



Input to the Thematic Report to the UN General Assembly by Special Rapporteur on the Right to Food

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PAX, the largest peace organisation in the Netherlands, has been [documenting](#) for years conflict-related environmental damage and its effects on civilians and their livelihoods. PAX reports on environmental aspects of conflicts in Gaza, Syria and Ukraine cover damage to agricultural land and agro-industrial facilities as a result of direct attacks or broader conflict-linked contamination of water and soil that hamper agro-production. While factors causing famine and starvation go well beyond the destruction of agricultural resources in conflict-affected areas, such instances contribute to food insecurity through disruption of food supply chains on local, regional or even international level. Therefore, this submission of input to the report of Special Rapporteur on the Right to Food focuses on three case studies of conflict-linked damage to agro-industrial facilities, documented by PAX over the past few years, with the aim of raising the need to address this problem as part of broader international efforts to prevent starvation. It concludes with responses to some of the questions, raised by the Special Rapporteur's questionnaire, with relevant policy recommendations.

Destruction of agricultural land in Gaza

In Gaza, agricultural lands have been heavily affected by military activities, as described in PAX's report "[Uninhabitable](#)", published in December 2023. According to UNOSAT satellite imagery [analysis](#) on October 28, 2023, at least 52 greenhouses were damaged, while nearly 600 large craters were observed in agricultural areas, a number that is likely to be much higher considering the fighting that has been taking place since. The movement of tanks and vehicles and fighting between the Israel Defense Forces and Palestinian armed groups have further impacted croplands and orchards. At least 22.7% of arable land has been affected by the war, as indicated by [analysis](#) per late November 2023 on land use by remote sensing expert He Yin from Kent State University. The loss of agricultural lands and infrastructure is putting serious constraints on food security and livelihoods of Palestinians in Gaza.

Even before the 2023 escalation of hostilities, the agricultural sector in Gaza has been hit hard by climate change, with 95% of Gazan farmers [reporting](#) that higher temperatures and changing precipitation were negatively affecting harvests, leading to a 65% [reduction](#) in the olive harvest alone. Yet, further destruction of agricultural areas, greenhouses, fields and irrigation infrastructure since October 7, 2023, exacerbated the situation of food insecurity and economic losses of Gazans in the short-term, and worsened the prospects of economic recovery efforts in long-term.

Destruction of agricultural land and agro-industrial facilities in Ukraine

In Ukraine, substantial amounts of agricultural land and numerous agro-industrial facilities have been damaged or destroyed since the beginning of Russia's full-scale invasion in February 2022. PAX's report "[Attacks on Agro-Industrial Sites in Ukraine](#)" provides an overview of attacks on Ukraine's agro-industrial sector between February 2022 and January 2023. PAX's database contains information on 150 incidents involving agro-industrial facilities, 61 of which have been verified through satellite imagery. Among them, incidents involving large livestock farms (18 incidents), silos for grain or vegetable oils (27 incidents), agro-fields (8 incidents) and agro-chemical facilities, particularly those involved in producing fertilizers and storing large amounts of hazardous substances (6 incidents). For instance, in Brovary, north of Kyiv, the country's largest agricultural food storage facility was [bombed](#) early in March 2022, [crippling](#) food storage and exports. During fighting around Kharkiv and Chernihiv,

there were direct [hits](#) on the Agromol [dairy farm](#) and other smaller sites, while energy infrastructure near farms in [Bohoduiv](#), [Okhoche](#) and [Chornobayivka](#) were hit, with power outages leading to millions of dead chickens. Representatives of the livestock industry [estimate](#) that 300,000 pigs have been killed to date by the shelling of various industrial-scale animal farms. In Rubizhne, an industrial city in Luhansk region, a direct hit on a silo storing what seems to be ammonium nitrate caused a massive [explosion](#) and possible exposure of [local residents](#) to the toxic residues of the red smoke plume. The attacks also damaged many storage silos of grain and vegetables, including the Cofco [sunflower oil plant](#) in Mariupol and Mykolaiv [sunflower oil silos](#). Small-scale farms were also hit, for example near [Bakhmut](#) and [Mykolaiv](#), killing hundreds of livestock, while on-site storage tanks of ammonium-nitrate at farms were also frequently hit, resulting in enormous blasts that destroyed the farms and caused [concerns](#) over chemical contamination. PAX's [report](#) also examined in detail four case studies highlighting the most important risk locations that have been affected by shelling and bombing: the Bakhmut Agrarian Union, poultry farms across Ukraine, Azot agro-chemical plant and Stirol chemical plant.

