



# zonAction



UNEP DTIE quarterly publication • OzonAction Programme under the Multilateral Fund

*A newsletter dedicated to the protection of the ozone layer and implementation of the Montreal Protocol*

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## View point

### *At the watershed*



*Mr Viswanath Anand, Secretary, Ministry of Environment and Forests, India and Chair, Executive Committee of the MLF*

At this critical juncture for the Montreal Protocol, I am reminded of the UN Secretary General's message for the International Day for Preservation of the Ozone Layer (16 September 1999): 'Whoever we are, wherever we live, whatever we may do, we all have an important stake in the preservation of the

Ozone Layer.' Making the global community aware of this responsibility, I feel, is the challenge ahead of us in the next decade.

The year 2000 should be a watershed for us as we discuss the remaining challenges in the various fora of the Montreal Protocol system. Perhaps the ExCom could dedicate some time at each of its meetings to discussing and analysing the overarching issues, in addition to its responsibilities of discussing project-specific topics?

ODS phase out in innumerable SMEs and the interlinked issue of the servicing

sector need to be taken up with urgency, in both low- and high-volume consuming countries. Technology transfer is an area where more proactive initiatives are necessary to demonstrate international cooperation, and phase out of methyl bromide will also be an important issue in the year 2000 and thereafter.

One of the major concerns of Article 5 countries is that conversion projects are leading them into import dependency where equipment, technology, spares and consumables are concerned. Greater emphasis should be placed on developing indigenous technology; the ExCom should encourage conversion projects based on locally developed technology.

Another major challenge confronting the global community is harmonizing of the policies established under the Montreal Protocol to phase out ODS with those introduced under the Kyoto Protocol to control greenhouse gas emissions.

Developing countries in the middle of the ODS phase-out process are very concerned about this; they need immediate and satisfactory answers to the problem if the momentum of phase out is not to be lost. Since a number of international

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agreements are now being pursued and implemented to tackle environmental problems globally, perhaps there is a need to adopt solutions which establish greater harmony with nature and which are driven less by technology alone.



*Freeze on halons and methyl bromide: 21 months to go  
50 per cent reduction in Annex A CFCs: 57 months to go  
85 per cent reduction in Annex A CFCs: 81 months to go*

## Evaluation of Institutional Strengthening and Refrigeration Projects highlighted at 30th ExCom Meeting

Organizations receiving funding for Refrigeration Projects from the Multilateral Fund will have to submit proof of disposal and destruction of CFC using refrigeration equipment. If they fail to do so their funding will be reduced. This was a key conclusion to the ExCom's discussion of the final evaluation reports for Refrigeration Projects at its 30th Meeting, held in Montreal on 29-31 March 2000. The Secretariat will now establish a list of parts or standard equipment which must be destroyed or rendered

unusable. This work will be carried out in cooperation with the implementing agencies.

During its review of Institutional Strengthening Projects the ExCom reiterated the importance of adequate mandate and of a suitable position for National Ozone Units (NOUs) within their governments if they are to fulfil their essential role in phase-out actions. The Meeting agreed on the need to establish new guiding principles for agreements between governments and

*continued on page 5 ...*



*The Honourable Mr. Serikbek Daukeev, Minister of Natural Resources and Environmental Protection of Kazakhstan, giving the opening statement at the CEIT meeting in Almaty.*

## News from international agencies



### Fund Secretariat

The Fund Secretariat assisted the Executive Committee of the Multilateral Fund (ExCom)

in successfully concluding its 30th Meeting, held 29–31 March 2000 in Montreal, Canada.

At the ExCom Meeting, the Secretariat's report on strategic planning for the Multilateral Fund in the 2000–2010 compliance period generated debate on the role of the Multilateral Fund in assisting Article 5 countries in complying with the requirements of the Montreal Protocol.

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### UNEP DTIE OzonAction Programme

The 30th ExCom Meeting approved projects under UNEP's 2000 Work

Programme worth US\$1.49 million, bringing the total amount of UNEP's Work Programme for 2000 to US\$4.9 million.

In recent months UNEP has continued to provide policy assistance to developing countries for phase out of methyl bromide. Two regional workshops—one in Africa, held in December 1999, and one in Latin America, April 2000—are the most recent examples of this (see page 6 for full reports). To further assist in the phase out of methyl bromide, an innovative activity has been undertaken this year: the expertise of NGOs in 10 countries is being used to increase awareness and build local capacity of farmers to phase out methyl bromide.

In cooperation with the Ozone Secretariat, UNEP DTIE also organized a high level meeting of officials from eight CEIT countries. Full details of this meeting, held in Kazakhstan in April 2000, can be found on page 6.

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<http://www.unep.fr/ozonaction.html>



### UNEP Ozone Secretariat

The Ozone Secretariat informed the Parties to the Montreal Protocol

and relevant organizations of the decisions made at the Beijing Meeting of the Parties, in order to expedite their implementation.

The Secretariat also sent reminders of the necessity to report ODS data for 1999 to all of the Parties that have not yet submitted their reports and helped to coordinate work of the TEAP and Aerosols TOC on Essential Use Nominations and the Reporting Accounting Framework for monitoring of production of CFCs.

