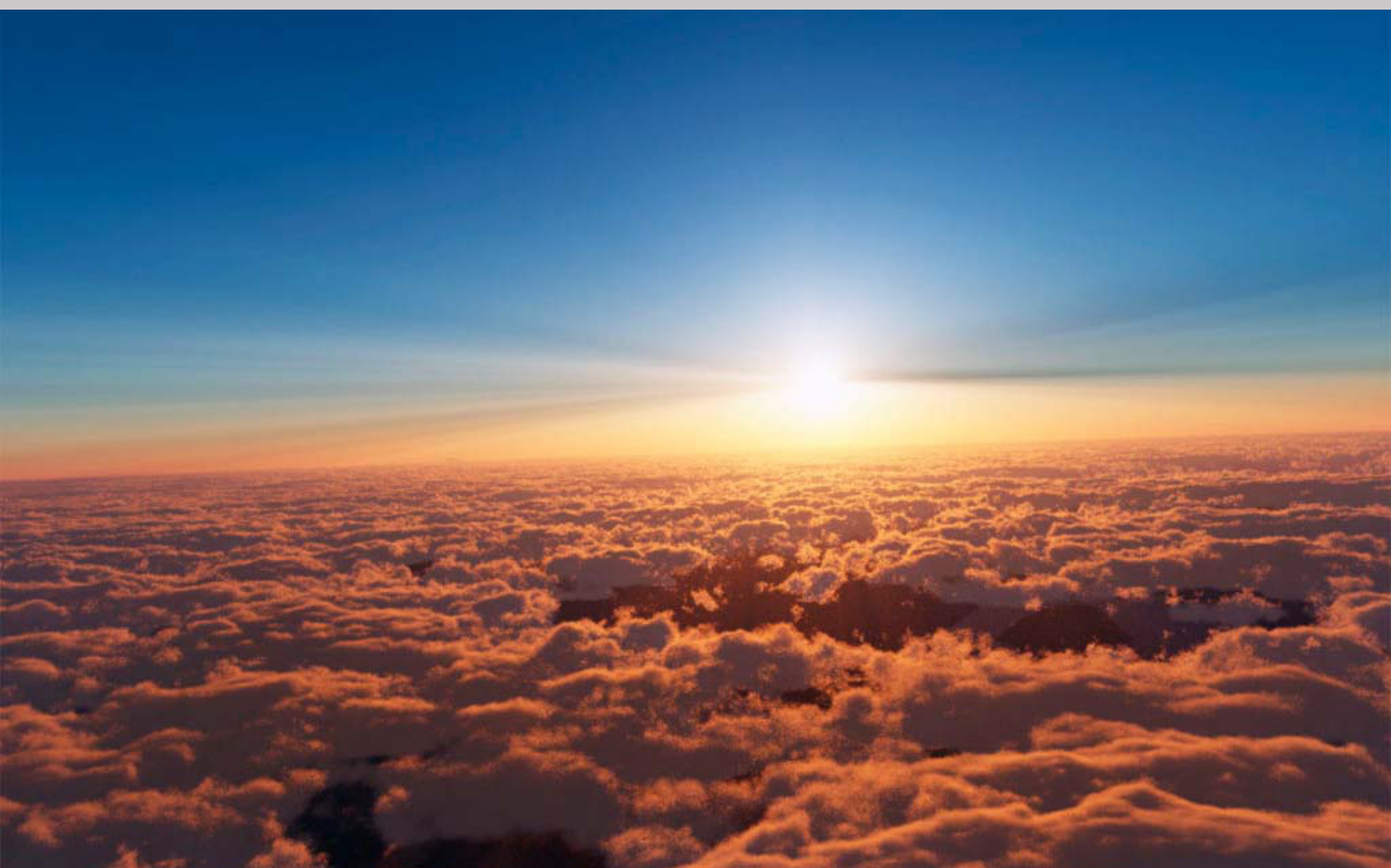


# Montreal Protocol on Substances that Deplete the Ozone Layer

*"Celebrating 20 years of progress in 2007"*



Recognition of some of the Exemplary  
Projects that have been undertaken  
pursuant to Article 10 of the  
Montreal Protocol

Ozone Secretariat

United Nations Environment Programme

## Exemplary Projects Undertaken Pursuant to Article 10 of the Montreal Protocol

When the Montreal Protocol was originally negotiated in 1987, the negotiators understood clearly that their initial effort was a work in progress. Nowhere was this more clear than with regard to Article 10 of the Protocol. Among other things, that nascent provision called on the Parties to the Protocol to begin deliberations at their first meeting on the development of workplans to assist developing countries in complying with their obligations under the Protocol. The promise of this provision was not fully realized until 1990, when Article 10 of the Protocol was amended to provide for the establishment of a financial mechanism to provide financial and technical cooperation, including technology transfer, to developing countries to enable their compliance with the Montreal Protocol. A particularly notable feature of Article 10 was its call for the financial mechanism to include a multilateral fund.

