# THIS WEEK

## EDITORIALS

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# Nuclear responsibilities

*Researchers can help to keep the peace as tensions rise between nuclear powers from India and Pakistan to the United States and North Korea.*

Just days ago, it looked as if India and Pakistan were ready to go to war. Ambulance drivers and trauma surgeons were told to cancel leave; airports were shuttered and the skies cleared of commercial flights. The world held its breath as the two nuclear-armed nations shot down each other's fighter jets. Thankfully, both sides have stepped back.

By coincidence, US–North Korea nuclear talks in the same week ended prematurely with no deal. North Korea will, however, continue its moratorium on nuclear tests for now, while the United States continues to suspend major joint military activities with South Korea.

The United States and North Korea are at least beginning to climb the ladder towards disarmament, however shakily. The South Asian countries, by contrast, are not even on the first rung. The big lesson from these most recent events is the need for an urgent global, or at a minimum bilateral, effort — one that includes researchers — to address the risks of undeclared nuclear arsenals. Stockpiles, according to the Stockholm International Peace Research Institute, are expanding.

Scientists have been at the heart of the most successful nuclear agreements, from the Soviet–US talks that laid the foundations for the global Comprehensive Nuclear-Test-Ban Treaty in 1996 to negotiations in 2015 on what is known as the Iran nuclear deal.

***"Scientists have been at the heart of the most successful nuclear agreements."***

Researchers are central because they have advanced knowledge of the science and technology of nuclear-weapons development, testing, dismantling and verification. Indeed, it is often researchers such as Ali Akbar Salehi, head of the Atomic Energy Organization of Iran, and former US energy secretary Ernest Moniz — who both worked at the Massachusetts Institute of Technology in Cambridge — who negotiate and write the words.

Historically, nuclear diplomacy has focused on global agreements; the latest is the troubled Treaty on the Prohibition of Nuclear Weapons, which opened for signature on 20 September 2017. But India and Pakistan — along with Israel — will not sign until the five permanent nuclear-weapons states (the United States, Russia, China, France and the United Kingdom) agree to do so, and that is even less likely. A more effective approach would be to build on existing agreements, starting with a 30-year-old bilateral agreement between India and Pakistan, in which scientists and engineers from each side swap lists of facilities, with their governments pledging not to attack.

This accord could be broadened to include a pledge that lists are accurate and that neither side will attack essential infrastructure, especially large dams, says Toby Dalton, co-director of the Nuclear Policy Program at the Carnegie Endowment for International Peace in Washington DC. He adds that the countries could also agree to exchange information on the ability of domestic extremist groups to acquire nuclear technology.

This could be instigated by each country's scientists, or through membership of the InterAcademy Partnership of scientific academies that work together on global problems. They have a duty to use these links, and their influence with the media and politicians, to take this step.

One of the biggest hurdles to all such undertakings, bilateral or multilateral, is an understanding that the greater threat is doing nothing towards disarmament. In that respect, the US–North Korea talks are at least in play. Eventually, India and Pakistan also need to begin a formal process. The people of South Asia were genuinely shaken by last week's military action. The world can no longer afford to live with the risk that this action could have led to all-out war. ■

# Track changes

Nature *welcomes a registry that supports experiments to improve peer review.*

Barely a week goes by without a new proposal to improve peer review: how to make it faster, better at spotting errors, more transparent, less prone to bias, less burdensome. But it's difficult to track this ferment — and to glean lessons from it. So *Nature* welcomes the launch of a registry of platforms and experiments around peer review. Called ReimagineReview, the online hub invites researchers to add projects and to raise awareness of peer-review trials.

*Nature* will use the platform to document its own peer-review experimentation. More than a decade ago, this journal trialled allowing public comments on manuscripts while the papers were being evaluated (*Nature* **444**, 971–972; 2006). Since 2015, Nature-branded journals have offered authors double-blind peer review, in which reviewers and authors do not know each others' names. An analysis of more than 128,000 manuscripts in this trial found that authors from less-prestigious institutions were more likely to choose double-blind review (B. McGillivray and E. De Ranieri *Res. Integr. Peer Rev.* **3**, 5; 2018). We are currently investigating publishing anonymous referee reports on Nature Research journals, as already offered by *Nature Communications* (unless authors opt out).

Many publishers are trialling ideas. BMC (part of Springer Nature) and the *British Medical Journal* were the first to offer open peer review; *eLife* and *F1000Research*, among others, have experimented with open formats, such as allowing authors and reviewers to interact directly, or publishing manuscripts before full review. The term 'open review' covers many practices, and it is not easy to measure their pros and cons. Last week, researchers published guidelines for editors wanting to move to open review; these sprang from a workshop at *Nature*'s offices (T. Ross-Hellauer and E. Görögh *Res. Integr, Peer Rev.* **4**, 4; 2019). Understanding which data on peer-review trials can be captured and how to report them is an effort we're committed to, to help authors and reviewers. It is in the scientific community's best interests for everyone to share what they learn. ■