

19 SEPTEMBER 2019 UPDATE 20 SEPTEMBER 2019

Scientists worldwide join strikes for climate change

From Bangkok to Brisbane, researchers were among those protesting to urge action on global warming.

Quirin Schiermeier,
Kate Atkinson,
Emiliano Rodríguez Mega,
T. V. Padma,
Emma Stoye,
Jeff Tollefson &
Alexandra Witze



Greta Thunberg sat in front of the Swedish parliament in Stockholm last August for the first ever 'school strike for climate'. One year on, the teenage activist's Fridays for Future campaign has [grown into a global movement](#) involving people of all ages and backgrounds, including many scientists and scholars.

As government and business leaders flock to New York City for the United Nations Climate Summit next week, millions of people in hundreds of cities worldwide are expected to take to the streets today to demand stronger action on climate change. Commitments made so far by nations to the 2015 Paris agreement are [unlikely to keep the rise in average global temperature below 1.5C](#).

Nature spoke with scientists striking in cities around the world about their motives and expectations.

Mexico City

Instead of carrying a sign, like most people at the climate strike in Mexico City, Ana Wegier was holding her three-year old son. "I believe it's super important for him to grow up participating in these events," she says as the boy savoured a popsicle to beat the heat.

Wegier and her son took to the streets downtown along with an estimated 3,000 protestors to participate in one of the 92 registered climate strikes across the country.

As a population geneticist at the Botanical Garden of the National Autonomous University of Mexico (UNAM) in Mexico City, Wegier is most worried about the "silent" consequences of a warmer planet. These include the ways that climate change is reducing the genetic diversity of crops and plants upon which millions of people depend. "What we're losing is the opportunity to survive many of the changes to come," she says.

Nearby, conservation biologist Jesús Pacheco Rodríguez marched with members of his laboratory from UNAM's Institute of Ecology. They stretched a red banner with the legend "Stop Extinction" as fellow protestors unleashed chants of "You can see it, you can feel it! The Earth is heating up!"

"We're going through the worst environmental crisis," says Pacheco Rodríguez. "It's really important that both academics and regular people come together. If we don't do that now, it'll be too late afterwards."

The effects of climate change have already started hitting Mexico City, says urban ecologist Luis Zambrano, who came to the protest

with around 12 members of the group he leads at UNAM's Institute of Biology.

Most of the city's drinking water comes from a vast underground aquifer that is recharged during the rainy season. But precipitation patterns have changed dramatically in the past years: they are more intense now, flooding the city and preventing water from infiltrating into the soil. Zambrano's research predicts that this will translate into less available water in the near future.

But Zambrano has hope that the climate strike will be a turning point in the way many Mexicans think about climate change. "This is the start of what needs to happen in this city and this country," he says.

Denver, Colorado

In Denver, Colorado, climate strikers turned out under sunny skies to march from the city's main train station to the gold-domed state capitol building.

Kirsten Blagg, a graduate student in physics at the Colorado School of Mines in nearby Golden, was sporting a "Think Science" t-shirt she got when ordering a piece of equipment for her laboratory. She came to her first climate march to support the students who have been organizing the global strikes, and to help send a message to politicians that many people care about climate change.

"It's pretty frustrating when scientists with real knowledge don't get listened to," she said. "I just wanted to put another body on the street."

Rhea Esposito, an ecologist and science educator at the National Ecological Observatory Network in Boulder, also said she was marching to try to keep public and political attention on the issue. "That's the point of a demonstration like this," she said. "The climate crisis is the number-one issue that we are facing as a species."

Esposito has worked in behavioural ecology, and at one point studied the nesting habits of both crows and magpies in Wyoming. She saw firsthand how crows were moving into the area and shifting the ecological balance — nowhere near a significant impact as what humans are facing from climate change, she said, but still an indication of how the world is now changing. Esposito has also seen climate change closer to home, such as with the increasing numbers of forest fires in Colorado.

New York City

Climate activists filled streets in downtown New York City today as they marched to the southern tip of Manhattan island, where Thunberg is set to speak.

Corey Lesk, a climate scientist who is currently studying for a doctoral degree, was among several dozen researchers from Columbia University's Lamont-Doherty Earth Observatory in Palisades, New York, who attended the protest.

Lesk says the world should have acted aggressively on climate change decades ago, and he is sceptical that the global climate rallies will change the political dynamic. That is one reason why he decided to study climate adaptation, focusing on the future of food and agriculture. Nonetheless, Lesk helped organize Lamont's contingent and came armed with three signs. He gave two away but kept the third, which reads "Keep it in the ground."