Since 1990, when the Interim Multilateral Fund was established, the Multilateral Fund has approved over 5,500 projects and activities in over 140 countries which, when fully implemented, are expected to eliminate over 235,546 ODP tonnes of production and over 173,616 ODP tonnes of consumption<sup>1</sup> of ozone-depleting substances. Each of those projects and activities represents the strong commitment of a Party operating under Article 5 of the Protocol to implement the Protocol and is therefore deserving of both recognition and praise. Each of those projects should also be applauded because of the tremendous effort behind it. Indeed, no one should ever underestimate the difficulty of project development and implementation. Although over time the Fund, the implementing agencies and the national ozone units have developed a great deal of efficiency in their work, the fact remains that no matter how many conversions of seemingly similar users have taken place, each one involves the operation of literally hundreds of different steps, and each one must be fine tuned to meet the specific needs of each user. Indeed, the development and implementation of a successful project involves so much communication and so many hand-offs that it is a small miracle that the success rate of Multilateral Fund projects is so very high. This truly is a testament to the commitment of the experts in the countries, the enterprises and the implementing agencies that make the projects possible.

In an effort to share with the Parties and the world community a small measure of what has been achieved under Article 10 of the Protocol, the Ozone Secretariat invited nominations for “exemplary projects” undertaken through the Multilateral Fund. Over 70 projects were nominated and have been reviewed by representatives of the Multilateral Fund’s four implementing agencies (the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP), the United Nations Industrial Development Organization (UNIDO) and the World Bank), the Multilateral Fund Secretariat, the Ozone Secretariat and the Chairman of the Executive Committee of the Multilateral Fund. This brochure contains a brief overview of those projects which have received the support of a majority of the reviewers. The projects contained in the brochure represent but a small subset of the outstanding work that has been done by the Parties, implementing agencies, enterprises and global entities under Article 10, a Protocol provision that has spawned what we believe to be the most innovative and successful effort ever to facilitate global compliance with an environmental treaty.

<sup>1</sup> The ozone-depleting potential of the various ozone-depleting substances varies. “Ozone-depleting tonnes” (ODP tonnes) are derived from metric tonnes by multiplying the number of metric tonnes by the factors given in Annexes A, B, C and E to the Montreal Protocol for the various substances. Where the factor is 1, as for CFC-11 and CFC-12 among others, the two are equivalent.

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## **China Halon Sector Plan. World Bank**

During the first years of operation of the Multilateral Fund, the Parties to the Protocol tended to work on a project-by-project basis. The China Halon Sector Plan signalled a break from this approach. Approved in 1997, the China Halon Sector Plan constituted the first effort by the Fund, or by any country, to tackle production and consumption of ozone-depleting substances within a country on a sector-wide basis. Specifically, the project envisioned that the Fund would pay China \$62 million over a period of years and that the funding would be provided in annual tranches, based on verification that China had met specific milestones in reducing the production and consumption of halons. The agreement also provided flexibility to enable China and the World Bank (the implementing agency for the project) to spend related resources to meet the agreed annual reduction targets.

This latter provision helped spawn a host of innovative modes of implementation. Among the most notable are the use of a reverse auction to distribute the reduction requirements among halon producers. Specifically, halon producers proffered bids representing the level of funding which they would offer to achieve a specific level of reductions (in metric tonnes), as a result of which the Government achieved the lowest-cost reductions possible by awarding grants to the lowest-price bidders. Understanding the need to build capacity to ensure the effective implementation and enforcement of the phase-out, the Government also used part of the funding provided by the Fund for technical assistance projects. Lastly, a portion of the funds was used to enable the creation of capacity for producing alternatives to halons.

The implementation of the China Halon Sector Plan has been a significant success for both China and the ozone layer. China has achieved almost all its reduction targets well ahead of the schedules originally agreed in the project. It has also introduced alternatives and substitute fire-protection technologies and eliminated around 36,000 ODP tonnes in both the production and the consumption of halons. The Chinese team developing the plan consisted of Mr. Liu Yi, Professor Hu Jianxing, Mr. Ru Jiang and Mr. Hu Xiaofeng. The World Bank team working on the project included Ms. Helen Chan, Ms. Jessica Poppele, Mr. Donald Brown, Mr. Roy Pepper and Mr. Erik Pedersen.

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## **Projects to Phase-Out Methyl Bromide in the Tobacco Sector in Malawi (UNDP) and the Former Yugoslav Republic of Macedonia (UNIDO)**

Methyl bromide is a highly potent and effective agricultural fumigant that has been used in many countries for decades. One of the largest uses of methyl bromide in developing countries has been as a soil fumigant for tobacco cultivation. As tobacco is an important cash crop for many developing countries, the prospect of phasing this use out caused considerable concern. Indeed, the phase-out of this use has constituted both a significant challenge and one of the most significant methyl bromide achievements of the Multilateral Fund to date.

