

## The ozone treaty can do much more for the planet

By Mario Molina  
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The Montreal protocol, the treaty that protects the ozone layer, celebrates its 20th anniversary next month. Its achievements in reducing chlorofluorocarbons and other ozone-depleting chemicals give us much to cheer.

There may be even more to celebrate if leaders decide aggressively to pursue the significant greenhouse gas reductions possible by strengthening the treaty. Next month, the parties to the ozone treaty have the opportunity to reduce climate emissions by many times the reductions mandated under the Kyoto protocol on climate change. It would be the first time developing and developed countries explicitly agreed to mandatory measures for reducing greenhouse gas emissions.

During its 20 years of operation, the Montreal protocol has become the world's best global environmental agreement, having phased out 95 per cent of ozone-depleting substances in developed countries and 50-75 per cent in developing countries. The US estimates that by 2165 these efforts to restore the ozone layer will prevent 6.3m deaths from skin cancer and produce \$4,200bn in health benefits to society in that country alone. Those health benefits extend to all countries of the world, and to the ecosystem itself.

But the work of the ozone treaty is not over. More needs to be done to complete the job of eliminating CFCs and related chemicals that are still attacking the ozone layer. Even more importantly, the ozone treaty can do a great deal to limit greenhouse gas emissions, because CFCs and the other chemicals that deplete the ozone layer are also powerful greenhouse gases.

The ozone treaty has already done more to reduce greenhouse gas emissions than the Kyoto protocol is expected to do in its initial commitment period, from 2008 to 2012. In the process, the Montreal protocol has delayed warming by up to 12 years. This delay may have kept the world from passing the "tipping point" for abrupt and irreversible climate change - a point that some of my colleagues calculate could be 10 years away.

The past climate reductions from the ozone treaty have been largely an un-intended result of reducing the emissions of ozone-depleting substances. Now it is time for the ozone treaty to make its role in reducing climate emissions more explicit. This should start next month with an agreement among the parties to accelerate the phase-out of hydrofluorocarbons in a way that promotes energy efficiency and climate change objectives. HCFCs were intended as "transitional" chemicals to replace the more damaging CFCs, which were phased out from 1987. But the use of HCFCs has soared in developing countries. It is threatening to delay the ozone layer's recovery and hinder efforts to combat climate change. To tackle this threat, a record number of parties to the ozone treaty - including both developing and developed countries - proposed in March to strengthen the ozone treaty by accelerating the phase-out of the offending HCFCs. Calculations by the ozone treaty's technical advisory body show that the proposals to adjust the ozone treaty could do more to reduce climate emissions by accelerating phasing out HCFCs. This could achieve more than the Kyoto protocol's initial target.

It is not clear that the 191 parties to the ozone treaty will reach a consensus at their meeting next month. Another question is what China will do, given that it makes much of the world's HCFCs. But political momentum is building and the leading industrialised countries recently weighed in with support. At their June meeting this year, the Group of Eight committed to "accelerating the phase-out of HCFCs in a way that supports energy efficiency and climate change objectives".

As they negotiate the accelerated phase-out of HCFCs, the parties must bear in mind the need carefully to manage the transition to substances that will replace HCFCs. This should include an analysis of the life-cycle impacts of the substitutes to ensure the lowest potential for ozone depletion and global warming and the highest energy efficiency.

The Montreal protocol still has the vigour and dynamism of youth, along with the experience and wisdom that comes with 20 years of success. It is now a question of whether the treaty's leaders can persuade the rest of the world to act next month. In the light of the short time before we reach the planet's "tipping point", they cannot afford to fail.

*The writer shared the Nobel Prize in Chemistry in 1995 for work in atmospheric chemistry, particularly concerning the formation and decomposition of ozone*