

Editorial

Ozone – ideals and realities

The public expects all Arctic scientists to know about polar bears, and all Antarctic scientists to be expert on the “ozone hole”. Exposure to bears or the effects of ozone depletion can result in death and are both thus newsworthy. Yet whilst deaths from bears continue to be news, some parts of the media appear to be showing “ozone fatigue” — the public are deemed to have heard enough of this story. Too bad — because the story can only get worse before it gets better.

Let's look at positive achievements first. The Montreal Protocol to limit destruction of stratospheric ozone must be regarded as a major success. January 1996 marks a key stage in its implementation. All the industrialized countries agreed in 1992 to phase out consumption of key chlorofluorocarbons, halons, carbon tetrachloride and methyl chloroform by 1996. There has been considerable success with this not least in part due to the alacrity with which CFC manufacturers decided that making replacements would be very profitable. Countries of the EU ceased production by December 1994 and the remaining OECD countries by December 1995. The establishment of the Multilateral Fund and the Global Environmental Fund (by UNEP, UNDP, UNIDO and World Bank) helps both underdeveloped countries and those with economic problems meet their commitments to phase out CFCs. This has been a very positive development — only marred by the inability of the World Bank actually to disburse the funds at anything more than a snail's pace.

Now for the bad news. Those countries, such as Russia, described as having ‘economies in transition’, have now said that they will not be able to comply on phasing out CFCs until 2000. Given their current state of economic disarray one might consider even this optimistic. In the developing countries the situation is even worse, although they have until 2010 to comply. India is in the vanguard of those increasing their production and export of CFCs and strongly opposing limits on methyl bromide use. Indeed, gaining compliance for any date may well be difficult since the sticking points are both money for ozone-friendly technologies and an understandable perception of interference in internal matters of sovereign states. Add to this the development of a black market in CFCs out of eastern European countries into Europe and the USA, the persistent misuse of the labels ‘recycled’ and ‘feedstock’ (whose use and trade is legal) and the lack of properly organized and funded CFC reclamation at the local level even in Europe and the picture becomes rather gloomy.

Ozone depletion in the Arctic winter, as well as the general downward trend in ozone over temperate latitudes, have all reinforced the earlier predictions of the global extent of this phenomenon. Even on the most optimistic expectations of timely and responsible actions by governments, industry and individuals things can only get worse before they get better. The rise in CFC production in developing countries has so far been more than offset by the decline in the rich world (whose stockpiles grow ever larger). History tells us to expect less rather than more altruism with a consequent further increase in damage.

Despite the scientific evidence and model predictions of increasing deaths and ecosystem damage, the threat from ozone destruction is invisible and so much less pressing than other more visible and immediate threats to human health and the environment. The politicization of the threat, its now indivisible link with the disputes between the developed and developing economies, and the determination of some individuals, industries and governments to exploit the situation show just how difficult it will be to stop the damage increasing for many, many decades. In this scenario Antarctic ozone research has clearly many years yet to run. And keep an eye out for the Polar bears!

D W H WALTON