiated by DGO e. V.) brings together

11 journalists and experts from Russia, located both in the country and in exile, wrote 12 articles on aspects of changes in environmental and climate policy in Russia. Some texts are published under a pseudonym or anonymously for safety reasons. The articles are published in Russian and German by Klimareporter magazine and were first released 20 July in Berlin and online.

Writing under a pseudonym, Vera Kuzmina has prepared a review of the articles and project itself for UWEC.

"Since the beginning of Russia's military invasion of Ukraine, climate change remains almost the only topic where dialogue with foreign countries remains possible," says Yekaterina Mereminskaya, climate journalist of Delovye Vedomosti. Recently, especially after the 2014 annexation of Crimea, the Russian Federation has used "green" diplomacy and engaged more actively on environmental and climate issues at the international level, including via UN organizations. In particular, Russia's representatives often proposed cooperation and partnership in the areas of environment and climate, also including the UN climate negotiation process or during high level economic forums in Russia.

However, whether such cooperation is at all possible right now is an open question, including on the part of Russia itself, where conditions for any international cooperation (including for scientists, researchers, and representatives of NGOs) become more and more difficult. It is caused, inter alia, by new amendments to the law on "foreign agents," expansion of the list of "undesirable organizations," and many other repressive trends.

For Russia's economy, the topic of climate and decarbonization is still part of the agenda even after the beginning of the war. Both Yekaterina Mereminskaya and Natalia Sarakhanova, senior lecturer at Saint Petersburg State University of Economics, observe that topics of climate and environment remain important for industry and corporate managers and that businesses (at least to some extent) continue to try to reduce emissions, collect data, report on GHG emissions, and introduce low-carbon work standards.

"Business initiatives continue, but may be frozen. There may be changes in six months, but for now companies stick to their climate policies. However, large multinational companies, market leaders, and change drivers have left Russia and there may be changes of

approach and direction," Sarakhanova adds.

Mereminskaya underscores the fact that scientists and climate experts have also begun to flee the country. "Climate headliners are leaving Russia. Thus, in many respects, the fact that Anatoly Chubais, presidential adviser on sustainable development, fled the country is a sign that the Russian authorities are saying farewell to the climate agenda," she said.

Scientists who have left admit that they cannot work in Russia now due to an atmosphere stifled by denunciations and mistrust. "Under these conditions, constructive interactions with students and colleagues are impossible," Mereminskaya added. At the presentation of the series of the articles, authors also noted that, for example, many experts had left the climate project on achieving net zero by 2050 in the Sakhalin region.

Still, a planned "eastern turn" of Russia's economy and companies (redirecting more trade and export routes toward Asia and not Europe) also presupposes requirements such as decreasing industry influence on climate and publicly available climate information. Sarakhanova cites the example that "conditions for placing

and terms of trade on the Hong Kong Stock Exchange from the point of view of providing information on a company's climate impacts are similar to those at stock exchanges in the USA, Great Britain, and the EU."

Will Russia be carbon-neutral by 2060?

"Russia has never declared a priority of reducing greenhouse gas emissions," said independent expert on sustainable energy Yuriy Melnikov. The plan was to achieve carbon neutrality, first of all, by increasing the absorptivity of natural ecosystems.

The Russian government approved a strategy for social and economic development of the Russian Federation with low greenhouse gas emissions by 2050 in 2021. The strategy does not presuppose any cuts in hydrocarbon production and even allows Russia to increase greenhouse gas emissions in a number of industrial sectors. The authors of this strategy believe that carbon neutrality can be reached at the expense of absorption of emissions by natural ecosystems, primarily in forests.

Mereminskaya also confirms plans to direct basic efforts aimed at decarbonizing Russia to a recalculation of the capacity of Russian forests to absorb CO2. In 2021, the Ministry for the Protection of the Environment and Natural Resources of the Russian Federation declared that a new methodology for calculating forest carbon capacity makes it possible to raise the absorption indicator from 0.5 to 1.1 g/metric ton of CO_2 per year.

In current conditions, E3G climate and energy policy and sustainable finance expert Maria Pastukhova describes four obstacles to the implementation of climate goals and an energy transition in Russia:

1. Changes in the finance and investment climate (exclusion from the SWIFT system, falling investment rating of Russian enterprises, departure of key investors (Total, BP, UNIPER, RWE, Fortum, etc.), federal budget changes and de-prioritization of the climate agenda);
2. Blocked access to "green" technologies and technologies aimed at reducing the intensity of emissions by the Russian oil and gas industry and doubtful hopes for the arrival of Chinese manufacturers as an alternative;
3. Interruptions of logistical and industrial-marketing chains; and
4. Absence of political stimuli (including general political isolation, inefficiency of such tools as Carbon Border Adjustment Mechanism (CBAM), taxonomy, etc. in the new realities).

Environmental journalist Nika Gurevich notes that as the world

gradually eliminates hydrocarbons, Russia will be faced with a very serious problem. If hydrocarbons cease to underwrite its federal budget, Russia will face difficult questions regarding future income and the foundation of further social and economic development. Russia's current development strategy has no plan to replace oil and gas revenue with income from other economic sectors. Since launching the war in Ukraine, the administration plans to continue selling its oil, gas, and coal, but to other markets, e.g. to Asia.

Very active for the previous two years, conversations on diversification of the Russian economy have faded. In many respects this is because a more urgent short-term task – identifying new markets for fossil fuels – has sidelined the necessity of reforms and revising long-term development objectives.

Besides, Gurevich also writes that, "Ukraine's pipeline system and natural gas transit through Ukraine's territory have been on Putin's mind for a long time. It was very important for him to gain control of it. And with politics and economics so closely intervened, each and every Europe-oriented figure in the Ukrainian president's office automatically became not only an ideological challenge but also an economic challenge for Putin, challenges he took very personally. In that sense, this 'special operation' is the latest morbid symptom of a long-term quest to mold Russia, Ukraine, and the world's system of economic and political relations into some rigid and ultra-conservative set of predefined beliefs."

Developments in renewable energy

Despite the trend of preserving oil and gas extraction, over the last decade, Russia has also pursued some renewable energy development. Solar and wind power facilities began to receive state support. Companies also became interested in transitioning to renewable energy sources to prove their cuts to emissions for their Western investors.

"By 24 February 2022, Russia's renewable energy sector had already been formed to some extent," noted Tatiana Lanshina, a head of the NGO "Goal Number Seven" (a reference to SDG 7, "Access to clean and affordable energy"). According to her, energy produced by renewable sources reached 0.5% of Russian national energy generation, while the average national indicator around the world is 10%.

