

RICH NATIONS WARNED AGAINST 'BACKSLIDING' ON CLIMATE CHANGE

Scientists from Egypt, which is hosting the COP27 climate summit, call for more research funding.

By Sarah El-Shaarawi & Ehsan Masood

The Egyptian hosts of the COP27 climate conference are warning the leaders of wealthy nations that there can be no “backsliding” on commitments made at COP26 in Glasgow, UK, last year.

The meeting, formally the 27th United Nations Climate Change Conference of the Parties, began on 6 November. In a letter to world leaders, conference president Sameh Shoukry, Egypt’s foreign minister, reiterated concerns that extra climate finance for the most vulnerable countries – promised in Glasgow – has not materialized (see go.nature.com/3ugtrbo). Industrialized countries had pledged to double funding for climate-adaptation projects, aiming to reach US\$40 billion per year from 2025.

But researchers say nations are off track to deliver this commitment. Furthermore, wealthy countries have failed to reach a promised goal of providing climate finance of \$100 billion annually to vulnerable nations. Low- and middle-income countries (LMICs) were expecting multilateral organizations such as the World Bank to increase funding to reduce greenhouse-gas emissions and make communities and ecosystems less vulnerable to climate change, but this has not yet developed into concrete agreements, Shoukry wrote.

Mahmoud Sakr, president of the Egyptian Academy of Scientific Research and Technology in Cairo, says that scientists from climate-vulnerable countries will urge COP delegates to boost research funding. Nations, he says, must conduct more of their own climate studies – especially in the Middle East and North Africa, which already experience low rainfall and arid conditions. The Arab world accounts for just 1.2% of published climate studies (S. H. Zyoud and D. Fuchs-Hanusch *Environ. Sci. Pollut. Res.* 27, 3523–3540; 2020).

Earlier this month, researchers at Greenpeace Research Laboratories at the University of Exeter, UK, reviewed climate-impact studies on six countries: Morocco, Algeria, Tunisia, Egypt, Lebanon and the United Arab Emirates (see go.nature.com/3fxeat9). They concluded that the Middle East and North Africa are warming at twice the global average rate. However, they also said that it is hard to

track this trend, because data from the region lacks consistency.

“There have been many promises,” says Mahmoud Mohieldin, the UN’s climate-change high-level champion for Egypt, but “without finance, money and investment, nothing will progress”.

In 2015, Egypt estimated that it needed to set aside \$73 billion for projects to help the country mitigate climate change and adapt its infrastructure. But this number has now more than tripled, to \$246 billion, says environment minister Yasmine Fouad. “Most climate actions we have implemented have been from the national budget, which adds more burden and competes with our basic needs that have to be fulfilled.”

Compensation controversy

Delegates from LMICs and climate campaigners are pleased that the concept of “loss and damage” is featuring in the main talks. Loss and damage is a reference to a demand from LMICs that they be reimbursed for harm they experience as a result of emissions from high-income countries. Until now, the European Union and the United States have opposed this idea, mostly because of concerns that they could

be subject to large claims for compensation.

However, the LMIC cause was boosted when the phrase “losses and damages” featured in the latest report on climate impacts, adaptation and vulnerability from the Intergovernmental Panel on Climate Change, published in February. Christopher Trisos, an environmental scientist at the University of Cape Town in South Africa and a lead author of the report’s chapter on climate impacts in Africa, says: “There is stronger evidence than ever that Africa has already experienced loss and damage that is attributable to human-induced climate change.”

The concept of reimbursement for such loss and damage is not aid, but based on the “polluter pays” principle, the basis of environmental laws around the world, says Sunita Narain, editor of science magazine *Down to Earth*, based in New Delhi. This financing “must be on the table – not to be pushed away with another puny promise of a fund that never materializes”, Narain writes in the 1–15 November issue.

Impossible to avoid

Ian Mitchell, a researcher with think tank the Center for Global Development in London, warned of possible unintended consequences if agreement on loss and damage becomes a deal-breaker at the meeting. High-income countries could agree to the principle and then absorb loss-and-damage finance as part of their humanitarian-aid spending – meaning it would not be new money.

Adil Najam, who studies international climate diplomacy at Boston University in Massachusetts, thinks it is unlikely that these issues will be resolved in Egypt, and says that the politics will probably get messy.

HOW MUSK’S TAKEOVER MIGHT CHANGE TWITTER: WHAT SCIENTISTS THINK

Extremists could flock back to the platform – and researchers are gearing up to study their impact.

By Heidi Ledford

When billionaire entrepreneur Elon Musk completed his purchase of Twitter and pledged that “the bird is freed” last month, Felix Ndahinda saw a threat rising on the horizon.

Ndahinda has trained in international law and works in Tilburg, the Netherlands, as a

consultant on issues pertaining to conflict and peace in the African Great Lakes region. He has already seen what a ‘free’ Twitter can do. For years, he has been tracking the social-media hate speech that swirls amid armed conflict in the Democratic Republic of the Congo¹. Much of that incendiary speech has gone undetected by the systems that platforms, including Twitter, use to identify harmful content, because it is shared in languages that are not built into



Elon Musk visited Twitter's headquarters in San Francisco, California, on 26 October.

their screening tools.

