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OPEN-ENDED WORKING GROUP OF THE PARTIES  
TO THE MONTREAL PROTOCOL ON SUBSTANCES THAT  
DEplete THE OZONE LAYER

Twenty-second meeting  
Montreal, 23-25 July 2002

STUDY ON MONITORING OF INTERNATIONAL TRADE AND PREVENTION OF ILLEGAL  
TRADE IN OZONE-DEPLETING SUBSTANCES, MIXTURES AND PRODUCTS  
CONTAINING OZONE-DEPLETING SUBSTANCES (DECISION XIII/12)

Report of the Secretariat

This study was prepared by the Secretariat, with consultancy assistance of the Royal Institute of International Affairs, London, based on decision XIII/12 of the Thirteenth Meeting of the Parties to the Montreal Protocol, on monitoring of international trade and prevention of illegal trade in ozone-depleting substances, mixtures and products containing ozone-depleting substances. In decision XIII/12, the Parties requested the Ozone Secretariat, in consultation, as appropriate, with the Technology and Economic Assessment Panel, the World Customs Organization, the United Nations Environment Programme Division of Technology, Industry and Economics (UNEP/DTIE) and the World Trade Organization to undertake a study and present a report with practical suggestions on the issues contained in decision XII/10 to the Open-ended Working Group at its 22nd meeting, in 2002, for consideration by the Parties in 2002. The terms of reference for the study are given in decision XII/10, which, like other decisions referred to in the text, is reproduced in annex I to this report.

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## Executive summary

Concern over the illegal trade in ozone-depleting substances (ODS), mainly in chlorofluorocarbons (CFCs) and in mixtures and products containing ODS, has been growing since it was first detected in the mid 1990s. The Parties to the Montreal Protocol have discussed the issue and proposed various means of studying and dealing with the problem in a series of decisions of the Parties between 1995 and the most recent Meeting, in 2001.

This report was prepared pursuant to decisions XII/10 and XIII/12, entitled “Monitoring of international trade and prevention of illegal trade in ozone-depleting substances, mixtures and products containing ozone-depleting substances”, and presents a series of options for discussion.

### Illegal trade in ozone-depleting substances

Illegal trade in all categories of ODS will clearly remain a concern over the next 10 years at least, in particular for CFCs in developing countries and possibly for hydrochlorofluorocarbons (HCFCs) and halons in developed nations. Means of controlling the illegal trade are available but difficult, requiring investment in customs resources, including training and equipment. The availability of intelligence, including monitoring of price movements and trade patterns, is crucial to developing the targeted risk analysis on which to base physical inspection of consignments. Cooperation between enforcement authorities in exporting, trans-shipment and import countries is of great value in combating the illegal trade.

### Identification and tracking

Various options are available for improving identification and tracking systems for ODS and for mixtures and products containing ODS. In the area of labelling, the following conclusions are reached:

- For virgin substances, given the wide range of labelling systems already in place and the relative ease with which they can be falsified, together with the existence of other ways of tracking movements of ODS such as customs codes and export and import licences, there is no value in trying to introduce a new, universal labelling system;
- This conclusion does not apply, however, to used substances, where the volume in trade is much lower and the problem of illegal trade is particularly strong. A consultation exercise involving the industry and Governments could therefore usefully be undertaken to identify more clearly the feasibility, costs and benefits of labelling used ODS;
- Given the large number of products containing ODS in trade, a universal labelling system would be exceptionally difficult to introduce, although it might be possible to develop such a system for key products such as refrigeration and air-conditioning equipment. A consultation exercise should be undertaken with the industry over the feasibility, costs and benefits of introducing a voluntary common system for identifying the ODS contained in their products.

Customs codes provide an alternative and in many ways superior method of identifying substances, mixtures and products in trade. The following measures would assist in combating illegal trade:

- Listing the most commonly traded hydrochlorofluorocarbons (HCFCs) – and also the most common hydrofluorocarbons (HFCs) – under separate Harmonized System (HS) codes. UNEP should pursue this matter with the World Customs Organization (WCO), but pending the outcome of those discussions, all Parties to the Protocol should be encouraged to develop their own national codes for these ODS;

- The development of specific customs code sub-headings for ODS mixtures, initially as recommendations for national codes and, potentially, for eventual incorporation into the HS proper. Discussions are already under way on this matter within the Montreal Protocol ad hoc Customs Codes Discussion Group;
- A review and possible revision of decision I/12A to specify clearly that no matter which customs code is allotted to an ODS-containing mixture, such a mixture must be considered to be a “substance” subject to the phase-out schedules;
- Further consideration of the feasibility of developing customs codes to identify key products containing ODS.

The most productive way to control international trade, and reduce illegal trade, lies in the more rigorous application of the existing means of controlling trade: export and import licences. Efforts to ensure that every Party ratifies the Montreal Amendment and introduces licensing systems, together with the provision of appropriate training, should remain a high priority. In addition, the following measures would improve the value of export and import licences in controlling illegal trade:

- Most Article 5 countries which do possess licensing systems have not had them in place for very long and there is relatively little experience with their operation and effectiveness. It would be useful to collect and distribute information on their operation and effectiveness in order to draw lessons for the future;
- The more visible the system is to the users – for example, by requiring applications for licenses to be accompanied by declarations certifying the accuracy of the information, signed by the importer or exporter – the more effective it is likely to be. Individual shipment licences, extending licence requirements to products containing ODS, checking whether licences are actually used when issued and if so how, the wider use of export licences, a requirement for clearance in advance from the importing country, and cross-checking import and export licences against each other would all enhance the value of licence systems in monitoring the market and detecting possible illegal activity;
- The development of a system of transit licences for ODS would be of particular value in bringing a common means of illegal trade under control;
- The introduction of a requirement for proof that substances labelled as used have indeed been used and are not virgin could be introduced into import licences and would assist in controlling a common route for “laundering” virgin ODS into legitimate trade.

### Enforcement

Effective enforcement is crucial to the prevention of illegal trade. There is growing experience in many countries with good practice in enforcement, and lessons should be learned and best practice disseminated. In particular, at the national level measures should be taken to encourage:

- Close collaboration between enforcement agencies – customs services, environment Ministries, environment and trade inspectorates, police and judiciary – all supported by appropriate training and awareness-raising;
- The appointment of special investigative agents, and/or the stationing of environment officials at a country’s main entry points, working together with customs officials;
- The provision of real-time data on imports, combined with automatic alerts from customs agents when specified goods cross the border;

- The collection and analysis of appropriate intelligence, including close monitoring of trade patterns, including monitoring of imports and trans-shipments and requests for import and export licences;
- Collaboration with industry to project future patterns of demand and supply and customer use profiles, and liaison with and support for non-governmental organizations carrying out investigations into illegal trade;
- High-profile publicity for seizures and arrests, helping to raise public awareness and deter smugglers, together with convergence in the penalties for illegal trading so long as these are not reduced to the lowest common denominator.