"Despite the very small market, large trendsetting players such as Fortum, Vestas, and ENEL developed projects in Russia. In addition, large Russian and international companies with operations in Russia started purchasing energy from renewable energy sources in order to lower CO_2 emissions from their manufacturing," Lanshina continues.

After the war was launched against Ukraine, however, demand for renewable energy production fell: Western companies that had invested in Russia's renewable energy transition left the market. In addition, Europe's I-REC certification body stopped selling certificates confirming the production or use of renewable energy within Russia.

According to Lanshina, "The departure of large investors and manufacturers in the renewable energy industry led to delays in launching of new generation capacities, as well as loss of access to green technologies. The government also canceled fines for infringements of renewable energy generation facility contracts," she added. In her opinion, that move is an effective measure of support, but it will not spur market development and will only reduce investors' losses.

Tatiana Lanshina observed that China will hardly be able to replace European companies in the sector of renewable energy sources in Russia. China's strategy is to deliver its equipment to other countries, but not to build local clusters and not to transfer technologies, Natalia Sarakhanova specifies, in her turn. Chinese manufacturers will hardly risk getting under sanctions of the USA and the EU because of attempts to receive some profit in the small market of this equipment in Russia.

Will Russia produce hydrogen?

In addition to renewable energy sources, prospects of hydrogen production have been a discussion topic in Russia since 2020.

"The basic focus on hydrogen projects in Russia was aimed at exporting hydrogen to the EU and neighboring countries in the Asian-Pacific region (Japan and Korea)," Yuriy Melnikov writes. Today, the European market is closed; cooperation with Asian partners is suspended; only domestic consumption remains.

However, here, even before 24 February, no clients were prepared to pay for hydrogen buses and cars or for low-carbon hydrogen itself, which is much more expensive than available analogs in Russia.

"Without a large-scale government program for hydrogen energy, this sector will not develop," he added. The first version of the program was developed before February 2022; now, it must be reworked.

"The current hydrogen strategy of the Russian Federation has an extremely general and declarative character," Maria Pastukhova writes. The absence of concrete projects aimed at exporting hydrogen makes the strategy almost unworkable. Pastukhova asserts that arrangements with European partners were just memoranda of mutual understanding and agreements of intent. No significant concrete steps have been made.

Melnikov, in turn, observes that although Russia's hydrogen market had only just started to develop, much was accomplished. Among other things, companies and the developers of the national hydrogen strategy reached bilateral agreements. Still, further practical steps are not yet obvious.

Maria Pastukhova specifies that before the war in Ukraine, some EU countries discussed purchases, in particular, of "blue" hydrogen (i.e. made of natural gas with the use of carbon capture and storage technologies). Russia could satisfy this demand. Now priority is given to "yellow" (produced with nuclear energy) and, first of all, "green" (received from renewable energy sources) hydrogen.

The EU has already confirmed 41 projects for the manufacture, transportation, and industrial use of "green" hydrogen. According to Maria Pastukhova, Russia's turn to Asian markets will not help it increase Russian hydrogen exports in the foreseeable future due to low demand for hydrogen in the majority of Asian developing countries; while Japan's and South Korea's developed economies have already redirected their vectors of cooperation elsewhere (e.g. Middle East, Chile, Australia), and China plans to create its own capacities. Besides, under current market conditions, the priority is given first to the development of "green" hydrogen; marketability of Russian "blue" hydrogen in foreign markets is much too questionable.

What is wrong with a circular economy for Russia?

Besides decarbonization, the concept of a circular economy became yet another important idea for Russia's 'green' development in recent years. This topic appeared in public and political debate in 2019, following the beginning of Russia' waste management sector reform.

"A circular economy (cradle-to-cradle) is a concept viewed by politicians as one direction of national economic development," notes founder of the "Moscow Circular" movement Yekaterina Yegorova. However, she also notes that this term is generally limited in its use to the waste management industry.

"A circular economy in Russia is understood only as waste management: creation of landfills, waste processing, and recycling. To a lesser degree, it is perceived as a change consumption model – from linear to cyclic"

"The linear model means that we extract resources, turn them into goods, consume them, and then throw away the largest percentage of valuable resources. This model leads not only to a rapid decline in the value of resources and materials as they become garbage, but also to environmental, economic, and social problems."

"The circular model means that the economic system and resource management are built in such a way that citizens' economic well-being and prosperity depend less and less on the consumption of exhaustible sources. In a circular economy, economic activities do not exhaust natural systems, but, to the contrary, increase natural capital. The creation of such a model requires changing business approaches, means of distributing benefits, and new political decisions," Yekaterina Yegorova asserts.

In her opinion, Russia's isolation will not allow it to create a circular model of economy given the need for new technologies (access to which is now complicated), and new approaches in management.

Yegorova continues, "However, it does not mean that it is impossible to do anything and wait for the time when the geopolitical situation improves. Even during these times there are opportunities to move towards a circular economy. For example, the transition to regenerative agriculture and reorganization of supply chains in the food sector industry can lead to positive changes in the sphere of restoring natural systems, as well as in achieving food security. Revised approaches in design and project engineering in construction and industry not only saves materials and reduces the risks of deliveries of raw materials, which today's Russia faces, but also makes it possible to use materials more

sustainably. Approaches such as urban mining (extraction of resources not from mines, but from already existing goods and buildings) and remanufacturing (restoration of parts and goods instead of manufacturing new ones) can bring both economic and environmental benefits."

According to Yekaterina Yegorova, these approaches will not replace the importance of open international partnership and the exchange of technologies and ideas needed for the transition to a circular economy. However, they can help to make the necessary changes at the local level for a more effective use of resources in situ.

General conclusions

During the presentation of the Sustainable Russia series, all experts agreed that uncertainty about the future is so high at the moment that it is impossible to speak of any certain forecasts for development of the current situation, including in the area of "green" and low-carbon development in Russia.

The war in Ukraine has further confirmed the priorities of the "captains" of Russia's economy, including preservation of the fossil fuel sector at its foundation, as well as the dependence of the world energy sector on the deliveries of Russian oil and gas. The means to solving the global energy crisis will make the future of extraction of oil, natural gas, and coal more clear, not only for Russia, but globally.

The extent to which the climate agenda will remain a somewhat important issue for Russia is, meanwhile, an open question, too. On the one hand, politicians and officials continue to declare their adherence to the goals of the Paris Agreement. On the other hand, companies and business associations try to lobby for the cancellation or postponement of some laws – including in the field of carbon reporting and verification, as well as allowing gas flaring and calling for a revision of sectoral strategies on greenhouse gas emission reductions. The prospects for Russia's emission reduction projects, including in international markets, are also unclear in current war conditions.

