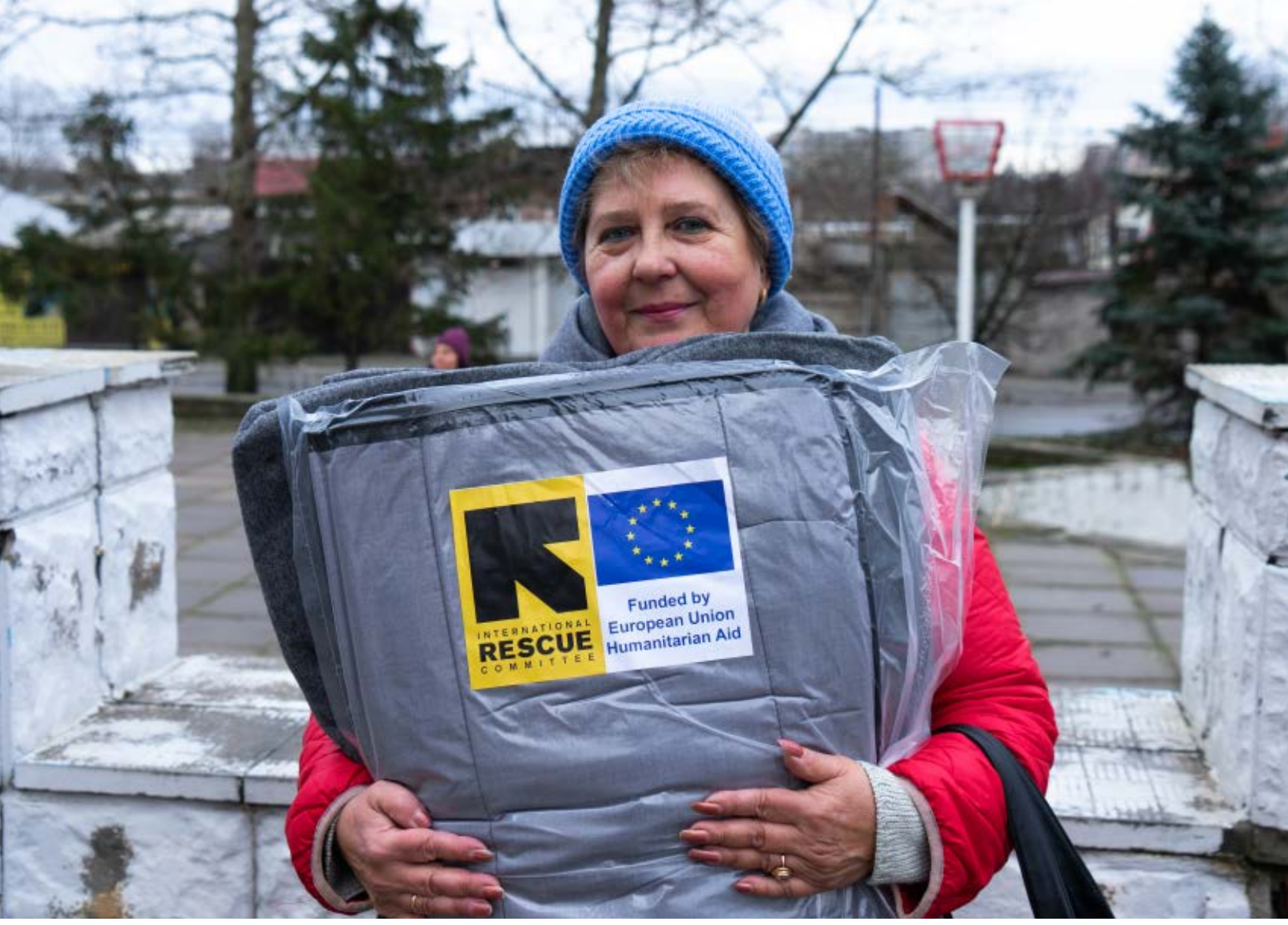

UKRAINE:

REFRAMING THE NARRATIVE OF CLIMATE, ENVIRONMENTAL DEGRADATION AND CONFLICT

WEATHERING RISK adelphi INTERNATIONAL RESCUE COMMITTEE

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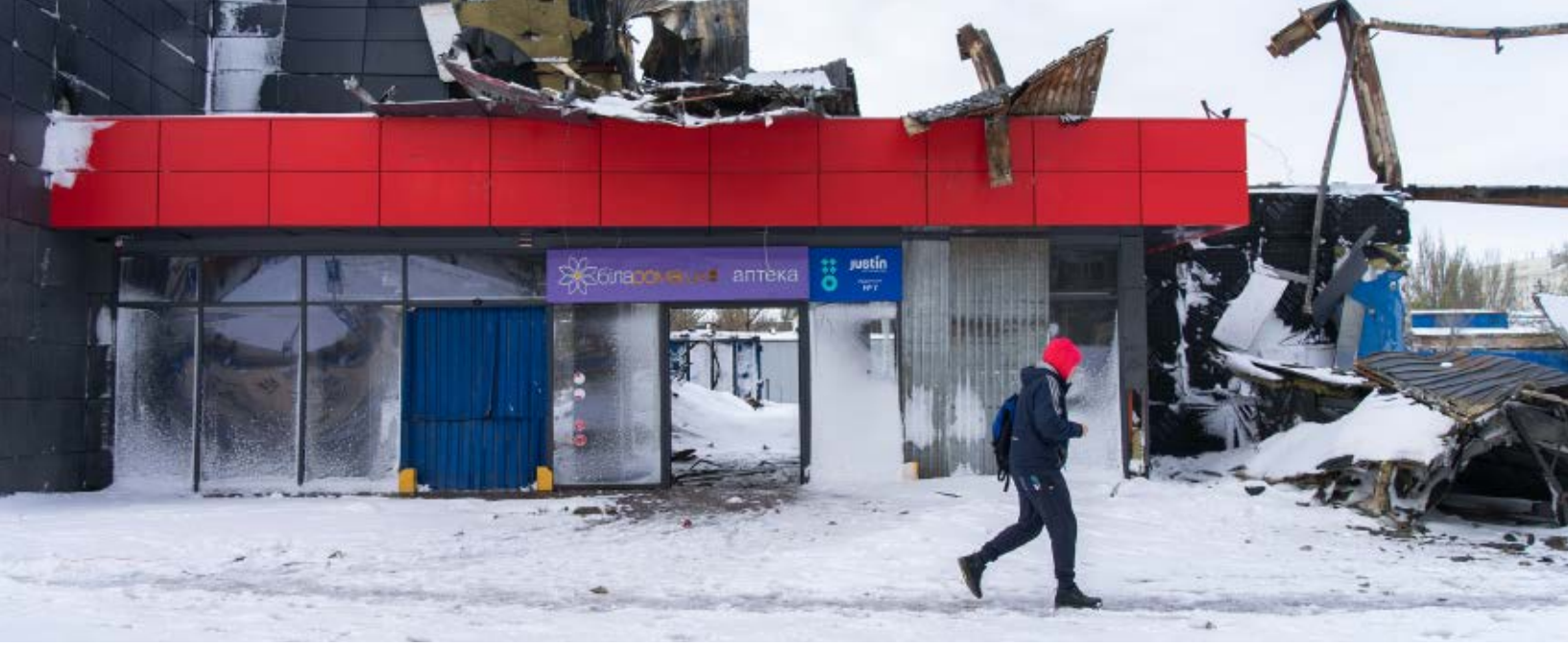
adelphi adelphi is a leading independent think tank and public policy consultancy on climate, environment and development. adelphi's mission is to improve global governance through research, dialogue and consultation. adelphi offers demand-driven, tailor-made services for sustainable development, helping governments, international organisations, businesses and nonprofits design strategies for addressing global challenges.