At the international level, existing networks can be developed and built upon through:

- Collaboration between national enforcement agencies. In particular, timely exchange of information between customs agencies, for example, pre-arrival notification of shipments of ODS based on export licences and cross-checking export and import licence data, could help to reveal instances of illegal trade;
- The conclusion of Memorandums of Understanding between WCO, Interpol, the Ozone Secretariat and UNEP/DTIE;
- A proposal to the International Network for Environmental Compliance and Enforcement (INECE) to establish a special working group or task force on illegal trade in ODS;
- The development of regional collaboration and regional networks and training.

The institutions of the Montreal Protocol itself could usefully be restructured to add value to existing efforts to control illegal trade and in particular to provide enforcement assistance to developing countries, which will bear the brunt of illegal activities in the near future. The following functions are required:

- The collection of data on illegal trade. Parties should be encouraged, and where necessary assisted, to report all cases of illegal trade detected, including the volumes and types of ODS involved, the means of smuggling, the means of detection where appropriate and the penalties imposed; how the seized materials were disposed of; best estimates of the volume of illegal trade that may be proceeding unchecked; summaries of threat analysis studies showing the likelihood of illegal trade in that country; and the systems in place for detecting and preventing illegal trade. It should be made clear that reported illegal trade should not count towards the reporting Party's consumption;
- Analysis of information on illegal trade to enable a database of common origins, routes, destinations and methods of illegal trade to be compiled and analysis of the data on production and consumption of ODS already collected, including following up any discrepancies;
- Analysis of projected future demands for and likely trade flows in ODS and, possibly, central coordination of the issuance, use and cross-checking of export and import licences;
- Communication of data and examples of best practice through reports to the Meetings of the Parties and through the Secretariat public Website or a restricted "intelligence" part of it, and possible extension of the mandate of the Implementation Committee;
- Establishment of regional and international networks of environment and enforcement officials, building on the crucial efforts of UNEP/DTIE;

- The provision of enforcement assistance, including expert assistance to UNEP/DTIE in designing and implementing training materials and activities specifically targeted on the control of illegal trade, working with countries experiencing particular problems with illegal trade to help them improve their enforcement activities, helping coordinate those countries' efforts with those of neighbouring countries and encouraging regional networks of enforcement officials, liaising with and drawing on the resources of WCO, Interpol, INECE and other international networks.

Although some of these functions can be carried out to a greater or less extent using the existing capacity of the Protocol's institutions, there is a strong argument for introducing an enforcement assistance officer or unit within the Ozone Secretariat to support, coordinate and enhance them. This would replicate the successful experience of the CITES Enforcement Assistance Unit. The recommendation of the 1999 UNEP workshop on appointing an individual from within the enforcement community should also be borne in mind. The possible use of non-governmental organizations or research institutes to collect data on illegal trade, and of the UNEP World Conservation Monitoring Centre (UNEP-WCMC) to provide a central collection and analysis point for import and export licences should also be considered.

#### Dealing with illegal material

The disposal of illegal ODS seized by customs or other enforcement bodies poses real problems for the authorities in many countries as all the options available to them have significant drawbacks. There is no easy solution, and indeed no single solution; the optimum course of action will vary depending on the circumstances of the country in question. For many countries, particularly developing countries, the costs of the various options suggest sale at auction as the least worst outcome. In all cases, however, national regulations should clearly state which agency has the responsibility for taking the disposal decision and bearing the cost. The costs involved in storage and destruction should not fall on the enforcement agency which seizes the goods, to avoid creating negative incentives.

#### Consumption and production controls

Discussions concerning the control of illegal trade tend to focus on means of enhancing enforcement, tracking and detecting movements of the illegal products, and taking more effective action against smugglers. All these measures will be necessary so long as ODS are produced and consumed, but it should be remembered that there are additional measures available that could prove as or more cost-effective in reducing illegal activities. These include:

- Use controls in particular sectors, and ODS sales and stockpiling bans, with or without import bans on virgin or both virgin and recycled ODS;
- Economic incentives and disincentives such as sales taxes and import duties to raise the relative price of ODS relative to non-ODS alternatives, but bearing in mind the danger of increasing the incentives for illegal trade by increasing prices;
- Readoption of decision I/12H, which included imports and exports of used ODS in the calculation of consumption, in order to reduce the incentives to import used ODS and help shut off a common route for illegal trade;
- A ban on the export of used, recycled and reclaimed substances except for purposes of destruction, which would require an amendment to the Protocol, or encouraging Parties to ban the use and import of used ODS and equipment containing it;

- Encouraging Parties to adopt restrictions on trade in used ODS, including by implementing decision VIII/20, which urged non-Article 5 Parties to establish systems requiring validation and approval of imports of used, recycled or reclaimed ODS, requiring the importers to provide proof that the ODS had actually been used, and extending the terms of the decision to cover Article 5 Parties;
- Encouraging Parties to institute a presumption against importing used ODS from countries which produce virgin ODS of the same types, and to introduce restrictions on the types of containers allowed, such as by permitting the entry of ODS in large containers only;
- An accelerated phase-out in the production sector in Article 5 parties if more resources can be made available through the Multilateral Fund. It would be important, however, to bear in mind the need for the production and consumption phase-outs to proceed in balance and it would be counterproductive for developing country production simply to be replaced by developed country exports or for unscheduled CFC shortages to develop and cause significant hardship;
- Reductions in production allowances for basic domestic needs in non-Article 5 Parties through an adjustment to the Protocol rather than an amendment or through voluntary commitments on the part of the countries and industries concerned.



## Introduction

1. Concern over illegal trade in ozone-depleting substances (ODS), mainly in chlorofluorocarbons (CFCs) and in mixtures and products containing ODS, has been growing since it was first detected in the mid 1990s. The Parties to the Montreal Protocol discussed the issue and proposed various means of studying and dealing with the problem in a series of decisions of Meetings of the Parties between 1995 and the most recent Meeting, in 2001. The relevant decisions are reproduced in annex I.
2. Decision XII/10, "Monitoring of international trade and prevention of illegal trade in ozone-depleting substances, mixtures and products containing ozone-depleting substances", was adopted at the Twelfth Meeting of the Parties, in Ouagadougou in December 2000, and instructed the Ozone Secretariat to examine the options for carrying out a study of connected issues, including labelling, identification, data exchange and disposal of seized materials.
3. The Secretariat identified three different ways of carrying out this study, and the Thirteenth Meeting of the Parties, in Colombo in October 2001, chose the one which gave the Secretariat the responsibility. The Ozone Secretariat contracted a consultant with relevant background knowledge and experience of the issues involved to prepare the initial draft, after consultations with various individuals and organizations.
4. A draft of the report was discussed in detail at an informal experts' meeting in Washington DC in March 2002, involving participants, who took part in their individual capacities, from all geographic regions and including representatives of Governments, international institutions, industry and non-governmental organizations. This final version of the report was prepared following that meeting and is now submitted to the Open-ended Working Group for discussion at its meeting in July 2002 and for final debate at the Fourteenth Meeting of the Parties, in Rome in November 2002. It is expected that the Meeting will adopt a decision putting into effect practical suggestions emanating from this study and from the subsequent discussions.
5. The study has four main sections. Chapter I provides a brief background to the development of the illegal trade and an analysis of the means by which it is carried out. Chapter II deals with the identification and tracking of ODS and ODS mixtures and products, including systems of import and export licensing, examining existing systems and also possibilities for reform. Chapter III examines options for improving enforcement activities, at national and international levels, including the reporting of the incidence of illegal trade. Chapter IV covers the problem of how to deal with seized ozone-depleting substances, while chapter V examines possibilities for controlling illegal trade through reducing demand and supply.
6. It should be noted that this study does not precisely follow the structure of decision XII/10, although every element of the decision is indeed considered. Subparagraphs 1 (a), (b) and (d) of the decision, which are closely interrelated, are covered in chapter II; subparagraph 1 (c) in chapter III and subparagraph 1 (e) in chapter IV.