Russia is navigating the road to political, economic, and technological isolation, including a halt or, in some cases, a ban (also in the form of associated risks) on international cooperation with "unfriendly" countries (including, for scientists or civil society representatives). These challenges are unlikely to play a positive role in Russia's "greening," including in terms of access to technologies, international exchange, and joint implementation of cooperation programs in the field of reducing greenhouse gas emissions and adaptation to climate change.

Additional information

Klimareporter has already published five articles for the Sustainable Russia project.

1. Project overview by Angelina Davydova, available in German and Russian.
2. Article by Nika Gurevich on the importance of the fossil fuel sector for Russia's economy, available in German and English.
3. Article by Anastasia Troyanova on the Sakhalin carbon experiment, available in German and Russian.
4. Article by Irina Antonova on Russia's rollback of domestic environmental regulation during its war in Ukraine, available in German and Russian.
5. Article by Yekaterina Mereminskaya about the present and future of the climate agenda in Russia, available in German and Russian. •

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Can the Iron Curtain Be Green? Europe's nature is being divided by fences and fortifications

By Oleksii Vasyliuk and Vadim Kiriliuk

This article discusses the current discourse on border barriers and related environmental issues. It explores the high-profile case of a wall built by Poland across a transboundary World Heritage property to control the inflow of migrants from Belarus. Given the accelerating development of a new Iron Curtain, active dialogue between experts in ecology and border security is essential to prevent damage to natural ecosystems.

Border barriers and nature

Decisions made during crises, dynamic geopolitical situations, or, even more so, during wartime often fail to consider wildlife conservation. In most modern cases, crisis decisions to build walls to strengthen a state

border (for example to address illegal migration) occur in more developed and democratic nations. In the recent past, the USSR was a champion of fence-building to prevent not only penetration by saboteurs, but also the mass exodus of its own citizens. In general in the last century, growing confrontation between nations has always been accompanied by the creation of barriers and fortified areas along borders.

A well-known recent example is a wall built by the US for hundreds of kilometers along the US-Mexico border (current length is 1053 km) to create a barrier against illegal migrants. Several thousand scientists from around the world have signed a petition against the expansion of this wall.

And, of course, the best known example in global history is the Great Wall of China, known to every school child and registered as a UNESCO World Heritage Site. Little is said about its environmental consequences despite its direct impacts on the ecosystem over the last two thousand years.

The Russian-Ukrainian war, as the most acute crisis of this century in Europe, has provoked an unprecedented wave of wall building in Europe. Poland and Belarus have already taken action. Russian-backed separatist enclaves, such as South Ossetia, are actively manipulating border fences to expand their sphere of control. Earlier, Ukraine repeatedly stated its intention to implement a "wall" project (in particular, in its eastern regions) designed to harden its border with Russia. Finland has announced plans to build a wall with Russia, as has Lithuania with Belarus.

In the era of a rising new Iron Curtain, intractable questions arise. How do countries consider and balance the needs of nature protection and national security? Is it possible to have a productive dialogue between environmentalists on the one hand and border services on the other? What alternative border protection options exist and what environmental risks do they entail? Is it possible to objectively assess environmental impacts when establishing military installations? What do the age-old experiences of border fences and border zones in the USSR and other countries teach environmentalists?

Our working group begins this difficult conversation in the hope of being heard by different stakeholders and institutions for developing optimal solutions. In an era when the armies of the world are beginning to intentionally track their carbon footprint, governments must also think about biodiversity conservation in the course of military activities. After all, the world has entered a period of extreme turbulence – military, socio-political, climatic. And the worst thing politicians can do is to use national security slogans to postpone environmental issues until an era of stability far into the future.

Today's climate change crisis puts humanity itself on the brink of survival and thus requires equally urgent solutions.

A little theory – a definition of landscape fragmentation

Fragmentation of natural landscapes is one of five globally recognized causes of ecosystem destruction. Separation of natural areas by man-made barriers (roads and railways, fences, clearings, agricultural landscapes, and, ultimately, cities) significantly complicates the movement of terrestrial animals that is necessary for their normal existence. For some species and populations this refers to regular (seasonal) purposeful movements across hundreds of kilometers (for example, reindeer or many species of migratory birds). Many ungulates and predators depend on seasonal migrations and daily movements in search of food and shelter within rather large individual habitats. For many species, maintaining the viability of even one pair or, even more so, a stable population, requires large areas, often to the extent that no such landscapes remain in European countries. Natural barriers should not stop animals when their instincts tell them to move. For example, this is why many wild animals are good swimmers, even when they are not primarily aquatic. For many species, human-made barriers can often be insurmountable.

In the long term, the ability of a species to move around the landscape is critical: without genetic exchange among individuals, isolated populations of a species degenerate after several generations and, as a result, often disappear altogether.

In an era of rapid climate change, the ability of animals to move from areas of increasing climate stress to landscapes with more favorable and familiar conditions also becomes especially important.

As landscape fragmentation occurs, movement restrictions and isolation lead to a decreasing number of species. Today, the survival of remaining large mammals is supported by specific conservation measures in densely populated Europe, but the appearance of new artificial barriers may put them at the brink of extinction.

Nevertheless, some animals are able to adapt to new conditions and survive alongside their human neighbors: using clearings and roads at dusk and even finding sustenance in agricultural landscapes. Moreover, man-made bridges over rivers are quite helpful for the migration and dispersal of terrestrial animals, as is, for example, a network of forest belts in the forest-steppe zone in southern Ukraine.

Environmental science includes the concept of landscape permeability for animals; consider the behavior of rabbits in the garden or roe deer or foxes in a

cultivated field. Crossing man-made landscapes can be simple for many species, even large mammals, especially birds. The same cannot be said for impervious borders or other extended fences.

A solid high wall, stretching for hundreds of kilometers, can become an insurmountable barrier for any terrestrial fauna or plants that depend on wind to spread their seeds. Moreover, natural features shrink in number when a small country starts building a wall. Animals and plants are destroyed during initial construction. For example, during construction of the Polish wall, a strip of forest 200 meters wide was cleared along the border. In addition, animals' ability to penetrate from the outside is sharply reduced; populations that find themselves in isolation may be on a path to degeneration.

