

Correspondence

Ukraine: thousands sign plea for scientific sanctions against Russia

I am one of the initiators of an open letter from Ukraine's scientific community (see <https://doi.org/hjw9>) that calls for wide-ranging academic sanctions in response to Russia's shameful military attack on Ukraine on 24 February (see *Nature* **603**, 201; 2022). So far, more than 6,000 scientists from Ukraine and worldwide have signed it (see go.nature.com/3hoh).

Such sanctions would effectively cut off Russia's access to new technologies, scientific research and information support. Examples include blocking access to all scientometric databases and international grant programmes, and ceasing to index scientific publications from Russia.

We beg for strong support from the international research community at this terrible time in Ukraine (see *Nature* **603**, 209–210; 2022). Only with unity will we be able to survive this terrible war. To sign the petition, go to go.nature.com/3cmwp.

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Secure molybdenum isotope supplies for diagnostics

Molybdenum-99 is the precursor of the short-lived radioactive isotope technetium-99m, which is widely used in nuclear medicine for imaging diagnostics. Currently in short supply worldwide, most ^{99}Mo – a by-product of nuclear fission – is produced in four reactors, located in Belgium, the Netherlands, Australia and Poland. It is usually transported to hospitals by air, so deliveries have been delayed during the COVID-19 pandemic. Local, resilient and unbreakable supply chains are urgently needed.

Setting up local $^{99}\text{Mo}/^{99\text{m}}\text{Tc}$ production systems could complement those dependent on fission reactors. For example, technologies that rely on accelerator-driven irradiation facilities could be used (see go.nature.com/3iuqlqr). These include cyclotrons (already available at many public hospitals), electron linear accelerators and deuterium-tritium fusion sources (M. Capogni *et al.* *Molecules* **23**, 1872; 2018). These need no fissile material and could be operated at relatively low cost.

In that way, meeting local demand for $^{99}\text{Mo}/^{99\text{m}}\text{Tc}$ would rely mainly on local transportation with a relatively low carbon footprint. It would also secure the supply of these isotopes to low-income countries and to national health systems.

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Predatory journals and conferences – three drivers

The InterAcademy Partnership (IAP), a global network of more than 140 scientific academies, has just issued a report on predatory academic journals and conferences (see go.nature.com/3mdmshb). Instances of such malpractice are rising at an alarming rate and require concerted action by all stakeholders – including universities and research funders – to avoid compromising the integrity of the global research enterprise.

The report builds on earlier work (A. Grudniewicz *et al.* *Nature* **576**, 210–212; 2019) and describes predatory practices that are used by new and established, fraudulent and reputable, conventional and open-access publishers worldwide. It advises researchers on how to navigate these complex issues.

Three systemic drivers of these predatory practices emerge: the increasing monetization and commercialization of research and scholarly communication; research-evaluation systems that rate quantity over quality; and a lack of transparency in the peer-review system. These problems need to be addressed urgently.

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Forest protection: invest in professionals and their careers

The protection and restoration of forests has major implications for the world's climate, biodiversity and economic and societal development. But high-level commitments – such as those made by 141 nations at the COP26 climate summit in Glasgow, UK, last year – are being undermined by a dearth of people trained to fulfil those pledges.

For example, the University of Oxford, UK, closed its once internationally renowned forestry institute in 2002. In Australia, only one undergraduate forestry programme persists, at Southern Cross University in Lismore. Fewer and fewer students worldwide are seeking careers in forestry and related disciplines, and recruiters at all levels are failing to attract suitably qualified candidates.

Declining prestige and public support are key factors that need to be rectified (see, for example, K. J. De'Arman and R. F. York *J. Forestry* **119**, 236–250; 2021). Investment in people and careers in forest management should be a priority. And perceptions matter: rebranding forestry as 'forest science' and attaching a conservation label could help.

Besides technical and management skills, training must focus on the importance of commitment, consultation, communication and adaptability if forest pledges are to be met.

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