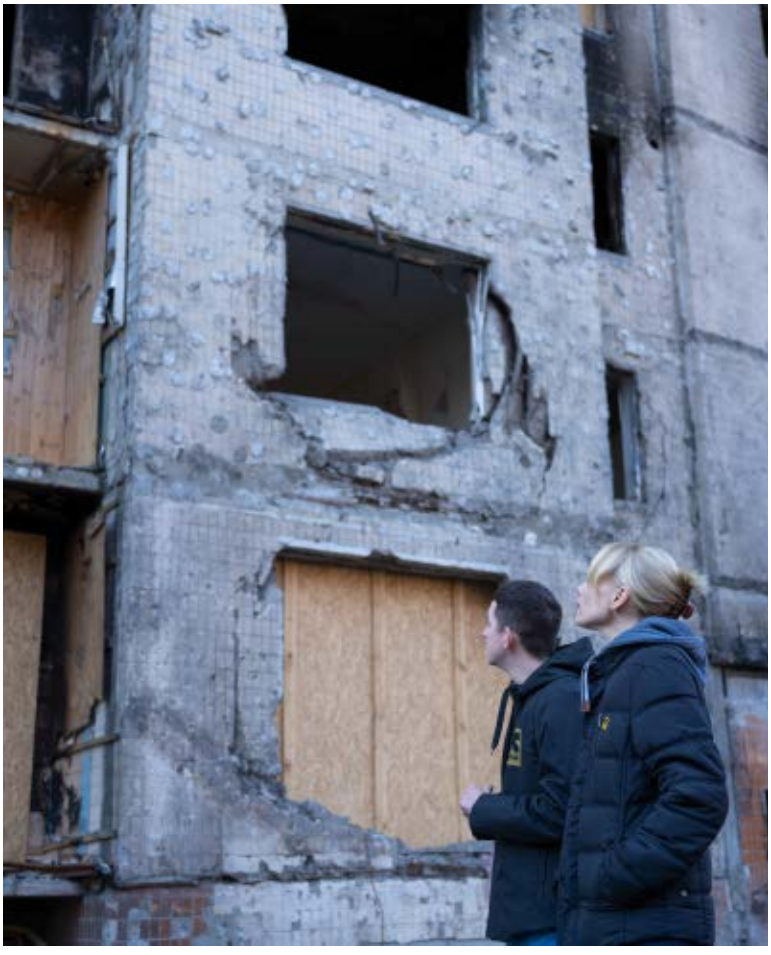
This report has been produced under the **Weathering Risk initiative**, a multilateral initiative that offers tailored analysis and tools to understand climate-related risks to human security and build sustainable peace.

International Rescue Committee The International Rescue Committee (IRC) helps people affected by humanitarian crises—including the climate crisis—to survive, recover and rebuild their lives. In over 40 countries, our teams respond quickly and stay for as long as they are needed. We ensure people not only survive but also recover and rebuild, leading lives defined by the hope and dignity we all deserve.



I. Introduction: why this report?

Since Russia's full-scale invasion in February 2022, the war in Ukraine has been in the spotlight, largely due to its dire human toll and geopolitical implications. To date, the environmental and climate impacts of the war have received limited attention, particularly in relation to humanitarian needs. In just the first 12 months, the war triggered an estimated net increase of 120 million tonnes of greenhouse gases and caused environmental damage exceeding USD 57 billion (The New Humanitarian, 2024). Two years on, this figure reached 175 million tonnes—surpassing the annual emissions of highly industrialized countries like the Netherlands (Ecoaction, 2024). Furthermore, this amount equals the cumulative carbon emissions of five countries classified as Fragile and Conflict-Affected States (FCAS) on the International Rescue Committee's (IRC) Emergency Watchlist: Haiti, Syria, Burkina Faso, Yemen, and Somalia (EDGAR, 2023). The extent to which the war in Ukraine exacerbates the vulnerability of the conflict-affected population to environmental and climatic changes is still not fully understood, creating a gap that hinders timely, climate-security risk-informed humanitarian, and post-conflict responses.



The war in Ukraine has significantly impacted vital resources such as energy and food, exacerbating the humanitarian needs of affected populations and contributing to widespread displacement and economic stagnation (Chatham House, 2023). The war is severely affecting agricultural productivity, soil degradation, water and air pollution, and biodiversity loss, thereby worsening pre-existing environmental degradation and climate change trends (see Box 1). Consequently, affected communities are trapped in a cycle of double vulnerability, with the war further diminishing their ability to cope with the loss of livelihoods and essential resources due to environmental degradation and climatic shocks.

These impacts are not limited to national borders. The war's impacts extend beyond Ukraine's frontiers, affecting global food and energy prices, and increasing food and energy insecurity for vulnerable populations worldwide. Furthermore, the war not only directly contributes to increased carbon emissions and environmental damage through military actions, the use of metals for weapons, and the carbon footprint of military operations, but also complicates global decarbonization efforts and undermines multilateral climate action.

Box 1: **Climate change impacts and environmental degradation in Ukraine**

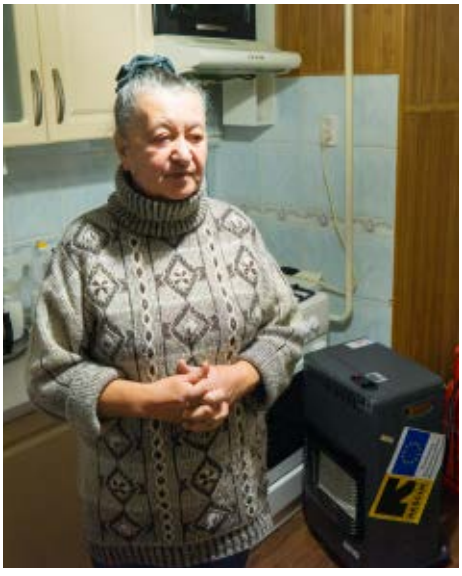
Ukraine is particularly vulnerable to the impacts of climate change. Since 1980, temperatures have been rising by **0.4–0.6°C per decade**, outpacing the average rate of increase in Europe (World Bank, 2021). Over this period, the country has warmed by **nearly 1.5°C**, with the average surface air temperature rising from **9.75°C in 1992 to 11.58°C in 2022**. Under the RCP 8.5 scenario, annual temperature increases could **exceed 4°C by the end of the century**, with the greatest impacts anticipated in the eastern and northeastern regions of Ukraine (World Bank, 2021).[1] The annual seasonal cycle is also expected to change, with summer months becoming longer and hotter, and winters warmer. These shifts will impact ecosystems and vegetation (World Bank, 2021).

These temperature increases have altered precipitation patterns in Ukraine, leading to greater variability in rainfall. Currently, Ukraine experiences significant year-to-year variability in rainfall, with some years being very wet and others very dry (Met Office, 2021). In all scenarios, particularly under RCP 8.5, annual precipitation is projected to increase further by the end of the century, though with substantial unpredictability (World Bank, 2021). The RCP 8.5 scenario also indicates a broader range of precipitation variability across oblasts, suggesting notable spatial differences. Southern and central oblasts are expected to become drier, while northern oblasts will become wetter.

The frequency and intensity of extreme weather and climate events, including heatwaves, thunderstorms, heavy precipitation, flooding, and droughts, are also expected to increase. According to the INFORM Risk Index 2023, Ukraine is classified at a high level of disaster risk, including natural hazards, and low levels of coping capacity. These changes will impact ecosystems and key economic sectors, leading to loss of livelihoods and jobs. Under the RCP 8.5 scenario, yields for all crops except wheat and soybean are projected to decline significantly by 2030 and 2050 (World Bank, 2021). Additionally, the energy and infrastructure sectors will be affected; projected increases in temperature, extreme weather events, and water scarcity are expected to drive up energy demand while putting additional stress on infrastructure (Met Office, 2021).

[1] Representative concentration pathways (RCPs) – used in the climate model experiments reported here – are time-series of changing concentrations of GHGs, aerosols and chemically active gases, resulting from emissions and changes to land-use. The RCP 8.5 scenario represents a high GHG concentration scenario, which assumes that society have not made the necessary efforts to cut GHG emission. Under this scenario, global temperature would increase up to 4.3°C by 2100 compared to pre-industrial temperature levels (Met Office, 2021).

This further exacerbates existing environmental degradation. Even before the full-scale war, Ukraine was experiencing significant soil degradation, with episodes of drought in the Black Sea and Caucasus regions **in 2020 leading to soil moisture deficits** (Barbosa et al., 2021). **Between 2000 and 2010, Ukraine faced five drought events** (2003, 2007, 2008, 2009, and 2010), each **affecting up to 80 percent of the grain crop area** (Walz et al., 2018). Wildfires have also been increasing over the past 20 years. From 2001 to 2023, Ukraine lost 1.26 million hectares of tree cover, representing an **11% decrease since 2000** (Global Forest Watch, 2024). Additionally, Ukraine has experienced major floods in recent decades, which have had dramatic impacts on infrastructure and human security. For example, a major flood in the Carpathian region in July 2008 forced more than 40,000 people to evacuate and resulted in 47 deaths (Didovets et al., 2019).