"That's the safest place for carbon," Lesk says.

The rally briefly turned chaotic when police wrestled a teenage girl to the ground after she allegedly struck an officer who was ordering people off the street. Lesk was among dozens of nearby protesters chanting, "Close the street! Keep us safe!"

Minutes later, the march from a square near New York's city hall to Battery Park began. The Lamont researchers were quickly swept up in a crowd that police estimated at more than 30,000.



London

The sun was shining as thousands of protesters descended on Westminster to demand stronger action on climate change. Chants of “What do we want? Climate justice! When do we want it? Now!” rang out as people — among them scientists and students from some of the city’s major research universities — navigated the packed streets.

“I’m striking for the same reason that I research climate change,” says Neil Grant, a PhD student at the Grantham Institute for Climate Change and the Environment at Imperial College London. “It is a huge societal problem we need to face. My research is aimed at helping to find solutions. But I can’t just engage with climate change intellectually, I need to engage practically.”

He says the UK government isn’t doing enough on climate change. “I’m hoping that politicians and those in power will listen to the voices of the strikers. In the UK, that might look like bringing forward the ban on petrol and diesel vehicles and making more use of onshore wind [power],” he says.

Grant adds that the Grantham Institute has been supportive of the movement — and although it hasn’t formally condoned people walking out of work, it encouraged researchers to attend the rally and do outreach, giving out information on climate science to those in the crowd.

Karen Yates, a condensed-matter physicist at Imperial College London, chose to attend the strike on her non-working day. For her, the strike is about raising awareness.

“I would like to ensure that the issues surrounding climate change are kept in the news so that we can discuss them as a society,” she says. The effects of climate change are already leading to mass migrations and suffering, she says. “The need to address the conditions leading to climate change is therefore one of social justice.”

Delhi

In Delhi, schoolchildren and hundreds of university students joined climate strikes, demanding immediate action to fight climate change and an end to the city’s chronic pollution problem. Protestors carried placards and shouted slogans — “We want to breathe clean!” — demanding an end to air and plastics pollution.

But most scientists from publicly funded research institutes kept away from the strikes, which pose a dilemma for Indian researchers. Some scientists who asked to remain anonymous told *Nature* said there was no buzz about the strikes within the academic community. By striking, they may appear to be “making a statement against the Indian government, and accusing it of not doing anything, whereas governments in developing countries in general have committed to mitigate climate change”, says Tejal Kanitkar, a climate researcher at the National Institute for Advanced Studies in Bangalore.

Sydney, Australia

Today was microbiologist Michael Kertesz’s first time protesting about climate change. His purpose for participating was to highlight the impact the planet’s warming is having on oceans.

“Fifty percent of the photosynthesis done on Earth is done by microbes in the sea,” says Kertesz, from the University of Sydney. But rising sea temperatures are having a significant effect on those processes, he says. “The Brazilian rainforests are on fire, but what’s happening in the ocean is even worse.”

The researcher joined a handful of colleagues — and tens of thousands of Sydney citizens, including university students, academics, environmental organizations, school students and their parents — as they marched through the city’s streets. The event was one of at least a dozen around Australia today.

Kertesz wants Australia’s government, led by the right-wing Liberal-National coalition, to transition the country away from coal and oil use and make strong investments in renewable energy.

After marching through the city’s centre, the protesters gathered at a central park. There, school students spoke about how climate change was exacerbating the drought afflicting much of the state of New South Wales, and climate activists from the South Pacific island Tuvalu spoke about sea levels rising around the coral atoll.

Ecologist Glenda Wardle, also from the University of Sydney, joined the strike because she thinks people’s actions can make a difference. “We each value nature in different ways, but today the collective voice said we want immediate action on climate change.”

Wardle says her [team’s long-term studies](#) in the Simpson Desert in central Australia show that global warming is contributing to longer, warmer droughts and bigger floods. Extra rain can make vegetation grow faster, which can lead to more frequent wildfires, she says. Wardle is also concerned about how warming will influence water scarcity and disease outbreaks in the desert and other ecosystems, which could potentially accelerate rates of species extinction.



Protesters during a climate strike rally on 20 September in Dhaka, Bangladesh. Credit: Allison Joyce/Getty

FIVE SCIENTISTS TELL NATURE WHY THEY'RE STRIKING

Natalya Gallo, San Diego, California

Joining today's climate rallies in San Diego, California, is a matter of professional ethics for marine ecologist Natalya Gallo. Born in 1988, the year [the Intergovernmental Panel on Climate Change](#) was founded, she has always had an acute interest in climate science and climate policies.

