

News in focus

biodiversity, but details about those funds have yet to be released.

Funding delays will be felt especially in “countries which have the highest levels of biodiversity and the fewest resources to actually conserve it”, says Kabraji.

Meeting uncertain

The CBD secretariat in Montreal, Canada, has said that the Kunming conference will take place in the third quarter of 2022, but it is waiting for China to confirm dates. David Ainsworth, information officer for the secretariat, says preparations for the meeting are under way, including plans for how to isolate meeting participants from local residents, similar to the process for the Winter Olympics in Beijing in February. There are provisions for the event to be held in another location if a host has to back out, but Ainsworth says there are no official plans to do that yet.

A decision to relocate the meeting would require China’s approval, which it is unlikely to give, say researchers. But sticking to having the meeting in Kunming could delay it further, owing to China’s strict lockdowns, which have brought cities to a standstill. The meeting will probably be pushed to after September or even to next year, says Ma Keping, an ecologist at the Chinese Academy of Sciences Institute of Botany in Beijing.

Some researchers say that the world should wait for China to host the meeting – whenever that will be – and that its leadership is important for the success of the negotiations. “The Chinese government has worked very hard to prepare such a meeting,” says Ma. “It should happen in China.”

Others think that it is more important that the meeting happens this year – whether in China or not. Facilities to host such a meeting exist in Rome, Nairobi and Montreal. “Any of these places would be preferable to indefinite further delays,” says Hughes.

“A further delay sends a problematic signal that habitat loss and species extinction can somehow wait,” says Li Shuo, a policy adviser at Greenpeace China in Beijing.

Regardless of when and where the meeting happens, researchers say what’s most important is that the world agrees to ambitious biodiversity goals and delivers on them. The two-year delay has given countries more time to develop the draft framework, but they have yet to agree to many of the terms, or to establish how they will finance and monitor the work. There are “significant disagreements still on just about every aspect of every target”, says Anne Larigauderie, executive secretary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services in Bonn, Germany. Nations will meet again only once more – in Nairobi in June – before the agreement is expected to be finalized at the summit in Kunming.



Mexican President Andrés Manuel López Obrador has been at odds with scientists.

WORRIES OVER DELAY IN REVAMPING MEXICO'S SCIENCE LAW

Researchers fear that a polarizing bill could ruin the chances of overhauling the nation’s science system.

By Emiliano Rodríguez Mega

It has been almost a year and a half since Mexico’s Congress missed its deadline to approve a bill that would drastically overhaul how science and technology are governed. Worried about the lack of progress since then, researchers fear that political wrangling and a lack of consensus might waste a prime opportunity to boost Mexican science.

A constitutional amendment compelled Congress to pass the legislation by 15 December 2020. But the deadline came and went without lawmakers even discussing the various proposals on the table, or whether to merge them. One proposal that has yet to make its way to Congress, but that was made available for public comment in March, has drawn the ire of some researchers. They say that this bill, developed by the country’s science agency, the National Council of Science and Technology (Conacyt), ignores the community’s wishes and concentrates decision-making power at Conacyt.

“What they are trying to do is to impose a single vision,” says Carlos Arámburo, a neurobiologist at the National Autonomous University of Mexico (UNAM) in Querétaro.

He participated in a series of meetings with Conacyt to express worries about the proposal, but says that the agency did not address many of the community’s concerns and suggestions. Conacyt officials did not respond to *Nature’s* queries about criticisms of the proposal.

The wait for a new science law adds to tensions between researchers and Mexico’s left-wing president, Andrés Manuel López Obrador, who took office in late 2018. His austerity measures and pledges to fight corruption in Mexico have led to debilitating budget cuts for science, as well as accusations of organized crime against scientists. Under his government, scientists have sharply criticized Conacyt for irregular management of funds, unjustified dismissals of early-career researchers from the agency and what they see as disdain for private academic institutions. Conacyt has denied some of these allegations.

Many researchers think that if a bill is passed, it will be Conacyt’s version that will win the day. And it has its supporters.

“It seems quite reasonable to me,” says Edmundo Gutiérrez Domínguez, a physicist at the National Institute of Astrophysics, Optics and Electronics in Puebla – one of

DANIEL BECERRIL/REUTERS/ALAMY

27 public research centres across Mexico that are coordinated by Conacyt. The bill promises to regulate not only science, technology and innovation, but also the humanities – an area that some feel has been neglected by previous administrations. If approved, it would ensure that science and technology are reoriented to “solve the great problems of the country”, says Gutiérrez Domínguez, who was appointed director of his institute in 2019 by the head of Conacyt, María Elena Álvarez-Buylla Roces.