Several new publications on ozone-related subjects are now available from the Secretariat:

- *Report of the Fourth Research Managers of the Parties to the Vienna Convention for the Protection of the Ozone Layer*, published in all official UN languages;
- *Action on Ozone 2000*; and
- *The Montreal Protocol on Substances that Deplete the Ozone Layer as Either Adjusted or Amended in London 1990; Copenhagen 1992; Vienna 1995; Montreal 1997 and Beijing 1999.*

The Secretariat also invites all interested parties to participate in its new Internet ODS Customs Codes Discussion Group. This can be found on the following web site:

<http://www.unep.org/ozone.ods-customs-codes/>

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<http://www.unep.org/ozone>



### UNDP

The 30th ExCom Meeting, held in Montreal in March

2000, approved UNDP's current business plan and associated requests for project preparation for the year 2000. The China Solvent Sector Strategy was also approved at the meeting for a total amount of US\$52 million over 10 years. This will phase out more than 4000 ODP tonnes (see box on page 5). Approval was reached after a year of hard and tireless work by the members of the Solvents

Sector Working Group under the leadership of Sweden's Ambassador Mr Rasmus Rasmussen.

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<http://www.undp.org/seed/eap/montreal>



### UNIDO

The 30th ExCom Meeting approved 35 projects for implementation by

UNIDO in the aerosols, foams, refrigeration, solvents and methyl bromide sectors. The projects will be implemented in 21 countries.

Three projects were also carried over from UNIDO's 1999 Business Plan. The first of these, in the fumigants sector in Argentina, will phase out 331 ODP tonnes, the other two, in Mexico's refrigeration sector, will phase out 35.2 ODP tonnes.

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<http://www.unido.org>



### World Bank

At its 30th Meeting, the ExCom approved US\$24 million for the World Bank's CFC production

sector closure projects in China and India. An additional US\$2.05 million was also approved to support costs and finance annual work programmes.

A further sum of US\$3.197 million was approved for investment and preparation projects in the production sector in Argentina, Chile, China, Colombia, India, Jordan, Malaysia, Mexico, Pakistan, Thailand, Turkey and Uruguay.

The total of US\$27.197 million approved for the Bank will phase out 5002.1 tonnes. To date the Bank has phased out 70 per cent of its ODP tonnes targets through Multilateral Fund approved projects.

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<http://www-esd.worldbank.org/mp/>

## Industry and technology updates

*UNEP DTIE welcomes information from industry and will mention as many new technologies and products as possible in this newsletter.*

### REFRIGERATION

#### Manufacturers turning to R-410 as alternative to R-22

Bryant Heating and Cooling Systems and Carrier Corporation have recently introduced new high-efficiency air conditioners using the non-ozone depleting refrigerant Puron.



*A Carrier unit using Puron*

Puron is Bryant's exclusive brand of R-410, an alternative to the ozone-depleting R-22. Puron is a 50:50 mixture of R-32 and R-125 with performance equal to that of R-22. Furthermore, Puron is as safe to use as R-22 as it has low flammability and low toxicity.

Bryant, the first manufacturer to introduce a non-ozone-depleting refrigerant for residential air conditioners (in 1996), has now introduced the Model 583B Packaged Gas and Electric Cool units. These will provide customers in the light commercial market with an environmentally-sound alternative to equipment using R-22. The Carrier Corporation's Puron-using unit, Model 48GP, is also for light commercial applications and is available in 2–5 tonne capacities.

For information on Puron, see:  
<http://www.puron.com/pages/puron01.htm>

For Bryant, contact: Kevin O'Donohue, Bryant,  
tel: +1 317 240 2935.

For Carrier, contact: George LaRose, Carrier,  
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### FOAMS

#### Honeywell plant to produce replacement for HCFC-141b

Honeywell Specialty Chemicals is planning to build a new plant that will produce hydrofluorocarbon HFC-245fa, a replacement chemical for HCFC-141b, the widely used blowing agent for polyurethane products due to be banned in the USA and in Europe in 2003.

The company announced that its new plant, to be located at Geismar, LA, USA, is expected to become fully operational by the middle of 2002. Commercial quantities of HFC-245fa, which has zero ODP, will be available later this year.

HFC-245fa, offers insulation performance comparable to that of HCFC-141b and is, according to Honeywell, an 'ideal product' for its replacement. It is also a non-flammable and safe alternative to the use of flammable blowing agents including hydrocarbons and HFC-365mfc. A further advantage is that HFC-245fa is not a volatile organic compound.

Contact: Lisa Vaga, Honeywell,  
tel: +1 973 455 6073,  
e-mail: [lisa.vaga@honeywell.com](mailto:lisa.vaga@honeywell.com)

### AEROSOLS

#### Ozone-friendly MDI available in the Philippines

A new CFC-free salbutamol metered dose inhaler (MDI) is now available in the Philippines. The new inhaler, from Glaxo Wellcome Philippines, will benefit around 8 million asthma sufferers in the country. The new MDI will look and perform exactly like the product it will replace and will use the same active ingredient (salbutamol) to provide equivalent relief. The only differences users may notice due to the new ozone-friendly propellant will be in taste, sound or feel.

Contact: GlaxoWellcome, fax: +63 2 816 4585  
e-mail: [nml94903@GlaxoWellcome.co.uk](mailto:nml94903@GlaxoWellcome.co.uk)

## India: HFC-134a pilot plant ready for commissioning

A pilot plant for the manufacture of HFC-134a, designed by the Indian Institute of Chemical Technology (IICT), was commissioned earlier this year. The plant is part of India's ongoing efforts to develop indigenous technology for alternatives to ozone-depleting substances.

