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**GLOBAL**

**1- EPA Honors Climate and Stratospheric Ozone Protection**

(Washington, D.C. - May 4) Coca-Cola, McDonalds, 3M, American Electric Power, Cinergy, and the cities of Boulder, Colo., and Syracuse, N.Y., are among the 25 individuals, teams, organizations and companies from around the world that EPA will recognize for outstanding efforts to protect the Earth's climate and stratospheric ozone layer. The award recipients have demonstrated ingenuity, leadership and public purpose by achieving reductions of ozone depleting and heat-trapping gas emissions.

Millions of tons of greenhouse gas emissions and ozone-depleting substances have been avoided due to the efforts of the award winners, EPA estimates. The winners have introduced new and improved technologies that reduce harmful emissions in refrigeration, liquid crystal displays (LCDs), and car air conditioning, improving the environmental performance of these industries well into the future ... [Among the Award winners] **OzonAction Programme of United Nations Environment Programme (UNEP) Division of Technology, Industry and Economics (DTIE) [received the 2005 Award]** For Leadership and Innovation in Assisting Developing Countries in Ozone Protection

UNEP DTIE organized its innovative OzonAction Programme to assist the developing countries and countries with economies in transition to phase out ozone-depleting substances (ODSs). This first globally coordinated technical cooperation and capacity building program enabled the compliance of these countries, particularly of least developed countries, with the Montreal Protocol, carried the TEAP/TOC technical findings and business advice to stakeholders and policymakers all over the world, catalyzed worldwide partnerships for voluntary actions of technology assistance to the developing countries, and established the only international program to educate and support customs officers and border police to prevent illegal trade in ODSs. The Programme benefited well over 140 countries through its unique regional networks of the National Ozone Units and information clearinghouse; conducted over 300 workshops, training courses and roundtables; and developed more than 100 need-based manuals, guidebooks, handbooks and technical booklets. Its innovative mechanisms like the first business-to-business web portal to trade banked halon and leveraging NGO's expertise to raise awareness among civil society have enabled cost-effective elimination of ODSs.

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Learn more about the US EPA Climate and Stratospheric Ozone Protection Award:  
[http://www.epa.gov/docs/ozone/awards/winners\\_2005.html](http://www.epa.gov/docs/ozone/awards/winners_2005.html)

**Source:** US EPA, May 2005 Press Release, 4 May 2005

<http://yosemite.epa.gov/opa/admpress.nsf/b1ab9f485b098972852562e7004dc686/75343777b4b3f09385256ff7006f9b02!OpenDocument>

**See also:** UNEP DTIE OzonAction Press Release:

(English) <http://www.uneptie.org/ozonaction/library/mmcfiles/4290-e-pr0405award.pdf>

(French) <http://www.uneptie.org/ozonaction/library/mmcfiles/4290-f-pr0405award.pdf>

## 2- Ozone Hits Record Low in 2005

Chilly Arctic Winters are Sapping our Atmospheric Protection - A combination of climate change and pollution is chewing through Europe's ozone, researchers say. They have announced that the protective layer over northern and central Europe was thinner this season than it has been since measurements began 50 years ago.

The results come from a campaign that collected ozone data from 35 stations from Greenland to Tenerife, between January and March 2005. Preliminary analysis of these data plus information from satellites reveals that about one-third of ozone molecules in the arctic stratosphere were destroyed this past winter. By early spring, ozone-depleted air had drifted southwards through large parts of northern and central Europe.

Substantial ozone depletion was observed during several cold arctic winters in the 1990s, most notably in 1999/2000. But this year's reduction of 30% is larger than seen before, scientists said at this week's meeting of the European Geosciences Union in Vienna.

Some, but not all, of this loss was replenished by ozone flooding up from the south. In fact, the loss came closer to creating a fully fledged ozone hole than ever before, says Markus Rex, an atmospheric scientist at the Alfred Wegener Institute of Polar and Marine Research in Potsdam, Germany.