### I. ILLEGAL TRADE IN OZONE-DEPLETING SUBSTANCES

7. The story of the growth of illegal trade in ODS is now relatively well known.<sup>1</sup> Nevertheless, it is important to understand the scale and nature of the problem when considering possible actions to take against it. This section summarizes what is meant by illegal trade, the reasons for its development, the methods used by those involved, and likely future trends in illegal trade in the various varieties of ODS.

#### A. Definitions

8. Illegal trade in ODS is an environmental crime defined by a UNEP workshop in 1999 as "deliberate evasion of environmental laws and regulations by individuals and companies in the pursuit of personal financial benefit ... Where these activities involve movements across national boundaries, they can be

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1. For the best recent summary, see UNEP/DTIE, "Illegal Trade in Ozone-Depleting Substances: Is There a Hole in the Montreal Protocol?", OzonAction Newsletter Special Supplement No. 6, UNEP/DTIE, Paris, 2001.

defined as ‘international environmental crime’<sup>2</sup>. The Montreal Protocol itself does not define illegal trade; rather, the illegal nature of the activities described below derives from the evasion of the national laws and regulations introduced by Parties in implementing their obligations under the Protocol.

9. This evasion of laws and regulations can take a number of forms, principally the import, export, sale and/or use of ODS without licence, and without payment of taxes or customs duties, and the mislabelling or misdescription of the substances and products involved. The end result in all cases is to supply the market with ODS in an unregulated and unmonitored fashion, increasing ODS consumption above what it would otherwise be.

10. It follows that if a country has no relevant legislation, there is no illegality involved, although in that case the country in question would be unlikely to be in compliance with the Protocol as it would have no regulatory means of controlling ODS consumption or production. Illegal trade is not the same as non-compliance with the Protocol, which derives from the failure of Parties, for whatever reason, to meet their obligations under the Protocol. The question of non-compliance raises different questions and is not covered in this report.

### B. Origins, scale and trends

11. Black markets inevitably develop where cost differentials between legal and illegal goods become significant and enforcement is weak enough to allow a reasonable chance of success in moving the goods undetected. In the case of ODS, cost differentials have arisen from a combination of two factors, the higher cost not so much of the CFC replacements but of retrofitting or replacing the end-user equipment to be able to take them, and, in some countries, market intervention to raise domestic prices above world prices. The latter occurred most notably in the United States of America, the first and for many years the principal market for illegal CFCs, where the Government applied an excise tax to CFCs to speed up phase-out. However, it has occurred also in countries such as India, where a supply cartel has maintained inflated prices.

12. As phase-out has proceeded, however, in developed countries the problem has diminished, at least for CFCs, as the end-user market has shrunk. Table 1 below shows United States of America figures for seizures from 1992 to 2001 (United States figures are used because it is the only country to keep detailed records of seizures), showing a peak in 1995 to 1997 and sharply falling volumes thereafter, probably reflecting both reduced demand and increasingly effective enforcement action. Total seizures over the 10-year period amounted to 1,125 tonnes, but estimates derived from checking manifests and on interviews with individuals indicted for illegal trade suggest that the total volume of illegal CFCs entering the United States was almost 10,000 tonnes. The United States Department of Justice, Environment and Natural Resources Division estimated that they were seizing 11.5 per cent by volume of the products entering the United States illegally; this figure compares with an estimated seizure rate of 12 to 14 per cent of illegal narcotics, the area of illegal trade afforded the highest priority by enforcement agencies. On balance, it is probably an over-estimate, however.<sup>3</sup>

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2. “Enforcement of and Compliance with MEAs: The Experiences of CITES, Montreal Protocol and Basel Convention”, UNEP, Nairobi, 1999, vol. I, section 2.2.

3. All figures: United States Department of Justice, Environment and Natural Resources Division.

Table 1. Seizures of CFCs by United States of America Customs <sup>4</sup>

Year	Seizures (lb)	Seizures (kg)
1992	1,000	454
1993	298,997	135,745
1994	889,305	403,744
1995	391,130	177,573
1996	460,212	208,936
1997	267,800	121,581
1998	59,806	27,152
1999	44,461	20,185
2000	35,355	16,051
2001	31,380	14,247
Total	2,479,446	1,125,668

13. The United States of America has historically been the largest market for illegal imports of CFCs, both because of its decision to apply an excise tax to accelerate phase-out and because of the high number of United States vehicles fitted with mobile air-conditioning systems (MACS), resulting in a sizeable and highly dispersed market. Illegal imports have also been detected, however, in the European Community, Central and Eastern Europe, Japan and Taiwan, China, and as developing countries have begun to move towards phase-out, starting with the CFC freeze in July 1999, instances of illegal trade have begun to appear in almost every region.<sup>5</sup> Illegal trade to date has almost entirely involved CFCs together with some halons, but the illegal trade in HCFCs and methyl bromide can be expected to develop as phase-out dates for those substances grow nearer (see below, however).

14. Various estimates have been produced for the total volume of illegal ODS in circulation. Based on a range of industry and Government estimates, the best guess gave a range of 16,000 to 38,000 tonnes of CFCs traded illegally in 1995 and 1996, representing between 6 and 15 percent of global production. It must be stressed, however, that almost by definition precise figures are impossible to come by and these estimates represent educated guesses at best.

