

# News in focus



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Afghans who hope to be evacuated head through flooded streets towards Kabul's airport.

## AFGHANISTAN'S TERRIFIED SCIENTISTS PREDICT HUGE RESEARCH LOSSES

For 20 years, science has blossomed in Afghanistan. Now many researchers are fleeing and those who remain face lost funding and the threat of persecution.

By Smriti Mallapaty

**O**n Sunday 15 August, geologist Hamidullah Waizy was interviewing job candidates at the Ministry of Mines and Petroleum in Kabul when he was told the Taliban had entered the city, and he must evacuate. The next morning, he saw armed militants on the streets.

Waizy, a researcher at Kabul Polytechnic University who was recently also appointed director-general of prospecting and exploration of mines at the ministry, was shocked by

the city's rapid fall. Two weeks later, he was still living in limbo, mostly shuttered up in the relative safety of his home.

Across Kabul, most universities and public offices remain closed. The Taliban says it wants officials to continue working, but it is not clear what this will look like. "The future is very uncertain," Waizy told *Nature*.

When the fundamentalist group last held the country, in 1996–2001, it brutally enforced a conservative version of Islamic Sharia law, characterized by violations of women's rights and little freedom of expression. But after it

was overthrown in 2001, international funding poured in and universities thrived.

Now, academics fear for their safety. They also worry that research will languish without money and personal freedoms, and because educated people will flee. Some fear that they could be persecuted for being involved in international collaborations, or because of their fields of study or ethnicity.

"The achievements we had over the past 20 years are all at great risk," says Attaullah Ahmadi, a public-health scientist at Kateb University in Kabul.

According to news reports, billions of dollars in overseas finance for Afghanistan's government – such as assets held by the US Federal Reserve and credit from the International Monetary Fund – have been frozen. It's not clear if the funding will be released, and how that will affect universities and researchers, but many report salaries not being paid.

In 2001, after the September 11 terrorist attacks in the United States, a US-led coalition invaded Afghanistan and overthrew the Taliban. In 2004, a new government was elected.

Kenneth Holland, a dean at O.P. Jindal Global University in Sonapat, India, was president of the American University of Afghanistan (AUAF) in Kabul in 2017–19. He says that when he arrived in the country in 2006, he found “no culture of research”.

### Hopes and aspirations

Since 2004, the World Bank, the US Agency for International Development and other organizations have poured hundreds of millions of dollars into universities to support teaching, training and research, he says.

Three dozen public universities have been established or re-established since 2010, and tens more private universities have been set up. Public universities are funded by the Ministry of Higher Education, which is financed by international donors, says Holland. Many private universities survive on tuition fees.

According to figures from the United Nations cultural organization UNESCO, the student population at public universities grew from 8,000 in 2001 to 170,000 in 2018, one-quarter of whom by that time were women. And although Afghanistan's contribution to journals remained small, the number of papers recorded annually in the Scopus database

increased from 71 in 2011 to 285 in 2019.

Shakardokht Jafari, a medical physicist at the University of Surrey in Guildford, UK, who is originally from Afghanistan, has seen much progress since 2001, from burgeoning enrolment of female students to growing output on topics from cancer to geology. But now she fears “there will be a stagnation of science”.

For a long time “scientists considered Afghanistan a black hole”, says Najibullah Kakar, a geohazards scientist at the GFZ German Research Centre for Geosciences in Potsdam. He is one of many Afghans who went abroad to study, intending to return with skills to help build the nation. In 2014, he helped to install Afghanistan's first seismic network. He continued that work until 2019, when conflicts made it difficult to travel to remote areas.

He and his team aimed to set up a seismic monitoring and research centre in Afghanistan to warn of natural hazards. But since the fall of Kabul, they have been in a state of panic, and Kakar, who says he has not slept for days, is desperately trying to help get his colleagues out.

Those colleagues are among a tide of researchers seeking asylum. Rose Anderson, a director at humanitarian organization Scholars at Risk (SAR) in New York City, which finds threatened scholars safe havens at universities, says that in August, SAR had more than 500 applications from people in Afghanistan.

Some are law scholars who fear reprisals if their field is at odds with the Taliban's interpretation of Sharia law. Many women fear being targeted for their gender and women's-rights activism; some men fear punishment for teaching or supervising women. Others worry they could be added to hit lists because they studied abroad or have international connections.

Almost all “reported a fear of being targeted

just because they are in favour of free and critical inquiry and held ideals around respect for human rights and women's rights”, says Anderson. Many have gone into hiding, or plan to cross into neighbouring countries.

So far, she says, more than 160 institutions globally have agreed to host scholars, and SAR has appealed to governments to fast-track visas and continue evacuation flights.

But getting people out has been very difficult and the US evacuation has now ended, so many at risk remain in Afghanistan.

### Risk to minority groups

The largest share of Afghanistan's population of 39 million, including many members of the Taliban, is ethnically Pashtun. Researchers from other ethnic groups risk persecution.

Musa Joya is a medical physicist at Tehran University of Medical Sciences in Iran, and also works as a lecturer in Kabul. He belongs to the Farsi-speaking Hazara community, which he says makes him a target. He had intended to return to Kabul next year to work at a radiotherapy centre supported by the International Atomic Energy Agency, but those plans could be suspended. Staying in Iran might not be a solution, because it is difficult for non-nationals to get jobs at research institutes, Joya says.

His wife and children are still in Afghanistan. “I really see a dark future,” he says. “I don't know how to feed my family; how to rescue them; how to protect them.”

There are a few hints that things might not be as restrictive as they were previously under the Taliban. Several researchers report that the Taliban is in discussion with university heads about restarting classes. There are suggestions that women might be allowed to continue their studies, although the Taliban has ordered that women and men be taught separately, and some universities have proposed introducing partitions in classrooms. But in the city of Bamyán, west of Kabul, women have been told not to work and to stay at home, says a female lecturer and education researcher there who wanted to remain anonymous.

Scientists also worry about the future of research. Joya fears that the Taliban won't prioritize research, or recognize its value. And he does not know how universities will cope without international financial support.

Many with postgraduate degrees have fled, says one Kabul scholar who did not want to be named. “This is a big catastrophe,” he says. “There will be no educated people left.”

It is not clear whether the international community will recognize the new government and continue to provide funding. Researchers hope they will not be abandoned. “We spent all our money, energy and time in Afghanistan to build a brighter future for ourselves and our children. But with this kind of withdrawal, they destroyed all our lives, all our hopes and ambitions,” says Joya.



Taliban fighters patrol the streets in Kabul.