The pilot plant is the result of IICT research which began in 1992. The IICT opted for vapour-phase catalytic fluorination, as the raw materials for this process—trichloroethylene and anhydrous hydrogen fluoride—are manufactured in India. However, the expertise for the high-temperature fluorination involved was not available in the country. Accordingly, the IICT formed a multi-discipline team of engineers and set up a fluorination laboratory equipped to handle corrosive and toxic anhydrous hydrogen fluoride.

The HFC-134a process was developed successfully and a pilot plant was designed by the IICT engineering team in 1996. In 1997, a turnkey contract was awarded to ENFAB Engineers, Hyderabad, for plant construction. The plant underwent extensive mechanical testing in accordance with international standards before commissioning. With this process completed, IICT became the fifth agency in the world to possess HFC-134a technology and Indian industry will, for the first time, have access to such a sophisticated process.

Contact: IICT, Hyderabad, India  
fax: +91 842 853757 and 854757  
<http://sunsite.sut.ac.jp/asia/india/jitnet/india/csir/iict.html>

#### Albuterol approved for use in UK

Northern Healthcare Limited, a subsidiary of the Miami-based IVAX Corporation, has been granted approval in the UK for its CFC-free formulation of the asthma medication albuterol. Albuterol is more commonly known in the UK as salbutamol. The product will be marketed under the name Salamol CFC Free in Norton's Easi-Breathe inhaler. The propellant used is HFA 134a.

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## METHYL BROMIDE

### Australian apple growers seek alternatives to methyl bromide

The impending 2005 phase out of methyl bromide is causing researchers to seek viable alternatives to methyl bromide for Australia's apple growers. Apple crops are a mainstay of Australia's state island Tasmania and, with 1.5 million trees bearing more than 47,000 tonnes of fruit a year, the island relies heavily on methyl bromide to fight the ever-present apple replant disease.

In the search for alternatives to methyl bromide, a team from the Tasmanian Institute of Agricultural Research, led by Dr Gordon Brown, is investigating environmentally-benign methods. According to Dr Brown, the focus is on non-chemical means. In the absence of methyl bromide, it is probable that the role of biological and cultural control practices will increase in management of replanting problems.

Tests have shown that the primary cause of replant disease in Tasmania is bacteria and soil sterilization trials have shown marked improvements in shoot

growth. Other alternatives to methyl bromide being studied include trichopel and vaminoc. Calcium hydroxide has been tried, but seems to affect soil pH levels. Mono-ammonium phosphate (MAP) fertilizer is also being studied and has shown a significant positive impact on shoot growth for non-sterile soil.

Apple crops account for 30 to 40 per cent of Australia's use of the pesticide.

**Contact: Dr Gordon S. Brown, Tasmanian Institute for Agricultural Research**  
e-mail: brown@dpiwe.tas.gov.au

### Roses from Zimbabwe without methyl bromide

Cherry Woods New Roses, Ltd., a family-owned business in Zimbabwe, is avoiding using methyl bromide by growing roses in a coconut fibre substrate instead of soil.

Soiless media, which also include rockwool and perlite, are being used increasingly by flower growers wishing to avoid methyl bromide use, especially in Holland. Cherry Woods New Roses is one of the first growers to use coconut fibre in Zimbabwe.

The fibre, processed into a substrate known as *cocospeat*, is free of common soil-borne pathogens because coconuts grow above ground. The substrate is used in bags or pots and, since no soil-borne diseases are present, fumigation with methyl bromide is not necessary.

Cherry Woods' decision to use *cocospeat* also makes good business sense. Much of the companies produce is destined for the European market where a number of supermarket chains—potential clients—will only buy flowers grown in an environmentally sustainable way.

**Contact: Dutch Plantin (substrate supplier),**  
e-mail: info@dutchplantin.com

## HALONS

### Halon Recycling Corporation (HRC) offers guidelines for halon recycling

The Halon Recycling Corporation has developed guidelines for companies involved in the reclamation of used halons. HRC's 'Code of Practice for Halon Reclaiming Companies' is designed to ensure that halon reclaiming companies operate in an environmentally sound manner without threatening public health or the Earth's stratospheric ozone layer.

The guidelines require companies to operate in accordance with US standards on fire protection and handling of materials, to test incoming halons for 'cross contamination with other agents, and to test all outgoing halons.'

HRC stresses the need for all technicians handling halons to receive training on emission reductions and in the safe handling of high pressure halon cylinders. The Code of Practice also requires companies to provide handling instructions and material data safety sheets to all suppliers and buyers.

**Contact: Mr Tom Cortina, HRC,**  
tel: +1 800 258 1283,  
e-mail: cortina@alcalde-fay.com

### US EPA lists two new acceptable ODS substitutes for halon

The US Environmental Protection Agency (US EPA) recently announced that it has listed two substitutes for ozone-depleting substances used in the fire suppression and explosion protection industry as acceptable under the agency's Significant New Alternatives Policy (SNAP) programme.

IG100, comprised entirely of nitrogen, has been approved as an acceptable

## Success stories

### Lebanon: first harvest of tomatoes grown without methyl bromide

Lebanon's Environment Minister, Mr Arthur Nazarian, recently accompanied a UNDP Resident Representative and some 60 farmers to the town of Addousieh in southern Lebanon to witness the first harvest of tomatoes grown in the country without the use of methyl bromide. The crop was the result of a UNDP-implemented demonstration project, started in November 1998, to test alternatives to use of methyl bromide as a pesticide in growing fruit and vegetables. By December 1999 project researchers were collaborating with farmers in 17 demonstration greenhouse sites around the country growing tomatoes, strawberries, cucumbers and eggplant with solarization combined with two replacement chemicals (vydate and condor) instead of methyl bromide. For the first tomato crop, the cost of using replacement technology was half that of using methyl bromide and one farmer was reported as saying, 'If we can maintain high yields at half the original costs, we will have a competitive edge on imported products.'

