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**Unprecedented Arctic ozone hole may lead to health and crop damage in North America**

Washington, DC, 5 October 2011 – Researchers documented an unprecedented level of ozone loss over the Arctic, for the first time warranting the description “Arctic ozone hole”, a term previously only applied to the hole over the Antarctic. In a study released in *Nature* this week the authors emphasized that never before in the observational record has ozone loss in the Arctic been comparable to the Antarctic. Even more worrisome is the proof that an Arctic ozone hole can form in temperatures milder than those experienced in the Antarctic.

A persistent Arctic ozone hole would increase exposure to ultraviolet radiation in the Northern Hemisphere, which causes skin cancer, cataracts, suppresses the immune system, and reduces agricultural productivity, among other damage. If the size of the Arctic ozone hole were to approach the size of the Antarctic ozone hole, over 700 million people living in countries surrounding the Arctic Circle (including the U.S., Canada, Scandinavian countries and Russia) would be exposed to harmful levels of radiation.

The ozone holes in the Arctic and Antarctic are caused by man-made chemicals called fluorocarbons, or f-gases, many of which persist in the atmosphere anywhere from 60 years to a century, continuing to cause damage. The extreme cold at the poles enhances the power of the f-gases to destroy the protective ozone layer, and with climate change the coldest winters are predicted to get colder. For the past two decades scientists have predicted climate change would create the conditions necessary to cause such an ozone hole in the Arctic. If this climate link is confirmed, it could mean a larger and more persistent Arctic ozone hole.

"If we want to avoid the damage a persistent Arctic ozone hole will cause, we need to ensure full compliance with the phase out of f-gases under the Montreal Protocol ozone treaty," said Durwood Zaelke, President of the Institute for Governance and Sustainable Development. "We also need to use other fast-action climate mitigation strategies, including national and regional air pollution laws, to cut black carbon soot and ground-level ozone," Zaelke added. "Cutting these two local air pollutants can cut the rate of warming in the Arctic by two-thirds within 30 years." These reductions can compliment essential cuts in carbon dioxide (CO<sub>2</sub>) and could be done quickly using existing technologies and existing laws and institutions, according to a recent assessment by the U.N. Environment Programme and the World Meteorological Organization.

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