Without a healthy layer of ozone for protection, light-skinned Europeans can get sunburned, even in the spring, in 20 minutes, particularly at high altitudes or when snow reflects the sunlight. Researchers are concerned that the radiation may have more dramatic effects on plants and animals, which cannot shield themselves with sunscreen.

### Out in the cold

Ozone is destroyed when oxygen molecules react with aggressive chemicals produced by the decay of chlorofluorocarbons (CFCs). The use of CFCs was largely phased out by the 1987 Montreal Protocol. But CFCs are long-living substances that will continue to destroy atmospheric ozone in Polar Regions for at least another 50 years.

Climate change appears to worsen their effect. High-altitude clouds made of nitric acids, sulphuric acid and water trigger the rapid transformation of CFCs into more aggressive compounds. And unusually cold arctic winters, which are expected to become more frequent as global surface temperatures rise, seem to favour the formation of such clouds.

"Over the last 40 years or so, we have seen a fourfold increase in the area cold enough for polar stratospheric clouds to form throughout the Arctic" says Rex. The reasons are not yet entirely understood.

Researchers knew it was going to be a particularly cold year in the Arctic this January, and their predictions of severe ozone depletion have now been confirmed.

To work out the fate of the arctic ozone layer in the more distant future, scientists will need a better understanding of how greenhouse gases affect temperatures in the upper atmosphere, says Neil Harris an atmospheric chemist at the University of Cambridge, UK. Current models of the stratosphere predict everything from a dramatic cooling in the Arctic to modest warming.

*Read the Article:* <http://news.nature.com/news/2005/050425/050425-4.html>

**Source:** Nature Publishing Group, 27 April 2005, By: Quirin Schiermeier

### **3- Ozone Layer Most Fragile on Record**

Fears over increase in skin cancer as scientists report that climate change continues to destroy the earth's protection

The protective ozone layer over the Arctic has thinned this winter to the lowest levels since records began, alarming scientists who believed it had begun to heal.

The increased loss of ozone allows more harmful ultraviolet light to reach the earth's surface, making children and outdoor enthusiasts such as skiers more vulnerable to skin cancer - a disease which is already dramatically increasing.

Scientists yesterday reinforced the warning that people going out in the sun this summer should protect themselves with creams and hats.

Research by Cambridge University shows that it is not increased pollution but a side effect of climate change that is making ozone depletion worse. At high altitudes, 50% of the protective layer had been destroyed.

The research has dashed hopes that the ozone layer was on the mend. Since the winter of 1999-2000, when depletion was almost as bad, scientists had believed an improvement was under way as pollution was reduced. But they now believe it could be another 50 years before the problem is solved.

What appears to have caused the further loss of ozone is the increasing number of stratospheric clouds in the winter, 15 miles above the earth. These clouds, in the middle of the ozone layer, provide a platform which makes it easier for rapid chemical reactions which destroy ozone to take place. This year, for three months from the end of November, there were more clouds for longer periods than ever previously recorded.

Cambridge University scientists said yesterday that, in late March, when ozone depletion was at its worst, Arctic air masses drifted over the UK and the rest of Europe as far south as northern Italy, giving significantly higher doses of ultraviolet radiation and sunburn risk.

The results, which were announced at a Geophysical Union meeting in Vienna yesterday, are part of a European venture coordinated by Cambridge University's chemistry department, which has been studying the relationship between the ozone layer and climate change since May 2004.

Yesterday, Professor John Pyle, from the university, said: "These were the lowest levels of ozone recorded since measurements began 40 years ago. We thought things would start to get better because of the phasing out of CFCs and other chemicals because of the Montreal protocol, but this has not happened.

"The pollution levels have levelled off but changes in the atmosphere have made it easier for the chemical reactions to take place that allow pollutants to destroy ozone. With these changes likely to continue and get worse as global warming increases, then ozone will be further depleted even if the level of pollution is going down."