**Contact: Mr Mazan Hussein, Ministry of Environment, fax: +961 4 524555 or 418910**  
e-mail: MKHussein@moc.gov.lb

### Ghana: surpassing the Montreal Protocol objectives

In 1991 Ghana was consuming around 102 ODP tonnes, with refrigeration and foam production accounting for around 97 per cent of this consumption. By 1996, consumption had fallen to around 16 tonnes ODP, a reduction of almost 85 per cent in just five years.

When Ghana became a Party to the Montreal Protocol, in 1989, its government decided on a strategy for an accelerated ODS phase-out schedule in advance of the Protocol's requirements.

Under a Country Programme for the Phaseout of ODS Ghana achieved success in its two major consuming sectors. In the foams sector, reduction was achieved mainly by the introduction of technological alternatives. For refrigeration, servicing of equipment accounted for the majority of the consumption. As servicing is a labour-intensive activity involving little equipment, the focus was on training of managers and technicians.

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substitute for halon 1301 for use in fire fighting applications. EPA has also approved HCFC Blend E as an acceptable substitute for halon-1211, used as a streaming agent in non-residential applications. The ozone depletion potential of the HCFC used in the blend is 0.02 and the US EPA found that in comparison with halon-1211, 'the blend reduces overall risk to the environment.'

**Contact:** Meg Victor, US EPA,  
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e-mail: victor.meg@epa.gov

## SOLVENTS

### Patent for ODS-free cleaning technology

Versar Inc. (USA) has applied for a world-wide patent for a new method of cleaning for aircraft oxygen systems that will eliminate use of ozone-depleting solvents and may extend system service life.

The cleaning system, which uses fluoroether-based materials and a chemical and mechanical cleaning process, can be applied to military and commercial aircraft. The company has plans to develop, test and demonstrate the system with the US Air Force, US Navy and NASA Space Shuttle Program. An initial order has been placed by the Royal Australian Air Force.

*continued from page 1 ...*

implementing agencies on Institutional Strengthening projects. It was also agreed that these principles should incorporate elements identified during evaluation.

Other decisions made during the meeting included:

- Approval of the 2000 Consolidated Business Plan for the Multilateral Fund. This consists of the work programmes of the bilateral and implementing agencies, with a target phase out of 29,542 ODP tonnes and at a total cost of US\$148.8 million.
- Approval of strategies to complete ODS phase out in the solvent and tobacco sectors in China.
- Implementing agencies should contact Article 5 countries to assess activities needed to ensure compliance. The information gathered will be an important input to the strategic planning process.

**Contact:** Secretariat of the Multilateral Fund  
(see page 2)

The technology, currently being developed in Oklahoma City (USA), can potentially be used for submarines and other applications requiring this type of cleaning.

**Contact:** Versar, tel: +1 800 238 7727,  
**website:** <http://www.versar.com>

## ODS DESTRUCTION

### Destroying CFC to make glass

Pure Chem Inc., a Canadian company specializing in refrigerant separation, has announced that it is applying for a patent for a process which converts halogenated compounds to glass. According to Pure Chem, the process will allow safe disposal of non-recyclable refrigerants without polluting the environment.

Conversion is achieved by means of an argon plasma system which separates chlorine and fluorine from gaseous and liquid CFCs and HCFCs to form a brine slurry. In a second stage, this slurry is mixed with carbon dioxide and with other raw materials in a melter, at a temperature exceeding 1,600 °C, to produce glass. Pure Chem's process does not generate any wastes requiring off-site disposal and all by-products are converted into raw materials.

**Contact:** Pure Chem,  
e-mail: [fmswhar@pacbell.net](mailto:fmswhar@pacbell.net)

## OASIS CD ROM available from UNEP

UNEP DTIE has released a CD-ROM entitled *OzonAction Strategic Information Systems*. (OASIS). It is a user-friendly electronic tool providing timely and neutral information to national ozone units, industry-based groups and other stakeholders in developing nations, or to anyone



involved in the phase out of ozone depleting substances. 'OASIS' contains information on sources of assistance, alternative technologies and policies, procedures and guidelines.

Data contained on the CD-ROM includes .pdf files. It is compatible with Windows 95 and Macintosh operating systems. Content is included in English, French and Spanish. Copies of OASIS are available for US\$100.

**Contact:** UNEP DTIE, Energy and OzonAction Unit, tel: +33 1 44 47 14 50,  
fax: +33 1 44 37 14 74

## Total ODS phase out in solvent sector approved for China

At its 30th Meeting, ExCom approved a US\$52 million agreement to help China eliminate the use of ODS in the country's solvent sector by the year 2010. This Solvent Sector Plan was submitted by the State Environmental Protection Administration of China (SEPA) through the United Nations Development Programme (UNDP) and was reached after hard work of the Solvents Working Group led by Sweden.

The Plan will eliminate more than 10,000 tonnes of ODS currently used by some 2000 small and medium sized solvent consumers in China. The Sector Plan will help China meet its phase-out commitments under the Montreal Protocol and will provide these enterprises with alternative ozone-friendly cleaning technologies and methods.

