

ILLEGAL TRADE IN OZONE DEPLETING SUBSTANCES:

*is there a hole in
the Montreal Protocol?*

The scale of illegal trade

A smuggler's methodology

The global response



zonAction

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THE SCOPE OF THE PROBLEM: an Overview of Illegal ODS Trade

The final phase-out dates are in sight for CFCs and other substances that harm the ozone layer – but smuggling operations threaten the continued recovery of the earth's atmosphere. *Duncan Brack* examines the origins and scope of the problem.

The Montreal Protocol on Substances that Deplete the Ozone Layer is considered to be one of the great success stories of international environmental diplomacy. The implementation of the ozone regime, however, has not been without its challenges. Fortunately, many of these were foreseen, including the incentives required to commercialise non-ozone-depleting alternatives to chlorofluorocarbons (CFCs) and other ozone-depleting substances (ODS), the need to adapt schedules in response to scientific analysis and technological developments as well as the different circumstances and requirements of developing countries.

One challenge, however, was not anticipated: the growth of a thriving black market in illegal shipments of CFCs and halons. In the mid 1990s, illegal material accounted for up to 15 percent of the world trade in CFCs. By the end of the decade, although the volume of illegal trade in CFCs had declined, halons, to a certain extent, took their place.

Why did this world-wide black market emerge? To find out we must examine the weaknesses in the ozone regime – in the Protocol itself and in the national

regulations implemented in response – that allowed illegal trade in ODS to appear and flourish, and consider to what extent the problem could have been anticipated earlier and more effectively.

INCENTIVES FOR ILLEGAL TRADE

If governments ban the production or use of any substance, provided that the alternatives are more expensive, a black market is bound to develop. This is hardly a new phenomenon in history, or even in environmental policy. Illegal trade in endangered species and their products, illegal dumping of hazardous waste, illegal fishing, whaling and logging all pose threats to the success of global environmental management.

In the case of the Montreal Protocol, many of the alternatives to ODS use have *not* in fact, proved to be more expensive – indeed, not only have they been non-ozone depleting, but they are frequently more effective and cheaper as well. This is particularly true in the solvents and aerosol sectors and to a lesser extent in foams. In the refrigeration, air-conditioning and fire-fighting sectors, however, there is an incentive for illegal trade. Though the ODS alternatives themselves are not usually more expensive, the problem arises because generally, equipment must be retrofitted, or sometimes completely replaced in order to use alternatives. For example, retrofitting or replacing an air



conditioning system in an American car could cost anywhere between US\$200 and US\$800. But in the mid-1990s it cost about US\$100 to acquire a 30lb cylinder of illegal CFCs, which contained enough refrigerant to service such a system many times over. Similarly, in fire-fighting it has proved difficult to develop systems as effective as those using halons.

So the incentive for continued use is clear and will remain until all ODS-using equipment is finally replaced with newer technology that can function on ODS alternatives. However, the ready availability of illegal ODS will itself inhibit the replacement process by effectively extending the operating life of the equipment involved. Although illegal trade has so far involved mainly CFCs and halons, as phase-out dates for methyl bromide and hydrochlorofluorocarbons (HCFCs) approach, it can be anticipated that illegal trade in these substances will develop as well.

**TOO MANY SOURCES,
TOO MANY ROUTES**

The problem of illegal trade in ODS is significantly exacerbated by two features: the fact that there are numerous potential sources and that it is difficult to detect ODS in transit. Sources of illegal ODS can be divided into three categories: legal production in non-Article 5 (industrialised) countries, illegal production in non-Article 5 countries and legal production in Article 5 (developing) countries. (see illustration, page 17)

The most obvious source is illegal production, or at least production in excess of Protocol requirements. A number of countries with economies in transition (CEITs) in Eastern Europe and the former Soviet Union have experienced difficulties complying with the terms of the Protocol due to the political and economic upheavals they experienced in the last decade. Of these, the most serious case – and the only producer – is the Russian Federation. In 1995, the Russian government claimed production of 39,000 ODP-tonnes of CFCs and consumption of 21,000 tonnes. Although Russia has historically

supplied CFCs to other transition economies, Russian production was still 13,000 ODP-tonnes higher than the region's total consumption. Furthermore, external sources estimated a total production capacity of 100,000 tonnes, with actual Russian production possibly as high as 70,000 tonnes. Most of the ODS entering Europe and the US illegally in the mid-1990s almost certainly originated in Russia.

From 1995 onwards, the parties to the Protocol put in place a series of strictly monitored regimes to achieve phase-out in these countries. Also, funding has been available from the Global Environment Facility (GEF) to assist them. In 1996, the World Bank published a proposal for a Special Initiative for Supplementary Funding to phase out Russian production capacity and this phase-out was completed in December 2000 (see "Special Initiative in Russia", page 10).

Illegal production is not, however, the only possible source of illegal consumption. Under the terms of the Montreal Protocol, Article 5 parties are permitted to continue to produce and consume CFCs and

Illegal trade in CFCs in industrialised nations seems to have peaked between 1994-96, around the 100% phase-out target for developed countries. In the US, industry and EPA estimates put the black market in CFCs between 10,000-20,000 tonnes in 1994 and 1995 (worth between US\$150 and \$300 million); subsequent years showed lower figures, falling to about 1,000 tonnes by 2000.

Source: Duncan Brack, Royal Institute of International Affairs, London. As with any other area of international environmental crime – or, indeed, crime in general – there are no reliable data available on the scale of the problem. In the case of illegal trade in ODS, the problem is exacerbated because in most countries relatively little effort has been put into investigating the problem. Any figures cited are educated guesswork at best.

halons until 2010; no controls applied to them at all until 1999. In fact, ODS production in Article 5 countries grew much more rapidly than was envisaged by the negotiators of the Protocol. Although developing country production of CFCs is still lower than consumption (they are net importers¹) the relatively easy availability of CFCs in some countries facilitates illegal trade. Whereas Russia was thought to be the main source of illegal CFCs for

DIVERSION OF ILLEGAL TRADE: CASE STUDY IN THE SOUTH ASIA REGION

BY SURESH WADHWHA

As India begins to cut CFC production in accordance with the Montreal Protocol, illegal trade in ODS has become a subject of great concern. Surfacing in India sometime in 1996, this illegal activity reached alarming levels in 1999. According to rough estimates, about 900 to 1,000 metric tonnes of ODS infiltrated into India between 1999 and 2000.

One of the most common smuggling methods uses fraudulent declarations to move illegal ODS through Inland Container Depots and ports across the country. In the last year and a half, some 131 metric tonnes of ODS were brought into India using false declarations at various ports when customs officers – due to ignorance regarding ODS – released shipments. As a first step towards rectifying this situation, the government of India issued circulars and directives to customs officials across the country to educate them on the particulars of illegal ODS traffic.

The efforts bore fruit. After the dissemination of the circulars, illegal ODS imports were seized in Nava Sheva, Cochin, Varanasi and Jaipur, where a US\$11,000 penalty was levied on each of two illegal shipments. In addition, police conducted raids on storehouses holding illegal ODS in Delhi, Mumbai and Calcutta.

Industry associations claim that porous land borders shared with neighbouring countries provide major routes for illegal ODS imports. It should be noted that some of these countries have not ratified the 1997 Montreal Amendment to the Protocol and so are not yet obliged to have licensing systems and other control mechanisms in place at this juncture.

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¹ At least on the latest data, up to 1997.

most of the 1990s, the problem now seems to have shifted to developing countries, particularly China, where ODS has been legally produced but then diverted into illegal markets in developed countries.

CFCs and halons have also been legally produced in industrialised countries, even after phase-out. Non-Article 5 parties to the Montreal Protocol may produce and consume after phase-out for use as chemical feedstock or as process agents, for essential use exemptions agreed by successive meetings of the parties and for export to developing countries to meet their "basic domestic needs." In addition, ODS produced before the phase-out dates may still be legally sold and consumed in many non-Article 5 countries even after phase-out. These may be available from stockpiles, or may be recovered from old equipment and recycled. As with developing country production, these exceptions to phase-out have provided a variety of sources for illegal commerce and a wide range

of opportunities for concealment or disguise.

The detection of illegal material is therefore extremely difficult. Unlike illegal drugs, for example, CFCs or halons available for sale in an industrialised country cannot automatically be assumed to be of illegal origin. This problem is compounded by the many different ways smugglers can place their products on the market. Since ODS are colourless, odourless gases at room temperature, chemical analysis is needed to determine precisely what substances are present. Smugglers have taken advantage of this fact and devised highly effective schemes involving mislabelling containers and documents, diverting ODS to third countries, concealing illegal canisters behind legal ones and disguising virgin ODS to appear recycled.

Mislabelling and diversion are probably the main smuggling methods, but all these routes have been observed in the US, EU and

Taiwan at various times and are now beginning to appear in developing countries as they move towards their own phase-out targets. A frequent route for illegal shipments has been through the "triangulation" of trade – ODS are produced legally in a developed country and then, as required by the Protocol, exported to an Article 5 country. Then the same ODS are re-imported illegally for use in the original developed country. European colonies in the developing world have often been used as re-entry points.

WHAT COULD HAVE BEEN DONE DIFFERENTLY?

After a slow start, the reaction of the authorities has clearly helped to reduce the volume of smuggled material, particularly in the US, where illegal trade is also a matter of tax evasion. However, it seems highly probable that the bulk of illegal ODS is still not being detected.

Could the problem have been anticipated when the Protocol was

THE MULTILATERAL FUND: BRINGING DEVELOPING NATIONS INTO THE PICTURE

The creation of the Multilateral Fund established a new approach toward solving global environmental problems – forging a close partnership between developing and industrialised nations that is based on equality, rather than dependence. Conceived at the Second Meeting of the Parties in London, the Fund was designed to help developing countries meet their ODS phase-out schedules as set down in the Montreal Protocol. Industrialised nations, being the major source of ODS, acknowledged their responsibility to assist developing countries in meeting the financial and technological costs of adherence to the Protocol. In addition, developing nations were given a ten-year grace period, with complete phase-out targeted for 2010, so as not to discourage needed development and to encourage ratification to the Protocol.

