Ozone layer depletion and the Montreal Protocol: Can this protocol be pushed further?

par

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The ozone layer is an invisible shield that protects Earth's inhabitants from the sun's harsh ultraviolet radiation. The potential depletion of this layer due to emission of man-made ozone depleting gases (such as refrigerants) was hypothesized in the early 1970s. Over the course of a decade and a half, this hypothesis was essentially proved to be correct through a sequence of scientific findings; some, such as the Antarctic ozone hole, were unanticipated. In response to the scientific findings that clearly linked ozone losses to human activity, the countries of the world adopted the Montreal Protocol. Further, as more accurate scientific information emerged, the Protocol was amended and adjusted many times. The most recent scientific findings suggest that the Montreal Protocol is indeed a success story and it is working as anticipated in reducing the ozone depleting gases; indeed the ozone layer is also showing signs of recovery.

How did the decision-making work with science to forestall a major potential environmental problem? What were the key reasons for the success of the Protocol? Were there factors that hastened the embrace of science findings? Were there missed opportunities for better decision making? Were new problems created by the protocol? Were other chemicals missed in the treaty? Can this protocol be used to further other goals?What were the lessons learned from this process?

In this talk I will describethe evolution of the science of the ozone layer over the past four decades. I will overlay these science findings on the international and national policy changes in limiting, curbing, and eliminating the emissions of ozone depleting substances. Then I will very briefly discuss the utility of the ozone regime in dealing with other related issues.