The relationship between the depletion of the ozone layer and climate change is so complex that the EU is investing £11m in a five-year project to try to understand and predict what is happening. Reporting the results of the first year, the scientists told the meeting in Vienna yesterday that "the atmospheric lifetime of these [ozone depleting] compounds is extremely long and the concentrations will remain at dangerously high levels for another half century."

Increased greenhouse gases in the air trap more heat in the lower atmosphere, but the stratosphere far above the earth is getting colder. As a result, ice clouds form between 14 and 26 kilometres above the earth, exactly in the region where the protective ozone is found.

The European scientists reported the first signs of ozone loss in January. As sunlight returned to northern latitudes, the rate of ozone depletion increased, and rapid destruction of ozone occurred throughout February and March. In the altitude range where the ozone layer usually reaches its maximum concentration, more than half of the ozone was lost. In the lower atmosphere losses were not so great.

"Overall, about 30% of the ozone layer was destroyed," said Dr Markus Rex, from the Alfred Wegener Institute in Potsdam, Germany, another member of the team. He said the cold conditions which created polar stratospheric clouds were four times more extensive in 2005 than in the 1960s and 70s.

Professor Pyle said overall the mixing of the air in the northern hemisphere was far more rapid than in the Antarctic so a "hole" in the ozone layer did not occur. Instead, as the air mixed in spring, there was a general thinning of the protective ozone over the whole of the northern hemisphere.

"It just means we have less natural protection than we should have and we are used to. It means that we should be careful about exposing ourselves to the sun, but that is already the case, this just makes things slightly worse," he said.

The UV danger Ecology altered as Earth burns

- The thinning of the ozone layer allows more ultraviolet light - or UV radiation - to reach the Earth's surface
- UV light stimulates the production of vitamin D in the skin, which strengthens bones, but it also burns and causes skin cancer, particularly in fair-skinned people. The UN environment programme estimates that for every 1% thinning of the ozone layer there is a 2% to 3% rise in skin cancer
- It also causes eye problems even if dark glasses are worn - mainly cataracts and snow blindness -and can suppress the immune response to the herpes virus and damage the spleen
- Excess UV radiation cuts photosynthesis in plants, reducing the size and yield of winter wheat
- Plankton which are constantly exposed suffer damaged DNA. As some species are more vulnerable than others, an increase in UV exposure has the potential to cause a shift in species composition and reduce diversity in ecosystems
- Reducing the world's populations of phytoplankton would significantly impact the world's carbon cycle, because phytoplankton store huge amounts of carbon in the ocean

Read the Article [http://www.guardian.co.uk/uk\\_news/story/0,3604,1470944,00.html](http://www.guardian.co.uk/uk_news/story/0,3604,1470944,00.html)

**Source:** The Guardian, 27 April 2005, By: Paul Brown, environment correspondent

## AFRICA

### 4- Ghana Complying with Protocol on Ozone Depletion Phase-out

Accra, Ghana (PANA) - Ghana has so far obtained US\$198,000 from the Montreal Protocol's Multilateral Fund to promote international efforts aimed at changing from the use of chlorofluorocarbons (CFCs) contained refrigerants found to be a main cause of the depletion of the ozone layer.

The fund was established to help developing countries, which were signatories, to embark on programmes aimed at the phasing out of the use of CFCs refrigerants worldwide by the 2010 deadline.

The Project Co-ordinator at the Ozone Office of the Environmental Protection Agency (EPA), Osae Quansah, said this Friday at a daylong awareness creation seminar on causes and impact of Ozone layer depletion for government institutions and stakeholders.

He said the amount had enabled the EPA to embark on measures to phase out over 24 tonnes of CFCs and replacing them with alternative hydrocarbons since 1997.

According to Quansah, the Agency had been issuing permits to only three companies to import CFCs into the country, under a quota system.

He said the EPA had so far trained over 200 Customs, Excise and Preventive Service (CEPS), officials at the country's frontiers to enable them to check the illegal importation of mislabelled CFCs into the country. Over

500 cylinders had been impounded from companies and individuals through periodic monitoring, he told seminar participants.