### **Malawi**

The Malawi methyl bromide phase-out project exemplifies the challenges faced in this sector. One challenge relates to the sheer size of the sector. In Malawi, methyl bromide was used by a large number of tobacco farmers and labourers, including many small-scale growers who had little or no formal education and were located in hard-to-reach areas. At the time of the project's inception, it was estimated that there were over 400,000 farmers using methyl bromide in Malawi.

Early on, the Government established a national project steering committee comprised of dedicated high-level stakeholders from the public and private sectors. Malawi's Agricultural Research and Extension Trust (ARET), a national institution with close ties to the country's principal agricultural production sector stakeholders, was tasked with the project's management. This served to enhance the credibility of project implementation among stakeholders. The close cooperation between stakeholders also served to support capacity development by encouraging the local production of materials to support the adoption of a "floating tray system" as an alternative to methyl bromide use, thereby developing local and regional market potential for small businesses and enhancing the long-term sustainability potential of the transition away from methyl bromide use through the development of cost-effective alternatives.

The project was also able to leverage other significant national goals. In particular, the project's outreach activities in rural areas offered an avenue at the rural community level to disseminate HIV/AIDS-related messages developed by national stakeholders associated with the Malawi National Aids Commission. Thus, the project supported not only the phase-out of methyl bromide but also HIV/AIDS education.

In all, \$2,999,824 of funding was approved in principle to support the phase-out of 185 metric tonnes a year of methyl bromide consumption. As a result of this project, Malawi was able to meet the accelerated phase-out targets it had set for itself, reaching full methyl bromide phase-out by 1 January 2005.



## **The Former Yugoslav Republic of Macedonia**

The use of methyl bromide as a soil fumigant was also phased out completely in tobacco sector in the former Yugoslav Republic of Macedonia. Tobacco is a major crop in that country, which produces over 34,680 tonnes of tobacco leaves a year. In 1998, the country's cultivated surface area totalled 22,000 hectares (average yield = 1,580 kg/ha). Over half of its total tobacco production is exported. Annual sales are of the order of \$80 million, and provide high revenue for farmers, estimated at \$2,000 per hectare per year. Ten per cent of Macedonia's population is employed in the tobacco industry, which produces two types of tobacco, the Oriental variety, accounting for 94 per cent of total production, and the Virginia variety, making up the remaining 6 per cent. Based on the excellent results of an initial demonstration project, tobacco farmers chose to change their mode of production completely by adopting soilless cultivation using a floating tray technology system. In the process of implementation, UNIDO had to adapt this technology to the predominantly grown Oriental plant, which is considerably smaller in size than is the Virginia. While challenging, the project proved to be a success, and 41.3 tonnes (24.78 ODP tonnes) of annual methyl bromide use was eliminated as the use of the substance in Macedonia's tobacco industry was completely phased out. Moreover, the implementation of the floating tray technology yielded the same production levels as the pre-phase-out baseline, but with higher-quality plants.

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## **Green Customs Initiative (GCI). UNEP**

It has long been understood that if Parties are to meet the requirements of the Montreal Protocol they must be able to control the movement of ozone-depleting substances across their borders. Indeed, effective implementation of many multilateral environmental agreements depends on effective border controls. The recognition of this need and the joint interest of the various multilateral environmental agreements in this area led UNEP to create the Green Customs Initiative, a pioneering partnership of five convention secretariats and three international organizations<sup>1</sup> that has contributed to the implementation of the Montreal Protocol through its capacity-building activities for customs officers. By supporting this effort to train customs officers in developing countries, the Multilateral Fund has enabled the Montreal Protocol to play a key part in this cooperative effort, which has had the added benefit of increasing the visibility of the Montreal Protocol among customs services and promoting operational cooperation with other multilateral environmental agreements.

The initiative also helped introduce the ozone issue into the sustainable development arena and into debates on security, and offers a coordinated approach to building the capacity of customs officers to monitor trade in commodities of environmental concern. It has always included the monitoring of ozone-depleting substances as one of its objectives. The initiative has included provision of joint customs training focused on awareness-raising involving the various secretariats and organizations; the development of a training guide for capacity-building; the establishment of a website ([www.greencustoms.org](http://www.greencustoms.org)); and the conduct of national pilot projects.

The first train-the-trainer regional workshop under the initiative was held at the Shanghai Customs College in China in May 2007. The contributions of two individuals should be specifically recognized: Ms. Donata Rugarabamu (Basel Convention secretariat – Officer in Charge and Senior Legal Officer) and Mr. Stephen Nash (CITES secretariat – Chief, Capacity-building Unit). Both have been instrumental in the successful drafting of the Green Customs Training Guide and have brought their exceptional knowledge of multilateral environmental agreements and of customs to bear for the benefit of the GCI partnership.

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