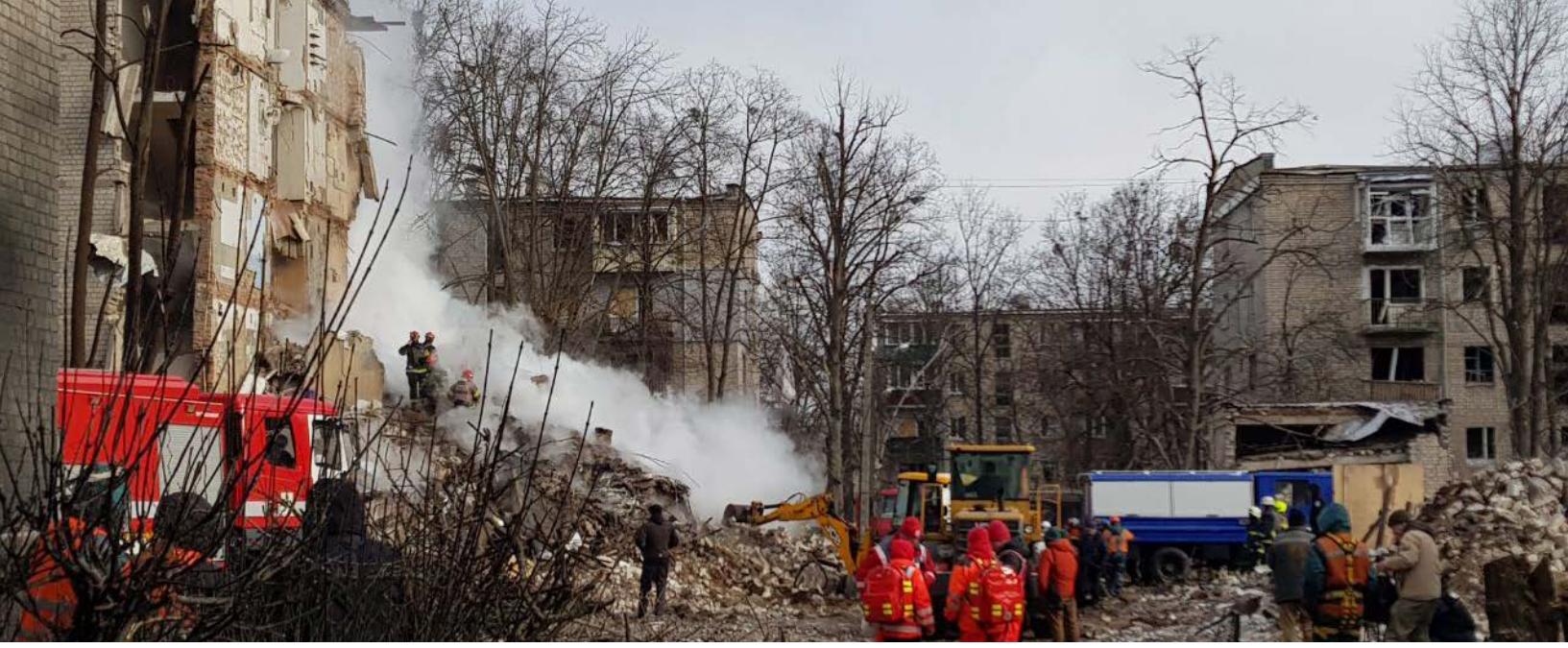
The combination of these factors is exacerbating humanitarian needs in Ukraine. In 2024, 14.6 million people—40% of the Ukrainian population—require humanitarian assistance (OCHA, 2023). An estimated 7.3 million Ukrainians, including 1.2 million children, face moderate or severe food insecurity (IFPRI, 2024). Additionally, 11.1 million people are in need of protection, in particular child protection (3.2 million) and tackling gender-based violence (2.5 million) (OCHA, 2023).

Addressing the impacts of climate change and environmental degradation on humanitarian needs can both strengthen humanitarian responses in building population resilience in the medium to long term and ensure the adequate integration of climate resilience in post-conflict reconstruction efforts.

This report provides a comprehensive analysis of the interlinkages between environmental degradation, climate-related changes, and humanitarian needs in Ukraine. To achieve this, the report outlines the links between the war, environmental degradation, climate change, and humanitarian needs using a pathway approach (see Box 2). It then examines current humanitarian responses implemented by international donors and organizations, identifies gaps, and suggests entry points for addressing them. Finally, the report offers reflections on potential climate-informed strategies for humanitarian organizations in Ukraine.

Box 2: **Methodology**

Data collection for this report primarily involved desk research and the analysis of secondary sources, complemented by conversations with relevant experts to triangulate and fact-check information. It is important to note that the ongoing war in Ukraine impacts the capacity and accessibility to collect data and monitor environmental effects in the most affected regions. Consequently, the extent of environmental degradation and its future impact on the country remains understudied and may be currently underestimated.



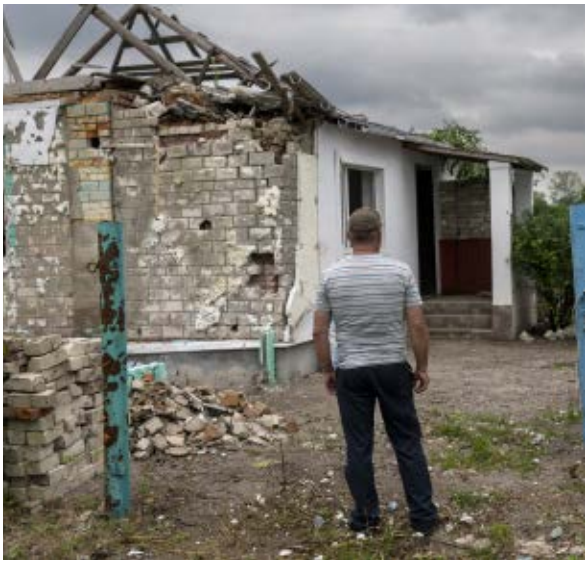
II. Climate and environmental linkages to the Ukraine

Research has proven that armed conflict significantly contributes to environmental degradation, affecting water availability and quality, soil and landscapes, air quality and greenhouse gas emissions, as well as biodiversity and ecosystem services (Shumilova et al., 2023). The Gulf War, for example, demonstrated how the widespread burning of oil fields led to pollution of lakes, soil, and deserts while impacting wildlife (BBC, 2023). It is also evident that climate change, by amplifying existing pressures on the environment and ecosystems, exacerbates these dynamics (Weathering Risk, 2023; IOM, 2024). In Yemen, for instance, climate change has already altered agricultural production due to increasing temperatures, rainfall variability, and the rising occurrence of extreme weather events, such as droughts and sandstorms (ICRC, 2022). These dynamics are already visible in Ukraine, contributing to worsening humanitarian needs in a number of ways.

Environmental degradation and climate changes exacerbate war-driven food insecurity and malnutrition

Land and environmental degradation in Ukraine have intensified due to the war, leading to a decline in agricultural production. The pervasive insecurity, infrastructure damage, and contamination from Explosive Remnants of War (ERW) linked to the war, combined with the enlistment of individuals previously employed in the agricultural sector, have severely disrupted the agri-food industry—a key economic sector in Ukraine, with around 17% of the labor force engaged in it as of 2021 (World Bank, 2021). All major crop production has dropped significantly since the start of the full-scale war in 2022. For example, maize production has fallen from 42.1 million metric tonnes (Mt) to 27 million Mt, and wheat production has decreased from 33.0 million Mt to 21.5 million Mt (IFPRI, 2024). In comparison, the decline in maize production in Ukraine (around 15 million Mt) alone surpasses the entire maize production of Ethiopia for 2024 (10.2 million Mt), the third-largest producer in Africa after South Africa and Nigeria (Worldstats, 2024).

This impact has been particularly pronounced in the southern and eastern regions of Ukraine, where most agricultural production is concentrated and where flighting has been most intense (BBC, 2023). Although crop production figures for 2023-2024 showed a slight increase, largely due to farmers' efforts to adapt to the wartime conditions, production has not yet returned to pre-war levels (IFPRI, 2024).



Conflict-related environmental degradation is likely to be worsened by the impacts of climate change, particularly through increased temperatures and extreme weather events. Even before the full-scale war, Ukraine experienced droughts, notably in 2003 and 2007, which resulted in substantial grain production losses (Walz et al., 2018). More recently, in July 2024, eastern Europe, including Ukraine, faced drier-than-usual soil conditions, heatwaves, and droughts, particularly in the eastern part of the country (Joint Research Centre, 2024). These factors have severely affected crop production in the region (Shumilova et al., 2023) and have been acutely felt in Ukraine, where farming conditions are further constrained by the ongoing full-scale war and reduced investments in climate change adaptation (see Section 5). Consequently, the loss of crops due to climate-related extreme events can lead to unsustainable livelihood practices.