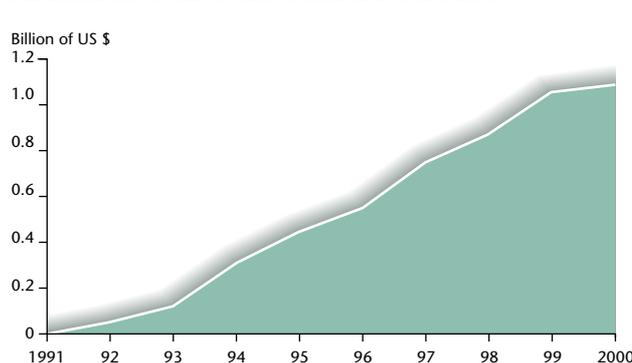
The fund is managed by the Executive Committee, which has been carefully structured to ensure balanced participation by industrialised and developing countries. The Executive Committee is assisted by a Secretariat, which monitors the realisation of projects, a task accomplished by several implementing agencies. The United Nations Environment Programme (UNEP) provides the organisational umbrella for the Fund's Secretariat and also acts as its Treasurer.

From its initial total of US\$160 million, the Fund has grown to over US\$1 billion, and has been used to help developing nations prepare country programmes, get technical assistance, obtain

information and training, and work in harmony with neighbouring countries to achieve the Protocol's goals. Over three-quarters of all distributed funds are invested in factories and equipment that are necessary for ODS phase-out. Some of the initiatives financed by the Fund include:

- Preparing 97 developing countries Country Programmes and phase out strategies
- Implementing institutional strengthening projects in 77 countries
- Helping 48 countries to prepare Refrigerant Management Plans
- Public awareness campaigns and training

Financial Assistance under Multilateral Fund





12th Meeting of the Parties to the Montreal Protocol, Ouagadougou, Burkina Faso, December 2000.

being negotiated? Almost certainly it could have, if not when the Protocol was signed in 1987, then when total phase-out of CFCs was agreed in London in 1990. By then it was clear that businesses and consumers would have to replace or adapt millions of appliances and pieces of equipment. The cost of CFC alternatives was at that time anticipated to be quite high (although that turned out not to be the case), establishing a clear incentive to keep old equipment in use after the official phase-out dates.

If the problem had been foreseen, could the Protocol have been designed or implemented differently? There are a number of measures that at least in theory could have reduced the likelihood of illegal trade.

First, the problem could have been tackled at its source by requiring all countries to have the same phase-out schedule. This would have meant no grace period for developing countries, which would have been inequitable as well as economically and politically unrealistic – at least without substantial additional financial support through the Multilateral Fund.

Second, the problem could have been tackled at its end-point – the point of consumption. Phase-out

could have been accelerated by the application of use and/or sales controls (as the EU has done in its latest regulations). However, this faster phase-out would have forced consumers to scrap or adapt equipment before they would otherwise have done so. The cost of doing so would have to be weighed against

the cost to the environment and to society at large of not controlling illegal trade. The preferred course of action would therefore depend on the balance of costs and benefits in a particular country at a particular time. It does appear that use controls can play a valuable part in the last stages of phase-out; but this level of detail could not realistically have been written into the Protocol at the outset.

Finally, the problem could have been tackled in its most obvious manifestation, in the process of illegal trade itself. This is mainly an issue for national governments, in terms of investment of political will and resources in detecting and controlling smuggling. Most enforcement authorities, such as customs and police, are not familiar with environmental crime and often not predisposed towards giving it a high priority, compared to their more traditional areas of concern such as drugs or arms. For this reason, it seems likely that environmental agencies should be the main enforcement authorities involved, though they will clearly have to co-operate with police, customs and judicial authorities. Adequate frameworks, training and financing, need to be in place to make this work.

At an international level, the need for the system of licences for imports and exports required under the 1997 Montreal Amendment to the Protocol could have been anticipated from the beginning, and precedents existed in other

environmental treaties, such as the Convention on International Trade in Endangered Species (CITES). Indeed, a more detailed tracking system, including identification codes for originating plant and labelling systems for ODS-containing equipment has been suggested recently and could probably have been implemented from the start.

LOOKING AHEAD

“International environmental crime” – the deliberate evasion or flouting of national environmental regulations with trans-boundary or global impacts – is now a fact of international life. The ozone regime is lucky, compared with many other environmental treaties, in that illegal trade will eventually disappear of its own accord as ODS end uses are gradually phased out. In fact, industrialised countries have already seen a fall in volumes. Developing countries, however, are just beginning to experience illegal imports as they progress in their own phase-out schedules. Consequently, there is still much to be done to control illegal ODS trade. Perhaps most importantly, there are many lessons to be learned from the Montreal Protocol that will be instructive in facing other environmental challenges.

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In June 1999, Richard Schmolke was arrested in the United States for smuggling 37 tonnes of CFCs from Venezuela into the US. Schmolke worked the fraud by shipping refrigeration units out to Venezuela for re-filling and re-export to the US, but on inspection the CFCs were found to be virgin and not recycled as claimed.

Source: Julian Newman, Environmental Investigation Agency, London.

GOOD INTENTIONS

and Unforeseen Consequences

Gilbert Bankobeza looks at how aspects of the Montreal Protocol affect the problem of illegal ODS trade.

Though entirely unintentional, there are elements of the Montreal Protocol that actually contribute to illegal trade. The most apparent one is the staggered schedule of ODS phase-out. Due to economic and technical considerations, not all countries were required to phase-out ODS at the same time. The 10 year grace-period given to Article 5 countries (developing nations) opened up tremendous potential for smuggling CFCs and other ODS into non-Article 5 (industrialised) countries after their 1996 phase-out deadlines. However, several other factors have added to the development of illegal ODS trade.

First of all, the demand for CFCs in non-Article 5 countries has continued beyond the phase-out deadlines in 1996 due to the continued use of old CFC-dependent equipment such as air conditioners and refrigerators. Alternative chemicals for these appliances were originally more expensive than CFCs, which made cheaper, illegally traded substances attractive.

Secondly, ODS are still available. The Montreal Protocol permits continued production of CFCs in non-Article 5 countries for their own essential uses, such as laboratory research, analytical uses and metered dose inhalers for asthma treatment. Industrialised nations are also allowed to export CFCs to Article 5 countries to meet their basic domestic needs. In addition, since Article 5 countries have been given more time to phase-out ODS, they are still

producing CFCs and other ODS beyond the phase-out deadlines applicable for developed countries.

Finally, there is a loophole: recycled substances are not subject to control measures contained in the Montreal Protocol, other than a requirement to report the quantities traded – and it is difficult to distinguish between new and recycled substances. This situation has allowed illegal trade to flourish among various legal trade flows: new CFCs are disguised as recycled, while new CFCs and halons destined for Article 5 countries are diverted into local markets. Similarly, mislabelling of products and other forms of fraud are taking place at international borders.

To combat these activities, measures have been taken by the parties to the Montreal Protocol to curtail or minimise illegal ODS trade in Article 5 countries. In 1997, a framework was adopted that required all parties to

implement an import/export licensing system to track commerce and facilitate data collection. Such a licensing system will also allow for better cross-checking of information between importing and exporting countries.

In order to facilitate the creation of these new licensing systems, UNEP has conducted a series of regional training workshops for customs officers and representatives from other government agencies in Africa, Asia, Latin America and the Caribbean and Eastern Europe (see *“Out on the Front Line: Training Customs Officers”*, page 20). These workshops, made possible through financial assistance from the Multilateral Fund and GEF, were designed to enable participating countries to set up and implement efficient legal systems to control and monitor ODS imports and exports.

Many Article 5 countries have already adopted licensing systems and now require strong enforcement to make them work. Stringent enforcement of national laws is extremely important. As long as trade in ODS between Article 5 and non-Article 5 countries continues to be legal, controlling illegal trade will be a challenge that could prove to be even more difficult than enforcing a global ban on these substances. However, with continued efforts to phase-out CFC-dependent equipment and strong commitment from governments to enforce the new licensing systems, it is quite possible that illegal ODS trade can be curtailed and eventually eliminated.

In 1995, Florida shipping agent Irma Henneberg received a 57-month jail sentence for falsifying shipping documents relating to the export of CFCs. She was involved in a scam to divert 4,000 tonnes of CFC-12 imported from Europe into the US market, falsely claiming that the chemicals were for export to Article 5 countries. A similar case was uncovered in the US in 1999. In a sophisticated transshipment fraud, 35 tonnes of Russian CFCs were diverted onto the American market. The importer claimed the chemicals were destined for Mexico, while in fact empty cylinders were sent to Mexico and the CFCs were transported to New York.

Source: Julian Newman, Environmental Investigation Agency, London.

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FACING THE CHALLENGE

in Countries with Economies in Transition



12th Meeting of the Parties to the Montreal Protocol, Ouagadougou, Burkina Faso, December 2000.

As many Eastern European countries struggle with huge economic transitions, monitoring and preventing illegal trade in ODS has been especially difficult – creating ample opportunity for smugglers. *Volodymyr Demkine* reports on this situation and what is being done to resolve it.

Illegal trade in ODS in countries with economies in transition (CEITs) has become a cause of serious concern in recent years. Inadequate control systems and enforcement are exacerbating this problem. At the 1997 Meeting of the Parties, the Parties stressed that these safeguards are crucial. "Together with licensing systems, accurate and reliable data reporting is essential to defeat illegal trade," the Parties noted in their report.¹ Because of the special circumstances in these countries, finding a solution requires careful consideration of several important issues.

One of the main factors contributing to illegal trade in this region is non-compliance with the Montreal Protocol. The enormous economic and political transition currently taking place in CEITs

has made it very difficult for them to ratify and subsequently comply with the Montreal Protocol. Obstacles include a lack of funding and institutional capacity to undertake projects, inadequate information and training on the Montreal Protocol and technical alternatives, communication difficulties due to tele-communications and language barriers and lack of familiarity with working within the international environmental protection system. In fact, several CEIT officials believe that they risk continued non-compliance beyond 2001 if phase-out actions are not co-ordinated through regional initiatives and if they do not receive the necessary information, support and training they require. Since the success of the Protocol depends on compliance by all countries, non-compliance by CEITs poses a serious problem. To rectify this situation, the Parties have established a special framework for phase-out in CEITs that have not been able to meet the original schedule.²

At the present time, several non-Article 5 CEITs are in a state of

non-compliance because they continue to consume ODS after the phase-out date for developed countries – January 1, 1996. However, in recognition of the challenges facing these countries and their bona fide commitment to become compliant as soon as possible, the Parties have decided to allow certain CEITs to continue to consume ODS for non-essential uses.³ In addition, the Russian Federation has been allowed to supply ODS to former republics of the Soviet Union, some of which are not parties to the Protocol. Unfortunately, unscrupulous traders have been taking advantage of this situation and illegally re-exporting Russian-made ODS. Furthermore, there is indirect evidence that illegal ODS trade is taking place between CEITs that are parties to the Protocol.