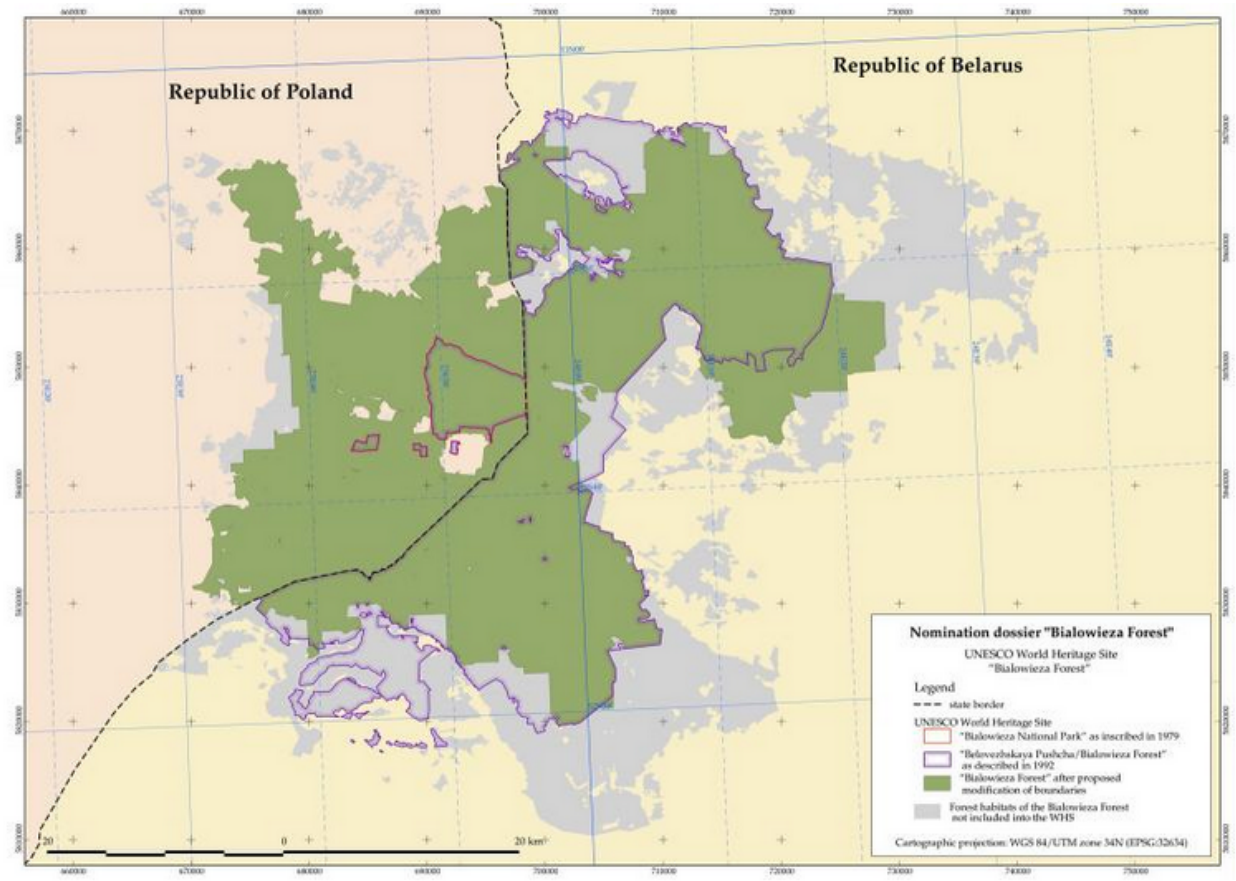
It is for these reasons that researchers and environmentalists criticize state moves toward planning each new boundary wall, but, in the end, these barriers are usually erected without incorporating the recommendations of specialists.

It should also be noted that highways and railways, with or without vertical barriers, are in many cases much deadlier than border fences. Entire populations of small animals – amphibians, reptiles, small mammals – simply die out along such roads if animals have access to the roadway. Many large animals also die – moose, significant numbers of dispersing young foxes, hedgehogs, and beavers. Birds of prey also die in great numbers when landing on the road to feed on the road's earlier victims. This is a sore subject, and it is worth a separate discussion.

Fence through Białowieża Forest

In March 2022 in its report to the United Nations Educational, Scientific, and Cultural Organization (UNESCO), the government of Poland reported:

> *"Since August 2021, Belarusian state services have been bringing groups of thousands of migrants from the Middle East into the direct border zone with Poland, in the Białowieża Forest property area, and forcing them to illegally cross the Polish state border. This poses a serious threat to the security of the state and Białowieża Forest World Heritage Site. As a result, the Polish Government and Parliament decided that a barrier must be built along the state border with the Republic of Belarus. The planned construction of the border barrier will be implemented in accordance with the Act of 29 October 2021 'On the construction of state border security' (Journal of Laws of 2021, item 1992)."*



Transboundary biosphere reserve Białowieża Forest World Heritage. Credit: UNESCO World Heritage Center

Poland's resulting wall along the border forms a barrier to illegal migrants attempting to enter the European Union from Belarus. The wall divides the transnational Białowieża Forest WH, one of Europe's most important protected areas, into two parts. At an installed height of 5.5 meters, the barrier stretches over 186 km. Such ambitious projects can indeed form a barrier for illegal migrants and subversive groups, but are also a significant threat to wildlife.

Białowieża Forest World Heritage Site is a transboundary site and it is specifically thanks to its location on the periphery of the two bordering countries that undisturbed wilderness is preserved here. Its integrity is the foundation of a truly important protected area.

As conceived by UNESCO, the creation of transboundary protected areas is an important measure not only for international cooperation (lacking today due to the current political situation), but, above all, for greater conservation of nature.

In an interview with Reuters, Guy Debonnet, chief of the Natural Heritage Unit at UNESCO's World Heritage Center, said Poland had to demonstrate that the wall would have no negative impact on the protected site: "Poland

should not move forward with this before we have the necessary assurances and our advisory body for natural heritage is convinced this can be done without impacting the outstanding universal value of the World Heritage property," he told Reuters.

According to Debonnet, ecological connectivity between the Polish and Belarusian parts of the forest was a key element when the World Heritage status was extended to Belarus in 1992.

According to the practices of the World Heritage Convention, any country that introduces significant alterations (e.g. an infrastructure project) to a World Heritage property is supposed to undertake a Heritage Impact Assessment and submit results to the World Heritage Center prior to project implementation. The Polish report to UNESCO promises "that environmental issues, including the welfare of animals and especially their migration needs, will be taken into account in the project …. Particular attention during the implementation of the project will be paid to border protected areas, and in particular to the transboundary World Heritage Site Białowieża Forest. In order to take care of the migration needs of wildlife, it will be equipped with special animal crossings to eliminate the barrier effect and the watercourses will not be fenced." However, nothing in that report suggests that an environmental impact assessment took place, and similar concerns exist from the standpoint of EU legislation.

Over 1,800 scholars, environmentalists, and activists in Poland and other European Union countries signed a petition calling for a ban on building fences along the Belarusian-Polish border. In an open letter to European Commission President Ursula von der Leyen, First Deputy Frans Timmermans, and European Commissioner for Environment, Oceans, and Fisheries Virginius Sinkevičius, petitioners drew attention to the fact that no impact assessment related to Belovezhskaya Pushcha National Park (a part of the Natura 2000 network) occurred during the planning process for the wall's construction.