A sector approach has been developed for complete ODS phase out in the

solvent sector in China. This will be achieved by controlling imports, phased reduction of local production through a quota system and eventual closure of production facilities.

UNDP, which will implement the programme jointly with SEPA and China's Ministry of Information Industry (MII), cooperated with SEPA and MII for three years to help plan and develop the sector phase-out programme. After the ExCom's approval, the Solvent Sector Plan will be executed through Annual Implementation Programmes managed by the Chinese government authorities in collaboration with UNDP. The UNDP Office in Beijing will manage the initiative with support from its Montreal Protocol Unit in New York.

**Contact:** UNDP,  
fax: +1 212 906 6947

## WORKSHOPS

### *Latin American countries agree on steps to phase out methyl bromide*

*'The preparation and implementation of national action plans are essential to complement the efforts of countries in Latin America in order for them to meet the freeze in consumption of methyl bromide.'* This is one of the most important conclusions from the Regional Workshop for Policy Development to Assist Latin American Countries to Phase Out Methyl Bromide, held in Santiago, Chile, on 12–14 April 2000.

The main objectives of the workshop, organized by the UNEP DTIE OzonAction Programme, The National Committee for the Protection of Flora and Fauna (CODEFF), and the Chile National Environment Commission (CONAMA), were to:

- assist the countries of the region to identify short-, medium- and long-term policy measures to meet the 2002 freeze on methyl bromide and achieve subsequent reductions required by the Montreal Protocol;
- encourage countries to develop their own national action plans for methyl bromide phase out; and
- prevent new uses of methyl bromide in the region.

Seventeen countries from the region participated in the workshop, supported by invited policy experts from Canada and the USA. The workshop brought together representatives from both the NOUs and the Ministry of Agriculture of each participating country for the first time.

### *African countries identify key activities for policy development to control use of methyl bromide*

Meeting at the Policy Development Workshop to Phase Out Methyl Bromide, held in Dakar, Senegal on 14–16 December 1999, policy and training experts from 15 African countries and from Europe identified key activities for development of policies and national action plans for phase out and replacement of methyl bromide. Participants who have been involved in regulation of methyl bromide and other pesticides shared their experiences and the lessons learned in developing policy approaches to replace methyl bromide. They agreed that important activities for policy development at the national level are:

- data collection;
- ratification of Copenhagen and Montreal Amendments;
- consultation with key stakeholders;
- import/export restrictions;
- training of trainers in implementation of alternatives;
- training of customs officers;
- awareness-raising programmes; and
- review of alternatives for quarantine and pre-shipment uses.

At the regional level, the workshop identified regional cooperation to control methyl bromide imports/exports, ecolabelling programmes, and information exchanges as key activities.

### *Compliance with Montreal Protocol in sight for Central Asian and Caucasus region*

Environment Ministers and high-level officials from eight countries with economies in transition (CEITs) in the Central Asian and Caucasian region met on 28–29 April 2000 in Almaty, Kazakhstan, to discuss immediate measures to enable compliance with the provisions of the Montreal Protocol. The meeting considered the status of compliance of each of the countries and drew up a blueprint for actions to end the situation of non-compliance by 2002, eight years ahead of the schedule for developing countries.



*Delegates at the Montreal Protocol meeting, Kazakhstan*

Participants noted the remarkable progress made by the CEITs in phasing out ODS, with a 90 per cent decrease in consumption since 1986. Successful national activities, such as institutional strengthening, public awareness, training activities, the establishment of licensing systems and projects to phase out CFCs in refrigeration in Azerbaijan and Georgia, were cited as excellent examples for other countries in the region to follow.

Representatives from Kyrgyzstan, the last non-party country in the CEIT region, informed the meeting that Kyrgyzstan had now completed the internal ratification process of the Vienna Convention and the Montreal Protocol and would soon submit the instrument of ratification to UN headquarters in New York.

**For more information on these events, contact:  
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## *Ozone science news*

### **Ozone deficiency persists in northern mid- and polar latitudes: a WMO update on ozone depletion**

According to the latest update from the World Meteorological Organization, ozone deviations of -10 to -15 per cent appeared in January and early February 2000 over Europe and the Canadian and Russian Arctic. Ozone decline accelerated from the second half of February until mid-March, with increasing solar light and stratospheric temperatures much lower than normal. Negative deviations of 20 per cent were recorded for a short time over the Canadian Arctic and almost continuously over Northern Siberia where, in early March, they exceeded 30 per cent.

Average ozone deviations for the 20 February–10 March period were strongest (-20 to -30 per cent) from 65 °N towards the pole, stretching from Northern Scandinavia eastward over the Russian Arctic to the river Lena in Northern Siberia (-130 °E). Over Europe, from Spain to the Ukraine, deviations were -10 to -12 per cent; they were -6 to -10 per cent over North America.

**Contact: WMO, fax: +41 22 733 2829  
<http://www.wmo.ch/>**

## NETWORK NEWS

### South Asia Network

#### India drafts rules for ODS

India's Ministry of Environment and Forests (MEF) has compiled a draft of proposed rules on ODS. The draft document, entitled 'Ozone Depleting Substances (Regulation) Rule, 2000' also contains information on the sale, consumption, reclamation, destruction, export and import of ODS.