15. The relatively complete 1999 figures for global production and consumption of CFCs, discussed at the Thirteenth Meeting of the Parties, in Colombo in October 2001, showed only a small surplus of production over consumption, yet prices for CFCs remain very low, particularly in developing countries. The inference drawn by some participants in the discussion was that there may be substantial unreported production. This is not, however, necessarily so: as the consumption phase-out has progressed, CFC stockpiles, for which no figures have ever been collected centrally, have been run down, particularly in developed countries, releasing substantial volumes onto the market. Stockpiles of some other ODS, such as HCFCs, are currently being built up, however. In addition, as end-user equipment is retrofitted or replaced, increasing quantities of recovered CFCs are entering the market, and once again no accurate figures are available for the volumes involved. Both these factors are likely to lead to excess availability of CFCs, and therefore low prices, on world markets; while it is possible that unreported production may be contributing, in reality this seems unlikely, because, particularly in Article 5 countries, production is more easily and more closely monitored than consumption (see also chapter V).

16. One further issue of concern to many countries is the phenomenon sometimes called technology dumping, i.e., the export of second-hand and out-of-date ODS-using equipment such as refrigerators, air-conditioning systems, vehicles, compressors and other components from developed to developing countries. This is a result of the differing phase-out schedules of the two groups of countries and is not illegal under the

4. Source: United States Department of Justice, Environment and Natural Resources Division.

5. See "Unfinished Business: The continued illegal trade in ozone-depleting substances and the threat posed to the Montreal Protocol phase-out", Environmental Investigation Agency, London 2001, for a good summary.

terms of the Montreal Protocol. It should be recognized that there are some economic and environmental benefits in using equipment to the end of its operating life, which in general is a better option than scrapping it prematurely. In this case, however, doing so will maintain ODS markets and delay phase-out in developing countries and increase incentives for illegal trade.

17. A number of countries, particularly those moving more quickly towards phase-out than required under the Protocol, have introduced corresponding import restrictions; decision X/9 of the Parties requested the Secretariat to maintain a list of countries which did not wish to import ODS products and equipment, and this list is available on the Secretariat Website.<sup>6</sup> The European Community also now bans the export, to all countries, of used equipment containing most categories of ODS. As a result, illegal trade in such products has grown and is difficult to detect given the lack of labelling of products (see also chapter II). The Parties to the Montreal Protocol have adopted a series of decisions, VII/32, IX/9 and X/9, to regulate the import and export of products and equipment whose continuing functioning relies on ODS.

### C. Routes for illegal trade

18. Many methods are used to move products illegally and can be grouped under five main headings: evasion, concealment, mislabelling, disguise, and diversion.<sup>7</sup> The following paragraphs explain these methods in more detail and summarize how they can be dealt with by customs and other enforcement authorities.

#### 1. Evasion

19. Legal materials must be accurately labelled and described in their accompanying paperwork; in many countries ODS shipments must be accompanied by an export and/or import licence. However, in general this documentation can be checked only at a border crossing where customs officers are present, and it is often relatively easy for materials to be moved clandestinely across borders avoiding any customs controls. Many countries have relatively porous borders, with many unmonitored crossing points, and ODS may be moved along traditional smuggling routes used, for example, for narcotics or tobacco; in the Caribbean in recent years, small, fast “tobacco boats” have been seized and found to be full of CFC cylinders. ODS may also be moved openly through border crossing points – with proper labels and customs codes but without licences – without any checks if customs officials are unaware of the need for an accompanying licence or are bribed to ignore it.

20. An adequate, honest and fully trained customs force is essential to preventing evasion of customs controls, together with regular monitoring of border crossings, but this poses problems of lack of capacity for many countries. Collaboration between national customs agencies to identify and close down smuggling routes is of significant value, as is monitoring of market price movements and intelligence from industry to detect whether illegal trade is taking place.

#### 2. Concealment

21. Concealment of material passing across borders is an obvious method of smuggling. Cylinders of illegal ODS can be brought into the country of import hidden in the holds of ships, in lorries or even in car boots individual backpacks, a common method for moving materials across the Mexico–United States border. Illegal cylinders can be concealed in the midst of legitimate cargo, for example by placing a row of cylinders containing legitimate products around the illegal ones. Compressors and other refrigeration equipment can be filled with illegal ODS, perhaps beyond normal capacity, and ostensibly empty cylinders can be shipped as “returned merchandise”. The most sophisticated means of concealment – detected in Taiwan, China – involves the construction of cylinders with hidden compartments and concealed valves,

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6. See Web page [www.unep.org/ozone/decision9-10.shtml](http://www.unep.org/ozone/decision9-10.shtml).

7. For a fuller description, see Lary Cook Larson, “The Art of Smuggling: What Customs Officers Need to Know”, and other articles, in “Illegal Trade in Ozone-Depleting Substances: Is There a Hole in the Montreal Protocol?”, OzonAction Newsletter Special Supplement No. 6, UNEP/DTIE, Paris, 2001.

containing illegal material, with legal material in a small cylinder directly beneath the top valve, misleading anyone who samples only from the top valve. Movement of material on this scale is, however, relatively rare; most cases of smuggling of CFCs have involved 13.6 kg containers.

22. The most obvious way of dealing with this means of moving illegal material is inspection of the shipments or containers. This is not, however, an easy task: it is impossible for customs authorities to carry out routine checks on every shipment, and it would waste an enormous amount of resources even if it were possible and erect barriers to normal commercial flows. Most customs authorities in developed countries currently inspect less than 2 per cent of imported freight shipments, and those generally on a targeted risk management basis, where information or suspicions suggest that there may be fraud or theft involved;<sup>8</sup> the proportion checked in developing countries is even lower. The development of means to collect appropriate intelligence is therefore vital to provide the information on which physical inspection can be carried out; this includes market price monitoring to detect the presence of illegal trade, and company-level checking of imports and exports to reveal unusual movements of materials or repeated transactions in equipment for which there is no apparent demand.

### 3. Mislabelling

23. Most ODS are colourless, odourless gases at room temperature and chemical analysis is needed to determine precisely what substances are present. Mislabelling of containers in which they are transported therefore provides perhaps the easiest means of smuggling. Cylinders can be repainted or relabelled, for example, as HFCs or hydrocarbons or as used ODS, often with false codes and markings indicating companies or countries of origin. Customs codes or chemical names can be falsified on the accompanying documentation; some names of ODS and non-ODS are very similar, such as 1,1,1-trichloroethane (methyl chloroform) and 1,1,2-trichloroethene, and can easily mislead officials checking documentation. Mixtures containing ODS may be described as products containing ODS, trade in which is not controlled under the Protocol. General descriptions such as “refrigerant” or “pesticide” may be given which may be correct but misleading. As discussed in chapter II, different ODS, particularly mixtures, are often assigned the same customs codes and there are many opportunities to mislead customs officers.

24. Physical inspection is the best way of detecting this method of illegal trade also. Poorly repainted or obviously old, scratched and scarred paint may be indicative of tampering. Chemical testing, either with portable refrigerant identifiers or in fully equipped laboratories, can reveal the true contents but requires an investment of money, training, and time. Again, risk analysis – tracking trade flows, watching for imports of substances from countries that have no production capacity – is necessary to target the shipments to be investigated. Options for improving labelling and coding systems are examined in chapter II.