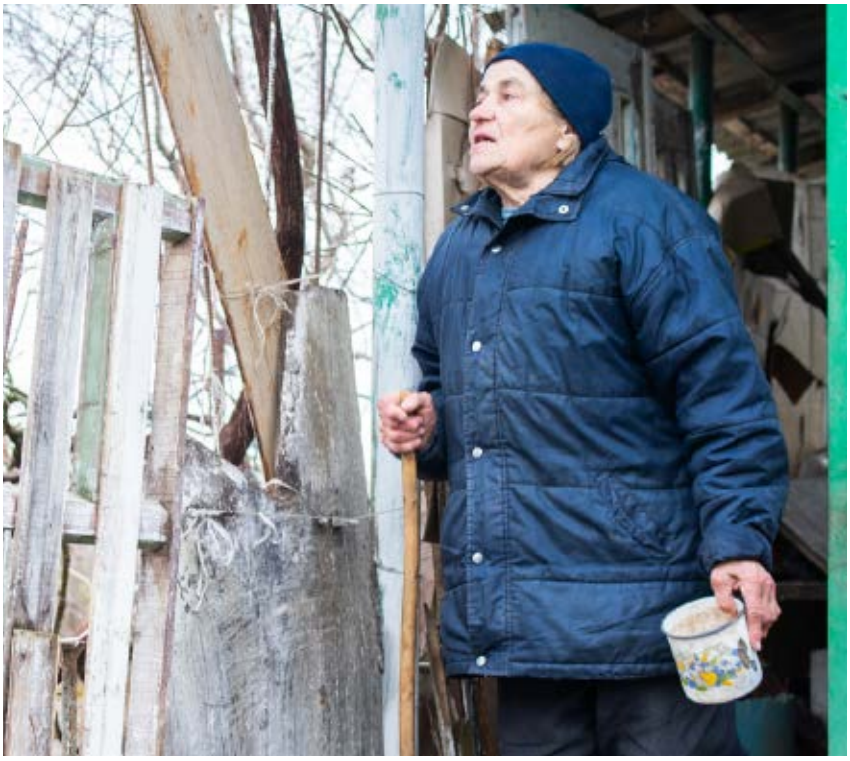
Declines in agricultural productivity and loss of livelihoods due to the combined effects of the war and climate change are escalating food insecurity in the country. The war has pushed up to 7.3 million people into food insecurity in 2024, according to the Humanitarian Needs Response Plan 2024 (OCHA, 2023). Those living near the front lines in the East and North of the country are most affected, especially when it comes to vulnerable groups such as women and children. The war has exacerbated pre-existing inequalities related to gender, age, and disability. For example, prior to the full-scale war, 37.5% of female-headed households were already experiencing moderate or severe levels of food insecurity, compared to 20.5% for male-headed households (UN Women, 2022). The conflict has deepened these disparities. With reduced access to land and credit, and ongoing salary and pension gender gaps, women in Ukraine are more likely to face food insecurity.

Climate change and environmental degradation exacerbate water insecurity and heighten health risks

The war in Ukraine is directly impacting water availability and quality due to the damage inflicted on water infrastructure and the resulting environmental degradation. Climate-related variability and extreme weather events are further intensifying water stress across the country.

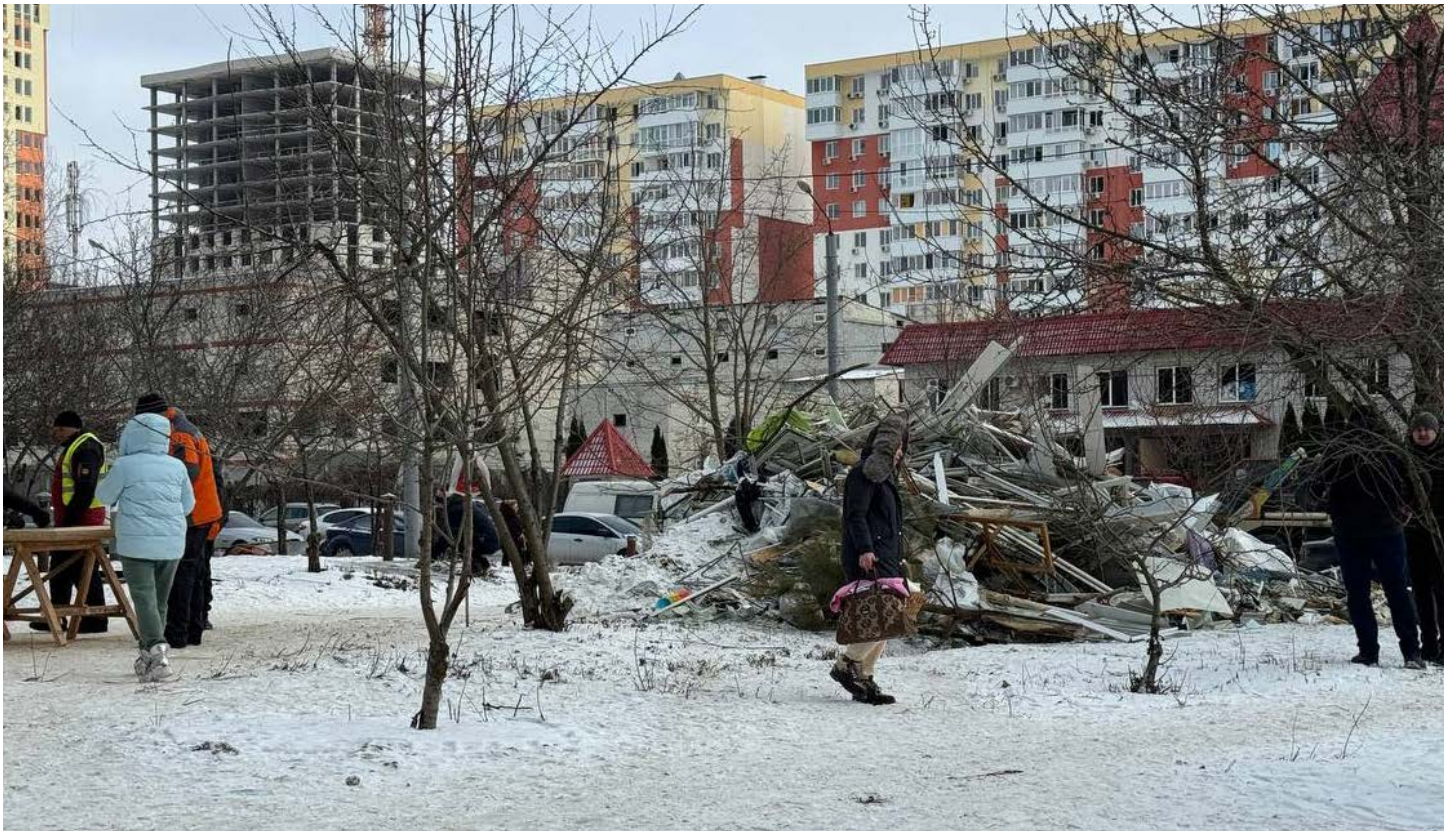
Ukraine's water system, already under stress due to aging infrastructure, has suffered further damage during the war, significantly decreasing water security. The country's water infrastructure—including large reservoirs, hydropower dams, industrial cooling facilities, pipelines and canals for household irrigation—has been poorly maintained since the collapse of the Soviet Union (Shumilova et al., 2023). As a result, approximately 40% of the network was in critical condition, and 35% required rehabilitation even before the war escalated (World Bank, 2021). This has led to repeated interruptions in water supply and wastewater collection services, resulting in water pollution and river contamination (World Bank, 2021). The war has worsened these issues; for example, it is estimated that up to 40% of the water supply system in Mariupol was damaged in 2022 (Shumilova et al., 2023).

The combined impacts of the war and environmental degradation are also negatively affecting water quality and, consequently, human health. In addition to difficulties accessing water for both domestic and economic use, constant shelling, ERW and chemical releases from damaged infrastructure are exposing surface and groundwater to pollution. This poses significant health risks, including the potential for cholera epidemics due to the mixing of sewage and drinking water (Euractiv, 2022). In 2023, waterborne infectious diseases such as viral hepatitis and gastroenterocolitis, linked to poor hygiene and water quality, have already been reported (RBC-Ukraine, 2024). Strengthened epidemic investigations are ongoing to prevent a cholera outbreak, but no confirmed cases have been recorded to date (Ministry of Health of Ukraine, 2024).



The destruction of key water infrastructure due to the war has also had severe environmental consequences, affecting water quality. For instance, the destruction of the Nova Kakhovka dam near Kherson—Ukraine's largest dam and a major water treatment facility—resulted in the contamination of critical downstream water sources (Crespi et al., 2024). The damage also triggered massive flooding, releasing chemical pollutants such as machine oil and liquid fertilizer into the soil and rivers (UNEP, 2022). In addition to inundating thousands of hectares of agricultural land in what was once the country's southern breadbasket, the flooding forced thousands of people to evacuate (BBC, 2023; The New Humanitarian, 2024).

