

The 'Cinderella' Gas

Read the passage and choose a heading for each numbered paragraph 1-7 from the list. There is one more heading than you need. Make a note of your choices on paper, then check your answers using the link at the bottom of the page when you've finished:

- | | |
|---------------------------|----------------------------------|
| A. A past problem? | B. A double danger |
| C. It's not too late | D. Expert opinion |
| E. No hope for the future | F. Another negative effect |
| G. Uses and abuses | H. A step in the wrong direction |

1.

The United Nations Environment Programme (Unep) has issued a warning about the dangers posed by nitrous oxide, the so-called "laughing gas". In a report presented at global climate talks, Unep says the chemical is now the biggest threat to the ozone layer. It says that thanks to farming and human activities, levels of the gas could double by 2050. If this happens, it could reverse gains made to slow the thinning of the ozone layer and exacerbate global warming.

2.

Nitrous oxide is one of several greenhouse agents which are dubbed "Cinderella" gases, because their contribution passes unnoticed. N₂O exists naturally in the atmosphere but agriculture is by far the biggest human source, producing two-thirds of emissions. It is also used in dentistry and surgery as an anaesthetic and a painkiller. It is sometimes used as a recreational drug, called "nozz", and its abuse has been linked to permanent neurological damage and deaths.

3.

Now, researchers say that it has emerged as the single biggest threat to the ozone layer since chlorofluorocarbons and other damaging gases were restricted by the Montreal Protocol signed in 1987. The famous "hole" over Antarctica has started to recover as a result of the phasing out of the hair sprays and refrigerants that contained these substances.

4.

But according to this new report, if no action is taken, levels of nitrous oxide could increase by 83% from 2005 to 2050. "The continued build-up of N₂O in the atmosphere will continue to deplete the stratospheric ozone layer and in so doing will to a degree undermine the achievements of the Montreal Protocol," says the document.

5.

Unep's executive director, Achim Steiner, warned that as well as posing a threat to the ozone layer, nitrous oxide has a powerful global warming effect. "It's one of those elements in our

modern life that we have not fully understood in terms of its negative impacts. "If we can bring it to the attention of farmers, government and industry, the importance of managing nitrous oxide more efficiently, and the climate benefits - it is a no-regret option," he said. The research underlines the fact that nitrous oxide is the world's third most powerful gas when it comes to global warming potential.

6.

Dr Joseph Alcamo is Unep's chief scientist. He told a news conference here in Warsaw that the gas could not be ignored any longer. "Nitrous oxide makes up only 6% of the greenhouse gases but in terms of CO₂, it is the equivalent to emitting three [billion tonnes] a year. "This is about 50% of the total amount of emissions from every vehicle in the world."

7.

However, the researchers were optimistic that both the warming potential and the danger to the ozone layer could be swiftly curtailed if action was taken, particularly in agriculture. "In the agricultural sector, it comes down to using nitrogen fertiliser more efficiently, a very simple idea, to improve the uptake by crops and livestock," said Dr Alcamo. "It has a lot to do with using the right fertiliser, in the right place."

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