### 4. Disguise

25. Some relatively simple though time-consuming tests such as boiling point or pressure checks may help pinpoint discrepancies between the claimed and actual contents of a pressurized cylinder. However, on occasion nitrogen has been added to cylinders to raise the internal pressure of an illegal substance to what would be expected for a legal ODS. Chloropicrin (trichloronitromethane) may be added in significant volumes to methyl bromide, changing its odour and allowing producers to represent it as a pesticide, in other words, as a product not controlled under the Protocol. Most seriously, virgin CFCs may be deliberately contaminated with substances such as water or oil to make them appear to be recovered or recycled material.<sup>9</sup> Used ODS are not subject to the control measures of the Montreal Protocol other than the requirement to report the quantities traded, although some countries have introduced national regulations to ban exports and/or imports of used ODS.

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8. United States and United Kingdom customs, personal communications.

9. Recovered ODS are used substances recovered from equipment; recycled ODS are recovered ODS subjected to a basic cleaning process such as filtering and drying; reclaimed ODS are used substances treated to restore them to a specified standard of performance. See decision IV/24.

26. Detection of these means of illegal trade is exceptionally difficult. Chemical analysis can detect cases of adulteration with nitrogen or other substances, although in general this cannot be carried at the border crossing point. It is well-nigh impossible, however, to distinguish between adulterated virgin and used ODS even through chemical analysis, although a laboratory can sometimes detect anomalous proportions of oil or water or the absence of metallic residues that would be expected in used material. A background knowledge of the recycling and reclamation facilities available in the country of export is needed, and substantial exports of used ODS from countries that are major producers of virgin ODS are probably grounds for suspicion. Full cooperation between the authorities in the countries of export and import is therefore needed for control measures to be effective.

## 5. Diversion

27. Diversion of material is a common means of illegal trade. Legally produced ODS ostensibly be exported to legal markets in Article 5 countries via a non-Article 5 country, but instead be diverted into domestic markets in the transit country, with false documentation. This has been a common problem in the United States, where Miami is an important source as a major trans-shipment port. The European Union procedure for inward processing, now ended for CFCs, whereby imports were processed in some way, usually by repackaging, and then re-exported, seemed particularly open to abuse, with few checks being made as to whether the substances were in fact exported.

28. Similarly, ODS produced or imported for use as feedstock or process agents in chemical processes are not included in the Protocol's definition of production or consumption, and false declarations may be made by importers and exporters as to the products' final intended use.

29. Intelligence-led analysis is required to detect these means of illegal trade and provide evidence that physical inspection or verification, such as checks that containers are actually re-exported. Indications of illegal trade include unusual patterns of trans-shipment, such as transit through countries not obviously on shipping routes and large volumes of ODS passing through or entering countries with low levels of demand. Cooperation between enforcement authorities in the countries involved, and on a regional or subregional basis, can reap dividends when checking what is actually transported and offloaded.

30. Goods in transit are almost never inspected by customs authorities, which represents a weakness in efforts to combat illegal trade, in both ODS and other forms of contraband. Discussions are ongoing within the G8 group of countries<sup>10</sup> and the World Customs Organization (WCO) concerning electronic means of tracking goods in transit, which may offer the possibility of trackable transit permits being required for particular goods (see also chapter II).

### D. Substances in illegal trade

31. Not all ODS are likely to be traded illegally: substances with very limited volumes of production and consumption will never be attractive to smugglers. Similarly, those with high production but a limited number of specialist end users are difficult to trade illegally because most producers and consumers are well known to each other. However, illegal trade has been detected in almost every category of Annex A and B ODS, and can be expected to develop in Annex C substances also.

#### 1. CFCs

32. CFCs are ideal substances for illegal trade. In most countries, there is or was a very wide range of possible end uses and a huge number of end users; for example, in the United States in the mid 1990s an estimated 100 million vehicles were fitted with MACS using CFCs, all dependent on a network of mostly small garages and workshops for servicing and refilling. Legislation is difficult to promulgate and enforce in such a huge and highly dispersed market. Although the use of MACS is less common in most other countries, road vehicles are increasingly likely to be fitted with them, and in most countries MACS represent

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10. Canada, France, Germany, Italy, Japan, Russian Federation, United Kingdom, United States of America.

the major source of demand for CFC-12, probably the substance most commonly traded illegally. Also, in almost all countries there is still a substantial and dispersed demand for CFCs in refrigeration and air-conditioning equipment and as propellants in metered-dose inhalers.

## 2. Halons

33. Halons, in contrast, are characterized by more specialized markets where consumers are chiefly manufacturers of fire extinguishants and the number of end users is smaller, manufacturers and end users are relatively well known to each other, and there are fewer brokers and distributors. Halons were also the first substances to be completely phased out, in 1994, under the Protocol's control schedules, and very few new uses have been developed since then. Satisfactory alternatives have still to be developed in many areas, however, and in the medium to long term it may not be possible for the continued demand for halons to be met from existing stockpiles. No one has been charged with illegal import of halons in the United States; however, the largest known case of illegal trade – in the European Community in 1997 – involved the illegal import of 365 tonnes of halon-1301, and 630 tonnes of CFC-12 falsely labelled as the HFC R-227.

## 3. Carbon tetrachloride and methyl chloroform

34. In developed countries, carbon tetrachloride and methyl chloroform are mostly used as feedstock or solvents in industrial processes and there is relatively little scope for illicit behaviour. In many developing countries, however, there is a wider range of smaller end users for these substances and illegal trade is more likely. Illegal trade is made easier as these substances may often be described to customs officials as solvents or cleaning agents, in other words, ODS-containing products which are not controlled under the Protocol.

## 4. HCFCs

35. There is much speculation as to whether HCFCs will be the next major group of ODS to be illegally traded in developed countries as CFC-using equipment is increasingly replaced, adding to the current level of demand for HCFCs in a range of air-conditioning applications. January 2004 will see the first major reduction, of 35 per cent, in consumption together with a freeze in production in non-Article 5 countries; the European Community has adopted a faster phase-out schedule, with a reduction to 45 per cent of a smaller base by 2004.

36. In principle, incentives will exist for illegal trade, particularly in HCFC-22, the most widely used substance. However, those incentives are weaker than in the case of CFCs because the market is considerably smaller; HCFCs are not used in MACS, and many other potential end users in refrigeration and air conditioning have switched to HFCs or non-ozone-depleting substitutes such as hydrocarbons. Also, stockpiles are already being built up in anticipation of phase-out, providing a larger pool of legal material. The volume of illegal trade can therefore be expected to be lower than in the case of CFCs.

## 5. Methyl bromide

37. Some illegal trade may also develop in methyl bromide, though, as with halons, compared to CFCs the markets are smaller, the end uses are more specialized and the substance tends to be traded directly to its end users with no brokers or dealers involved. The substance is also highly toxic, requiring expertise in handling; it is most widely used as a pesticide, for which most countries require special permits, so its use is usually well documented. Total phase-out will be reached in non-Article 5 countries by 2005, but exemptions for quarantine and pre-shipment uses provide a possible route for laundering illegal material. As mentioned above, mixtures containing methyl bromide are often traded as pesticides which are not controlled under the Protocol. Illegal trade in methyl bromide therefore certainly seems possible.