In addition to the environmental damage caused by the war, climate change is contributing to increasing water scarcity in Ukraine. Reduced precipitation between October 2019 and March 2020, coupled with warmer temperatures and droughts in the southwest and central regions, has impacted water availability across the country (Barbosa et al., 2021). Lower river flow conditions in eastern Europe have also affected water resources around the Southern Bug and its major tributaries (Barbosa et al., 2021). As a result, in 2022, the United Nations reported that 6 million people in Ukraine were struggling daily to access drinking water, with 1.4 million lacking access to safe water in the east of the country (UNICEF, 2022). War-related damage to water infrastructure, combined with climate-induced water scarcity, has also disrupted irrigation systems, particularly near the frontlines in eastern and southern Ukraine, where the cultivation of strategic crops—especially wheat, as well as sunflower and barley—is concentrated (OSW, 2021).



Environmental degradation and climate-induced extreme weather events exacerbate protection needs

As a result of the war, protection needs have skyrocketed across the country. The widespread presence of landmines and repeated shelling undermine both the security and resilience of the population. Additionally, environmental degradation and climate-induced extreme weather events are further intensifying protection needs, particularly among women and children.

Over 11.1 million people in Ukraine – especially women and children, people with disabilities, and the elderly - currently require protection assistance (Nonviolent Peaceforce, 2022). More than 6.7 million Ukrainians are also at risk from landmines and ERW across the country. As of June 2023, landmines had been reported in at least 11 of Ukraine's 27 regions, particularly in the southern and eastern parts of the country, including Donetsk, Kharkiv, Luhansk, and Odesa (Human Rights Watch, 2023). According to the Ukrainian government, more than 174,000 km^2—nearly 29% of Ukrainian territory—needs to be surveyed for mine contamination (Government of Ukraine, 2023).

The widespread presence of mines has made accessing certain parts of the country difficult, hindering the delivery of humanitarian aid (Human Rights Watch, 2023). Landmines and ERW also restrict access to agricultural lands, reducing the capacity for farming (Human Rights Watch, 2023). Most civilian casualties from mines and ERW occur during farming or forestry work (The Halo Trust, 2022). As of April 2023, 10% of Ukraine's agricultural land was considered contaminated by landmines and ERW, preventing planting on over five million hectares (ACAPS, 2024).

In addition to the direct threat to human life, landmines cause soil and environmental degradation, releasing chemicals into the soil and water. The demining process itself can further degrade land, significantly impacting agricultural production and increasing the need for assistance (UNEP, 2022).

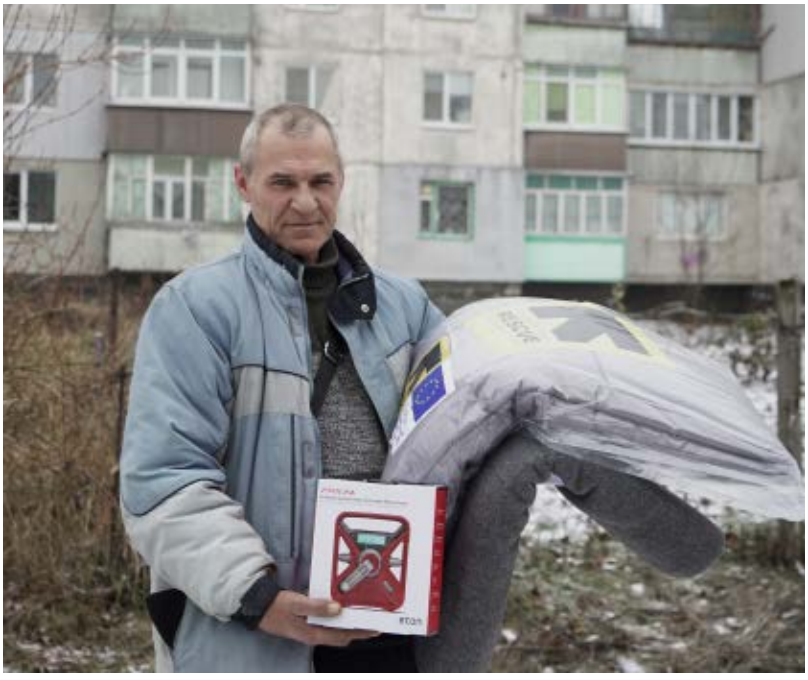
The increasing occurrence of climate-induced extreme weather events risks exacerbating these dynamics and related protection needs. The loss of soil fertility due to the war is already placing pressure on the agricultural sector. Additionally, the heightened frequency of floods and other extreme weather events linked to climate change is likely to further escalate these needs. Extreme weather events, in themselves, pose significant risks, destroying homes and displacing thousands of people across the country. For instance, in June 2020, floods in western Ukraine caused major infrastructure damage, affecting over 500 km of roads and destroying more than 14,000 homes (Met Copernicus EMS, 2020). Energy infrastructure is particularly vulnerable to extreme weather events, such as heatwaves and heavy storms, impacting people's access to electricity and heating, and thereby endangering them during both cold winters and hot summers (Reuters, 2022). Overall, these extreme weather events complicate immediate relief and relocation efforts, placing additional strain on the humanitarian system (OCHA, 2023).

Protection needs are especially heightened for vulnerable groups such as women and children. Before the full-scale war began, two-thirds of women in Ukraine had experienced some form of gender-based violence (GBV) in their lifetime (OSCE, 2019). The deteriorating security situation sharply increases the risks they face, with an estimated 2.5 million people at risk of GBV as of 2023, 88% of whom are women (HRP, 2023). Children are also disproportionately at risk of family separation and abuse amid the widespread displacement caused by the war (OCHA, 2023). Extreme weather events and conditions exacerbate these challenges by increasing economic instability, food insecurity, mental health issues, and disrupt access to infrastructure and housing—all of which are key drivers of gender-based and other forms of violence (van Daalen et al., 2022).

Climate change and environmental degradation exacerbate war-induced displacement

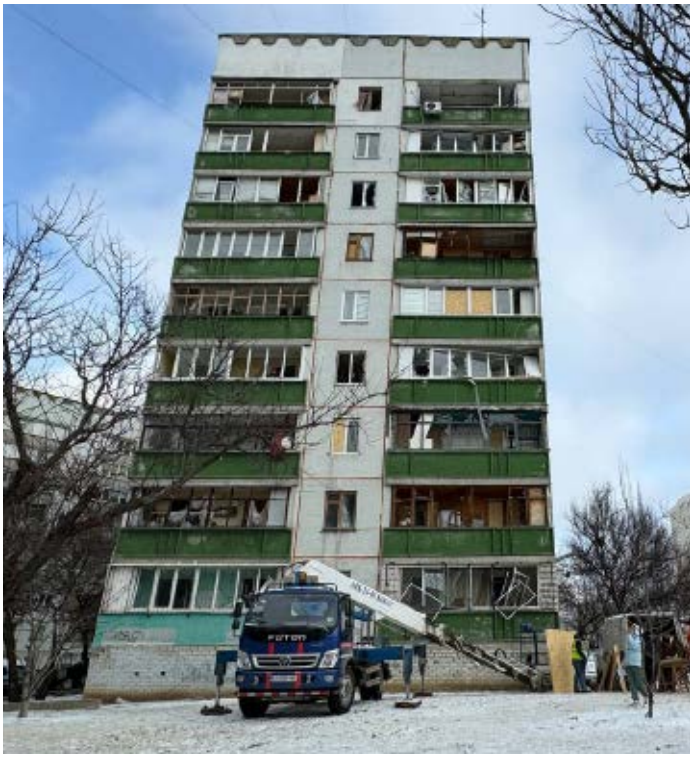
War-induced displacement is further exacerbated by the impacts of climate-induced extreme weather events. The conflict in Ukraine has forced over 6.7 million people to leave the country and internally displaced more than 3.4 million people (UNHCR, 2024). The active security threats posed by the war, combined with the destruction of homes and infrastructure and the loss of livelihoods, are key drivers of displacement. Additionally, increasing numbers of people in Ukraine are being displaced by climate-induced extreme weather events, such as floods, wildfires, and storms (IDMC, 2024). Between 2020 and 2023, extreme weather events caused the displacement of 4,600 people, with 60% of this displacement attributed to floods and 27% to wildfires (IDMC, 2024). These trends are expected to worsen according to current climate projections for Ukraine (World Bank, 2021).