Gallo, a postdoc at the Scripps Institution of Oceanography in La Jolla, has attended several high-level UN climate negotiations, including the 2015 Paris meeting that produced a [landmark agreement](#) to limit global warming to 1.5 °C. The [United States' withdrawal from the Paris agreement](#) was an incredible disappointment to Gallo — and a strong motivation to carry on with her science and policy work.

"The science shows us clearly where we need to be but, sadly, political action and public awareness are still far away from there," she says.

Hundreds of protesters — among them many scientists from the University of California, San Diego (UCSD) — are expected to join the rallies organized by schools in the city. Gallo will attend with her three-year-old daughter, whose life she fears will be affected by global warming in ways that aren't yet foreseeable. Gallo says she will also join student climate protests in October on the UCSD campus and attend the next round of UN climate negotiations in December in Chile.

Pao-Yu Oei, Berlin

Pao-Yu Oei, an industrial engineer at the Technical University of Berlin, will take part in Friday's climate strike with his entire 15-strong research group, work duties permitting. In fact, the university's president encouraged all its scientists and staff to shift Friday lectures and join youth protesters at the Brandenburg Gate, the venue for one of around 500 climate rallies planned in Germany that day.

Oei's research focuses on social and economic consequences of phasing out fossil fuels — a burning issue in Germany, where coal still produces more than one-third of electricity.

"It is very clear that Germany will miss its climate goals if it doesn't quit coal very soon," he says. "But what researchers say doesn't always convince the powers that be. We will strike because civil society must absolutely put pressure on policymakers to act."

Fernando Archuby, La Plata, Argentina

In Argentina, the country's long-running economic crisis tends to obscure environmental concerns, says Fernando Archuby. The palaeo-ecologist at the National University of La Plata — the second-largest research university in Argentina — wasn't aware of the global climate strikes planned on Friday until an e-mail from *Nature's* news team drew his attention to them. Curious, he discovered that a handful of local young people involved in the Fridays for Future movement had this time invited adults to their rally. Archuby has decided to join them.

He says there is much to be done to raise public awareness about climate change in Argentina. "Our politicians are happy when energy consumption rises because it means that our economy is recovering," he says. "And people here tend to say that if climate is a problem at all, then it is up to the rich countries, not us, to fix it. Few in my country would accept that we must change our habits, too."

Most scientists in Argentina understand the global nature of the world's climate dilemma well, Archuby says. But, at least in La Plata, few are prepared to take to the streets. "I asked my colleagues if they might join the strike tomorrow," he says. "I don't think very many will."

Jean Balié, Bangkok

Jean Balié, an economist, isn't normally a big fan of public demonstrations. But on Friday, the head of the agri-food policy department at the International Rice Research Institute (IRRI) in Los Baños, the Philippines, will step out of an important steering meeting in Bangkok to join a small group of food-policy researchers outside the office of the UN's Food and Agriculture Organization in the Thai capital. They will be gathering there to protest against feeble global climate action. "Every one of us can make a contribution," he says. "But tackling climate change must rely on a robust policy framework."

Too many politicians are suspicious of the mounting evidence of dangerous climate change, he says. "As scientists, we have a responsibility to alert the public that here's a real threat to the way we want to live our lives."

The IRRI is part of the Consultative Group on International Agricultural Research, which runs 15 research centres worldwide. Growing more food in a sustainable way in a warming world is an enormous challenge that can't be tackled by political declarations and good intentions, says Balié. "What the world needs now is a plan of action with real commitments, local to global."

Saphira Rekker, Brisbane, Australia

Rekker, a finance lecturer at the University of Queensland in Australia, has taken a day's leave to join the climate demonstration organized by trade unions in Brisbane. "What Greta Thunberg and striking schoolchildren have achieved so far is just what we need," she says. "I want to show my support and feel the vibe of that great movement."

Rekker studies how the activities of corporations and industries affect the achievability of global climate goals. She never thought much about taking climate concerns to the streets. But on a business trip to Brussels last March, she saw schoolchildren peacefully demonstrating for their future, chanting slogans and holding banners. "This was just so inspiring," she says. "I suddenly realized what children must feel when short-term interests are put before the long-term wealth of humanity."

Rekker is fascinated by how nature works and everything balances. When raging bushfires spread into the suburbs of Brisbane during an unusually dry winter, destroying homes and threatening people, she saw them as a harbinger of a climate that is turning increasingly hostile. "I'm a global citizen and I can move to a safer place any time," she says. "Most other people don't have that luxury."

doi: 10.1038/d41586-019-02791-2