Other scientists are not so hopeful. “On the one hand, you see this speech of good intentions embodied in the law,” says Judith Zubieta, a science-policy researcher at UNAM in Mexico City. “On the other, you’re seeing concrete actions that completely contradict what the pretty words say.” For instance, Mexico’s current science law states that national spending on research and technology should not be less than 1% of the country’s gross domestic product. Conacyt’s proposal says only that the nation will provide “sufficient, timely and adequate” funds.

Although Mexico has never hit the 1% spending goal – the closest it has come was in 2010, when it invested nearly 0.5%, according to the Organisation for Economic Co-operation and Development (see ‘Unmet promise’) – having a mandate is better than leaving the goal open to interpretation, says Carlos Iván Moreno, a public-policy researcher at the University of Guadalajara in Mexico.

Mexico’s current science and technology law was enacted in 2002, after intense lobbying by the research community.

Although the law had its strong points, it didn’t succeed in making science a priority in Mexico. In May 2019, an opportunity to improve the law arose when legislators modified the country’s constitution to include the right of its people to “enjoy the benefits” of science and technological innovation. The

amendment required that Congress issue a general science law no later than 2020. Anyone could submit a proposal, and López Obrador asked Conacyt to draft the government’s.

So far, four proposals have been drafted. As well as from Conacyt, they have come from a group of academics and a network of state science councils. More are expected from opposition lawmakers.

However, some of them “have [little] possibility of moving forward”, says Alma Cristal Hernández, president of the Mexican Association for the Advancement of Science in Mexico City. Conacyt’s version looks like the strongest contender, because López Obrador’s party and its allies hold a majority in Congress.

Helpful or harmful?

But not much has happened so far. Legislators have “unfinished business” with the new law, says Alfonso Cruz Ocampo, the technical secretary of the Science, Technology and Innovation Commission of Mexico’s Chamber of Deputies, the lower house of the nation’s Congress. The commission will help to review the various proposals that have been put forward. “We will seek to integrate the virtues of each of them,” he says.

The COVID-19 pandemic, a disgruntled research community and, most of all, political polarization have also contributed to the extreme delay, Moreno says. “The preliminary draft presented by Conacyt has been rejected in the main academic and institutional circles,” he explains. “There is no consensus.”

Conacyt’s leadership says its law will bring about positive change for science in Mexico. In an opinion piece published in the newspaper *La Jornada* last year, Álvarez-Buylla Roces wrote that, if approved, the legislation would “promote the advancement of knowledge” and the development of the country’s own technologies to ensure “the well-being of the

Mexican people”.

But other provisions in Conacyt’s proposal have not quelled fears of bias against some scientific institutions in Mexico.

For example, the law would provide tax exemptions for universities and research centres when they purchase supplies, equipment and material – but only from state-owned suppliers. A letter written by Coparmex, an independent employers’ union that represents more than 36,000 companies in Mexico, calls this part of Conacyt’s bill “discriminatory”.

The government’s proposal also guarantees universal access to scholarships for students, as well as economic stimuli for researchers, but only as long as they study or work at public universities or institutions. “It’s deeply exclusionary,” says Romeo Saldaña Vázquez, an ecologist at the private Ibero-American University in Puebla. The measure means he would lose the extra stipend of 20,000 pesos (about US\$1,000) he receives each month from the National System of Researchers, a programme managed by Conacyt that rewards scientists for their productivity.

Most worrying, other critics say, is that the draft would give Conacyt power over most science-based policies in Mexico. The document implies the elimination of at least nine advisory bodies – some of which were created as a result of the current science law – that represent the country’s academic and scientific community. “I would see it as the return of a very centralized policy, a centralized vision of science,” similar to that in the 1970s, when all science-policy decisions fell on Conacyt’s shoulders, says Rosalba Medina Rivera, president of the National Network of State Councils and Organizations of Science and Technology in San Luis Potosí, which submitted its own law proposal to the Senate.

Gutiérrez Domínguez sees it differently. “It seems to me to be a policy that retakes control of science” by the Mexican government, he says, adding that the law would allow the participation of different sectors of society, including the academic community.

The myriad of concerns has led some to ask: does Mexico even need a new science law?

“That’s a very important question,” says Alma Maldonado, a higher-education researcher at the Center for Research and Advanced Studies in Mexico City. “There is a battle, a political and ideological dispute, over a law that could be beneficial – but could also do a lot of harm.”

The science commissions of the Senate and Chamber of Deputies are set to meet in mid-May to explore a way forward.

Disclosure: While getting his undergraduate degree, Emiliano Rodríguez Mega, the reporter of this story, co-authored a paper in 2015 with María Elena Álvarez-Buylla Roces, the current head of Conacyt.

UNMET PROMISE

Since 2002, Mexico’s science law has required the country to invest no less than 1% of the country’s gross domestic product (GDP) in research and development (R&D). The goal has never been met. Among the members of the Organisation for Economic Co-operation and Development, Mexico is currently investing one of the smallest amounts in R&D.