These and other attacks on Ukraine's agro-industrial complex that followed have had negative impacts not only on Ukraine's economy and people's livelihoods due to direct killing of thousands of livestock, but also for food security on a broader scale. In view of Ukraine's role as global exporter of agricultural products, land degradation resulting from direct destruction of agricultural fields, contamination with land mines and unexploded ordnance, soil pollution from explosive weapons and other military activities, as well as groundwater and surface water contamination, comes with negative consequences for global agricultural supply chains. Russia's war in Ukraine further impacts global food security both due to direct destruction of storage facilities, perennial crops, as well as due to the lack of fertilizer, pesticide, seeds, and fuels that had been produced at the affected agro-industrial facilities.

Devastating conflict impacts on agriculture in North-East Syria

In North-East Syria, a decade-long conflict has devastated vast amounts of agricultural areas – either by direct destruction of agricultural land, conflict-linked pollution or damage to water and agricultural infrastructure. As described in greater details in PAX's report "[War, Waste, and Polluted Pastures](#)" (published in 2021), for the region that used to be considered as the breadbasket of Syria, with crops such as wheat, barley, lentils and cotton grown using rain-fed and irrigated agriculture, conflict impacts have been severe for local farmers. Faced with a lack of fertilizer, pesticides and even clean water, local agriculture has had to cope with compounded effects of conflict impacts, climate-induced natural disasters, and pre-existing lack of enforcement of environment regulations.

Water pollution and water shortages have been a particularly acute issue both for Syrian farmers and pastoralists. Besides the risk of contaminated water due to waste – a consequence of poor environmental governance, one of the most significant risks to agriculture continues to be the local oil industry, still operating with crude artisanal refineries and wells. Water and soils have been poisoned by oil spills, often conflict-linked, which not only ruins the soil but directly enters into farmers' water supply. In another report, "[We Fear More War, We fear More Drought](#)", PAX described dramatic impacts of compounding climate-induced water shortages and the legacy of continuous fighting on livestock and crop yields, based on dozens of interviews with pastoralists, farmers, and local authorities in North-East Syria, combining this with satellite analysis and humanitarian data.

North-East Syria, as well as other parts of the country, has also witnessed [massive wildfires](#) that have affected both agricultural land and forests, with many of these instances being conflict-related: occurring as a result of direct shelling or arson tactics by armed groups or from secondary fires spread from burning oil facilities. PAX's [analysis](#) showed that only in the governorate of Al-Hasakeh on the frontlines, around 437,000 acres of land have been burned during several months of 2020. These fires, which intensified over 2019-2020, impacted thousands of farmers and their families, severely hampering agricultural production and threatening food security in the area.

Policy recommendations

Considering conflict-linked destruction of agricultural sectors of conflict-affected countries as a contributing factor to food insecurity and, potentially, starvation as its most extreme form, the following recommendations can be considered to prevent and address such incidents:

1) Raising awareness about conflicts' toll on the agricultural sector and food security

It is crucial to document the incidents of damage or destruction of agricultural lands and agro-industrial infrastructure by conflict parties and raise awareness about their impacts on people's lives and livelihoods on regional and international level. Such practices should be considered through the lens of violations of international humanitarian law and relevant UN documents, such as dedicated UNSC resolutions [2417](#) (2018) and [2573](#) (2021). The unacceptability of such violations and the need for holding perpetrators accountable should be highlighted by States at the political level, as well as by international organisations and civil society groups in their broader advocacy efforts and public outreach.

2) Supporting technical capacities and expertise to identify and respond to damages to the agricultural sector in conflict-affected areas

It is important to invest resources in high-quality monitoring of instances of conflict-linked damage to agriculture both for the above-mentioned purposes of raising awareness and ensuring accountability and for using these insights for post-conflict recovery of affected areas. During the post-conflict reconstruction phase, capacity and expertise on sustainable agriculture and green recovery should be included in workplans of involved local, national and international agencies.

3) Improving international mechanisms to prevent and respond to conflict-linked environmental damage

On a broader scale, it is important to strengthen and implement international norms around the protection of the environment in armed conflict, through promoting the implementation of such useful frameworks as ICRC's Guidelines on the Protection of the Natural Environment in Armed Conflict and the International Law Commission's Principles on the Protection of the Environment in Relation to Armed Conflicts (PERAC Principles), as well as relevant UN resolutions.¹ On the operational level, to prevent, mitigate and address environmental harm in conflict in a more effective and coherent manner, states should consider establishing an UN system-wide [Environment, Peace and Security \(EPS\) agenda](#), with the aim to integrate humanitarian response, climate action, resilience, and environmental peacebuilding approaches across the national, regional, and international levels.

¹ For instance, UNSC resolutions [2417](#) (2018) and [2573](#) (2021); UNGA resolution [76/L.75](#) (2022); UNHRC resolution [48/13](#) (2021); and UNEA resolutions [2/15](#) (2016), [3/1](#) (2017) and [6/12](#) (2024).