



The reinvasion of Ukraine threatens global food supplies

People and countries least able to cope will be hit hardest

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Reliable access to adequate nutrition is essential for physical and mental health. Vladimir Putin's illegal reinvasion of Ukraine reminds us that we take our food supply for granted.¹ The consequences will be felt far beyond Ukraine's borders.

The immediate threat is to those under siege. Unable to escape Russian shelling, they are running out of food and water. This is a clear breach of the Geneva Convention, which proscribes "starvation of civilians as a method of warfare."² Ironically, in 2018 Russia supported UN Security Council Resolution 2417 that condemned starving of civilians and denial of humanitarian access.³ Ukrainians in other parts of the country are not spared, as food distribution systems are disrupted by damaged infrastructure and shortage of transport.

Ukraine has often been described as Europe's breadbasket. But this seriously understates its importance. It is also a major exporter of other staples, including barley, rapeseed, and sunflower oil. It accounts for about 17% of global corn exports, 12% of wheat, and 30% of sunflower seeds, most turned into oil in Ukrainian factories.⁴

The impact of the war is already apparent. About 25% of wheat and 43% of corn harvested in the most recent season have yet to be exported,⁴ and Odessa, Ukraine's main port, is blockaded. The current winter wheat crop cannot be harvested, and next season's crops cannot be planted. Other countries might be able to make up some of this shortfall, but it is difficult to see how they could replace it.

Global food prices are already at an all time high, owing to increased demand, covid related port disruptions, and massively increased shipping costs.⁵ In 2021, the price of wheat and barley rose 31%, and rapeseed oil and sunflower oil prices rose more than 60%.⁶

The consequences will be felt by everyone, but some are especially vulnerable. Many Arab countries depend on Ukrainian exports.⁷ Lebanon, which lost much of its grain storage capacity in a devastating 2020 explosion, could run out of wheat by mid April. Yemen, stricken by drought and war and almost entirely dependent on imported wheat, faces starvation. Syria too is highly dependent on Ukrainian wheat supplied by the World Food Programme.

Other countries are highly dependent on food purchases by bilateral and multilateral development agencies. Afghanistan is especially vulnerable, as illustrated by a recent picture in *The BMJ* of Afghan men showing their scars from selling kidneys to support their families.⁸ Rapidly rising world food prices will reduce what these agencies can afford.

Finally, there are many poor people in rich countries who will suffer. As the food writer Jack Monroe has noted, a combination of rising prices and loss of bargain lines means that costs are increasing much faster for those with least to spend on food.^[12] These are the people who will also be worst affected by rising fuel costs. Food insecurity, already high in some countries including the UK, increased further during the pandemic. There is a real risk that people will starve.

So what must be done? The immediate priority is to do whatever possible to support the three groups listed above. Several other actions are also necessary.

The first is to ensure that existing food supplies are used as efficiently as possible. This means taking measures to reduce the vast quantities of edible food that are wasted in rich countries every day. In 2018 the UK wasted an estimated 9.5 million tonnes of food, 70% of which was wasted by households.⁹ It also means reducing the woefully inefficient practice of converting large quantities of grain, soyabeans, and other staple crops into meat, which would also help control global warming. One study estimated that replacing all animal based foods with plant based ones could feed an additional 350 million people.¹⁰

The second is to revisit the existing model of global trade. Many countries have little or no food stocks and have disinvested in domestic production in favour of cheaper imports. Storage has been replaced by just-in-time distribution chains. Consumers have been existing in what now, in Ukraine, looks like a fantasy world of food that is ever present, ever available, and ever cheap. Here too, there are sound reasons for change to reduce global warming.

Third, as the cost of petrochemicals also rises, we must revisit our systems of agricultural production, dependent on oil for fertilisers, transport, and agrichemicals. This model was under scrutiny already for its contribution to biodiversity loss and poor health—for example, by encouraging consumption of energy dense ultra-processed foods.¹¹

The war in Ukraine should be a wake-up call. Food security and sustainability are key prerequisites for health. Feeding all people well is not a luxury but a mark of 21st century civilisation.

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1 McKee M, Murphy A. Russia invades Ukraine again: how can the health community respond? *BMJ* 2022;376:o548. doi: 10.1136/bmj.o548. pmid: 35236662

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- 2 International Committee of the Red Cross. Protocol additional to the Geneva Conventions of 12 August 1949, and relating to the protection of victims of international armed conflicts (protocol I), 8 June 1977. 1977. <https://ihl-databases.icrc.org/ihl/WebART/470-750069#:~:text=Historical%20Treaties%20and%20Documents&text=1,,method%20of%20warfare%20is%20prohibited.&text=move%20away%2C%20or%20for%20any%20other%20motive>
- 3 UN Security Council. Resolution 2417 of the United Nations Security Council, S/RES/2417. 24 May 2018. <http://unsct.com/en/resolutions/doc/2417>.
- 4 Patterson W. Russia-Ukraine conflict: what it means for grain and oilseed markets. ING. 2022. <https://think.ing.com/articles/russia-ukraine-conflict-what-it-means-for-grain-markets>.
- 5 Howard G. 2022 shipping costs "will be higher than ever before." 2022. <https://www.seatrade-maritime.com/containers/2022-shipping-costs-will-be-higher-ever>.
- 6 Dongyu Q. New Scenarios on Global Food Security based on Russia-Ukraine Conflict. Food and Agriculture Organization of the United Nations. 11 Mar 2022. <https://www.fao.org/director-general/news/news-article/en/c/1476480/>.
- 7 Al-Faour N. Ukraine war compounds food security woes of Middle East and North Africa: Arab News. 2022. <https://www.arabnews.com/node/2040301/middle-east>.
- 8 Iacobucci G. Afghans driven to sell kidneys on black market in the face of extreme poverty. *BMJ* 2022;376:o587. doi: 10.1136/bmj.o587. pmid: 35246427
- 9 Waste and Resources Action Programme. Food surplus and waste in the UK—key facts. 2020. <https://wrap.org.uk/sites/default/files/2020-11/Food-surplus-and-waste-in-the-UK-key-facts-Jan-2020.pdf>.
- 10 Shepon A, Eshel G, Noor E, Milo R. The opportunity cost of animal based diets exceeds all food losses. *Proc Natl Acad Sci U S A* 2018;115:3804-9. doi: 10.1073/pnas.1713820115. pmid: 29581251
- 11 Swinburn BA, Kraak VI, Allender S, et al. The global syndemic of obesity, undernutrition, and climate change: The Lancet Commission report. *Lancet* 2019;393:791-846. doi: 10.1016/S0140-6736(18)32822-8. pmid: 30700377
- 12 Monroe J. We're pricing the poor out of food in the UK—that's why I'm launching my own price index. *Guardian* 22 Jan 2022 <https://www.theguardian.com/society/2022/jan/22/were-pricing-the-poor-out-of-food-in-the-uk-thats-why-im-launching-my-own-price-index>