POLICY

Serbia's science rethink draws mixed response

Scientists fear that reforms, although badly needed, will result in job losses.

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ANDREJ ISAKOVIC/AFP/GETTY

Serbia's parliamentarians have approved a law to create a national research fund.

Serbia is making sweeping reforms to its ailing science system as part of its efforts to join the European Union — but some scientists say that the changes could do more harm than good.

The government says it is keen to revitalize and invest more in its cash-starved research system, which has an annual budget of about €100 million (US$115 million) and last put out a grant call nearly a decade ago.

But some scientists say that the reforms, although badly needed, will lead to hundreds of university researchers losing their jobs. They also fear that the government will not keep its promises and will instead cut salaries and extend political control over research. "The laws sound very good on paper," says Milan Ćirković, a researcher at the Astronomical Observatory of Belgrade. "But the true test will come in practice."

The aim of the changes is to improve the quality and relevance of research, and to lay the groundwork for setting up elite institutions in Serbia, says Vladimir Popović, the country's state secretary for science. "In some fields, we need only a small additional push to reach the top," he says. For example, Serbian institutes excel in physics, food science, mining and metallurgical engineering, he says.

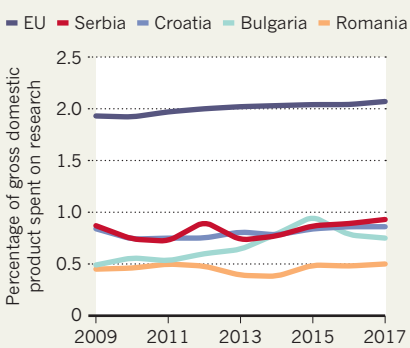
Popović is part of a coalition government elected in 2016 and led by the populist Serbian Progressive Party, which is pushing for Serbia to join the EU. He says that the changes are supported by the EU, and that the government will boost funding for research, backed by sources that include the World Bank and an EU funding mechanism for countries hoping to join the bloc (see 'Serbia and science'). In 2019, the research budget will increase by up to 30% and monthly salaries will rise by 9%, up from the current average of €1,200, says Popović.

As part of the reforms, Serbia's parliament passed legislation on 7 December to set up a national science fund that will oversee the awarding of much-needed research grants. The science ministry has until now been in charge of grants, but it made its last call for proposals in 2010. The government cancelled the next round, in 2016, because researchers protested about the small budget available — although why the call hasn't been issued since then isn't clear. The ministry did not respond to *Nature*'s question on this point.

Researchers have continued to receive yearly payments for their old projects, which has kept the system ticking over — but the lack of fresh funding has led to stagnation, they say. "A lot of things have changed in science. There are even new fields that did not exist in 2010," says Milovan Šuvakov, a researcher at the Institute of Physics in Belgrade.

SERBIA AND SCIENCE

Relative spending on science in Serbia, which is trying to join the European Union, is well below the average for the bloc but similar to that of neighbouring countries that have recently joined.



Croatia joined the EU in 2013; Bulgaria and Romania joined in 2007.

SOURCE: EUROSTAT

The government's intention is to separate grant funds from salary: until now, researchers' wages have been paid out of their grants. That means the ministry effectively had to fund all grant applications to avoid mass unemployment in research centres, and even a shutdown of some institutes, says Slobodan Bubnjević, science writer and head of communications at the Institute of Physics. "The former institutional financing did not take into account competitiveness and did not reward the best researchers," says Bubnjević.

Scientists are now eagerly awaiting a grant call that should be made possible under the new fund and related law proposed by the science ministry.

But Ćirković and Šuvakov are concerned that the government will still have control over the fund and will be able to appoint loyalists to the board, which could erode independence and expertise. Popović disagrees. "Decoupling policymaking from project financing accomplishes quite the opposite — less political control and more independence and expertise," he says.

Another of the proposed changes is raising fears about job losses, and about possible divisions in the scientific community, because only researchers who work at institutes, rather than at universities, will automatically receive salaries. University researchers will get a ▶

salary only if they already hold a teaching post. Researchers say this will mainly affect young scientists who haven't yet had the time or experience to get a university teaching post. An online petition to change this proposal has been signed by more than 1,000 people so far.