CONTROLLING ODS TRADE IN UKRAINE

Ukraine provides a good example of the ODS trade situation in CEITs. Like most non-Article 5 countries, Ukraine was scheduled to complete phase-out of CFCs by 1996. However, due to economic difficulties it was not able to meet that goal. In 1995, in anticipation of the problem, the Parties considered the situation and decided to let Ukraine consume ODS beyond January 1996,

¹ Report of the Ninth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, UNEP/OzL.Pro.9/12, September 1997.

² E. g. Decisions X/20 to X/28.

³ Non-Article 5 CEITs still allowed to consume ODS for non-essential uses are: Azerbaijan, Belarus, Estonia, Latvia, Lithuania, Kazakhstan, the Russian Federation, Turkmenistan and Uzbekistan. Several CEITs such as Croatia, Georgia, Kyrgyzstan, Moldova and Romania were classified as Article 5 countries.

In Europe, industry estimates suggest illegal imports of up to 15,000 tonnes a year in the period 1994 to 1996. In January 1997, Dehon Services, the European Union's largest CFC distribution company, estimated the volume of illegal trade by comparing data on end-use sales with total legal supply from production, stockpiling and recycling capabilities. On this basis, an estimated 8,000 tonnes of illegal material entered the EU in 1995 and 6,500 tonnes in 1996. Mirroring the US experience, recent years seem to show lower volumes.

Source: Duncan Brack, Royal Institute of International Affairs, London.

provided the country did its best to phase out ODS in its territory as promptly as possible. The international community, in turn, agreed to provide financial support for implementation of the proposed Country Programme (CP) of ODS phase-out for Ukraine. In October 1996, the Ukrainian government approved this programme and a corresponding grant agreement between Ukraine and the World Bank was ratified in March of

1999. According to this agreement, Ukraine will phase out ODS in its territory by the year 2002.

First attempts to create a clear picture of the ODS market in Ukraine were made by the Ministry for Environmental Protection and Nuclear Safety (MEP) in 1995. Originally, it was supposed that there would be no reason for businesses to distort data on ODS (mostly CFC) consumption and trade and that there would be no incentive for illegal imports. This was based on two assumptions: first, that ODS import was not prohibited; and second, that historically Ukraine imported the lion's share of its ODS from the Russian Federation. At that time, cheap CFCs produced by the Russian plants were widely accessible in most CEIT countries. CFCs made in the Russian Federation could be bought for less than US\$1.00 per kilogram, often on credit or via barter⁴ schemes. As a result, the street price of CFC-12 was around US\$1.50 per kilogram.

Data was collected mainly from enterprises and companies that were covered by official statistics. Surprisingly, when the consol-

idated data was compared with independent expert assessments and export figures on ODS trade from Russia to Ukraine, many discrepancies were discovered. In fact, many businesses distorted data on ODS imports and some enterprises even reported zero consumption. The reasons for these distortions were mostly commercial in nature. Many companies tried to reduce their real turnovers to escape taxation, others used barter schemes to hide as many commodities as they could. Other reasons included poor book-keeping and lack of enforcement on the local level. To be fair, the businesses were not concerned with environmental liability because there was no relevant regulation in Ukraine at the time.

There were several methods of bringing uncontrolled ODS into Ukraine. Some businesses preferred to negotiate with customs officers, while others used mislabelling and other means. Again, at the time there were no restrictions on ODS imports and the reasons for such behaviour had to do with commercial, not environmental

SPECIAL INITIATIVE IN RUSSIA

Due to the huge transformation taking place in its economy, the Russian Federation was not able to meet the 1996 ODS phase-out deadline for developed countries. Though Russian consumption of ODS had dropped from over 100,000 tonnes to under 30,000, the continued production of CFCs and other ODS was a cause of concern because it provided a potential supply to smugglers – and ample opportunity for illegal ODS trade.

The Russian government continued in its efforts to support the goals of the Montreal Protocol, developing an alternate plan that called for ODS phase-out by 2000. In keeping with its promise, last December the Russian Federation announced that it had achieved phase out of ODS production. The World Bank, along with the Global Environment Facility (GEF) and individual donor countries, is supporting this effort with a special initiative that provides funds to ensure the permanent closure of ODS-producing facilities in Russia.

Signed in October 2000, the US\$26.2 million grant will be used to compensate seven ODS-producing enterprises that have ceased operations and also finance the monitoring and verification of the closures – to be carried out by Russian and international experts.



KEEPING TRACK IN THE CZECH REPUBLIC

Very few CEITs have been able to compile statistics on actual incidents of violations concerning illegal trade in ODS. One of these, the Czech Republic, reported 146 incidents of illegal trade in ODS during the period 1995 to 1997. These included:

- Delays in forwarding information on ODS quantities to the authorities (118)
- Import of ODS without permit (10)
- Import of ODS in an amount higher than allowed in the permit (14)
- Failure to pay charges for the use and transport of ODS (4)

Fines levied on violators by the Czech Environmental Inspectorate totalled US\$53,310.

Source: Paper supplied by Czech republic to the Workshop on Enforcement and Compliance with Multilateral Environmental Agreements (MEAs), Geneva, 12–14 July 1999.

matters. But the fact remains that these methods were used to import controlled substances illegally. By 1996, it was absolutely clear that the first thing that needed to be done was to establish a reliable monitoring system of ODS traffic in Ukraine.

To that end, the National Ozone Office – responsible for the day to day control and implementation of the Montreal Protocol – worked in several directions. First, all regional offices of the MEP were ordered to register all ODS users, to include them in a central data bank and to regularly request them to report ODS consumption. (This task has been significantly facilitated since 1999, as any business currently dealing with ODS must now obtain a license.) Then the Ozone Office started establishing direct contacts with main ODS traders. In addition, MEP officially approached the Customs Service of Ukraine to obtain data on import/export of ODS. By the beginning of 1998, there were at least three information channels providing information on ODS import, export and consumption in Ukraine. This system allowed officers to crosscheck information obtained from different sources and, as a result, to obtain reliable data.

But the most important development was to establish a

system of licensing the import/export of ODS. This system was established by governmental decree in March 1998. The decree bans any unlicensed import or export of ODS and products containing them. ODS re-export is also prohibited. With this monitoring system in place in Ukraine, illegal trade in ODS should be very difficult. However, some problems and possible loopholes still remain.

PROBLEMS AND SHORTCOMINGS

A significant problem for many CEIT countries is unreliability of the control on the border. Many businesses have been able to negotiate with customs officers to obtain various indulgences. Since then, several countries have imposed charges on imported ODS. This measure has been applied to create an economic incentive for rapid ODS phase-out. However, it

also automatically creates an economic incentive for smuggling ODS. In this situation, special attention should be paid to border controls, but unfortunately, environmental authorities do not have control over customs services. Another obstacle is that customs officers are still lacking appropriate testing equipment to check substances at the border.

Another problem that is specific to CEITs is that small quantities of ODS that are transported over the border in a non-commercial manner may easily escape proper control, especially if the carrier uses mislabelled containers. Some ozone officers have complained that because prices for CFC-12 are very different in neighbouring countries and borders are transparent, it is profitable for technicians to purchase CFC-12 abroad and bring it back in private cars disguised as something for personal or household use. Nobody knows how much CFC is transported in this way, but it is clearly another obstacle in the effort to curb illegal ODS trade.

LESSONS LEARNED

Several lessons can be learned from the experience of Ukraine and other CEITs. First of all, it is very important to establish a reliable national system of monitoring of ODS trade and consumption as early as possible. Ideally, it should be done before

SMUGGLING PENALTIES IN CEITs

Almost all CEITs have legislation that accords fines of up to US\$25,000 for violating regulations dealing with ODS imports/exports. In a few CEITs, illegal trade in ODS is treated the same as illegal trade in any other chemical and in one or two legislation contains penalties of imprisonment. Some CEITs, such as Poland, will soon introduce imprisonment penalties.

Source: Janusz Kozakiewicz, kozak@ichp.waw.pl

⁴ "Barter" is an exchange in goods which avoids transferring monies from the buyer's bank account to the seller's bank account. Since barter often allows people to escape taxation, such schemes are widely used in countries of the former Soviet Union.

As of September 1999, 662 seizures of illegal ODS imports (involving 1,000 tonnes) had been made in the US, 133 resulting in criminal cases. 87 defendants had been convicted, leading to a total imprisonment period of 48 years and total fines of US\$38 million.

Source: Duncan Brack, Royal Institute of International Affairs, London.

elaboration of the CP. However, this crucial component is usually included into the CP's institutional strengthening project, which comes after the CP is approved. Such an approach is not effective.

Secondly, the introduction of environmental fines regarding ODS must be carefully planned. If the fines are put into place too early, they may create economic incentives for illegal trade.

Finally, co-operation with the business sector is essential. Establishing sustainable relationships with the biggest ODS suppliers/consumers or their business associations may be very helpful. In addition, companies promoting ODS alternatives and technologies can serve as effective examples and provide leadership in the market.

To sum up, uncontrolled trade paves the way to illegal trade. By creating a comprehensive system of monitoring of ODS transportation and consumption before the introduction of strict ODS phase-out measures, illegal trade can be minimised. In this context, it is essential to establish national ODS import/export licensing systems pursuant to the decisions made at the 1997 Meeting of the Parties as promptly as possible.

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A MASTER OF DISGUISE:

Why Illegal ODS Trade is Difficult to Detect

Due to the nature of the chemicals at issue and the circumstances surrounding their sale, it is not always easy to pinpoint when, in fact, commerce in ODS is illegal. Janusz Kozakiewicz discusses the reasons behind this conundrum and how smugglers take advantage of the situation.

Controlling any type of illegal commerce is difficult, but because of their unique characteristics, controlling trade in ODS is particularly complex. The progressive scarcity of ODS – currently CFCs and halons – has made illegal trade that much more profitable and this problem is now effecting not only industrialised nations, but also Article 5 countries and CEITs that have controls in place. Because of its broad scope, understanding all aspects of this phenomenon is essential to both limiting this illegal activity and ensuring the success of the Montreal Protocol.

Most ODS, including CFCs and HCFCs, are odourless gases or liquids that boil at low temperatures. But these characteristics do not necessarily help customs officers identify illegal ODS, as ozone-friendly substitutes, such as HFCs, are also gases without scent and or low-boiling compounds. Furthermore, the chemical names of ODS and their non-ODS counterparts may look very similar to an official checking documentation (for example, hydrochlorofluorocarbons

vs. hydrofluorocarbons, or 1,1,1-trichloroethane vs. 1,1,2-trichloroethene). To make matters worse, these substances are often imported or exported under trade names only. Often, a smuggler need only change around the names of the chemicals in question in order to confuse the customs officer and cross the border.