In an already-fragile war context, this exacerbates the humanitarian needs of the displaced population (OCHA 2022). Ukraine is already suffering from a lack of access to shelter for its displaced population. In March 2022, around 21% of internally displaced people (IDPs) reported having difficulties finding a place to sleep for themselves and their families (IOM, 2022). Social cohesion between displaced populations and host communities has also been decreasing, with disputes arising over access to cash assistance provided by humanitarian actors, especially in the western regions, which host many IDPs (IDMC, 2024). Reduced access to basic services such as drinking water, sanitation, and education is also common among IDPs. These trends are likely to be exacerbated by further displacement driven by extreme weather events.



At the same time, internal displacement contributes to environmental degradation, leading to the loss of resources crucial for people's livelihoods. Conservationists have already expressed concern about biodiversity loss in Ukraine due to the relocation of displaced populations into protected areas (WWF, 2022). For example, over 15,000 IDPs were relocated to the Carpathian Biosphere Reserve in western Ukraine (Yale 360, 2022). This situation introduces multiple risks, including increased poaching of protected species (e.g., sturgeon), illegal logging, deforestation, pollution, waste, soil degradation, and depletion of water resources (WWF, 2022). Consequently, large-scale displacement may cause further environmental damage in Ukraine, which, in turn, can lead to increased livelihood insecurity for the affected populations.

The war undermines climate and environmental action



The war in Ukraine has significantly disrupted climate mitigation and adaptation efforts both within the country and globally. During COP27, Ukrainian President Zelenskiy confirmed that effective climate action is impossible while the war continues, stating that „there can be no effective climate policy without peace" (The Guardian, 2022). National spending has been largely focused on responding to the Russian full-scale invasion, with up to 50% of the public budget allocated to war efforts in 2023 (Ministry of Finance of Ukraine, 2022). Renewable energy investments have also suffered due to the armed conflict, with nearly 90% of the country's wind power and 50% of its solar energy capacity damaged or suspended because of the ongoing war (Chatman House, 2023). Furthermore, the full-scale war in Ukraine has shifted global energy priorities. The increased energy prices and sanctions on Russian oil and gas have led some countries to return to fossil fuels, with announcements of new coal power stations and investments in oil and gas development (Chatman House, 2023).

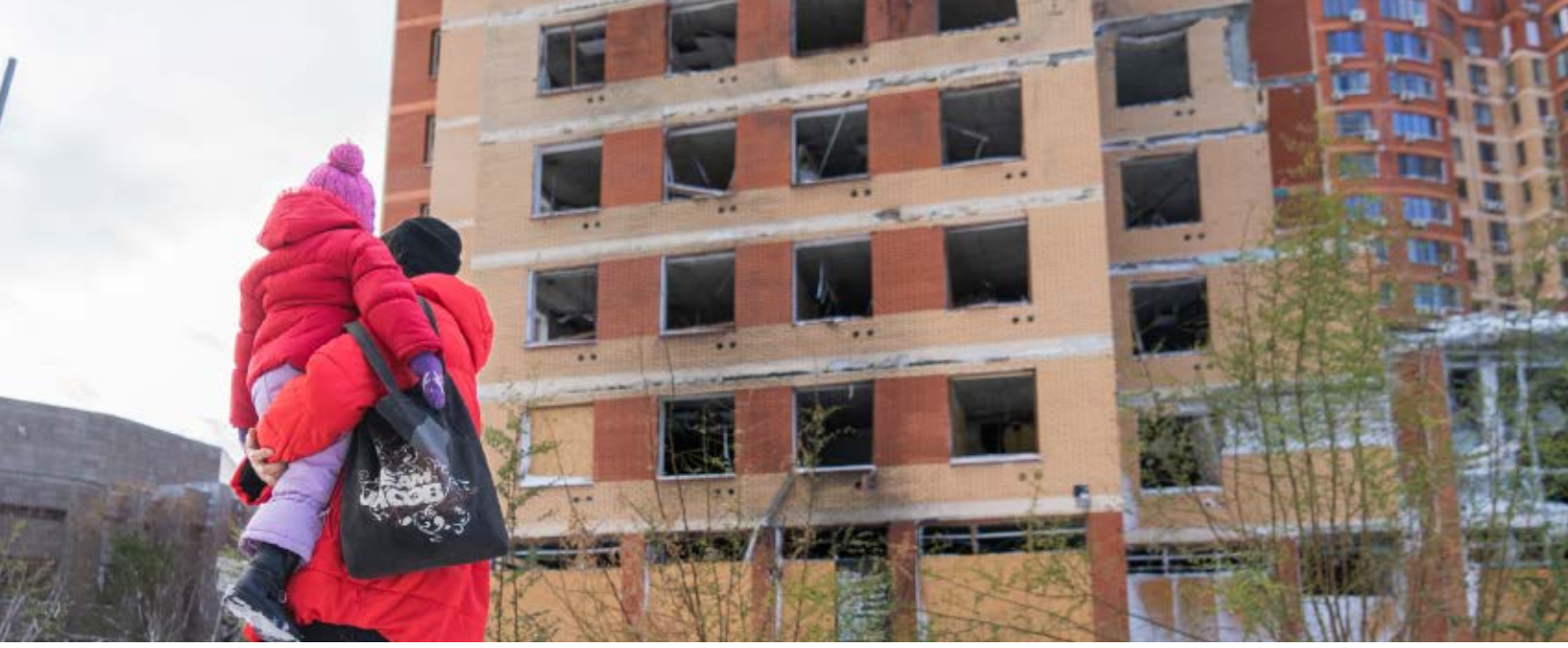
Conservation efforts, such as the protection of biodiversity hotspots, have also been suspended or interrupted due to the ongoing war. The conflict has caused direct damage to natural parks through repeated bombings, military manoeuvres, and attacks. Additionally, the war has led to a reduction in the number of rangers and employees in conservation areas and key ministries due to the mobilization for the war effort (WWF, 2022). More than 24 protected areas across Ukraine have reportedly suspended their conservation activities (WWF, 2022). With forest management authorities suspending their activities in conflict zones, illegal logging, poaching, and other environmental crimes are at increased risk (WWF, 2022). Forest protection is particularly threatened as the Ukrainian government lifted regulations prohibiting logging in protected forests in 2023 to boost timber exports, which had been impacted by the full-scale war (Financial Times, 2022; Ecoaction, 2024).

Wildfires are increasing because of the combined impacts of the war and climate change, further hampering climate change mitigation efforts in Ukraine and Europe. Between February and May 2022, at the start of the full-scale war, over 160,000 hectares of Ukrainian forest were burned due to hostilities and repeated bombings (Yehor, 2022). Wildfires caused by shelling were the most frequent source of forest disturbance in the conflict-affected areas (Matsala, 2024). The number of wildfires has drastically increased since the beginning of the war, with the burned forest area in 2022 being 25 times larger than in 2021 (Chatman House, 2023). Accessibility constraints for firefighters are contributing to the expansion of forest fires and the size of affected land (Matsala, 2024). In addition to causing displacement and loss of livelihoods, wildfires reduce the carbon sequestration capacity of Ukrainian forests, with negative repercussions across Europe. Alarmingly, projected increases in temperature, particularly during summer, are expected to worsen these trends by causing more frequent heatwaves and higher aridity, especially in the south and east of the country (World Bank, 2021).

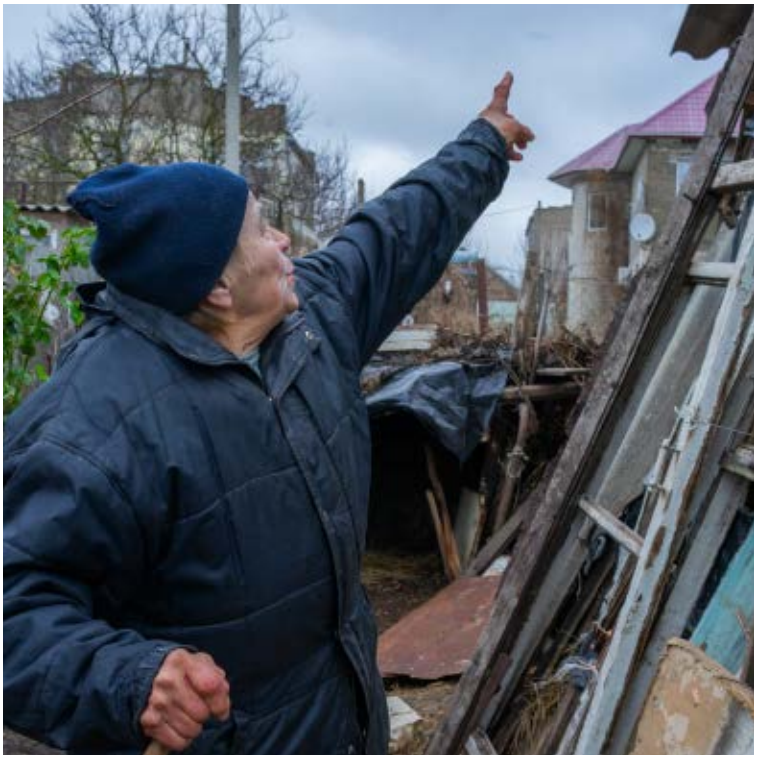
Box 3: **Global Repercussions of the War, Environmental Degradation, and Climate Change in Ukraine**