### E. Practical suggestions

38. Illegal trade in all categories of ODS will clearly remain a concern over the next 10 years at least, in particular for CFCs in developing countries and possibly for HCFCs and halons in developed countries. Means of controlling the illegal trade are available but difficult, requiring investment in customs resources, including training and equipment. Parties may wish to consider improvements in:

(a) The availability of intelligence, including monitoring of price movements and trade patterns, which is crucial to developing the targeted risk analyses on which to base physical inspections of consignments;

(b) Cooperation between enforcement authorities in countries of export, trans-shipment and import in combating the illegal trade.

## II. IDENTIFICATION AND TRACKING

39. A key problem in combating the illegal trade in ODS lies in identifying them and tracking their movements. As indicated in chapter I, ozone-depleting substances are transported in drums or pressurized cylinders and are not identifiable by simple inspection of the product; chemical analysis is required. Given the expense of portable refrigerant identifiers – of the order of \$1,000 a unit, not readily affordable in large numbers, particularly for developing countries, – although prices as low as about \$350 have recently been seen – and the difficulties involved, including time delays in taking samples and transporting them to laboratories, identification must generally rest on the codes and labels used in marking or the documentation accompanying, ODS cylinders, containers and products containing ODS.<sup>11</sup> This chapter reviews existing systems of tracking, including labelling, customs codes and import and export licensing systems, and the possibility of adding chemical tracers to substances, and considers their value in combating illegal trade.

### A. Naming and labelling: the case for a universal system

40. There is no global standard requiring uniform naming, labelling or packaging of ODS or ODS-containing products or equipment. A very wide range of differing forms of identification is in use around the world, and familiarity with these naming systems forms an important part of the training of customs officers.<sup>12</sup>

#### 1. Virgin substances

41. Ozone-depleting substances themselves maybe identified by their short or complete chemical names, trade names, CAS (United States Chemical Abstracts Service) number, United Nations SIN (substance identification number) or ASHRAE (American Society of Heating, Refrigeration and Air-Conditioning Engineers) number. CFC-12, for example, may be identified as dichlorodifluoromethane,  $CF_2Cl_2$  (its chemical formula), ASHRAE no. R-12, CAS no. 75-71-8 and United Nations SIN 1028. It has had a wide number of trade names, depending on manufacturer, including Algofrene 12, Arcton 12, Asahifron R-12, Daiflon 12, Forane 12, Freon-12, Frigen 12, G12, Genetron 12, and Taisoton 12.

42. Mixtures or blends containing ODS are becoming more common in international trade as companies experiment with means of reducing ODS use; blends of HCFCs and HFCs, for example, may be used in fire-fighting and refrigeration. Frequently the exact composition of a blend is proprietary, so while some of the more common blends may be identifiable through ASHRAE numbers, the majority are not. In general, however, most though not all of their uses tend to be fairly specialized so the blends themselves are unlikely to be illegally traded, although illegal material may of course be mislabelled as a blend to mislead customs

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11. The Canadian Customs Laboratory, in cooperation with Environment Canada, is testing a method, involving irradiation with neutrons of detecting ODS inside a container without opening it, similar to systems already used for detecting explosives. This may prove useful but is not likely to be of widespread application.

12. See, for example, the UNEP/DTIE Training Manual for Customs Officers, "Saving the Ozone Layer: Phasing Out Ozone-depleting Substances in Developing Countries", UNEP/DTIE, Paris, 2001.

authorities. Pre-polymers are listed under Annex D of the Protocol, which lists products containing CFCs and halons, although they could equally well be considered as mixtures by customs officers, providing another potential source of confusion. In any case, Annex D deals only with the ban on trade with non-Parties to the Protocol.

43. ODS may be stored and transported in a variety of containers, from intermodal bulk liquid containers (ISO tanks) containing 20 tonnes or more down through 1-tonne or smaller reusable cylinders, to the more common 50 lb (22.7 kg) reusable or 30 lb (13.6 kg) disposable cylinders – disposable cylinders are now banned in many developed countries – to 1 lb (0.45 kg) canisters. The smaller containers may be colour-coded; a common, though not universal, system is the ARI (American Refrigeration Institute) scheme, which depends on ASHRAE numbers; CFC-12, for example, is contained in cylinders painted white. Containers are also often marked with symbols specifying safety information (toxicity, flammability and so on).

44. The case for attempting to standardize the labelling and naming systems for ODS by creating a new global system to help reduce the illegal trade is that clear labelling of substances is useful in tracking the legal trade, which in turn helps show up abnormal patterns of exports and imports which may suggest illegal activities, reduces the chances of confusion between enforcement agencies and clearly identifies the product to end users, who in some cases may not realize that what they are purchasing is illegal.

45. However, there are many labelling systems for substances which already permit such tracking and identification. There is no evidence to suggest that, if properly applied, they systematically fail to fulfil those purposes, so the added value of replacing or supplementing them with a universal system is very low. Also, as chapter I shows, all labelling systems are easy to evade; labels can be changed or falsified and cylinders can be painted in the wrong colours with the wrong markings. A universal system would be no less easy to evade.

46. In addition, the introduction of such a system would require either worldwide agreement not only between producers – a fairly limited number of companies – but also between the much larger number of processors, distributors and traders; often, there are several links in the chain between producer and end user. Or, if voluntary agreement proved impossible, all Governments would have to legislate to implement a universal system. In fact, Government regulations already specify what labelling is required, so these would either have to be amended by every Party to the Protocol or the new system would have to be applied alongside existing systems. All these steps would imply substantial investment of time and resources.

47. In any case, near-universal identification systems for ODS in trade are already in existence: these are customs codes and, for countries which have ratified the Montreal Amendment, export and import licences. If properly applied, and reforms to both systems are certainly possible (see below), these systems provide much better means of deterring illegal trade. Clearly, there is no value in trying to introduce a new, universal system of labelling for virgin ODS.

## 2. Used substances

48. Used – that is, recovered, recycled or reclaimed – ODS are subject to the same labelling requirements as virgin substances, but the fact that they are used substances is itself important; as noted in paragraph 25 above, used ODS are not subject to the control measures of the Montreal Protocol other than the requirement to report the quantities traded, and virgin ODS are often mislabelled or disguised as used ODS to facilitate illegal trade. There are no international standards for labelling or identifying used ODS as such and national regulations vary substantially; some countries ban the export or import of used ODS, some require detailed evidence to be produced before they can be imported and some require labelling of used ODS. In fact, relatively small amounts of used ODS are currently traded internationally; used ODS tend to be reused in the country where they are recovered, and at present world prices for virgin CFCs are so low that there is little incentive to import used ODS instead. It is possible, however, that international trade in used ODS may increase in the future as phase-out continues, recovery and retrofitting become more widespread and production of virgin ODS declines.