The proposed rules include a requirement for ODS producers, sellers, importers and exporters to register with MEF, and restrictions on import and export of ODS from countries that have signed the Montreal Protocol. Under these measures import and export would be subject to licensing. The draft also proposes that anyone producing, selling using, importing, exporting, storing, destroying or reclaiming ODS should be obliged to maintain records and file reports. It is also suggested that this obligation be extended to all those who have received technical and financial assistance from any international agency or from the Indian government.

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### Ozone Anthem

#### Cameroon: an anthem for ozone

Students in the 'Ozone Club', at the Biyemassi High School in Yaoundé (Cameroon), have written an 'Ozone Anthem' which we are pleased to reproduce here. The anthem was sung for the first time in public on 18 April 2000, during the celebrations for the 30th Earth Day in Yaoundé.

#### Ozone Anthem

*From the Montreal accord of September 1987*

*There was a ban on all CFCs,  
And on ozone-unfriendly compounds  
To protect humanity*

*There is just one sky  
From all corners of the earth  
Let's protect our environment  
We are all at the mercy of the ozone  
Together, let's save ozone*

### English-Speaking Africa

#### NOUs meet in Gambia



*Main meeting of ODS Officers' Network for French-speaking Africa, 11-14 April 2000*

At their 6th main meeting, held in Banjul, The Gambia from 17-20 April 2000, ozone officers from English-speaking Africa expressed their concern that imports of a large number of second-hand fridges from Europe would make reducing CFC consumption increasingly difficult and called for assistance to find a solution.

Representatives from 16 countries enjoyed the excellent hospitality of Ozone Officer Mr Babucarr Badjan and his team. The network also welcomed new member Liberia, represented by Deputy Minister Mr Robert Neal. The ozone officers were also pleased to welcome Mr Gilbert Bankobeza from the Ozone Secretariat and Mr Richard Abrokwa-Ampadu from the Multilateral Fund Secretariat, as well as representatives from GTZ, UNDP and UNIDO. It was encouraging to hear that the majority of countries were meeting the CFC freeze and that they were making steady progress in putting legislation in place.

The participants visited a foam factory near Banjul, successfully converted from CFC-11 to methylene chloride. They also paid a visit to the Banjul brewery where they were able to verify that the new ammonia refrigeration system recently installed to replace CFCs had not led to any reduction in quality of output.

### French-Speaking Africa

#### French-speaking NOUs gather in Guinea

Offshore oil and gas industries whose ODS consumption is large and difficult to control, and the importance of accelerating approval and implementation of Refrigerant Management Plans were key concerns discussed by ozone officers from French-speaking Africa at their 5th

### Network news announcement

#### OzonAction welcomes Ms Ludgarde Coppens to South Asia Network

UNEP would like to welcome Ms Ludgarde Coppens, the new Regional Network Coordinator for the South Asia Network of ODS Officers. Ms Coppens, who will be based in the UNEP ROAP Office in Bangkok, Thailand, brings with her experience from working on Montreal Protocol issues with the Belgian government. The Programme is proud to have her on board.



*Main meeting of ODS Officers' Network for English-speaking Africa, 17-20 April 2000*

main meeting in Conakry, Guinea, 11-14 April 2000.

Guinea's ozone officer, M. Nimaga Mamadou, and his team provided a warm welcome to 18 network-member countries. It was especially pleasing that Djibouti, DR Congo and Comores were represented and that the network was able to provide their ozone officers with the information and assistance they required. The member countries appreciated the participation of Michael Graber (Ozone Secretariat) and Ansgar Eussner (Multilateral Fund Secretariat), UNDP, UNIDO and Ms Claude Putavy from the French Environment Ministry as Article 2 country partner.

Ansgar Eussner conducted the evaluation of the meeting, and the ozone officers responded positively assisting him as far as possible in his search for the 'concrete results of networking.' The network agreed to move ahead as a priority with its proposed workshop for harmonization of the regional customs codes and legislation.

**For further information about Africa network meetings, please contact Mr Jeremy Bazyé,**  
Regional Network Coordinator,  
UNEP Regional Office for Africa.  
tel: +254 2 624 281, fax +254 2 623 928,  
e-mail jeremy.bazyé@unep.org


**WORLD POLICY ROUNDUP**

### *European Union: new rules will go further than Montreal Protocol requirements*

The European Union is reported to be close to finalizing rules that will go beyond the requirements of the Montreal Protocol in prohibiting sales and use of CFCs, halons, carbon tetrachloride, hydrobromochlorofluorocarbons, and 1,1,1-trichloroethane. The new rules will also include restrictions on the sale and use of HCFCs.

Expected within six months, the measures will: curtail imports and exports of all ODS; ban sales of halons after 31 December 2002, except for critical use exemptions; mandate equipment to recover ODS from fire protection equipment; and permit replacement of halon-containing critical use systems

with HCFCs, provided all of the halons are destroyed.

**Contact: Mr Peter Horrocks,**  
**fax: +32 2 296 5654,**  
**e-mail: peter.horrocks@cec.eu.int**

### *USDA to review proposed use of methyl bromide for wood imports*

In 1999, the US Department of Agriculture (USDA) proposed changes in regulations on imports of un-manufactured wood products from Mexico that would allow pest control by fumigation with methyl bromide as an alternative to heat treatment.

Several respondents to the USDA proposal said that the department should take account of methyl bromide's impact on the environment before finalizing the rule. USDA has now agreed to study the impact of methyl bromide which would arise from its proposal.