The impacts of the war in Ukraine are being felt in other fragile contexts worldwide due to the interconnectedness of energy and food supply systems. **Before the war, Ukraine accounted for 10% of global wheat exports, 13% of barley, 15% of corn, and more than 50% of sunflower oil** (Sobolev, 2023). As the productivity of these key crops has been severely impacted by the war, combined with the effects of environmental degradation and climate-induced extreme weather events in Ukraine, global food prices have risen. This increase has affected countries highly dependent on Ukrainian imports to meet their basic food needs. For example, Egypt, the largest buyer of Ukrainian wheat, had sourced nearly 80% of its wheat from Ukraine; since the onset of the full-scale invasion, bread prices there have increased by 50% (International Crisis Group, 2022). Similarly, Somalia, which imported 90% of its grains from Ukraine and Russia before the invasion, has experienced significant increases in food prices (VoA, 2023). **The volatility in global food commodity prices has also affected the capacity of humanitarian organizations to deliver food aid, exacerbating the vulnerability of conflict-affected populations worldwide**. For instance, one year after the war began, the World Food Programme (WFP)—which purchases 40% of its grain from Ukraine—reported a 44% increase in its costs (Chatman House, 2023).

Similar dynamics are evident in global energy access. **The war in Ukraine has led to significant price increases in the energy sector, with crude oil prices rising dramatically between 2020 and 2022**. Energy security is crucial for political stability, and the war in Ukraine risks exacerbating poverty and social unrest in other regions, particularly in the Middle East and North Africa, where countries heavily rely on energy imports from Ukraine and Russia (Chatman House, 2023). **In countries such as Jordan, Tunisia, and Yemen, dependence on gas and oil from Ukraine and Russia has led to substantial economic consequences, with inflation rates rising sharply** (International Crisis Group, 2022).



III. Opportunities to Address Environmental and Climate Risks in Humanitarian Response in Ukraine

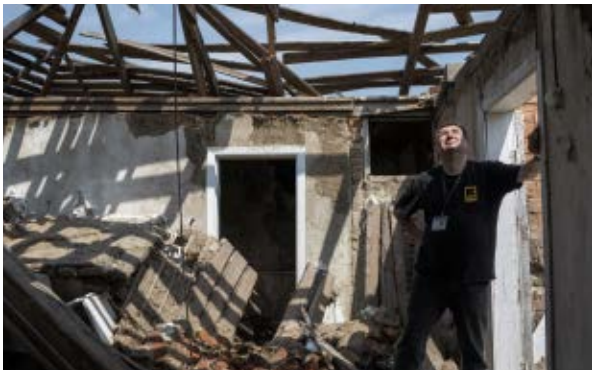


Across different conflict-affected and crisis contexts, survival often takes over environmental and climate concerns. In Ukraine, there already have been efforts to monitor and raise awareness about the environmental damage caused by the war, largely led by international and Ukrainian environmental organizations and networks. For example, the Ukrainian civil society organization Ecoaction has been monitoring environmental damage caused by the full-scale war and advocating for a green post-war reconstruction (Ecoaction, 2024). In 2022, activists, environmental experts, and journalists formed the Ukraine War Consequences Work Group with the objective of collecting and analysing information about the war's negative impacts on environmental degradation. Their focus includes key topics such as climate change, ecosystem degradation, green recovery, and nuclear safety, among others (UWEC, 2024). Despite these efforts, there has been limited follow-up in terms of remedial actions.

Humanitarian responses are designed to address immediate and emergency needs in the short term, but their prospective longer-term impacts need to be carefully considered. For example, a waste management site was established in Bucha to collect the rubble from destroyed buildings in the Kyiv region. The priority was to clear the settlements as quickly as possible so that people could return. However, this approach meant that waste was not initially sorted, which now poses challenges for proper disposal, particularly given the high levels of asbestos present. (UNDP, 2024; Nielsen O. & Hodgkin D., 2022).[2]

Funding for humanitarian, relief, and recovery projects in Ukraine has, to date, only partially addressed the environmental and climate dimensions of the war. For example, while the Humanitarian Response Plan (HRP) acknowledges the importance of reducing the environmental impact of humanitarian interventions, it does not explicitly incorporate climate change as a factor exacerbating risks (OCHA, 2023). The Ukraine Relief, Recovery, Reconstruction, and Reform Trust Fund, managed by the World Bank under the Multi-Donor Resources for Institutions and Infrastructure (MRII), primarily supports infrastructure projects. However, only one project, focusing on the repair of residential houses, explicitly addresses climate resilience (World Bank, 2024). Additionally, the Ukraine Community Recovery Fund, a pooled fund administered by the UN Multi-Partner Trust Fund Office, includes projects aimed at community-based recovery of agricultural livelihoods, but these projects do not reference the impacts of climate change or specific measures to address them (MTPF, 2024). Similarly, at the Ukraine Recovery Conference in Berlin earlier this year, experts expressed concerns about the lack of integration of nature protection, restoration issues, and biodiversity concerns within discussions on green recovery and sustainable development (UWEC, 2024).

The landscape is changing as the focus of international support for Ukraine shifts toward planning for post-conflict recovery. The UN in Ukraine Transitional Framework, the strategic document supporting the Government of Ukraine's response to the economic and social impacts of the war, reflects this shift. It proposes connecting immediate humanitarian needs with longer-term recovery (UN, 2022). The strategy includes components for resilience building, such as infrastructure reconstruction, energy and environment, housing, livelihoods, and job creation, as well as environmental reparations like mine action and debris removal (UN, 2022).



In line with this, an increasing number of organizations are launching integrated programs that address the environmental and climate drivers of humanitarian needs, with a long-term perspective on post-conflict recovery. For instance, the World Food Programme, in partnership with the Food and Agriculture Organization, is working to monitor the presence of mines and other explosive remnants of war on small-scale agricultural lands. This initiative aims to restore agricultural productivity while reducing environmental degradation and land contamination (WFP, 2024). In February 2024, the UNDP launched the Environmental Compact for Ukraine, which calls for an evaluation of the environmental damage caused by the war and emphasizes the need for recovery and post-war restoration (UNDP, 2024).

[2] It is estimated that 70% of buildings in Ukraine contained asbestos, a construction material largely used for slate roofs and insulation. While asbestos is relatively safe when bound in structures, when set free (e.g. via bombing), it can cause various forms of cancer (WHO, 2024).