49. Given the disparities in the regulations governing the labelling of used ODS, the case for harmonizing or at least aiming for convergence between labelling systems is much stronger than for virgin ODS, and given the relatively small quantities currently traded would not be so difficult to implement. It would also not be too difficult to evade or falsify, but it would provide another level of deterrence to illegal behaviour that might make a difference at the margin. A consultation exercise involving industry and Governments could therefore usefully be undertaken to identify more clearly the feasibilities, costs and benefits of labelling used ODS. As argued in paragraph 47 above, however, licensing systems are almost certainly more effective instruments for reducing illegal trade (see also paragraph 75 below).

### 3. Products containing and designed for ODS

50. Labelling for equipment using or designed to use ODS usually indicates the working fluids (refrigerants) by type and quantity alongside the power supply and other basic technical data, but there are no universal standards specifying the contents or even location of such labels. Several countries have national requirements for labelling of products which contain or require the use of ODS, and others have introduced voluntary labelling schemes for ozone-friendly technologies, i.e. products which do not contain ODS.

51. Development of a universal labelling system for ODS-using products, given that the number and range of such products is vast, would be a major exercise because of the need to introduce and implement the relevant legislation in all Parties to the Protocol. As indicated in chapter II, however, some substances and products are more likely to be illegally traded than others; that being the case, refrigeration and air-conditioning equipment, particularly MACS, would make sensible targets. Given that such equipment is always labelled in some way, it would be a useful exercise to consult, perhaps through the Protocol's Technology and Economic Assessment Panel, with the industry over the feasibility, costs and benefits of introducing a voluntary common system for identifying the ODS contained in such products.

52. The benefits of such a system in deterring illegal trade are not likely, however, to be very substantial: the problems of relatively easy evasion are still present, and detection is often more difficult than for ODS per se since smaller products, such as domestic refrigerators, often use sealed cooling systems which cannot be tested for ODS without destroying them. Also, much of the illegal trade in products is in second-hand equipment, which cannot realistically be subjected to a mandatory labelling requirement. Nevertheless, mandatory labelling is an option worthy of further consideration.

#### B. Customs codes

53. The most common method of identifying goods for customs purposes is the use of customs codes, which are designed and applied primarily to facilitate international trade but also to facilitate the collection, comparison and analysis of trade statistics. The vast majority of countries now use the Harmonized Commodity Description and Coding System (Harmonized System (HS)) administered by the World Customs Organization (WCO, formerly the Customs Cooperation Council): a six-digit code is assigned to each product or group of products subject to trade and over ,000 HS codes are currently provided in 96 chapters. The Harmonized System is subject to regular review and revision over a 5- or 6-year cycle. The latest edition came into effect from 1 January 2002, including the amendments approved by the Contracting Parties in 2000. The next review cycle has already started and is expected to be completed in 2004 and implemented in 2007.

##### 1. Substances

54. Pure ODS are listed in chapter 29 of the HS, "Organic chemicals". Following past requests by UNEP, separate HS codes have been assigned to specific ODS; CFC-12, for example, is coded 2903.42. Many others, however, are included in codes describing a group of ODS; the halons in Annex A, Group II of the Protocol, for example, fall under HS code 2903.46 and all the substances listed in Annex C (HCFCs, HBFCs and bromochloromethane) fall under 2903.49.

55. Given the urgent need to monitor the international trade in ODS and taking into account the relatively long periods before amendments to the Harmonized System can come into effect, in 1995 WCO issued a recommendation, amended in 1999, requesting member administrations and Harmonized System Contracting Parties to insert additional subdivisions in their own statistical nomenclatures, using their national coding systems to expand the six-digit HS codes for a number of specified ODS including the most commonly traded HCFCs. Canada, for example, uses the codes 2903.49.00.11 and 2903.49.00.23 to identify HCFC-22 and HCFC-141b, two of the most commonly used HCFCs.

56. Although WCO recommendations such as these can be implemented much more quickly than modifications to the Harmonized System itself they are only voluntary. As HCFCs increasingly take over market share from CFCs, and possibly in due course become the subject of illegal trade themselves, there is a strong case to be made for listing the most commonly traded HCFCs, and also the most common HFCs, under separate codes, and UNEP should pursue this matter with WCO. Pending the outcome of these discussions, all Parties to the Protocol should be encouraged to develop their own national codes for these ODS.

57. Customs codes, however sophisticated, will not deter the determined smuggler; like labels, they can be falsified relatively easily. Nevertheless, customs codes are of value in controlling illegal and also legal trade; they are essential for monitoring and collecting import and export data, and, even more importantly, for pointing to imports which customs officials may need to check further, for example to ensure that the importer has the requisite import licence (see also below). In this connection, it should be remembered that ODS are sometimes imported without licences in ignorance rather than in defiance of national regulations. Codes therefore provide intelligence and raise the deterrence threshold against illicit behaviour, and the further amendments and/or developments of national systems advocated in paragraph 56 above would assist this process.

## 2. Mixtures containing ODS

58. Mixtures containing ODS are classified in chapters 30 to 38 of the Harmonized System according to their use or to their industrial origin rather than by their composition. If there is no separate description of their specific use, mixtures containing ODS fall within the description “other chemical products and preparations of the chemical or allied industries ... not elsewhere specified or included” within code 3824; mixtures containing CFCs are separately identified in 3824.71, and mixtures containing halons in 3824.79. When a mixture has no applicable description, it falls under the last sub-heading, 3824.90, under heading 3824, which groups all other chemicals, of any kind, that lack another applicable code.

59. Many ODS mixtures, however, match the description of a use listed higher up in the HS code hierarchy and can therefore be quite correctly declared under that code where they are mixed with other chemicals used for the same application. Methyl bromide, for example, when mixed with other chemicals for use as a pesticide, will be classified under one of the codes for pesticides, 3808.10 – 3808.90, alongside other pesticides containing no ODS. This problem can be dealt with by assigning separate sub-headings for mixtures containing ODS, a solution which can also be applied to the miscellaneous chemicals listed under sub-heading 3824.90. The Montreal Protocol ad hoc Customs Codes Discussion Group is currently working on identifying and proposing such specific sub-headings for ODS mixtures, initially as recommendations for national codes and, potentially, for eventual incorporation into the Harmonized System.

60. A further problem is created by the classification of mixtures containing ODS according to their function, whereby they can sometimes be falsely considered “products” under the Montreal Protocol definition, thus avoiding any controls. As noted in paragraph 23 above, and although decision I/12A of the first Meeting of the Parties attempted to clarify the difference between ODS and ODS-containing products, misinterpretation is still possible and can be exploited to aid illegal trade, for example by avoiding any requirement for import or export permits. It would be worthwhile for the Parties to the Montreal Protocol to review and perhaps revise decision I/12A in order to specify clearly that no matter which customs code is given to an ODS-containing mixture, such a mixture must be considered a “substance” subject to the phase-out schedules.