**Contact: Dr Kenneth Vick, fax: +1 301 504 5987**

### *Manitoba Canada proposes tougher CFC and halon strategy*

The Manitoba Ozone Protection Industry Association (MOPIA) reports that Environment Canada (EC) is proposing a tougher strategy to phase out surplus CFCs and halons in Canada.

The new strategy would: prohibit refilling of mobile air conditioning equipment with CFCs in 2000; prohibit CFC refilling in the mobile refrigeration sector by 2003; continue the existing ban on conversion of 'white goods' to use of CFCs; and prohibit refilling of commercial refrigeration and air conditioning systems with CFCs in 2003. The strategy would also ban refilling of chillers with CFCs by 2008.

**Contact: EC website: <http://www.ec.gc.ca/ozone>**

## WEB Watch

### **UNEP launches on-line bookstore**

UNEP has officially launched its new on-line bookstore. Known as Earthprint, the 'store' is a website on which visitors can view detailed summaries of UNEP publications (including those of the OzonAction Programme and the Ozone Secretariat), order through a secured site, and register to receive e-mail announcements of new publications. Visitors can also find publications through a keyword search or by entering a specific subject area.



**Contact: Customer Services, Earthprint, UNEP,**  
**tel: +44 1438 748 111, fax: +44 1438 748 844,**  
**e-mail: [customerservices@earthprint.co.uk](mailto:customerservices@earthprint.co.uk),**  
**website: <http://www.earthprint.com>**

### **UNEP DTIE's OzonAction Programme Launches E-Fora**

To help countries meet their obligations under the Montreal Protocol, the UNEP DTIE OzonAction Programme is launching two public Electronic Discussion Fora and Update Services. The fora will facilitate dialogue between stakeholders on key issues relating to the phase out of ozone depleting substances (ODS), and will contribute to a global knowledge base.

- *Climate and Ozone Discussion Forum and CLIO<sub>3</sub> Update Service* enables subscribers to exchange knowledge about ideas and issues surrounding the coordinated implementation of the Montreal and Kyoto Protocols. Discussions will focus on climate- and ozone-

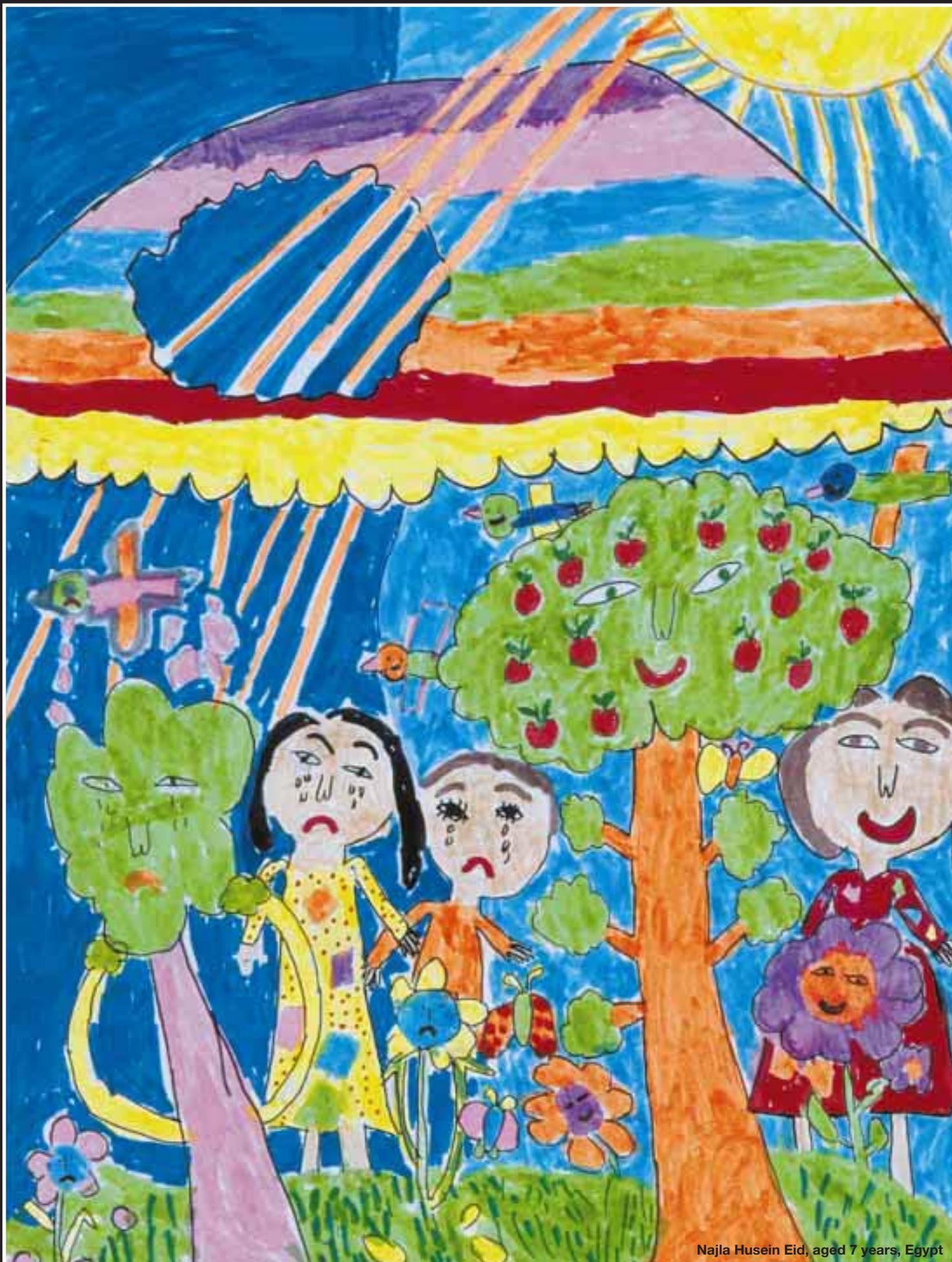
friendly substances for use by industry; policy incentives to encourage the adoption of climate- and ozone-friendly alternatives; and information from researchers as new technical and policy options become available.