Although it is possible to test containers suspected of holding ODS, necessary equipment is available only at a limited number of customs check points. But sometimes not even a test will detect ODS. Some importers/exporters are now transporting ODS in special compartments hidden in containers filled with ozone-friendly substances.

Customs officers usually check a special customs code to help them identify a substance. However, few individual ODS have their own code. In some cases, codes identify not one, but a whole group of ODS, or cover a wide range of mixtures containing ODS. Even in the most

In 1997, customs officers in Taiwan discovered illegal CFC cylinders concealed within false jackets labelled as containing HFC-134a. When samples were taken from the main valve HFC-134a was detected. But when the cylinder was cut open, it revealed a hidden valve with the bulk of the contents being illegal CFCs.

Source: Julian Newman, Environmental Investigation Agency, London.



A portable Halon Identifier used to analyse liquid samples to verify purity and identify contaminants taken from storage cylinders.

sophisticated customs classification systems, the problem of classifying mixtures containing ODS has not yet been solved.

Moreover, some of the mixtures containing ODS may be given a customs code related to its use, rather than its composition. This loophole is sometimes also applied to "pure" ODS. For example, some producers add small amounts of chloropicrin to pure methyl bromide (an ODS) to change its odour and then incorrectly give the code for an insecticide or pesticide on customs forms – thus avoiding monitoring and control.

Another important issue is the fact that while ODS and *mixtures* containing ODS are controlled under the Montreal Protocol, there are no restrictions for trade in *products* containing ODS between Parties to the Protocol. The distinction between ODS-containing mixtures and ODS-containing products is of crucial importance for a customs officer or ozone official. Though the Montreal Protocol provides guidelines for such differentiation,¹ this does not help customs officers,

who must rely on customs codes to make a judgement. Even for ODS specialists, differentiating between the two may not be easy.

Once an ozone depleting substance is fully identified, there may still be doubts as to whether the shipment is legal. Various exemptions exist under the Montreal Protocol and smugglers can take advantage of such allowances. The trick most frequently used is to declare virgin ODS as "used," and thus exempt from phase-out schedules. ODS used for laboratory and analytical purposes are also exempt – provided they are of specified purity and are traded in capacity-specific containers with special labels. It is quite difficult for customs officers to check whether these requirements have been met. ODS produced or imported for use as "feedstock" in a chemical process are not included in the Protocol's definition of production or consumption and thus in some countries no permit is needed. In this case, the customs officer has only the importer/exporter's declaration to rely on in making a judgement.

These problems must be addressed by the international community as soon as possible if we are to avoid further development of illegal trade. Key measures include introducing ODS licensing/permit systems into the Montreal Protocol and organising extensive training for customs officers on both a regional and national level – particularly in developing countries (see "*Out on the Front Line: Training Customs Officers*", page 20). However, even these measures will not solve the problem of ODS identification unless further action is taken to improve the customs classification of ODS-containing mixtures, develop a labelling/marker system for ODS and further clarify the difference between ODS-containing mixture and ODS-containing product in customs codes. These steps, along with the recent decision taken at the 12th Meeting of the Parties in December 2000, will help to provide customs officers and other officials with the tools they need to identify and prevent illegal trade.

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¹ Decision I/12A (items (c) and (d), respectively) states "if a substance or mixture must first be transferred from a bulk container to another container, vessel or piece of equipment in order to realise its intended use, the first container is in fact utilised only for storage and/or transport and the substance or mixture so packaged is covered by Article 1, paragraph 4 of the Protocol (i.e., *it is a controlled substance*)" and "if, on the other hand, the mere dispensing of the product from a container constitutes the intended use of the substance, then that container is itself part of a use system and the substance contained in it is therefore excluded from the definition (*of a controlled substance*)"

THE TRICKS OF ILLEGAL TRADE: How Criminals Smuggle ODS

In the largest detected case of ODS smuggling in the European Union, the German firm Taifun and a network of brokers imported over 800 tonnes of Chinese CFCs and halons between 1995 and 1997. The chemicals were falsely labelled as R-227, a legal HFC, to avoid detection. The smuggled chemicals were shipped to the UK, Belgium, France, Greece, Italy, Germany and the US.

Source: Julian Newman, Environmental Investigation Agency, London.

Smugglers are very creative when it comes to transporting contraband ODS across borders. Citing several actual cases, investigator Julian Newman offers an analysis of their motives and methods.

When officials from around the world agreed to the Montreal Protocol in 1987, they could not have imagined that within a decade chlorofluorocarbons (CFCs) would be second only to cocaine as the most valuable contraband smuggled through the US port of Miami.

While those phrasing the protocol and its initial amendments were rightly focused on phase-out schedules and funding, the possibility of illegal trade did not cross the radar. Yet by the mid-1990s, around 20,000 tonnes of ODS were being smuggled annually and the black market was

providing 20 per cent of CFCs in global circulation.

With hindsight, the probability of substantial trafficking in ODS was assured as soon as differing phase-out schedules were agreed for developing (Article 5) and industrialised (non-Article 5) countries. The motive behind ODS smuggling is pure economics: as production bans came into force in both the European Union and the United States, domestic demand remained buoyant. At the same time, some developing countries, notably China and India, were rapidly expanding production. This, coupled with Russia's non-compliance, ensured abundant supplies of cheap CFCs for the global market.

Rich rewards await those willing to break the rules to illegally divert these cut-price CFCs into the lucrative US and EU markets. For example, Chinese CFC-12 can be bought for as little as US\$1 per kilogram and can fetch at least US\$16 on the UK market. The potential profit margin on a standard 20 tonne container can be over a quarter of a million US dollars. Some of the larger smuggling rings have made millions of dollars from their criminal enterprises.

People involved in ODS smuggling tend to be from the white-collar end of crime. Some may have a legitimate background in a sector associated with ODS, such as refrigeration or fire-

fighting equipment, while others are classic middlemen or "arbitrageurs" dealing in a range of dubious commodities. Occasionally links between ODS smuggling and other criminal activities surface. An individual involved in a plot to illegally import Chinese ODS into Germany was also accused of breaking sanctions by supplying missile parts to Iraq. One of the first cases of illegal ODS imports in Italy was uncovered during an investigation into arms trafficking and some of the smugglers caught crossing the Mexico-US border had previously worked as drug "mules".

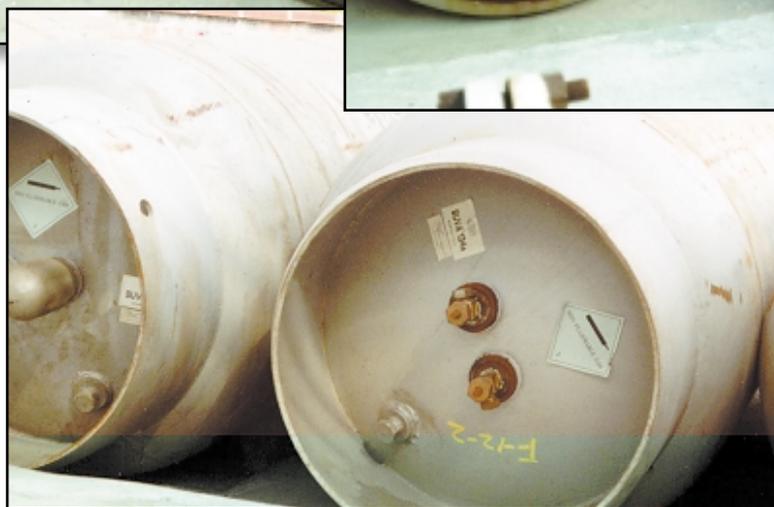
Opportunities for ODS smuggling have been greatly enhanced by major loopholes in the Montreal

In 1996, CFCs were seen on sale in Spain clearly packaged in disposable cylinders intended for export to Article 5 countries. Enquiries revealed that the CFCs were packaged in the UK for export to Africa, but had been diverted onto the European market by a Spanish firm. Offshore islands are often used for this smuggling method. In 1995 and 1996, the Dutch Antilles suddenly began importing huge amounts of CFCs, far more than could possibly be needed on the island. In 1998, customs officers on Reunion Island in the Indian Ocean intercepted CFCs about to be illegally shipped back to France.

Source: Julian Newman, Environmental Investigation Agency, London.



Seized refrigerant containers with a hidden compartment containing CFC-12. Access valves were connected to a small compartment containing HFC-134a.



Protocol, facilitating trade in used or recycled material and permitting transshipment of ODS for repackaging. The recycling scam has been particularly prevalent in the US, where imports of used CFCs and halons are still permitted. In just two months in 1997, over 350 tonnes of supposedly recycled halon 1301 were shipped from China to the US – yet at that time the most modern halon reclamation plants in the world could only process 70 tonnes in a year.

Repackaging fraud came to light in the EU in the mid-1990s, when a number of brokers (particularly from the UK) began bringing in bulk shipments of Russian CFCs, ostensibly to be repackaged and re-

exported to Article 5 countries. In fact, much of this material found its way onto the black markets of Europe and the US.

Like most illicit activities, ODS trafficking is fluid in nature; it is constantly shifting to take advantage of changing circumstances such as new loopholes, price differentials, market availability and to avoid locations where enforcement has been enhanced. A variety of methods are employed to avoid detection (see *"The Art of Smuggling: What Customs Officers Need to Know"*, page 16), ranging from sophisticated frauds involving false paperwork and covering several different countries, to an individual simply loading up a car

with canisters and driving across the border from Mexico to the US.

The first major cases began appearing in the US around 1995, with Florida emerging as the major hub for CFC trafficking. To counter this threat, the US authorities launched "Operation Cool Breeze," an inter-agency task force that was soon zealously tracking down the smugglers, but not before over 9,000 tonnes of CFCs were illegally imported over a two-year period.

During this period a number of offshore islands, particularly in the Caribbean, emerged as key transit points in laundering CFCs and disguising the true destination of the chemicals. In 1995, shipping records revealed imports of over 2,000 tonnes of CFCs into the

continued on page 18

THE ART OF SMUGGLING: WHAT CUSTOMS OFFICERS NEED TO KNOW

BY LARY COOK LARSON

S muggling ODS is a very profitable and relatively low risk crime. Assuming that appropriate controls are in place, customs officers are the first line of defence. Customs officers must have a basic understanding of the regulatory system in place, a working knowledge of the required import/export documents and the ability to recognise shipments of ODS. With this fundamental knowledge, they will be better able to detect the common smuggling practices described below.