Quansah said Ghana was "a leading compliant signatory to the Protocol", and that EPA has trained over 4,000 refrigeration mechanics on how to change from CFCs usage to other alternative hydrocarbons, while 35 cold stores in the country, including three in Koforidua, had their CFC plants also changed.

He also said the EPA had distributed 16 recovery and recycling equipment to major car air-conditioning workshops nation-wide and urged owners of refrigeration equipment to ensure that they were changed from CFC to the "Ozone saving" hydrocarbons.

*Read the Article*

[http://www.hoovers.com/free/news/detail.xhtml?ArticleID=NR20050506670.2\\_529b0005b5723efe](http://www.hoovers.com/free/news/detail.xhtml?ArticleID=NR20050506670.2_529b0005b5723efe)

**Source:** HooversCom, Quoting: Asia Intelligence Wire, 8 May 2005

## **NORTH AMERICA**

### **5- Environment Canada, Handee Reach Agreement on CFC Imports**

MONTREAL, May 5, 2005 - Handee Products and its president, Mr. Barry Joseph Gardyn, signed an agreement on April 28, to use environmental protection alternative measures as set out in subsection 296(1) of the *Canadian Environmental Protection Act, 1999* to answer to charges of having contravened to paragraphs 272(1) a) and b) of the same law.

Between the months of April and September 2002, the Handee Products Company and its president illegally imported and sold streamers in aerosol containers bearing the brand name "Party Crazy String". These cans contain a propellant composed mainly of CFC-11 and CFC-12.

Scientific studies, conducted by several researchers throughout the world, reveal that the increase in CFC (chlorofluorocarbon) emissions in the atmosphere contributes to the depletion of the ozone layer. This layer acts as a protective barrier against the noxious effects of the sun's ultraviolet rays on the planet's living organisms. The depletion of the ozone layer contributes to the increase in skin cancer among humans.

The sale and importation of these products contravenes to the *Ozone-depleting Substances Regulations, 1998*, under the *Canadian Environmental Protection Act, 1999*.

In this case, Environment Canada suggested that the defendant participate in the Environmental Protection Alternative Measures program. The alternative measures agreement requires the implementation of an operational procedure and management policy specific to the company with respect to the prohibition of the manufacture, importation and sale of products containing CFCs; the writing and publication of an article in an information bulletin of the Canadian Importers and Exporters Association; and the payment of a total of \$100,000 to be deposited into the Environmental Damages Fund for damages caused to the environment.

Under the alternative measures agreement, the defendants must meet the conditions set out within 18 months, failing which the case will automatically be brought before the courts. According to the *Canadian Environmental Protection Act, 1999*, Handee Products and its president would then be liable to a fine of not more than \$300,000 and to imprisonment for a term of not more than six months.

These charges are pursuant to an investigation led by the Enforcement Branch of Environment Canada.

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*Read full text:* [http://www.ec.gc.ca/press/2005/050505\\_n\\_e.htm](http://www.ec.gc.ca/press/2005/050505_n_e.htm)

**Source:** Environment Canada Press Release, 5 May 2005

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The United Nations Environment Programme Division of Technology, Industry and Economics (UNEP DTIE) OzonAction Programme provides OzoNews as a free service for internal, non-commercial use by members of the Montreal Protocol community. The goal of OzoNews is to provide current news relating to ozone depletion and the implementation of the Montreal Protocol, to stimulate discussion and promote cooperation in support of compliance with the Montreal Protocol. With the exception of items written by UNEP and occasional contributions solicited from other organizations, the news is sourced from on-line newspapers, journals and websites. The views expressed in articles written by external authors are solely the viewpoints of those authors and do not represent the policy or viewpoint of UNEP. While UNEP strives to avoid inclusion of misleading or inaccurate information, it is ultimately the responsibility of the reader to evaluate the accuracy of any news article in OzoNews. The citing of commercial technologies, products or services does not constitute endorsement of those items by UNEP.

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