As elsewhere in the EU, and in accordance with EU directives "Directive 2009/147/EC on the conservation of wild birds" and "Directive 92/43/EC on the conservation of natural habitats and of wild fauna and flora," the Natura 2000 protected area network operates in Poland. This network requires impact assessments on the conservation value of any project undertaken on member sites in Poland. Each country is accountable to the EU, which finances Natura 2000, for the fulfillment of the ecosystem functions of such territories.

The letter's authors worry that the fence's construction will result in moving the Białowieża Forest World Heritage Site to the "List of WH in

May 2022 satellite imagery of the construction of a boundary dike in Olmansky Wetlands Refuge (left and lower areas are in Ukraine, upper and right areas are in Belarus). Credit: GoogleEarth

Danger." This is a particular concern for Belarus, where Belovezhskaya Pushcha National Park is included on the list as a transboundary extension of the Polish World Heritage property.

Along with the leadership of the Belarusian national park, five European organizations have submitted complaints about the border wall to the Standing Committee of the Bern Convention on the Conservation of European Wildlife and Natural Habitats. Their complaint awaits review today.

After provoking riots at the border in 2021, Belarusian authorities have now submitted complaints to UNESCO and several other international organizations that the construction of the wall harms the reserve's wildlife. During a Belarusian Foreign Ministry press conference, Belarus National Commission on UNESCO Affairs Secretary Natalia Schasnovich reported that (31:39 in the video) in February-March 2022, the UNESCO World Heritage Center asked the Polish government to provide a detailed report and suspend construction until an environmental impact assessment was carried out. Belarusian officials confirm that this project was planned with neither an environmental impact assessment nor input from the Belarusian government.

Belarus not only spoke out against the fence's construction at the state level, but the Belarusian State Control agency also announced calculated environmental damages in the amount of 52 million rubles (over 17 million Euro), and the Belarus Ministry of Natural Resources

and Environmental Protection released a dramatic and disturbing video showing the harm to wildlife allegedly caused by such fences.

In addition, on 18 March 2022, a round table for state officials and administrators of academic institutions was held in Belarus dedicated to the topic of "Construction of artificial barriers in transboundary protected areas: real harm with imaginary benefits." Among other statements, participants noted that demolition of a barbed wire barrier long ago erected along the Belarusian side of the border was planned, but not yet carried out. According to round table participants, creation of a new wall along the border will disrupt the migration routes of terrestrial mammals, and a concrete dam at the wall's base will change the hydrological regime and result in wetland formation on the Belarusian side. Belarusian experts announced that the Polish fence project violates at least 8 international agreements.

Strengthening Belarus' borders

However, the sincerity of Belarusian official statements is doubtful. It is more likely that the country's dictatorial regime is using this environmental rhetoric as a smokescreen for other goals. This was clearly seen at the UN General Assembly meeting on 28 July 2022, when Belarus refused to support adoption of a historic resolution on the "human right to a clean, healthy, and sustainable environment."

According to the UNGA meeting official coverage, "Belarus's representative said that the country abstained because… recognizing a special category of human rights can only be done through a universal and legally binding instrument. Then she drew attention to the environmental and legal aspects of Poland's construction of a barrier along its border with Belarus that is damaging the environment and urged Poland to dismantle the structure and restore the damage….Responding to her counterpart from Belarus, Poland's representative explained that in 2021, Belarus President Alexander Lukashenko engineered a migration crisis, stranding thousands of migrants. This is the sole reason for the structure on Poland's border, a situation Poland is closely monitoring. The fence on the Polish side includes 20 large animal crossings, she said, noting that waterways and marshes, among other areas, will not be fenced. The fence will be subject to electronic monitoring by Poland."

Belarus's own history of border barriers is not at all an example to be followed, even as it convincingly criticizes Poland's actions. Throughout May, June, and July 2022, Belarus' armed forces actively built a network of fortifications along the border

with Ukraine, Poland, and Lithuania. They have also laid minefields, an obvious deadly threat to large animals, since at least 2018. Unfortunately, this immediately led to devastating consequences for nature. Because part of the Belarusian-Ukrainian border runs through very swampy terrain, Belarusian authorities have launched a program to build dikes in protected swamps. The world famous Olmansky Wetlands Refuge suffered damage as a result.

Belarus' State Border Service is also implementing the Protection Line project, which will pass through 19 protected areas, including the same Belarusian Belovezhskaya Pushcha National Park as well as Sorochansky Lakes, White Moss, and Braslav Lakes nature refuges.

It is also noteworthy that environmental NGOs were not able to critique construction of the barrier, given the fact that the majority of them were liquidated by the Belarusian government in 2021. Indeed, most environmental cooperation projects with the European Union in the Belarusian part of the Białowieża Forest WH property have been put on hold for the time being.

Greening the curtain?

Construction of a new Iron Curtain in Europe is becoming more and more certain, and, most likely, will be actively developed in the coming months and years. At the same time, the natural environment in states along boundary fences will certainly experience certain changes. On the one hand, wildlife movements will be limited, while on the other, wildlife will actively develop in little-visited border zones. Also, poorly selected construction materials and technologies for the barrier can result in changes in the hydrological regime. Prudent and environmentally responsible planning for additional border protection measures can significantly reduce and possibly minimize the negative impacts of new barriers.

In many cases, different technologies and management solutions that are more responsive to conservation needs and national security concerns can be proposed in place of extended impervious barriers.

It is often completely impractical to divide a protected area or even an unprotected wetland with a fence, because it is generally more effective to build barriers along the borders of developed areas, leaving impassable thickets and marshes between the fence and the border. Such an approach benefits the preservation of undisturbed landscapes and turns national border security into a useful conservation measure. Experts around the world are well aware of the example of the Demilitarized Zone (DMZ) along the 38th parallel between North Korea and

the Republic of Korea. That zone is one of the most important nature islands on the Korean Peninsula and is an important migratory stopover for rare crane species.

In most cases, additional environmental and other measures can be envisioned to radically reduce environmental impact, for example, by eliminating the use of technology and measures in barrier construction that are hazardous for animals. It is important to increase the permeability of such fences by leaving openings to allow small animals to pass through the barrier.

These issues can only be reasonably addressed if the planning of new security measures naturally includes environmental and human impact assessments and consideration of a variety of alternatives. In the case of the Polish fence, this is precisely the step that was bypassed under the pretext of extreme urgency. A new law passed since then to enforce the creation of border barriers explicitly excludes such projects from European Union procedures for environmentally responsible planning and management.