Diversion of ODS Shipments: ODS are shipped to an intermediary country while in transit to their named destination (called "transshipment"). During this interval, smugglers secretly switch the ODS in the shipping containers with other materials and put the ODS on the black market.

Indicators of illegal trade:

- Shipments routed through a transit country when they could have been shipped directly
- Transshipments to countries that produce the same ODS
- Transshipments to countries which would not consume the volume of ODS being shipped.

Detection: Customs officers can track container numbers and check with shipping companies to make sure the ODS actually left the country. They can also contact officials in the stated destination country to make sure that the shipment actually arrived.

Mislabelling ODS: Shipments are mislabelled and imported as a different product. There are many variations on this method.

Indicators of illegal trade:

- Country of origin and type of product raises suspicion. For example, the country of origin has limited or no production capacity for the legal chemical claimed in the customs documents.

Documents and Cylinders Switch: Illegal ODS are identified as a legal substance in customs documents and shipped in cylinders used for the legal substance. For example, Chinese CFC-12 has recently been found shipped in cylinders painted and labelled as Genetron 134-a, a legal HFC.

Detection: Customs officers must open shipping containers and sometimes arrange to test the cylinders' contents.

Cylinder Within a Cylinder: Smugglers manufacture a special cylinder that contains a small cylinder inside. The small cylinder holds the legal substance and has exterior valves on top for inspection, while the larger cylinder contains the illegal ODS and has hidden valves in a secret compartment on the bottom. When the customs officer samples the contents from the top valves, only the legal substance is detected.

Detection: Double cylinders have a different valve configuration (see photos on previous page).

Changing Tank Pressure with Nitrogen: Smugglers add nitrogen to change the cylinder pressure of Halon 1301 to that of HFC-227. The legal refrigerant HFC-227 is then entered in the import record.

Detection: A full lab analysis is required. Simply checking the pressure of the cylinder will not disclose its true contents.

Repainting and Relabelling: Less sophisticated smugglers repaint and/or re-label the original cylinders containing controlled ODS to look like containers of a different chemical.

Detection: Poorly repainted and relabelled cylinders often indicate smuggled chemicals. Disposable cylinders (13.6 kg in particular) have also been reused to smuggle controlled ODS. Old, scratched and scarred paint is another good indicator of illegal activity.

Using Incorrect Customs Codes: This is a less sophisticated variation on the method described above. Chemical imports are generally described on customs forms variously by their trade names, chemical names, UN numbers and harmonised tariff codes (customs codes). This can create confusion for customs officers. Trade names may not be sufficiently descriptive or may have changed; chemical names can be very similar (compare Dichlorodifluoromethane (CFC-12), banned in non-Article 5 (industrialised) nations, to Chlorodifluoromethane (HCFC-22) and Dichlorotrifluoroethane (HCFC-123), legally traded under the Protocol); different chemicals are assigned the same customs codes, and not all ODS have been assigned UN numbers. Sometimes general descriptions are given that are technically correct but do not properly identify the chemical being imported. Smugglers take advantage of the confusion and the customs officer's lack of knowledge to illegally import or export ODS.

Indicators of illegal trade:

- A general description or an incomplete, inadequate, inconsistent identification of the product being imported or exported.

Detection: Careful examination and comparison of all papers associated with the transaction, including invoices, packing lists, bills of landing and official customs documents. The chemical name, UN number, tariff codes and trade names on the various documents should identify the same chemical. If they do not, the shipment should be physically inspected.

Traditional Smuggling: Illegal ODS cylinders are hidden behind legal merchandise in the part of a container or tractor-trailer that is not visible from the doors. For example, banned CFC-12 has been discovered in the centre of shrink wrapped pallets of HCFC-22 and HFC-134a cylinders.

Indicators of illegal trade:

- Illegal ODS offered for sale in the domestic market at lower than expected prices.

Detection: Cylinder manufacturers can provide information to track smuggled ODS in the domestic market back to the source using "Julian dates," which identify the date and origin of manufacture, or serial numbers.

Hiding ODS in Equipment: Compressors or other refrigeration equipment are filled with ODS beyond their intended capacity. Once the equipment is imported, the ODS is removed for sale on the black market. One smuggling group repeatedly sent refrigeration equipment with an oversized cylinder out of the country for "repair" and then brought it back charged with illegal ODS.

Indicators of illegal trade:

- ❑ Importation of compressors and other refrigeration equipment by companies not previously in that business, or by companies associated with distributors of ODS.
- ❑ Repeated transactions in equipment for which there is no apparent demand.

Detection: Visual inspection is required. Equipment with oversized storage cylinders in the compressor unit are probably being used to smuggle ODS.

Returned Merchandise: Product is referred to as "returned merchandise," thus concealing its actual nature.

Indicators of illegal trade:

- ❑ The return of "empty cylinders," especially those being returned from a country that would not consume a large volume of refrigerant. The economic utility of shipping empty cylinders is questionable, unless it is a large ISO tank.

Detection: Returned products and cylinders must be inspected.

Claiming Virgin ODS as Recycled: Some non-Article 5 countries, including the United States, permit the importation of used ODS that has been recycled in the exporting country. Smugglers provide false certificates indicating that the virgin product is recycled. There is no chemical test available to determine whether the substance is virgin or reclaimed and some smugglers add contaminants to virgin product so that it does not appear too pure.

Indicators of illegal trade:

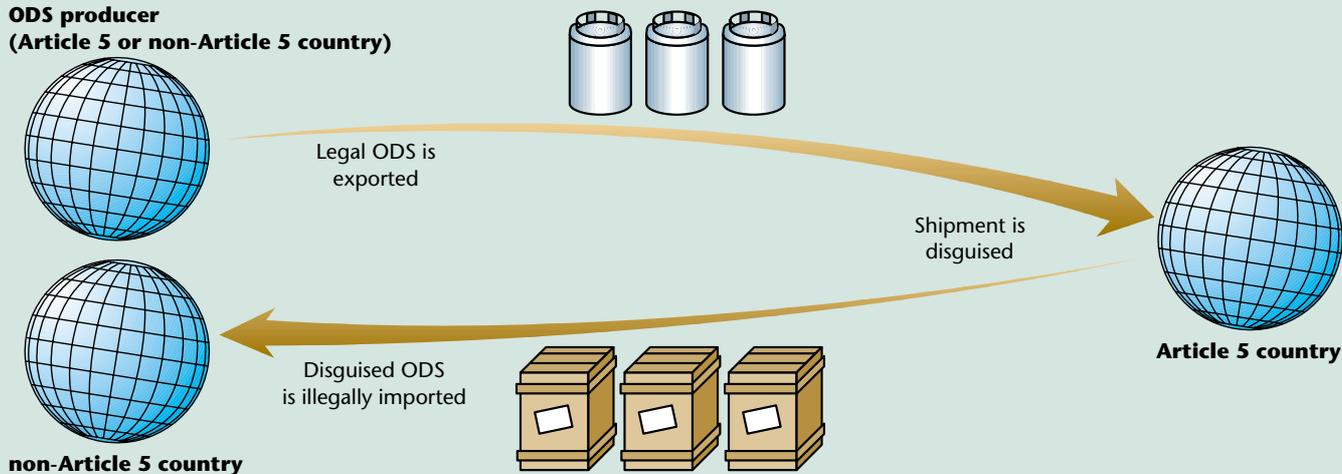
- ❑ The country of origin and type of product often raises suspicion that the material is virgin. For example, imports of CFCs and Halons from Article 5 (developing) countries that are major producers of virgin ODS and have limited capacity for recycling.

Detection: Because the importer collaborates with the exporter to falsify documents, it is difficult to prosecute the crime unless investigated by the authorities in the exporting country.

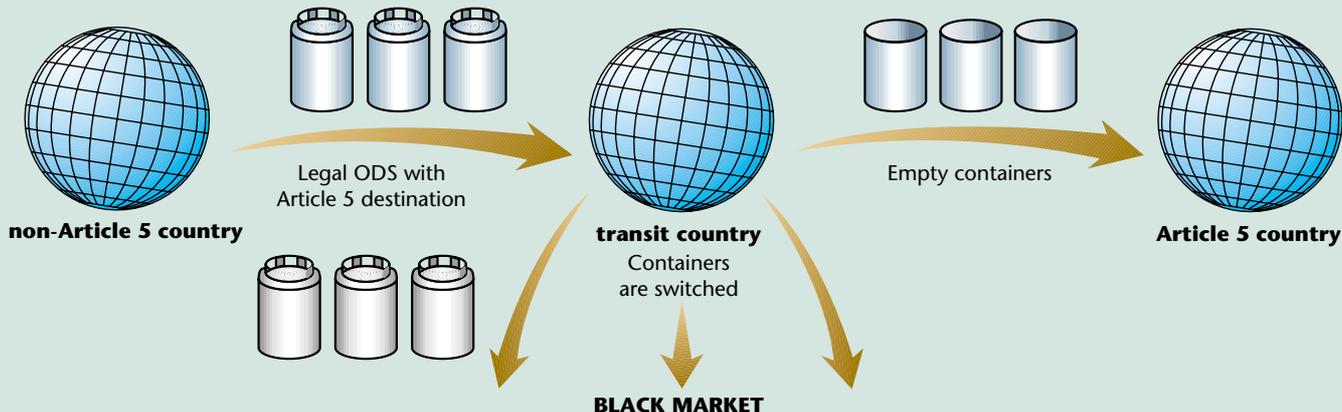
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TRIANGULATION

ODS producer (Article 5 or non-Article 5 country)



TRANS-SHIPMENT



Seized boat and containers from an illegal CFC-12 smuggling attempt into the US on a cigarette boat last year, Miami, Florida

U.S. Customs



U.S. Customs



U.S. Customs



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small islands of the Netherlands Antilles, a territory with a maximum authorised consumption of around 90 tonnes per year. According to a District Attorney in Florida, the shipments to the island were sufficient to “put a dome over it and cool it until the next century”.

When the dust from Operation Cool Breeze settled, the authorities had secured a number of prosecutions involving substantial fines and even jail sentences. Irma Henneberg, manager of a Florida shipping company, received a 57-month jail sentence for filing false shipping manifests and diverting around 3,000 tonnes of CFCs onto the US market. Three company officials from Refrigeration USA pleaded guilty to smuggling 4,000 tonnes of CFCs into the US and forfeited property worth US \$3 million.