Evolutionary biologist Biljana Stojković is among those who think that such changes will do more harm than good. "As far as I know, this will be a unique situation in the whole world — universities without science," says Stojković, who works at the University of Belgrade. "At least 1,500 young scientists will lose their positions," she says.

Popović says that researchers will not lose their jobs as a result of the reforms. "Serbia has roughly half the number of researchers per capita as compared to [countries in] the EU," he says. "The country is making all possible efforts to keep all existing researchers and attract researchers from abroad, particularly from the diaspora."

Popović adds that the laws have also been designed to allow a wider set of stakeholders to invest in science: the government's long-term goal is for the private sector to provide two-thirds of overall research funding.

But Ivan Belča, a physicist at the University of Belgrade, says that given Serbia's weak economy, it is unlikely that the private sector will be able to increase investment in the near future.

And few trust the government's promises of putting in more public money — something that Popović says his ministry is "painfully aware of". "Losing trust was a 20-year-long process, during which time many governments changed," says Popović. "It is our intention to regain the trust by establishing new institutions and legislation." ■

BIOLOGY

US ecology project in turmoil

Sudden leadership changes at the National Ecological Observatory Network prompt top scientist's resignation.

BY SARA REARDON

An ecological observatory funded by the US National Science Foundation (NSF) is in turmoil after a top leader quit and its advisory board was dissolved.

On 4 January, the contractor that manages the US$434-million National Ecological Observatory Network (NEON) dismissed two long-time project managers. NEON's scientific director, Sharon Collinge, who says she was not consulted about the moves, resigned in protest on 8 January. Later that day, the contractor disbanded the organization's scientific advisory board.

In an e-mail to the advisory board — seen by *Nature* — Battelle, the non-profit contractor in Columbus, Ohio, that runs NEON, said that its actions were driven by the "changing needs of the research community".

NEON has almost finished constructing a web of more than 80 ecological observation sites across the United States, and is beginning to produce data for ecologists to analyse. "Given the maturation of the NEON project, it is appropriate to re-examine the charter of our external advisory group," said Battelle's chief scientist, Michael Kuhlman.

The turmoil is the latest in a long line of woes for NEON, which launched in 2000 and has faced ballooning budgets and allegations of mismanagement by its previous operator. Battelle took over NEON's operations in 2016 and, in 2018, appointed Collinge, an environmental scientist at the University of Colorado Boulder, as the network's observatory director and chief scientist. The non-profit also created the 20-member Science, Technology & Education Advisory Committee (STEAC).

STEAC members credit Battelle with saving NEON, and construction of its observatories is now on schedule. But several see the dismissals and cancellation of the board as a breach of trust with the scientists who hope to use NEON data. "That's burning bridges, which you just can't afford to do in a small community," says Ankur Desai, an atmospheric scientist at the University of Wisconsin–Madison.

"I understand fully that this is very difficult and emotional for some people," says Battelle spokesperson Patrick Jarvis. "Our goal remains to develop amazing data products and help the research community understand what's going on at the broadest ecological level." The changes were driven by the need to improve the programme's efficiency, he adds.

Collinge, who took temporary leave from her faculty position in February 2018 to manage NEON, says that she felt blindsided when Battelle dismissed two senior NEON managers: Wendy Gram, an ecologist who served as NEON's education director, and Richard Leonard, its vice-president for research infrastructure. Collinge says that Battelle acted without her knowledge or consent. Battelle told *Nature* that it is the sole decision-maker on NEON personnel issues.

After Collinge resigned, Kuhlman disbanded the programme's board of advisers. He has appointed Eugene Kelly, a soil researcher at Colorado State University in Fort Collins, as temporary chief scientist while the company looks for a permanent NEON science chief.

Jarvis says that Battelle will appoint a new advisory council "in the very near future", after Kelly begins work and Battelle can consult with the NSF. ■

CHRIS MCKAY, BATTELLE MEMORIAL INST.

NEON operates this instrument-laden tower in Alaska, which gathers data on the surrounding taiga.