At UWEC Work Group, we seek to initiate a discussion among stakeholders in order to avoid or address the negative consequences of planned and existing border barriers and fortifications. In subsequent articles, we will review sustainable technologies for creating animal-friendly barriers and border zones, as well as consider important examples in global practice. Although barriers stopping human border crossings are often detrimental to wildlife, some options can have positive conservation effects. Future articles will analyze new designs for border barriers and fortifications stemming from the current war and its geopolitical fallout. •

Translated by Jennifer Castner

Main image credit: ednh.news

Restoring nature on agricultural lands: a comparative analysis of legislative innovation in Ukraine and Russia

By Oleksii Vasyliuk and Eugene Simonov

The issue of how to legally rewild lands that were previously only ineffectively cultivated is an urgent question in both Ukraine and Russia. The subject is also important from the perspective of protecting biological diversity and fighting climate change. Over the last two months, there have been two important amendments in laws regulating the management of forests that grow on abandoned agricultural lands in both Ukraine and Russia.

War has necessitated further adjustments to previous regulations, and today their implementation depends on the ongoing development of the military-political

situation. The process for licensing natural resource extraction is being simplified at the state level, and previously confirmed plans to achieve conservation goals are being scaled back or canceled outright.

In this article we analyze recent legislative changes in Ukraine and Russia that affect the fate of unused agricultural lands, lands that could either be returned to agricultural production or finally legally recognized as natural areas. Regulatory decisions on these questions were made almost simultaneously in each country.

Oleksii Vasyliuk analyzes the pros and cons and needs for the future development of Ukraine's land and forest legislation. President Zelenskyy is using a new law to grow the country's forest fund by one million hectares, and the most effective means for achieving this goal is by legalizing "self-afforested" areas, or secondary forests.

In Russia, development of rural forestry has the potential to slow the demise of villages in less fertile northern regions. Eugene Simonov studies the latest regulations halting the development of rural forestry on vast expanses of abandoned agricultural lands in the Russian Federation, hopefully only temporarily.

One million hectares of forest for Ukraine

On 20 June, Ukraine's Upper Rada parliament passed bill №5650 "On amendments to certain legislative forest conservation acts." The bill was one of the most widely-anticipated laws among Ukrainian environmentalists and was largely written by civil society sector experts.

What was the vision for Bill №5650?

One premise of the bill's preparation was last year's announcement by Ukrainian president Volodymyr Zelenskyy of his government's intent to increase the number of forests in Ukraine by 1 million hectares (one version of the announcement stated 1 million trees).

It's obvious that land and other resources are insufficient to plant such a large number of forests in Ukraine, but that issue does not render the initiative impossible. Northern and western Ukraine both have significant secondary forests growing on long-abandoned agricultural lands. To a degree, these forests are more sustainable than monoculture forests planted by foresters. In any case, even a mediocre forest is more valuable to the environment than any representative field.

However, earlier secondary forests lacked legal status in Ukraine and were considered "fields." And not just fields but abandoned fields with temporary tree cover. Such areas are usually leased out to farmers who then clear-cut or even burn these forests in order to begin cultivating corn or potatoes. Burning

down these forests to grow corn is, of course, unacceptable for reasons of nature conservation and climate protection.

For this reason, the idea arose to increase the number of nominal forests in Ukraine not through new plantings but by preserving forests that arose independently and giving these "self-recovering" forests official recognition. The total area of such forests in Ukraine is estimated at 500,000-800,000 hectares. The goal of the law could be described as a way to fulfill the president's promise to increase the quantity of trees planted quickly and to a high standard.

Guided by these ideas, the Ministry of Natural Resources and civil society drafted bill №5650.

It was hoped that the plan could:

- Ensure that changes in the intended use of forested land areas for the construction of residential sites and natural resource extraction would only occur in unforested areas;
- Prioritize the use of lands suitable for agriculture not only for food production but also for forest and conservation purposes;
- Permit forestry management in any land category (not only on forest fund land), a principle which allows the use of degraded arable land for forestry purposes;
- Legitimize secondary forests, thereby increasing forest cover with no additional budget impacts; and, lastly,
- End both the large-scale plowing of steppes and meadows and clearcutting secondary forest, moves that assume a moratorium by 2025 on tilling such lands.

It's worth adding that it used to be thought that planting slopes of natural steppe with non-native acacia was also considered land conservation, given that these areas are sloped and thus farmers consider them degraded (regardless of soil quality). Many valuable steppe grasslands were transferred to forest managers and destroyed according to this principle. Not only was the steppe destroyed, but no forest grew because, in recent years, a more arid climate has not facilitated the growth of new forests. At the same time, truly degraded agricultural lands were not restored in any way, despite significant need. Bill №5650 provides that only degraded cropland be subject to conservation instead of the past practice of including all slopes, including those covered by natural steppe vegetation.

What was Law №5650 in reality?

When the bill became law, the Ministry of Natural Resources announced that

the law would protect forests, steppes, and meadows. The final version of the law, however, was not all that was expected. The language in the bill's first reading was significantly better, even while it was still far from ideal. The large agribusiness and developer lobby got involved before the bill's second reading, and during negotiations, Ministry representatives specifically supported agribusiness and not environmentalists that were criticizing changes benefiting the farm lobby.

Let's take a detailed look at the law.

Part 1. Forest

Prior to land reform a significant number of secondary forests were owned by the state. State-owned secondary forests were relatively simple to "legitimize" and transfer to forestry enterprises. Environmentalists called for transferring secondary forests on farmland to state forest management during the land reform process. Their calls were in vain. Today, secondary forests are predominantly found in communal or private ownership.

The law offers two ways to protect forests. The first approach is to allow citizens, businesses, or local governments to assign them legal status in order to then carry out forestry operations. This is economically beneficial: the owner of the site has an attractive alternative to uprooting secondary forest and "restoring" arable land, instead protecting it and generating income through timber sales.

In practice, that didn't work out so well. In its final version, Law №5650 permits legitimizing secondary forests (the law describes them as "self-afforested areas"), or, in other words, officially changing the zoning from "agricultural" to "forestry" in a relatively simple process. Owners of privately-held secondary forest and local governments managing communal lands are both permitted to do this.

Logically at this point, the private owner of the newly-established self-afforested area or a business association would then carry out forestry activities there. But no one has changed forest management rules, and they are applied equally to state-owned forestry enterprises managing 20,000 hectares and one-hectare private or communal forests.

In order to earn income, the owner of a small forest must submit to a forest inventory process, obtain logging tickets, pay land and harvest taxes, prepare piles of paperwork, upload harvest data into the national registry, etc. This is absurd and unprofitable for small forest owners.