An intriguing aspect of many of these cases was the convoluted route used to ship the contraband CFCs. A significant amount of the chemicals originated from Russia and passed through Europe, in particular a cluster of companies based in the Midlands region of the UK, before being diverted onto the US market instead of the

declared destinations in Article 5 countries. In one case, a container of CFCs left Russia for the UK and was then shipped on to Houston. The container then turned around and was shipped back to the UK, by which time it had mysteriously become filled with HCFCs. The container cleared UK customs and disappeared.

Despite the clear evidence of the complicity of European companies in smuggling Russian material, for years EU authorities refused to acknowledge the problem. The extent of this complacency was exposed in July 1997, when an illegal shipment of Chinese CFCs were seized in the Netherlands. Subsequent investigations revealed a conspiracy by a network of brokers to distribute illegal Chinese CFCs and halons all over Europe, headed by the German

company Taifun and the UK firm Northstream. Over a two-year period, the fraudsters imported over 800 tonnes of Chinese CFCs, in many cases by simply labelling it as legal HFCs and selling it to clients in the UK, Italy, Belgium, Greece, France, Germany, Hungary and the US.

In addition to proving the existence of a thriving black market in the EU, the Taifun case also revealed the emergence of China as a major supplier of illegal ODS. To gain an insight into the links between Chinese suppliers and brokers in the US and EU, the Environmental Investigation Agency (EIA) launched an intensive one-year investigation. Posing as chemical dealers, EIA established a dummy company and set about contacting ODS suppliers all over China. The results were startling, as

© Environmental Investigation Agency



Storage room holding a shipment of illegal CFC-12 in the South Asia region, February/March 2001

a series of brazen offers were made to supply ODS using recycling and false-labelling scams.

The company Sino-Resource wrote: "Frankly speaking, we are supplying R-12 overseas. Some clients ask us to reduce purity and make R-12 seem recycled for the sake of an import licence." This firm claimed to have supplied clients in the US and Italy using this method. MinMetals

Contraband ODS continues to be carried across international borders, but increased vigilance on the part of customs officers and co-operation between customs and environmental agencies can make a difference. In April 2001, Mr Kitson Thompson of Toronto, Ontario was fined CN\$5,000 plus 30 hours of community service for illegally importing an undeclared, thirty pound cylinder of chlorofluorocarbons (CFC's) on an Air Canada flight from Jamaica. The cylinder, which was discovered during a customs baggage examination, was missing prescribed safety marks. A joint investigation by Environment Canada's Environmental Protection Branch and Canada Customs Investigations resulted in Thompson being charged with making a false statement and the subsequent penalties.

Source: Environment Canada News, April 24, 2001.

made the following offer: "Regarding R-12, we can issue a full set of shipping documents in the name of R-22, the legal commodity." Another company called Ningbo Material told how it had supplied a European client by filling a shipping container with illegal CFC-12 cylinders, except for one layer of legal HCFC-22 cylinders next to the door in case of inspection.

It appears now that ODS smuggling in the US and EU peaked during the thriving black market of the mid- to late-90s and has now subsided. This is partly due to better enforcement, but also a testament to the sheer amount of cheap material unscrupulous brokers have been able to bring in undetected.

Once again illegal trade is mutating. Smuggling cases are emerging in developing countries as the effects of the 1999 freeze on production of ODS are felt. In India, seizures of illegal ODS have taken place in Jaipur, Mumbai, Cochin and Varanasi and police raids have been carried out on premises in Delhi, Mumbai and Calcutta (see "Diversion of Illegal Trade", page 5). In Pakistan, a container labelled as holding HCFC-22 was in fact packed with CFC-12. Counterfeit cylinders have been detected in Indonesia and Malaysia, while an estimated 80

per cent of CFC-12 imports into Vietnam are illegal.

The current dynamic of smuggling in developing countries is bound to be different from that experienced in the past. Because of the 1999 freeze, the global supply of ODS will gradually dry up as plants in China, Russia and India decrease production and close. When this happens, the very scarcity of ODS may drive the black market price up.

In the meantime, the introduction of licensing systems should prove a useful tool in combating smugglers, but only if countries include provisions to license exports as well as imports to avoid transshipment. Training of customs officers and other enforcement authorities is also a useful step. However, judging by past experience, ODS smugglers can be quite ingenious when necessary and stamping out the illegal trade is a daunting challenge. As long as a market for ODS persists, there will always be someone willing to bend the rules to supply it.

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OUT ON THE FRONT LINE: Training Customs Officers

New measures are being implemented to stop illegal ODS trade with customs officers playing a crucial role in making sure the new regulations live up to their potential. The following article describes what is being done by UNEP DTIE's OzonAction to make sure that agents are ready to take on this challenge.

Customs officers are often the first line of defence in the battle against illegal activity, such as illegal ODS trade. Stationed at international borders and ports of entry, these agents are in a prime position to catch smugglers and confiscate illegal ODS before it reaches the black market. For this reason, customs officers are an obvious and essential component in any country's phase-out strategy.

However, detecting illegal ODS trade is not easy for personnel in developing countries as they do not always have access to proper "know-how", training or equipment. Additionally, smugglers have become very clever at disguising ODS and

defrauding customs agents (see "A Master of Disguise", page 12 and "The Tricks of Illegal Trade", page 14).

The challenge is to offer customs officers training that will help them both spot illegal activity and effectively use ODS monitoring and control mechanisms. This is a vital issue for Article 5 countries, where the freeze on CFC consumption took effect in 1999 and further control measures will soon be added. In these countries – most of which are not ODS producers and thus completely reliant on imports – CFCs are primarily used in the refrigeration and air-conditioning servicing sector. This is why national phase-out plans in Article 5 countries usually include Refrigerant Management Plans (RMPs) with customs training being an essential component of RMPs since 1997.



BUILDING A FRAMEWORK

Following stakeholder consultations, UNEP DTIE's OzonAction designed an overall concept for customs training which included the concept of a "Country Handbook on ODS Legislation and Import/Export Licensing System." The Handbook, developed before training commences, is a compendium of

LICENSING SYSTEMS: KEEPING TRACK OF ODS IMPORTS AND EXPORTS

By requiring importers and exporters to register and apply for permits, customs officers and other officials have written records that show where and when ODS shipments move and who did the moving. Not only do these systems help countries collect data and monitor the whereabouts of ODS, but they also make it easier to control the ODS supply and thereby help countries meet their phase-out schedules. Moreover, licensing systems are extremely useful to customs officers, who ordinarily have to rely on customs codes that can be problematic in the case of ODS.

The ability to track ODS movement in this fashion is a powerful weapon in the fight against illegal trade. In recognition of this fact, in 1997, at the Ninth Meeting of the Parties in Montreal, an amendment was introduced requiring all Parties to create an import

and export licensing system for ODS (the Montreal Amendment). The systems were to be introduced by January 1, 2000, or three months after ratification of the Montreal Amendment, with some delays allowed for methyl bromide and HCFCs.

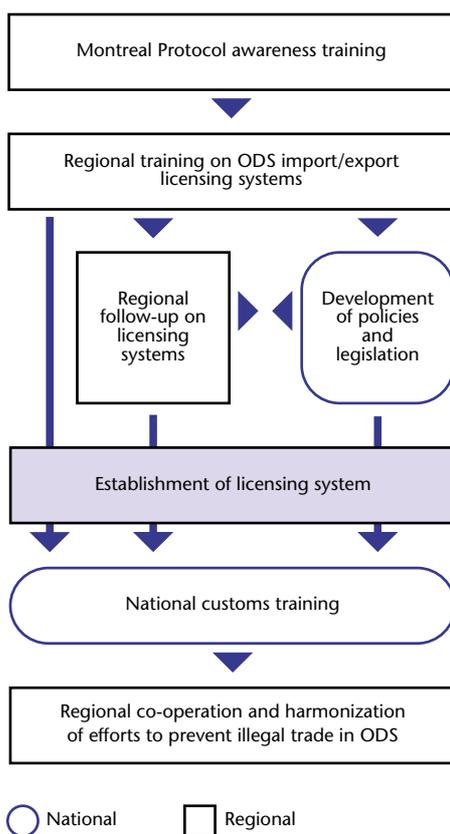
The general concept was that all international transport of ODS must be approved in advance. Before any ODS can be moved into or out of a country, importers or exporters must apply for a permit that specifies the quantity of ODS, the countries involved in the transaction, what the chemicals will be used for and other important information. This kind of transparency, coupled with strong enforcement, will hopefully pre-empt smuggling attempts and help prevent illegal trade.

country-specific regulations and is used as a complement to UNEP DTIE's training manuals for customs officers. It has now become an essential element of customs training programmes.

Both officer training and legislative enforcement are at the heart of UNEP's customs training framework. Encompassing a wide variety of workshops and programs which are designed to compliment and reinforce each other, the aim is to create a corps of informed officers equipped to monitor and control ODS trade.

At the regional level, UNEP's workshops help countries develop licensing systems and draft legislation in accordance with the Montreal Protocol. Follow-up regional workshops are held in certain cases to see how new regulations are working and to devise any necessary corrective measures. Once a licensing system is in place, training customs officers

UNEP Training Framework



becomes of paramount importance and country-specific national training programs are set up.

At the national level, UNEP's training programmes for customs officers unfold in a multi-phased process, which begins with a "train-the-trainer" phase to create a new resource for future customs training (see "Customs Officers Training", below). These national workshops focus on a specific country and help officials work with decision-makers and other stakeholders to gain support for ODS regulations.

To make sure that the new legislation and licensing systems are working in concert with those of neighbouring countries, additional regional workshops are then held on the harmonization of ODS legislation to foster co-operation between customs and enforcement agencies within regions or economic zones.

continued on next page

RMP Training

| | | | |
|---|-------------------------------------|--|--|
| PREPARATION OF PHASE I and PHASE II (4 months) | MONITORING AND EVALUATION | | REPORTING OF PHASE I and PHASE II (1 month) |
| | PHASE I Implementation (1 month) | PHASE II Implementation (12 months) | |

CUSTOMS OFFICERS TRAINING: A NATIONAL APPROACH

When it comes to tackling the problem of illegal ODS trade, each country must devise a strategy that suits its particular situation. In addition to its other customs training, UNEP has designed national training programmes that focus on the needs of specific nations. Seminar participants are involved in a vital give-and-take, resulting in recommendations, observations and proposed policy frameworks that address national issues and concerns.

