

News in focus



People clear debris from a damaged military base in Okhtyrka in the Sumy region of Ukraine.

GLOBAL RESEARCH COMMUNITY CONDEMNS RUSSIAN INVASION OF UKRAINE

Rebuke against Russian science grows in response to the deadly conflict.

By Nisha Gaiind & Holly Else

Russia's unprovoked invasion of Ukraine has unleashed an outpouring of condemnation from scientists and research organizations worldwide. Some organizations in Western nations have moved quickly to sever links with Russia – cutting off funding and ending collaborations with its scientists. And from Mauritius to Latvia, national science academies and groups of researchers have issued statements sharply criticizing the conflict and supporting their Ukrainian colleagues (see page 201).

In Ukraine, scientists are pressuring nations to freeze Russia out of their science programmes, and calling on Russian institutes and scientific leaders to condemn the invasion.

“There should be a complete boycott of the Russian academic community. No cooperation,” says Maksym Strikha, a physicist at the Taras Shevchenko National University of Kyiv, who is in the centre of the Ukrainian capital and said the front line was 30 kilometres away. That includes barring Russian-authored articles from Western journals and banning researchers with Russian affiliations from international research teams, he says. “The

Russian academic community should also pay its own price for supporting [Russian President Vladimir] Putin.”

The chorus of condemnation includes the voices of thousands of scientists in Russia, who say that they are appalled by their government's actions. In a letter organized by researchers in Russia and signed by more than 7,750 people, scientists condemn the hostilities and say that the Russian leadership has launched an unjustifiable war. The letter includes around 85 scientists who are members of the Russian Academy of Sciences, a government body that oversees much of the nation's research.



People in St Petersburg, Russia, protest against their government's actions.

Among the strongest actions taken so far is the decision by a group of Germany's largest research funders, including the German Research Foundation, to freeze all scientific cooperation with Russia. In a 25 February statement, the group – the Alliance of Science Organisations in Germany – says that the country's research funds will no longer benefit Russia, that no joint scientific events will take place and that no new collaborations will begin. "The Alliance is aware of the consequences of these measures and at the same time deeply regrets them for science," it said.

"My former student lives in Germany and we still collaborate. She was informed by her superiors that any contact with Russian scientists would be strongly discouraged," says Mikhail Gelfand, a co-organizer of the Russian scientists' letter and a biology lecturer at the Skoltech Center of Life Sciences in Moscow. "From what I see, it's happening in many places."

The mood among colleagues in Russia is "terrible", Gelfand says. "Nobody thought it would come as far as direct invasion. Nobody thought that Russia would attack Kyiv." Gelfand says that he hopes there is a way that general sanctions don't harm individual scientists, many of whom oppose the war.

Collaborations cancelled

In the United States, the Massachusetts Institute of Technology (MIT) in Cambridge ended its relationship with the Skolkovo Institute of Science and Technology, or Skoltech, in Moscow, which it co-founded in 2011. "We take it with deep regret because of our great respect for the Russian people," says a 25 February statement from MIT.

And on 5 March, the European Commission said that it was suspending scientific cooperation with Russia. In a statement, it said it would stop payments to Russian research partners

and review all projects that involve Russian research organizations under Horizon Europe and its predecessor Horizon 2020.

Another high-profile cancellation is the four-yearly conference of the International Mathematical Union, which awards the prestigious Fields Medal and was scheduled to be held in St Petersburg in July. After mounting pressure from national mathematical societies and more than 100 of its invited speakers, the

'WE HEAR SHELLING': UKRAINIAN SCIENTISTS STAND IN DEFIANCE

Researchers tell *Nature* about their experiences of the Russian invasion.

By Nisha Gaiand, Holly Else & Antoaneta Roussi

"I survived this already eight years ago," says economist Illya Khadzhyonov. "I am from Donetsk."

As the world awoke to news on 24 February that Russia had invaded Ukraine, including its capital Kyiv, Ukraine's people were being forced to make impossible decisions about whether to stay and shelter, attempt to flee or fight for their country.

As the conflict continues, Ukrainian researchers have described to *Nature* how they have responded. Some say that their colleagues and students have taken up arms to defend their country. Others have stayed in

union said on 26 February that it would hold the International Congress of Mathematicians online in light of the conflict.

Further action

Some Ukrainian scientists say that the actions announced do not go far enough. In particular, Russian academic institutions have failed to condemn the aggression, says an open letter from the Academy of Sciences of the Higher School of Ukraine. Restrictions on Russian scientists must be all-encompassing, they say: "We urge that researchers with an affiliation of such institutions not be admitted to international grant teams, not be invited to international conferences, and not be published in leading international scientific journals."

The editorial board of at least one journal, the *Journal of Molecular Structure*, has decided to no longer consider manuscripts authored by scientists working at institutions in Russia.

Alexander Kabanov, a Russian-US chemist at the University of North Carolina at Chapel Hill who co-organized a letter from Russian researchers living overseas, says that support for Ukrainian researchers is the next step. "Right now, many Ukrainians are fighting for their country and some are refugees," he says. The Western academic community should develop programmes of support for Ukrainians who need education and scientific training, Kabanov says. "I believe the laboratories should be open for them."

cities, looking after their families and watching the devastation wrought by Russian shelling. "We are not thinking about research," says Khadzhyonov.

Air-raid alerts

Khadzhyonov is vice-rector for scientific work at Vasyl' Stus Donetsk National University. In 2014, the 85-year-old university relocated to Vinnytsia in central Ukraine, displaced by the conflict in the Donbas region, parts of which are claimed by separatists. "It moved to Vinnytsia with no resources, no buildings. It had a rebirth," says Khadzhyonov.

For Khadzhyonov, the events of the past week remind him of that time, when he was forced to leave his hometown of 35 years. "It's the second

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