Moreover, the law does not require anyone to legalize their self-afforested areas. It's a right but not an obligation. If the owner so desires, they can still legally clear and till the land. Given the

unprofitability of small-scale forestry under these conditions, you can guess what owners or managers will choose to do.

If the state truly intends to protect secondary forest through business and local government, then the passage of №5650 must be followed by developing reasonable rules for forestry management of small forests. Otherwise, the law will go nowhere. No one will recategorize secondary forests when faced with the prospect of continuous potential losses.

The second approach for Law №5650 is to create financial incentives for the conservation of secondary forests, including selling them into state ownership. Unfortunately, there is nothing good to say about such sales of secondary forests. The government never has money for nature protection, so it is doubtful that even 10 hectares might be redeemed in this way. Just two years ago, the federal government transferred all state-owned agricultural land to communities (and almost all of them immediately registered their plots as arable land, hoping for the greatest profit at auction). The law does not specifically address any other financial incentives, and any such stimuli have yet to be developed in detail by the Cabinet.

As an aside, Law №5650 obliges the authorities to inventory secondary forests: identify them, their location, and size and number. But this does not, however, mean that the government will actually conduct such an inventory.

In summary then, Law №5650 alone is unlikely to save even a hectare of secondary forest, yet it remains a step toward their preservation. Real protection requires further work, mostly by the Ministry of Natural Resources.

Part 2. Steppes, meadows and arable lands

Ukraine's legendarily-fertile chernozem soil is already almost depleted due to overuse by farmers. Ukraine is the most plowed country in Europe, and a third of Ukraine's endangered species live in steppe habitats. Today, in place of chernozem, the country has heaps of degraded arable land. Will Law №5650 enable the restoration of tangible areas of degraded agricultural land? Unlikely. In its final version, however, the law introduces a few changes related to land restoration.

In this case, "restoration" is defined as fallowing depleted land or some other method of restoring soil fertility. Degraded lands and lands used in violation of the law are subject to restoration, for example, slopes steeper than 7° that have been tilled.

This is good in concept, but restoration only occurs at the initiative of the land owner or manager! If a community depends on working long-degraded croplands for survival, it is acceptable to

continue depleting them. Restoration is not mandatory.

In addition to secondary forests, steppes and natural meadows are most often listed as "arable land" or "unforested areas" in land cadasters. As a result, they are either tilled or given over to forest plantations.

Some steppes and meadows were more fortunate, officially described as "hayfields" or "pastures." But nothing prevents tilling from occurring if the documented status changes from "haymaking" to "arable land", or even just plowing in spite of its status.

It is noteworthy that the new Law for the first time introduces a legal definition of "steppe land". Uniquely for Ukraine, this is the steppe's first appearance in the legal landscape. The law also prohibits planting forest in steppes as well as converting "pastures", "hayfields", or "fallows" to forest if the land is communal or state agricultural land leased after Law №5650 comes into force.

It is an open question about which of these provisions will be useful. A legal definition of "steppe" does not directly influence the fate of steppe lands. By now, most have been distributed as arable land.

A ban on planting forest in steppe lands will have an impact, but only if activists demand that forestry enterprises first recognize steppe lands as steppe in each specific case. Since land cadasters do not change automatically, steppe remains "not steppe" in the registries. How can it be proven that a forestry enterprise planted forest on steppe lands if there is no record that it was steppe?

The ban on changing "hayfield" or "pasture" categories may save some steppe lands, but not a significant quantity.

Law №5650 makes many other detailed changes to specific regulatory acts. Some are beneficial, some are half-hearted, and some simply will not work. There is, for example, a useful ban on creating forests comprising invasive (alien) tree species. That said, that regulation will only function when the Ministry of Natural Resources finally approves a proposed list of invasive species already found in Ukraine, a move that is being actively opposed by forestry enterprises that are extensively planting introduced American tree species (Red oak and Robinia locusts) across the entire steppe zone. Moreover, in Western European nations these species are banned for use in forestry as especially dangerous species. Officials have not been able to get the list approved over the last five years, even after the list was developed using government funding by Ukrainian National Academy of Sciences scholars.

In another change, local governments will be held responsible for unauthorized logging in forests not

designated for logging. Previously, no one was held responsible for this type of logging. This is, of course, a positive change.

Following the first reading, a number of proposals beneficial to nature disappeared from Bill №5650. For example, the final language no longer includes a moratorium on the plowing of pastures and hayfields or the transfer to private ownership or lease of agricultural reserve land (other than arable land) through 2025. Such regulations could protect certain steppes and meadows from cultivation. A requirement for coordinating planned afforestation activity with the Cabinet of Ministers was also tossed out, and the same fate befell a regulation to protect forests during land transfers for the construction of power transmission lines. Lawmakers also eliminated a regulation limiting peat extraction in natural ecosystems.

As a result, despite the bill's passage overall – indeed a big step forward – the final version lost a large number of potentially useful regulations and innovations.

Overall, Law №5650 has some positives, but they are quite limited. Aside from the section on secondary forests, the law is akin to using wooden posts to prop up a decrepit old house. Each issue the law touches upon is a huge challenge for the entire country. There are no easy solutions here, and wooden posts will not get the job done. We have to make plans, involve specialists, work at length, negotiate, and, finally, develop comprehensive, high-quality solutions. After that, it is critical to build public support and ensure that not a single major agribusiness or other corporate lobbyist gets involved at the last moment with "anti-corrections."

How are secondary forests doing in Russia? Russia has 50 million hectares of "agricultural forests" at stake

In June 2022, having heeded the agribusiness lobby's calls for prioritizing expanding crop planting during the war, the government of the Russian Federation issued a decree that actually prohibits the cultivation of new forests on abandoned agricultural lands and introduces a tough, virtually impossible procedure for land owners and users with existing secondary forests to obtain forestry permits, along with a completely unreasonable reporting system. This is the latest chapter in the long-standing debate about the fate of secondary forests on agricultural lands. Earlier, UWEC published an overview of how different states' approaches to maintaining a balance between food security and the conservation and restoration of natural areas are changing in wartime.

Many lands cultivated in the Soviet era's planned economy turned out

to be completely unprofitable in new market conditions and huge areas were abandoned, especially in Russia's northern regions. In 2019 Greenpeace estimated that there are roughly 76 million hectares of abandoned agricultural land suitable for forestry in Russia, including 30 million hectares covered in mature secondary forest and about 20 million hectares of thickly wooded immature forest stands. For comparison, this is larger than the entire area of agricultural land in Ukraine (43 million hectares). If those 50 million hectares were under competent forest management, this area could yield 300 million m^3 of harvested wood per year in the medium term and support up to 100,000 permanent jobs in the forestry sector alone. Allowing rural forestry would legitimize the restoration of natural forest complexes in locations where they existed prior to the senseless socialist tilling. Encouraging natural secondary forest growth instead of artificial forest plantations is the most effective form of climate forest projects for Russia. In general, it is an obvious positive step, as well as any changes that legitimize rural forestry.

