

Ukraine's scientists need help to rebuild research system

With countries around the world increasingly focusing on problems at home, we must not forget the need to reconstruct Ukraine's research and educational infrastructure.

More than six months have passed since Russia invaded Ukraine. In that time, some 5,500 civilians have died, more than 5.6 million have left for other countries, mainly in Europe, and at least another 6.3 million people have been internally displaced. Many of Ukraine's universities, and much of its research infrastructure, have been bombed, and around one-quarter of Ukraine's research workforce – some 22,000 people – have left the country.

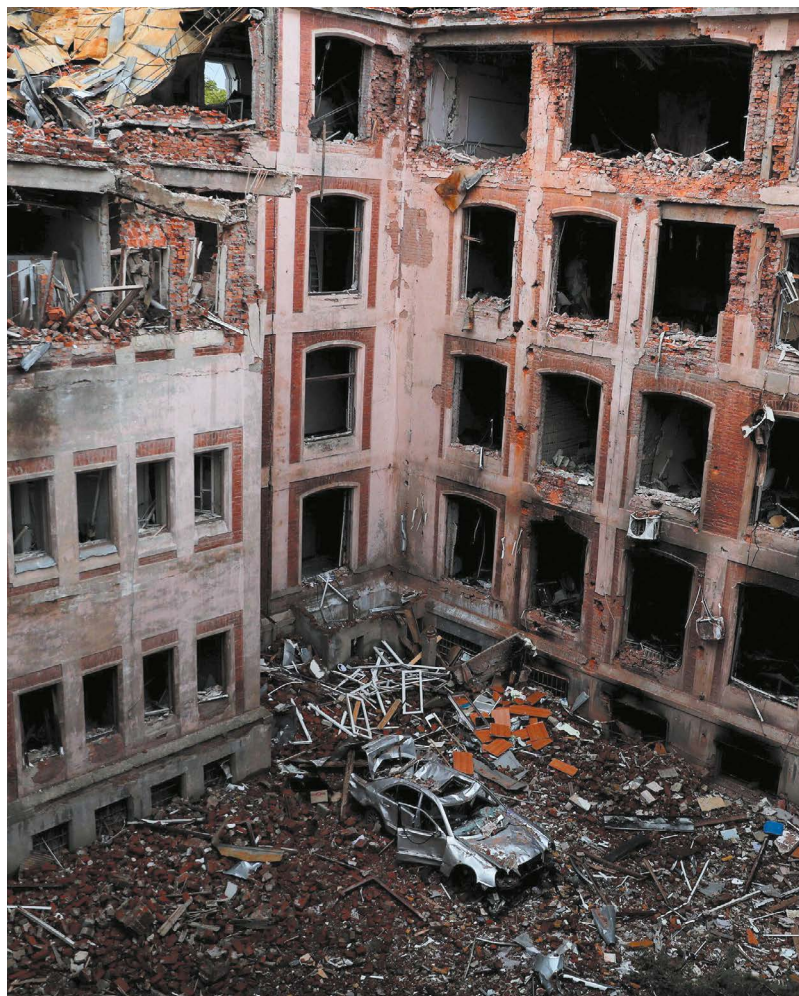
The rippling effects of the invasion are being felt around the world. Russia is restricting supplies of fossil fuels to Europe. The resulting fuel shortages, coupled with a surge in oil and gas prices, have precipitated a worldwide crisis in energy and food supplies, and an increase in the cost of living. And the International Atomic Energy Agency, based in Vienna, has been seriously concerned for nuclear safety since Russia seized control of Ukraine's nuclear power plant at Zaporizhzhia in March.

Much of this has shifted international focus away from Ukraine's citizens. The people of Ukraine – both those who have had to leave and those who have stayed to continue teaching, doing research or fighting to defend their country – continue to show an indomitable spirit, as *Nature* and others have reported.

From the invasion's first days, the global scientific community has mobilized its support. Funding and fellowships have been awarded to researchers from Ukraine, and researchers and governments around the world have sought to boost collaboration with Ukrainian colleagues. At the same time, European nations and the United States have taken steps to cut Russia's researchers out of the world's research system.

We have argued, and continue to argue, that such a blanket boycott is unwise. As a publisher, we continue to accept manuscripts from researchers in Russia. Coordinated action is required to deal with the many interconnected crises and challenges the world is facing, and everyone in the global science community needs to be unified.

In June, the leaders of the science academies of Ukraine, the United States and a number of European countries agreed some outline steps for continued science collaboration. These included offering funding programmes to researchers in Ukraine, providing access to research



Ukraine's Kharkiv National University is among those that have been bombed.

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infrastructure abroad and granting waivers on article-processing charges and conference fees.

At an international conference on reconstruction for Ukraine, held in July in Lugano, Switzerland, many governments committed to a set of principles (the Lugano Principles) on how they would approach rebuilding the country. The principles include that reconstruction will be based on what Ukraine needs and that the international community will work in close partnership with Ukraine's people, including researchers. This must also include rebuilding and modernizing Ukraine's educational and research infrastructure.

These are welcome and timely measures. They are also needed to reassure Ukraine that it can count on the support of friends and allies, even as they grapple with the wider effects of the war at home. Winter in the Northern Hemisphere will further test international resolve to maintain support for Ukraine's people, who are fighting to protect their lives, homes and land, and for the right to live in a sovereign nation. Ukraine's researchers need the international community to remain united in its focus on enabling them to rebuild research. It is a test we cannot fail.