Box 4: **Climate Change and the Environment in Humanitarian Action**

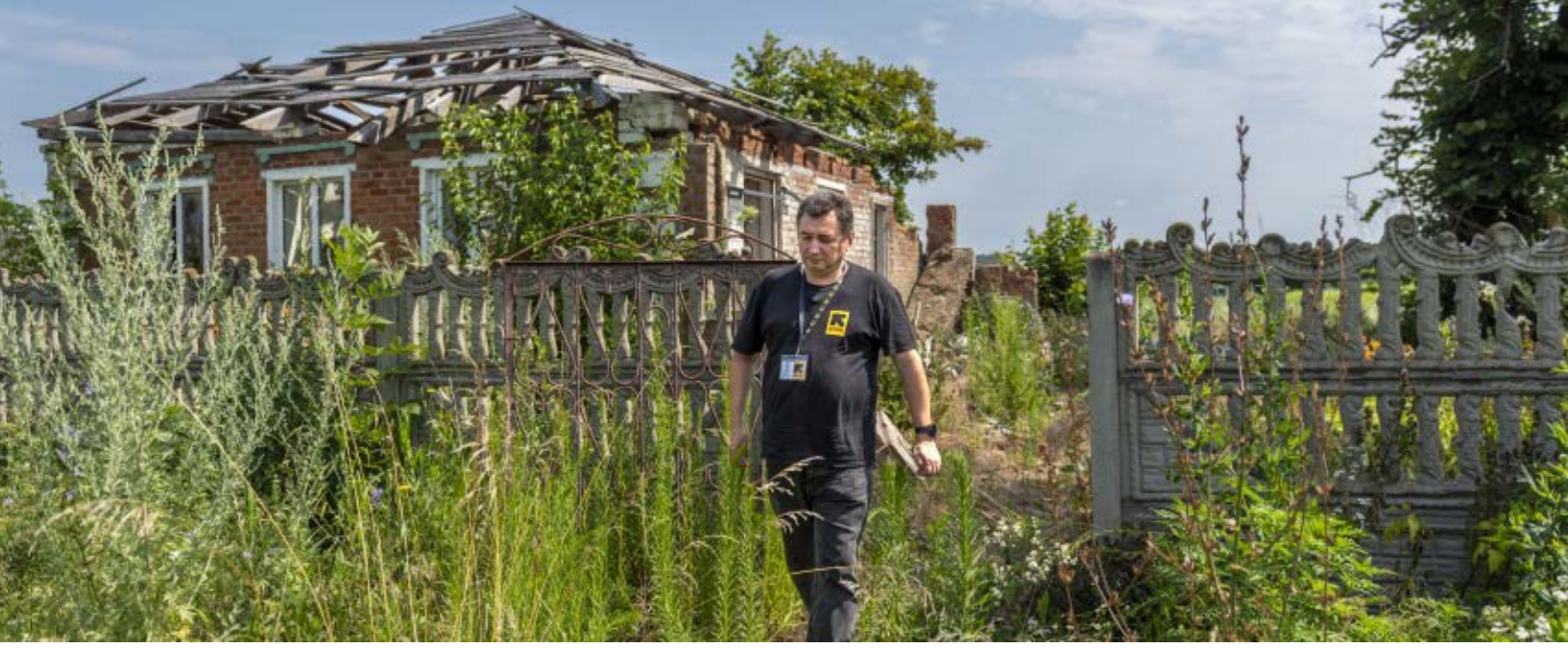
The International Committee of the Red Cross (ICRC) was one of the first organizations to recognize that climate change is and will affect humanitarian action in its 2019 report (ICRC, 2019). Drawing on its expertise in humanitarian law, the ICRC advocated for the establishment of the Climate and Environment Charter for Humanitarian Organizations in 2021 (ICRC, 2021). **This charter, signed by more than 400 humanitarian organizations, outlines commitments for humanitarian actors to address the climate and environmental crisis** (ICRC, 2021). Although based on voluntary signatures, the charter has played a significant role in mainstreaming climate and environmental considerations into humanitarian action.

In 2021, the Under-Secretary-General for the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) also emphasized the need to address the climate crisis, noting that it is "already one of the top drivers of humanitarian needs and human suffering" (OCHA, 2021). **By 2024, the climate crisis was identified as one of the nine Areas of Common Concern** (AOCC) for inter-network collaboration during the Humanitarian Networks and Partnerships Week (HNPW) (Inter-Agency Standing Committee, 2024). An increasing number of humanitarian organizations have since re-focused their interventions in climate-vulnerable, conflict-affected settings to strengthen community resilience and capacity to adapt to a changing climate. For example, the International Rescue Committee (IRC) has invested in climate-smart agriculture and livestock production, community natural resource management, and climate-resilient crops to reduce vulnerabilities to climate stress and shocks in Syria. It has also supported anticipatory actions to climate hazards in Nigeria.

The government of Ukraine has made significant strides in acknowledging and addressing environmental and climate factors, particularly in the context of post-conflict reconstruction plans. In 2021, Ukraine endorsed the Environmental Security and Climate Change Adaptation Strategy of Ukraine until 2030. This strategy outlines the framework for Ukraine to fulfil its international obligations under the Paris Agreement while also enhancing its resilience to climate impacts (UNDP, 2021).

In 2022, the government established the National Council for Recovery from the War, which includes a working group on environmental safety tasked with developing proposals for the 10-year recovery plan launched in July 2022. Priority areas identified by this working group include the sustainable use of natural resources, conservation of natural ecosystems, and effective waste management (Chatman House, 2023).

In 2024, the Platform for Action on the Green Recovery of Ukraine was established at the Ukraine Recovery Conference in Berlin. This platform aims to coordinate environmental responses among donors and the Government of Ukraine (UNEP, 2024; Government of Ukraine, 2024). Prompt action on these initiatives would contribute to mitigating the humanitarian consequences of both war-induced environmental degradation and climate change. However, it remains to be seen how effectively these priorities will be addressed in the face of other pressing needs in post-war Ukraine.



4. Way ahead

There is little doubt that the current humanitarian crisis in Ukraine is primarily driven by the protracted war situation, not by climate change, as survival needs take precedence over environmental concerns. However, the war exacerbates the impacts of climate change and environmental degradation, which in turn further intensifies existing vulnerabilities and suffering.

Therefore, it is crucial that humanitarian efforts in Ukraine—and in other protracted conflict contexts—acknowledge these factors and seize the opportunity to address environmental and climate impacts. To this end:

HUMANITARIAN ORGANISATIONS IN UKRAINE SHOULD:

1. **Enable data generation on environmental degradation and climate-related risks in the areas of interventions,** including secondary hazards that result from the war – such as asbestos contamination - and ensure there are appropriate plans and procedures in place to deal with them; this is crucial for humanitarian interventions not just to help "build back better", but also "build back safer" and contribute to Ukraine's post-war green recovery.

2. **Strengthen preparedness to reduce the need for short-term action** by giving particular importance to scaling up anticipatory action and community-based disaster risk reduction, such as early warning and early action systems, as this can significantly reduce the loss of lives and livelihoods by anticipating risks and enabling proactive measures; this should also include investing in capacity-building on disaster risk reduction, including in the face of climate change, for local organisations and authorities in Ukraine.

3. **Look ahead by investing in both immediate relief interventions and humanitarian needs responses as well as medium-long term recovery and sustainable solutions,** especially in those areas in Ukraine that are already transitioning into early recovery phases; interventions aimed at enhancing communities' resilience to climate change, social protection and pre-crisis action, and climate resilient livelihoods should be aligned with recovery and reconstructions strategies (e.g. the Ukraine Strategy 2030 on climate mitigation).

4 **Strive to address environmental and climate resilience factors in their operations,** including the identification of environmental risks, and ensure they have strategies in place to mitigate their potential climate and environmental impacts; special consideration should be given to minimizing operations' carbon emissions, shifting to renewable energy sources, and using sustainable materials, inter alia.

5 **Build partnerships with environmental and development actors in Ukraine and other conflict-affected contexts** to sustain climate and environmental-informed interventions through cooperation, sharing of experiences and methodologies, and peer-learning. Civil society should be a key partner in these endeavours, with a continuous engagement of diverse groups within the Ukrainian population on the basis of accountability and trust, to ensure their unique needs and priorities are reflected and addressed.

INTERNATIONAL DONORS SHOULD:

1 **Put in place mechanisms to monitor how humanitarian interventions actively contribute to climate and environmental resilience.** This would require developing integrated monitoring and evaluation indicators that capture the impacts of investments on different dimensions (humanitarian assistance, early recovery, climate resilience, environmental protection, ecosystem restoration, etc.) and across different timeframes. This will also require indicators within humanitarian programmes which measure the impacts of the intervention against a number of relevant indicators of people's capacity to adapt to and cope with climate impacts.

2 **Redouble focus to avert new security risks emerging as a result of climate change and environmental degradation trends in Ukraine,** including by directing investments towards supporting: a) ongoing work to identify, document and assess environmental damage and climate impacts; and b) anticipatory action that simultaneously contributes and delivers co-benefits in terms of humanitarian assistance and early recovery.

3 **Strengthen Ukraine's prevention and emergency response capacity**, which is a crucial step to prevent and mitigate serious pollution incidents at hazardous facilities, including through investments aimed at the repair of damaged critical infrastructure, the clearance of mines and unexploded ordnance, and land remediation measures at affected sites.

4 **Support plans and secure funding for green reconstruction** that can be implemented when the time comes, working with the national government e.g. through the environmental working group of the National Council for Recovery from the War to help shift the country towards low-carbon development, energy efficiency and environmental protection.

5 **Ensure that funding also reaches non-governmental and civil society groups** that are engaged in local environmental action while also representing marginalised groups, such as disability, youth, elders and women's rights groups, to support their work addressing environmental and climate risks on the ground and supporting affected populations.

6 **Consider how to support Ukraine with rebuilding a climate-risk informed agri-food system as and when reconstruction efforts can begin.** The transition towards greener food systems is already a priority within the EU and requires a repurposing of current agricultural subsidies and the identification of new financial resources. Post-conflict efforts to rebuild Ukraine's geopolitically strategic agri-food sector should ensure that in the rush to rebuild the country and economy, opportunities to lock-in a sustainable and climate resilient food system are not missed. Safeguards and incentives can already be explored.

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