National Training Programmes for Customs Officers offer basic background information on ozone depletion issues, including an overview of the Montreal Protocol and its amendments and national phase-out strategies. They also provide in-depth enforcement training on subjects such as legislation and licensing systems, revised customs codes, monitoring and control systems for ODS and ODS-containing products and their implications for customs officers. Participants are also trained in the use of identification tools for ODS refrigerants.

The training takes place in two phases. In Phase I, workshops are

held for customs trainers and other key stakeholders (such as representatives from the ministries of justice or commerce) in order to "train-the-trainers." The trained customs trainers are expected to train the other customs officials from the major ports of entry and to prepare a Montreal Protocol related training module to be included into the country's on-going training curriculum for customs officers. The training programme includes on-going monitoring and evaluation.

To date, 68 customs training programs have been approved by the Executive Committee of the Multilateral Fund, 48 of which will be implemented by UNEP. Seven countries have now completed Phase I of the training (Jamaica, Trinidad and Tobago, Guyana, Syria, Fiji, Bahrain and the Gambia) with close to 150 customs officers and stakeholders participating. 15 more Phase I training programmes should be finished by the end of 2001. Some countries, such as Jamaica, have moved on in the training and have trained 118 customs officers in Phase II.

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WORKSHOPS AT WORK

It is too early to make long-term assessments of the programmes' success, but so far the results are promising. Jamaica, for example, reports an increase in seizures of ODS equipment around Kingston since Phase II training was completed, as well as increased commitment on the part of customs officers. At the regional workshop in Budapest on ODS licensing systems for the Central and Eastern European and Baltic States, participants proposed a universal labelling system that would be drawn up in co-operation with industry. In Thailand, at a regional workshop on ODS control and monitoring in South East Asia and the Pacific (SEAP), the idea of establishing a framework for co-operation on a regional level between SEAP countries was developed. These and numerous other recommendations have since been passed along to the Meetings of the Parties.

Customs training programmes are invaluable weapons in the battle to stop illegal trade in ODS. These programmes can help ensure that customs trainers and agents possess a clear understanding of their country's commitments within the Montreal Protocol and their national phase-out strategy. Importantly, such training helps establish a solid framework to tackle this issue by providing an opportunity to incorporate training in ODS licensing and control mechanisms into an on-going customs training curriculum and by creating a support system through a community of informed government officials.

UNEP DTIE's OzonAction is an enabling programme that assists developing countries and CEITs to meet their obligations under the Montreal Protocol. Resources for such activities are provided by the Multilateral Fund and the Global Environment Facility (GEF).

THE BASEL CONVENTION AND THE MONTREAL PROTOCOL: Working Together

Those who are attempting to control hazardous waste transport and those who are trying to curb illegal ODS trade are, in many ways, fighting the same fight.

Dr Sachiko Kuwabara-Yamamoto, Executive Secretary of the Basel Convention Secretariat, shows how co-operation between the Basel Convention and the Montreal Protocol will help both achieve their goals.

In the last few decades, global concern over the state of the earth's environment has moved the nations of the world to work together to try to limit the consumption, production and transport of materials that are harmful to environmental and human health. This international co-operation has resulted in the creation of a number of historic agreements, including the Montreal Protocol and the Basel Convention. The Montreal Protocol

was designed to phase out substances that deplete the ozone layer. The Basel Convention, signed in 1989, addresses the movement of hazardous waste across international borders and is now expanding to include a commitment to minimising the creation of hazardous waste. While both of these agreements have met with success, they are also threatened by a common enemy: illegal trade.

The Basel Convention grew out of a response to uncontrolled trade. In the late 1980s, the tightening of environmental regulations in industrialised countries led to a dramatic rise in the cost of hazardous waste disposal. Searching for cheaper ways to get rid of such wastes, "toxic traders" began shipping hazardous waste to developing countries and to Eastern Europe. When these schemes were exposed, international outrage led to the drafting and adoption of the Basel Convention. During its first ten years, a framework was put into place to control and monitor the movement of hazardous waste and criteria was developed for environmentally sound management of toxic materials. The next decade will bring a new focus – reining in illegal traffic of hazardous waste. Illegal trade was, in fact, set out as one of the top priorities at the 1999 Conference of the Parties.

Illegal traffic in hazardous waste and illegal traffic in ODS overlap in many ways. Not only is ODS a

In Taiwan (a target for illegal imports of Chinese ODS), authorities estimated illegal trade as reaching up to 2,000 tonnes per year during the peak period (1994 to 1996). No other significant illegal imports have been reported from any developed Asian country, though it is possible that some is taking place. Japan, for example, had relatively high stockpiles of CFCs at phase-out, so may be less of a target for illegal traders.

Source: Duncan Brack, Royal Institute of International Affairs, London.

Sanctions, controls, illegal activities and enforcement activities involving ODS in the EU member states

| Country | Penalty for illegal trade | Use restriction | Intensity of illegal activities |
|-----------------|--|-----------------|---------------------------------|
| Austria | €365–29,200 | yes | low |
| Belgium | – | partially | medium? |
| Denmark | up to 1 year imprisonment and fine | yes | low |
| Finland | up to 2 years imprisonment or fine | yes | low |
| France | up to 3 years imprisonment and fine (up to 2 x the value of the good) | – | medium-high |
| Germany | up to 2 years imprisonment and fine | yes | low |
| Greece | – | – | medium-high |
| Ireland | (planned) | – | low |
| Italy | up to 2 years imprisonment and fine (up to 3 x the value of the good) | partially | medium-high |
| Luxembourg | up to 6 months imprisonment and fine of up to €124,000 | yes | low |
| The Netherlands | up to 2 years imprisonment or fine | yes | medium-high |
| Portugal | – | – | low? |
| Spain | fine of €6,010–1,202,024 | yes | medium-high |
| Sweden | up to 2 years imprisonment and fine | yes | low |
| United Kingdom | unlimited fine and/or up to 2 years imprisonment (7 years in case of exp.) | – | low |

hazardous waste, but similar smuggling schemes and routes are used by both kinds of toxic traders. Clearly, it will be to the mutual benefit of both the Montreal Protocol and the Basel Convention to work together to prevent illegal trade. The framework is already in place: both agreements have secretariats administered by UNEP and both are also focusing substantial prevention efforts on customs control at borders and ports of entry. Close co-operation among the two secretariats, as well as collaboration between customs and police officers, will be essential first steps toward curbing illegal trade and achieving our common objectives.

The Training Seminar for the Port

Enforcement Officers, held in Hong Kong in December 2000, is an example of such co-operation. The seminar was organised jointly by the Basel Convention Secretariat, the Ozone Secretariat, CITES, Interpol, the World Customs Organization, as well as offices of the Chinese government and a number of other environmental organisations.

The seminar's participants, including representatives from over 12 Asian countries, worked together to find ways to deal with the issue of toxic trade in Hong Kong. Each year, over 5 million tonnes of wastes are imported or exported through the city's port, one of the largest in the world. These wastes include large

quantities of CFCs and other substances controlled by the Montreal Protocol. In order to cope with these quantities and ensure that transactions are legal, co-operation between customs, enforcement and regulatory authorities is critical. To this end, the participants offered several recommendations, including facilitating the flow of information, increasing communication networks and further developing co-operation between governments, ozone and hazardous waste regimes and other stakeholders.

The Basel Secretariat is planning four more training seminars for port enforcement officers in Latin America, Central and Eastern Europe, Africa and the Middle East. In each seminar, the importance of full co-operation with the Montreal Protocol will be stressed, as it will be in other activities aimed toward the prevention and monitoring of illegal traffic in hazardous wastes. By working in concert through these types of efforts, we will move closer to achieving the shared goals of both the Montreal Protocol and the Basel Convention.

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ENFORCEMENT IN EUROPE: EUROZONE

Members of the European Union share open borders and economic initiatives, but when it comes to ODS enforcement many countries are going it alone. Communication between enforcement agencies in different countries is often limited and policy co-ordination is not always in synch. To improve this situation, the Chemical Legislation European Enforcement Network (CLEEN) set up a European enforcement project, **EurOzone**, to establish a common enforcement practice of EU ODS regulations. "To be really effective, enforcement of the ODS Regulation must take place consistently in all Member States," states CLEEN's website (www.cleen-europe.org). Last year's EurOzone conference underlined the need to establish a co-ordinated effort on important ozone issues such as the removal and destruction of CFCs and curbing illegal ODS trade. Subsequently, guidance materials have been prepared and inspections are being carried out throughout 2001.

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THE G-8 NATIONS' CONTRIBUTION

to the Fight Against Illegal Trade

Joining forces to battle international problems has been the work of the Group of Eight Nations for the last 25 years. *Bruce Pasfield* explains how the G-8 is responding to the challenge of international environmental crime – and its commitment to upholding the goals of the Montreal Protocol.

Since 1975, the major industrial democracies of the world have been meeting annually to deal with important economic and political issues facing individual countries and the international community as a whole. This group of countries (known as the Group of Eight, or G-8 Nations) now includes France, United States, Britain, Germany, Japan, Italy, Canada and Russia.

The G-8 Nations' first formal efforts to address global environmental crime dates back to a May 1997 summit meeting in Miami, Florida where the group's environmental ministers recognised the need for a collective focus on controlling trade that breaks international environmental laws, including "shipments originating in their countries and those that have adverse impacts on developing nations." The ministers renewed their commitment and pledged further co-operation at a subsequent meeting in April 1998 at Leeds Castle, England.

Shortly after this meeting, members of the G-8 process began trying to put the ministers' words into action. The United Kingdom proposed that the G-8 Nations'

Senior Experts Group on Transnational Organised Crime (the Lyon Group) conduct a survey on environmental crimes. The survey asked each member country to provide information about illegal traffic in ozone depleting substances (ODS) under the Montreal Protocol, in hazardous waste under the Basel Convention, and in protected species under the Convention on Illegal Trade in Endangered Species (CITES). The survey also asked each country to identify organisations and personnel responsible for national enforcement of each of these Multilateral Environmental Agreements (MEAs). May 1998 the survey results confirmed what the member countries had already suspected: environmental crime had become a significant international problem, with illicit profits totalling billions of dollars each year.

In response to the survey results, the G-8 Nations agreed to create a subgroup of the Lyon Group that would focus on collective law enforcement efforts to combat transnational environmental crime. In July 1999, the subgroup met for the first time and took a two-tiered approach to the problem. First, it focused on immediate steps to address illegal traffic that violates MEAs. Regarding the Montreal Protocol, these steps included:

- Inviting the G-8 Nations to participate in the North American CFC Enforcement Initiative. Formed in 1995 in

response to an emerging ODS black market in the United States, this initiative meets quarterly and shares information on common ODS smuggling routes and methods. G-8 Nations' participation at these meetings has led to several successful transnational ODS trafficking investigations and greater awareness of illegal trade problems among member countries.