Even so, Ndahinda thinks that Musk's pledges to reduce Twitter's oversight of social-media posts would add to the momentum and influence of hate speech in the Great Lakes and beyond. "A permissive culture where anything goes will always increase the trends," says Ndahinda. "It will embolden actors and increase the virulence in their hate speech."

All eyes are on Twitter as Musk's plans for the platform come into focus. For now, it is unclear how far he will go towards his early pledge to be a "free speech absolutist", which has raised concerns that he might reduce oversight of offensive or potentially harmful tweets. But past research offers some pointers on what the impact of looser restrictions could be.

"It's a very complex ecosystem," says Gianluca Stringhini, who studies cybersecurity and cybersafety at Boston University in Massachusetts. "But if you go and get rid of moderation on Twitter completely, then things will become much worse."

All in moderation

Currently, Twitter uses a combination of automated and human curation to moderate the discussions on its platform, sometimes tagging questionable material with links to more credible information sources, and at other times banning users for repeatedly violating its policies on harmful or offensive speech.

Musk has repeatedly stated that he wants to loosen Twitter's reins on speech. In the days following his purchase of the company, Twitter reported a surge in hate speech. The company said that, by 31 October, it had removed 1,500 accounts related to such posts. Musk says that, for now, its moderation policies have not changed.

Musk has met with civil-rights leaders about

his plan to put a moderation council in charge of hate-speech and harassment policies. Users who had been banned before Musk's takeover of the company will not be reinstated until a process for this has been set up, Musk has said.

Some of the users who have been banned from Twitter will have retreated to lesser-known platforms with fewer regulations on what can be said, says Stringhini. Once there, their social-media activity tends to become more toxic and more extreme². "We see a community that becomes more committed, more active – but also smaller," he says.

Normally, these platforms are where false narratives start, says Stringhini. When those narratives creep onto mainstream platforms such as Twitter or Facebook, they explode. "They get pushed on Twitter and go out of control because everybody sees them and journalists cover them," he says.

Twitter's policies to restrict hate speech and misinformation about certain topics – such as COVID-19 – reduce the chances that such tweets will be amplified. Loosening those policies would allow the tweets to find larger audiences.

Bad business

"When you have people that have some sort of public stature on social media using inflammatory speech – particularly speech that dehumanizes people – that's where I get really scared," says James Piazza, who studies terrorism at Pennsylvania State University in University Park. "That's the situation where you can have more violence."

Judging from social-media platforms with loose restrictions on speech, a rise in extremism and misinformation could be bad business for a platform with mainstream appeal such as Twitter, says Piazza. "Those communities degenerate to the point to where they're not really

usable – they're flooded by bots, pornography, objectionable material," says Piazza. "People will gravitate to other platforms."

And regulations on the way from the European Union could make Musk's 'free speech' rhetoric impractical as well, says Rebekah Tromble, a political scientist at George Washington University in Washington DC. The EU's Digital Services Act, due to go into effect in 2024, will require social-media companies to mitigate risks caused by illegal content or disinformation. In theory, Twitter and other platforms could try to create separate policies and practices for Europe, but that could prove difficult, Tromble says. "When it's fundamental systems, including core algorithms, that are introducing those risks, mitigation measures will necessarily impact the system as a whole."

Tromble expects that the Musk era at Twitter will begin with a period of chaos as Musk and Twitter users test the boundaries. Then, she says, it is likely to settle down into a system much like the Twitter of old.

Over the coming weeks, Stringhini expects that researchers will launch studies comparing Twitter before and after Musk's takeover, and looking at changes in the spread of disinformation, which user accounts are suspended, and whether Twitter users quit the platform in protest. Tromble intends to monitor campaigns of coordinated harassment on Twitter.

Whether changes in Twitter policies will have an impact on real-world behaviour is another open question: researchers have struggled to definitively disentangle the effects of social media from the many factors in a changing social environment. For example, a 2017 study of more than 1,200 US Republican and Democratic Twitter users found no significant impact of exposure to accounts operated by the Russian Internet Research Agency on political attitudes and behaviours³. "In much of our research, we're measuring what kinds of narratives pick up and how they go viral," says Stringhini. "The missing link is that we cannot really tell if this online messaging is really changing anyone's actions and opinions in the real world."

To Ndahinda, however, it is clear that the normalization of hate speech and conspiracy theories on social media could have contributed to violence in the Democratic Republic of the Congo, even if academics have not yet been able to delineate its contribution clearly. "It is a very difficult thing to work out the causal link from a tweet to violence," says Ndahinda. "But we have many actors making public incitements to commit crime, and then later those crimes are committed."

1. Ndahinda, F. M. & Mugabe, A. S. J. *Genocide Res.* <https://doi.org/10.1080/14623528.2022.2078578> (2022).
2. Horta Ribeiro, M. et al. *Proc. ACM Hum. Comput. Interact.* **5**, 316 (2021).
3. Bail, C. A. et al. *Proc. Natl Acad. Sci. USA* **117**, 243–250 (2019).