- *Methyl Bromide Alternatives Discussion Forum and RUMBA Update Service* enables subscribers to exchange knowledge about the phase out of methyl bromide under the Montreal Protocol. In the forum, members can discuss technical alternatives to methyl bromide; policy incentives encouraging its phase out under the Montreal Protocol; and information from researchers on new technical and policy options.

All interested individuals are invited to join the fora, which can be accessed at [www.uneptie.org/ozat/forum/index.html](http://www.uneptie.org/ozat/forum/index.html).

**For more information, contact:**  
**UNEP DTIE, Energy and OzonAction Unit,**  
**tel: +33 1 44 37 14 50, fax: +33 1 44 37 14 74**



Najla Husein Eid, aged 7 years, Egypt

## The National Ozone Unit Interview

This is one of a series of articles featuring the views of national ODS Officers

### Mr Hassan Hanachi

ODS Officer, Tunisia



*Tunisia has a number of investment projects approved to phase out ODS. Can you summarize the major achievements of your National Ozone Unit in the implementation of these projects over the last two years?*

Over the last few years, the Multilateral Fund and implementing agencies have helped us to complete three projects in the refrigeration sector (involving 16 industrial units), four projects in the foam sector and seven in the aerosol sector. These and other approved projects will enable Tunisia to complete the ODS phase out.

*What have been your major difficulties in meeting your phase-out targets?*

As ozone protection is a relatively recent concern for the world community, we faced a number of difficulties in the early stages. These included identifying ODS-using sectors, a lack of knowledge amongst industrialists about the environmental risk of using ODS and their difficulty in understanding the implications of alternative technologies. These difficulties led to a delay in executing several projects. However, with the help and effort of the relevant authorities, we overcame them and implemented several projects.

*UNEP's trends analysis data, based on the data you submit under Article 7, show that the consumption figures for Tunisia in 1997 are a little over your freeze levels, and that this seems to be growing. What steps have you taken to ensure that the 1999 freeze and the subsequent reductions in CFCs are met?*

To reach the 1999 freeze and conditions for future use of ODS, we focused on public awareness activities to reach all categories of the population. In

collaboration with the Ministry of Industry and Customs, we defined a mutual line of action to control imports of ODS. We are now preparing and defining rules to prevent and control import and export of products containing ODS.

*What lessons have you learned as an ODS officer that will be helpful to other developing countries in meeting the Protocol targets?*

The most important lessons learned are: coordination and information exchange between government and industry; middle and long term planning; and also actions in the field.

*How do your awareness raising activities contribute to the ODS phase out activities in your country? How do you evaluate the success of your awareness programmes?*

An essential part of Tunisia's environmental policy is to encourage public awareness and promotion of an environmental culture to support the Montreal Protocol. This includes providing information to management authorities, students, the public and industrialists, and making them aware of major problems related to ozone depletion through conferences and dissemination of posters, and bulletins. The information tools provided by UNEP DTIE, such as videos, posters and guides, have had a positive impact on all target audiences.

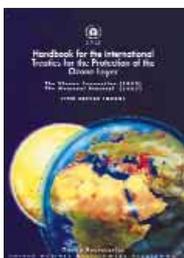
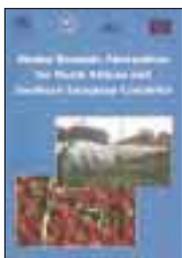
### Apology

In the last issue of OzonAction we incorrectly indicated that readers wishing for more information on the article 'HFCs and HCFC: working alternatives to ODS' should contact 'Mr Dave Stripe'. This should have read Mr Dave Stirpe. We apologize to Mr Stirpe and to our readers for any inconvenience caused.

### New publications

Far left: *Methyl Bromide Alternatives for North African and Southern European Countries*. UNEP DTIE OzonAction Programme, Paris, 2000.

Near left: *Handbook for the International Treaties for the Protection of the Ozone Layer*. UNEP Ozone Secretariat, 2000.



### Forthcoming meetings

Earth Technologies Forum  
30 October–1 November Washington DC

Symposium on Chemical and Non-Chemical Soil and Substrate Disinfestation  
11–15 September 2000, Turin, Italy

### Status of Ratification

(as at 19 May 2000)

**The Vienna Convention**  
174 Parties; new Party: Haiti

**The Montreal Protocol**  
173 Parties; new Party: Haiti

**The London Amendment**  
139 Parties; new Party: Haiti

**The Copenhagen Amendment**  
104 Parties; no new Parties\*

**The Montreal Amendment**  
37 Parties; no new Parties\*

**The Beijing Amendment**  
Chile is the first Party to have ratified the Beijing Amendment

\*since the last issue of the *OzonAction Newsletter*

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