But Russian land legislation and the mindset of agricultural officials have preserved even more immutably all these same prejudices from socialist times, also described above in the context of Ukrainian legislation. In their

way of thinking, a field overgrown with forest is mismanaged and a violation of the "normal" order of things and thus something to be uprooted and land to be tilled. But in a country where the rural population is declining due to petty prohibitions on the efficient conduct of diverse economic activity on their land, this approach is a dead end, a fact that has become obvious to many managers. As a result of this observation, positive changes took place in the Russian regulatory framework in 2018-20.

Federal Law №538-FZ of 27 December 2018 added a new Article 123 "Forests located on agricultural land" to the federal Forest Code, legitimizing land for rural forestry as such. Russian federal decree №1509 followed, adopted in 2020. That decree established that it is sufficient to notify authorized agencies that you are engaging in rural forestry by growing, preserving, and using your forest. A minimal regulatory and administrative burden was envisaged for land owners and users using their land for forestry as was the possibility of both managing existing forests and growing new ones at the discretion of individual land owners.

Destruction of rural forestry

Although the situation had improved by 2020, large-scale rural forestry still required new legal acts and administrative procedures, as public activists informed Russia's president at a meeting of the Council for the Development of Civil Society and Human Rights, held 9 December 2021. It seemed that the president understood.

In January 2022, President Putin tasked the federal government with "analyzing conditions for carrying out activities for growing forests on agricultural land not used for their intended purpose, ensuring that records are kept of the results of such activities and creating the necessary conditions for their implementation, including for the implementation of climate projects, and, if necessary, submitting proposals for making appropriate changes to the legislation of the Russian Federation." In fact, he supported the proposals of the Russian branch of the international Council of Greenpeace on ways to make good use of widespread secondary forest growth on agricultural lands for the benefit of the population and the planet.

As the Russian saying goes, "we tried our best, you know the rest." Under pressure from agricultural holding companies and government agribusiness officials, the Government of the Russian Federation issued a new Decree (№1043, 8 June 2022) that introduces administrative and regulatory restrictions rendering rural forestry almost impossible. It is no longer possible to cultivate new forests on abandoned agricultural lands, and

virtually impossible procedures for obtaining permits and reporting on rural forestry are proposed for lands with existing secondary forests. In addition, as is also true for Ukraine's new law, it is presumed that a farmer or a small agribusiness will be required to carry out forest management in their forests, as well as a number of extremely costly procedures that are beyond the scope of small and medium-sized businesses and completely antithetical for rural forest management.

Taken in combination, these regulatory requirements will completely halt any development of a rural forestry industry, and, accordingly, criminalize land ownership where forest has already grown on old arable land.

One reason for the change of government attitudes toward forests on agricultural lands, is, apparently, the economy's transition to martial law. As we have already described, in April 2022 Putin ordered an accelerated return of abandoned lands formerly held by collective farms to active cultivation, while the ruling United Russia party proposes to till an additional ten million hectares of land within next four years. The authorities now view increased food production as a guarantee of both domestic political stability and a source of export revenue in the long term. We believe that after receiving guarantees from the UN at July 2022 talks in Turkey to facilitate increased Russian grain exports, Russia's desire to transfer all "empty" agricultural lands to large agricultural holdings will only intensify. Accordingly, the determination to till forested lands and seize such lands from small owners unable to so themselves this will also increase. The prospects for expansion of arable lands are very vague, but the harm from the decisions made is already quite tangible.

According to Greenpeace's assessment, there will be at least five negative consequences upon adoption of these amendments:

1. The number and size of fires and the frequency with which they damage settlements and infrastructure will increase given that fines and other punishments will be issued for failure to use agricultural lands. One of the defining features of "negligent use" is the existence of forest on agricultural land absent an established right to use the land for forestry. This will force land owners to destroy young forests, and that the easiest way to destroy them is by lighting stubble fires.
2. Growing crises in the supply of firewood and the inexpensive wooden building material stem from a radical increase in regulatory and administrative burdens on forest users. This has made it impossible or economically unattractive to

supply the population with these cheap products at the expense of forest fund lands, and, to date, the problem is only partly using forests on agricultural lands.

3. Food security will decrease as a mandatory return to agricultural trade in low-productivity and inconvenient lands cleared of forests will force the distribution of agricultural subsidies over a larger area and reduce support for the most efficient producers working on the best lands.
4. Abandonment of rural settlements and entire rural areas will accelerate, especially in less fertile non-chernozem parts of Russia. The absence of rural forestry development prevents implementation of forestry-related socio-economic projects to support jobs and livelihoods.
5. The most promising climate-focused forest projects will be infeasible, given that afforestation of previously treeless lands and awarding managed forest status to spontaneous secondary forests are the most promising options.

"The Russian branch of Greenpeace categorically opposes such a decision by the government," explains Vilen Lupachik, Forestry Program expert at Greenpeace's Russian branch on the organization's website.

"Silviculture in forests on abandoned agricultural lands is an obvious and almost the only way to develop rural areas, especially outside the chernozem region in the north. It is impossible to return over 70 million hectares of currently unused agricultural land to agricultural use. The government also recognizes this challenge, given that it plans to return just 13 million hectares to circulation over the next 10 years through a newly adopted state program. But in order for silviculture to develop, it is necessary to not only stop fining land owners for the presence of forests on their land but also end forced removal of these forests. Decisions on whether to grow forest or agricultural products, and, moreover, how to grow this forest, should be made by the land owner and not bureaucrats. But the government chose the opposite path, and it's a dead end," Lupachik concluded.

The Russian government also recently submitted a bill to the Duma that would make it easier to seize agricultural land in the event of "negligent" use. Now the land of "careless" owners can be seized one year after obtaining usage rights instead of after three years. It will be possible to cancel the right to continuing (perpetual) use, lifetime and inheritable ownership, unreimbursed use, agricultural land leases, and even mortgaged properties. This will put farmers and small agribusinesses on the

brink of failure and consequently reduce their capacity to protect forests on their own land.

Demonization of civil society as "foreign agents" also makes it unlikely that Russian authorities will be able to engage in constructive dialogue with NGOs in the near future or to overcome the impasses created by the legal dead-end described above. As a result, until such a time that top-level management changes take place, Russian rural forestry is in for hard times.

The good news is that it is completely unrealistic to uproot and destroy 50 million hectares of forest, and as a result, more and more unprofitable fields will continue to be overgrown with "illegal" forests no matter what decisions the Russian government makes.

Translation by Jennifer Castner

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