- Creating an international database on suspected ODS smuggling activity. Information in this searchable database is maintained by US EPA's Joint Center for Strategic Environmental Enforcement. A number of G-8 Nations have contributed to the database, which has already been used to identify repeat offenders and provide guidance about smuggling problems throughout the world.

The second part of the strategy was to create a permanent structure for addressing violations of MEAs. At the subgroup meeting in February 2001, member countries agreed to prepare a report that will both study the role



of organised crime in illegal environmental trade and provide suggestions on a lasting framework for international co-operation. The G-8 Nations plan to present the completed report at the Lyon Group plenary G-8 meeting in the fall of 2001.

The subgroup meeting also resulted in some consensus about the content of the report. All agreed that the report should stress that international co-operation must extend beyond the G-8 Nations. This is particularly true in the case of the Montreal Protocol, since black market ODS in G-8 Nations often originates in developing countries. The report should also point out that whenever possible, this co-operative effort should be undertaken through existing umbrella organisations. Interpol, the World Customs Organization, the MEA Secretariats and other environmental networks can all play an important role in co-ordinating enforcement efforts. Furthermore, the report should provide guidance on harmonising information systems and securing contacts with key players in MEA enforcement. Finally, recommendations will likely be included to address each MEA's specific enforcement needs.

The subgroup hopes that the report will provide a blueprint for the G-8 Nations and the rest of the world on how best to work co-operatively to prevent international environmental crime. If the nations of the world can work collectively on enforcement, they can make a difference in the fight to protect our planet's environment from those who would choose to degrade it for profit.

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SAFEGUARDING THE SUCCESS of the Montreal Protocol

If illegal trade is not curbed, its first victim could be the Montreal Protocol. Tom Land, Sue Stendebach and Lars Wilcut examine the threat and describe the steps that must be taken to eliminate it.

Illegal imports of ODS are a serious challenge to the continued success of the Montreal Protocol. The Protocol's design presumes that its controls will unleash economic forces that will push industries and enterprises away from the use of ODS. As the Protocol's measures reduce—and eventually phase-out—production and imports, the price of ODS should rise accordingly. And when ODS become expensive, businesses see a financial benefit in switching to non-ODS technologies.

However, a small minority is taking advantage of increasing prices and dwindling supplies to make a profit in illegal trade of ODS. Illegal imports undermine the message intended by the Protocol's economic signals and weaken incentives to switch to alternative

technologies. Furthermore, illegal imports make ODS readily available at low prices, thus extending their use—and ultimately extending the damage to the ozone layer.

To address this challenge, the Parties to the Protocol took and should continue to pursue the following measures:

- closing and dismantling facilities that produce ODS, consistent with phase-out schedules;
- establishing enforceable import regulations in each country;
- developing administrative systems for monitoring compliance with import regulations;
- taking enforcement actions against cases of illegal ODS import; and
- establishing and continuing cooperation among ozone officers globally to ensure mutual compliance.

To ensure the long-term success of the Montreal Protocol, all facilities producing ODS must eventually be closed and dismantled, consistent with phase-out schedules. Just one remaining plant could supply enough illegal material throughout the world to undermine the ozone layer's recovery. Thankfully, the efforts of the Executive Committee for the Multilateral Fund for the Implementation of the Montreal Protocol and the Special Initiative in Russia (see *"The Multilateral Fund: Bringing Developing Nations into the Picture"* and *"Special Initiative in Russia,"* pages 6 and 10) have moved effectively to develop agreements that will result in the closure of numerous production facilities. With this kind of continued persistence and

Since 1996, evidence of illegal trade in CFCs has been falling, whereas illegal trade in halons has been increasing, particularly in the US. Developing countries, however, who are now starting phase-out, are beginning to experience the illegal import of CFCs, with cases reported from South and Southeast Asia, the Middle East, the Caribbean and Latin America. This illegal trade will almost certainly grow in volume and impact.

Source: Duncan Brack, Royal Institute of International Affairs, London.

cooperation, the eventual closure of all ODS producing plants should be achievable. Clearly, closing the tap on ODS is the ultimate goal to ensure a healthy ozone layer for future generations. Until that goal is reached, however, all Parties will need to take interim steps domestically to combat illegal imports.

The widespread support for the 1997 Montreal Amendment plainly shows that the Parties believe licensing of ODS imports and exports is essential to the Protocol's success. No matter how a licensing system is designed, it can serve both to combat illegal imports and to ensure compliance with a country's phase-out obligations. Illegal ODS imports undermine other efforts to convince industries to switch to non-ODS technologies. An enforceable regulation that limits ODS imports seems imperative to ensure both an individual Party's compliance and the overall success of the Protocol. While important measures are currently being taken to reduce the demand for ODS, ultimately it is the establishment of enforceable regulations to limit the supply of ODS that will be crucial to achieving success.

However, without a compliance system, the licensing regulation is just another piece of paper. A compliance system can ensure that

import regulations are being properly and effectively implemented. One example of such a system is the partnership created between the US Customs Service (Customs) and the US Environmental Protection Agency (US EPA). Both agencies identified Harmonized Tariff Codes for each ODS. These codes were then entered into the Customs database, so Customs inspectors can be alerted if there is a match with the information in an import entry form. If there is a match, the database instructs the Customs inspector to call US EPA, the agency responsible for the import licensing regulation and maintaining specific information about who can import and how much can be imported. US EPA then confirms whether or not the shipment can be imported. Since 1995, there have been more than 650 seizures of illegal ODS shipments in the United States.

In addition, enforcement actions must be taken against cases of illegal ODS imports. Not only will large fines or prison terms draw attention to the problem, they will also deter others from similar unscrupulous behaviour. To this end, cooperation among domestic and international government agencies is often vital to investigations of potential violations. In the US, for example,

an inter-agency task force of the US EPA, Customs, Internal Revenue Service (taxing ministry) and Department of Justice was established in 1995 to assist enforcement against illegal ODS imports. This task force, which has grown to include other US and Canadian agencies, meets quarterly to share information regarding import trends, changes in regulations and on-going investigations.

Lastly, it is becoming increasingly clear that cooperation among the Parties' ozone authorities is necessary to identify attempts to illegally ship ODS across borders. Communication between the Parties about ODS policies, as well as sharing import and export information will provide vital data for determining the legitimacy of imports. Through this type of collaboration, we can effectively block imports from entities that violate an exporting country's regulations and thereby increase global compliance – which will ultimately lead to achievement of the goals of the Montreal Protocol.

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COMING ATTRACTIONS: METHYL BROMIDE

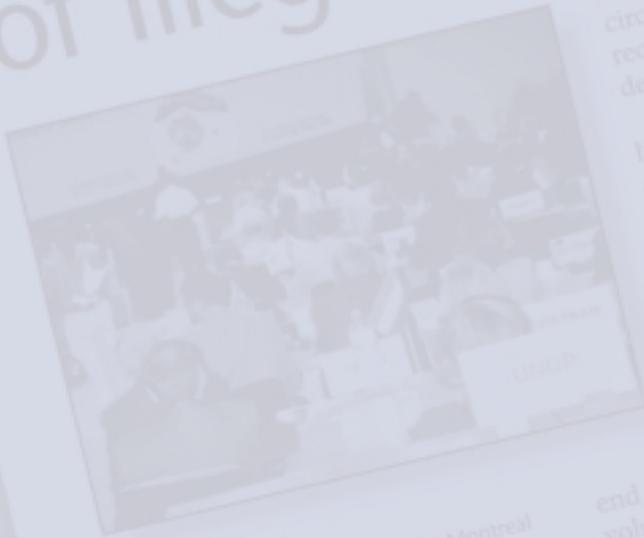
There is a new ODS phase-out on the horizon – methyl bromide. This pesticide is not only destructive to the earth's ozone layer, but highly toxic to human beings as well. According to the Montreal Protocol, developing countries (Article 5) are required to freeze their production and consumption of methyl bromide by 2002, reduce it by 20 percent by 2005 and phase it out entirely by 2015.

Alternatives to methyl bromide are available for over 95 percent of its non-quarantine and pre-shipment (QPS) uses. These include the use of other synthetic pesticides and combinations of environmentally-friendly techniques such as crop rotation, composting, plant extracts and biological agents. In Benin for example, farmers have successfully used 17 different methods involving inorganic substances and wood ash to protect fields and

preserve food stocks and 72 other alternatives have been identified that use of insecticidal plants. In the African region in general, methyl bromide alternatives have been effective on pests for crops such as tobacco, gourds, strawberries, tomatoes, peppers, bananas and pineapples.

Barriers to methyl bromide phase-out in Article 5 countries include importer countries' requests for QPS uses, producers' fear of potential economic losses, lack of strategies and co-ordination among governmental institutions and problems related to technology development. Other issues that may impede the development of phase-out strategies include poverty, debt service and the globalisation of agriculture.

THE SCOPE OF THE PROBLEM: an Overview of Illegal ODS Trade



12th Meeting of the Parties to the Montreal Protocol, Ouagadougou, Burkina Faso, December 2000.

The final phase of the Montreal Protocol is the final phase for CFC and halons destined for use in Article 5 countries.

as well as the different circumstances and requirements of developing countries.

One challenge, however, was not anticipated: the growth of a thriving black market in illegal shipments of CFCs and halons. In the mid 1990s, illegal material accounted for up to 15 percent of the world trade in CFCs. By the end of the decade, although the volume of illegal trade in CFCs had declined, halons, to a certain extent, took their place.

Why did this world-wide black market emerge? To find out we must examine the weaknesses in the regime - in the Protocol and in the national legal

threats to the environment.

In the case of the Montreal Protocol, the focus is on ODS use.

to be more effective, countries not only have to improve their monitoring systems, but also have to ensure that their national legal systems are strong enough to enforce the Protocol's provisions.

This is a major challenge, as a lesser developed country's refrigeration and air conditioning industry is an important part of its economy.

Therefore, the Protocol's provisions are not always easy to implement, especially in developing countries.

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OUT ON THE TRAINING CUSTOMS



line of defence in the battle against illegal activity, such as illegal ODS trade. Stationing agents in a strategic position to catch smugglers and confiscate illegal ODS before it reaches the black market is an obvious and essential component of any country's phase-out strategy.

However, detecting illegal ODS trade is not always easy for personnel in developing countries as they do not always have access to proper "know-how" training and equipment.

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