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ways to cope?

• As we prioritize our pandemic coverage, we will be reducing some of our other content in *Nature*'s magazine section. We understand that you, like us, are still interested in other issues, and we'll continue to cover various important discoveries and developments in the world of research.

• For our authors and reviewers, we're well aware that many of you will have difficulty meeting deadlines associated with our peer-review process. If you are an author or a reviewer, please let us know if you need extra time. Our automated systems will continue to remind you of the original timelines, but we intend to be highly flexible.

• We intend to expedite consideration and review of COVID-19 papers. To help us achieve this, we would like to hear from those of you with relevant expertise who can review over short timescales. If this is something you can do, please write to nature@nature.com, putting 'COVID-19 reviewer' in the subject line.

• Travel restrictions mean that most of our editors and reporters will be unable to meet researchers in face-to-face meetings for the foreseeable future. However, social distancing is not social isolation, and we are doing more to reach out to you in virtual ways.

All these are small steps, and we will be looking for any opportunity – working with you all – to do more, so the world can return to something like normality. This is a big moment for research, and the whole world needs to see results.

Countries must take action on 'hidden' CFC stocks

The international community underestimated ozone-depleting chemicals in old cooling units.

In September 1987, many nations came together in Montreal, Canada, in response to an environmental alarm sounded by researchers. The stratospheric ozone layer, which shields the planet from the Sun's harmful ultraviolet radiation, was disintegrating over Antarctica. The culprit was clear: chlorofluorocarbons (CFCs), a class of chemical used in cooling systems and in products such as spray cans and foam insulation.

That meeting is where the Montreal Protocol on Substances that Deplete the Ozone Layer was adopted – it would be ratified in 1989. CFC emissions fell as countries and corporations rolled out less-damaging chemicals.

Studies[1] confirm that the ozone layer has begun its long recovery. And this has strengthened the Montreal Protocol's reputation as one of the best case studies for science-based policy: researchers identified a looming threat; governments took meaningful action; and the threat began to recede.

> **"The protocol is a shining example of how scientific evidence can drive global action."**

But CFCs didn't just deplete ozone. They have climatic effects, too, as greenhouse gases, and also in that they have changed how air circulates in the Southern Hemisphere – and probably beyond. Now a team led by researchers at the Cooperative Institute for Research in Environmental Sciences in Boulder, Colorado, reports[2] on page 544 how the Montreal Protocol has been helping to pause – or in some cases possibly reverse – the recent changes in atmospheric circulation driven by ozone depletion. Less ozone meant less absorption of incoming solar energy in the stratosphere. This cooled the lower stratosphere, strengthening the upper-atmospheric winds that circulate around Antarctica during austral summer. But as stratospheric-ozone conditions began to improve around the turn of the millennium, the previous change started to stabilize, and might even have begun to reverse, the researchers found.

This study demonstrates the enduring power of the Montreal Protocol – and of international environmental agreements – to protect the global commons. But another study, published in *Nature Communications* last week, reminds us why it is vital for researchers to remain vigilant – and why their work is still needed.

There's no requirement in the Montreal Protocol to find and dispose of older CFC sources – such as old fridges and air-conditioning units – partly because the agreement was about future sources. Also, CFC banks have been regarded as small, but quite how 'small' has been the subject of considerable debate and study. Now, researchers from the Massachusetts Institute of Technology in Cambridge report[3] that two types of CFC (CFC-11 and CFC-12) are leaking out of old cooling equipment and from building insulation – in greater quantities than had been estimated.

The researchers have calculated that these CFC "banks" are so large that they could potentially delay ozone recovery by six years, also adding the equivalent of nine billion tonnes of carbon dioxide to the atmosphere – similar to the amount that the entire European Union has pledged to cut from its emissions under the United Nations Paris climate agreement. The researchers also found higher-than-expected levels of CFC-113, a chemical previously used in solvents whose direct production is banned.

These latest findings follow research from 2018 and 2019 in which China was traced as a source of illegal CFC-11 emissions. China's government has reportedly cracked down on this, and the latest analyses – still preliminary – suggest that these emissions have decreased.

Tracking and disposing of older CFC sources will be essential if the Montreal Protocol is finally to achieve its goals. That will need some degree of action by the protocol's signatory countries – and sooner rather than later. That said, the protocol is a shining example for researchers and policymakers in other domains – not least in climate change – of how scientific evidence can drive global action.

1. Chipperfield, M. P. *et al. Nature* **549**, 211–218 (2017).
2. Banerjee, A., Fyfe, J. C., Polvani, L. M., Waugh, D. & Chang, K.-L. *Nature* **579**, 544–548 (2020).
3. Lickley, M. *et al. Nature Commun.* **11**, 1380 (2020).