### 3. Products containing ODS

61. As with mixtures, products containing ODS fall under several different chapters of the Harmonized System according to the function of the products rather than the material they contain. Air conditioners, for example, are referred to in chapter 84 (“nuclear reactors, boilers, machinery and mechanical appliances; parts thereof”), where they are listed as “Window or wall types, self-contained or ‘split-system’” (code 8415.10), “Of a kind used for persons, in motor vehicles” (code 8415.20), or “Other: Incorporating a refrigerating unit and a valve for reversal of the cooling/heat cycle (reversible heat pumps)” (code 8415.81) and so on.

62. These codes do not distinguish products using ODS from those using non-ozone-depleting substances, which renders the system of limited use even in monitoring the legal trade. Given the enormous range of products that may contain ODS, it is never likely to be practical to modify the Harmonized System to distinguish them, though it may be possible to develop national subdivisions to identify the key products in trade, such as refrigeration and air-conditioning equipment. Given the increasing number of countries which place restrictions on the import or export of products whose continued use relies on CFCs (see paragraph 17 above), the feasibility of developing customs codes to identify the key products should be considered further by the Parties to the Montreal Protocol.

#### C. Export and import licensing

63. As we have seen, labelling and customs codes are of limited value in deterring illegal trade. The third major means of identifying and tracking the movement of ODS across international boundaries – systems of export and import licences – is of much greater value.

##### 1. Discussion

64. Since the first days of the Protocol, Parties have been required to possess some means of controlling trade in ODS as consumption is calculated as production plus imports minus exports. Many parties established import and often export licensing systems to ensure that they met their consumption phase-out targets; the United States of America introduced its petition system partly in response to the spread of illegal imports. As concern with illegal trade grew, in 1997 the Protocol itself was amended – the Montreal Amendment – to introduce a requirement for export and import licenses for most categories of ODS. Entering into force in November 1999, the amendment requires those Parties that ratify it to establish and implement a system for licensing the import and export of new, used, recycled and reclaimed controlled substances.<sup>13</sup> Parties operating under Article 5 are permitted to delay taking these actions for Annex C ODS until 2005 and Annex E ODS until 2002. By March 2002, 78 Parties had ratified the amendment. If the problem of illegal trade had been foreseen when the Protocol was negotiated, it is likely that the requirement scale of the for licensing systems would have been in place from the beginning.

65. The general concept behind the licensing system is that all international movements 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 relevant information. This enables the authorities to obtain what simple reliance on customs codes cannot provide: a complete picture of exports and imports, disaggregated by substance, and including data on the movements of used ODS – and thereby a means of controlling them. The licences can also be designed to provide information on end uses, and to require all applicants for licences to register with the authorities, again rendering control strategies far more effective.

66. This approach is similar in principle to systems established under other MEAs, including the Convention on Control of Transboundary Movements of Hazardous Wastes and Their Disposal (the Basel Convention), the Convention on International Trade in Endangered Species of Wild Fauna and Flora

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13. Montreal Protocol, Article 4B, paragraph 1.

(CITES) and a number of other agreements negotiated but not yet in force. Annex II provides brief descriptions of the tracking mechanisms of these MEAs and some lessons for the control of illegal trade that can be drawn from their operation.

67. The Ozone Secretariat is instructed periodically to prepare and circulate a list of those Parties that have reported to it on their licensing systems; at present about 115 Parties to the Montreal Protocol have licensing systems in place. Surveys of regulations in effect in 1995/96, updated in 2000,<sup>14</sup> showed that of 59 countries surveyed 40 possessed requirements for permits or notification for imports, and 19, all of them Article 5 Parties, did not. Most Article 5 countries which do possess licensing systems have not had them in place for very long, and there is relatively little experience with their operation and effectiveness; it would be useful to collect and distribute information in this area in order to draw lessons for the future.<sup>15</sup>

68. Parties to the Montreal Protocol have repeatedly stressed the need to implement export and import licensing systems and, indeed, the control of illegal trade is impossible without them: it is unlikely that the import of ODS into countries lacking such a licensing system could even be illegal. Technical and financial assistance is provided through UNEP for the revision of regulations, the introduction of licensing systems and training of customs and other officials in their operation (see chapter III below). Efforts to ensure that every Party to the Protocol ratifies the Montreal Amendment and introduces licensing systems should remain a high priority.

69. The presence of an import and export licensing system provides the basic underpinning for any system to control illegal trade, yet it is only as effective as its operators: customs officials must know that a licence is required for a particular shipment and must be able to check with the relevant authority, usually the Environment Ministry or Agency, whether a particular shipment has one. This requires some knowledge of the materials that may be traded, including substances and mixtures, together with their customs codes and the other forms of labelling discussed above, and effective contact networks between the various agencies within the countries. Provision of effective training and resource materials is a prerequisite for success in operating licensing systems.

70. Licensing systems too can be evaded: illegal traders may rely on customs officers not having the time, inclination or knowledge to check the requirement for a licence, or they may provide bribes or other inducements to ignore that requirement. If the smuggling methods identified in chapter I are followed, the illegal materials may well be moving without licences in any case. But the requirement for a licence – and high-profile seizures of goods moving without licences – makes the illegal activity more obvious and raises the deterrence threshold.

## 2. Improving licensing systems

71. UNEP/DTIE training and resource materials provide many options for the design and implementation of licensing systems; the more elaborate those systems are and the more information they require, the harder they are to evade, though also the more difficult to implement. In general, the more visible the system is to the users – for example, if they require applications for licenses to be accompanied by declarations certifying the accuracy of the information, signed by the importer or exporter – the more effective they are likely to be. Spot checks by customs and environment officials working together may help to identify goods moving through entry and exit points that should have licences but do not, and checking whether licences are actually used when issued, and if so how, is an extremely valuable tool in monitoring the market and detecting possible illegal activity.

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14. “Regulations to Control Ozone-depleting Substances: a Guidebook”, UNEP and Stockholm Environment Institute, Paris, 2000.

15. Lessons from some systems which have been in operation for longer are included in “ODS Import/Export Licensing Systems: Resource Module”, UNEP and Stockholm Environment Institute, Paris, 1998.

72. Some licensing systems, including that of the European Community as of 2001, require permits for each individual shipment, which increases the burden on industry and customs but allows more precise monitoring of movements. Individual shipment licences can be given unique identification numbers, helping reduce opportunities for fraud.

73. More effort has been devoted to establishing import licensing systems than export licensing systems since far more countries are importers than exporters, but the Montreal Amendment requires export as well as import licensing, and this is an important means, if implemented properly, of controlling illegal trade. A requirement for clearance in advance from the importing country is another possible means and is of similar value. Both export and import licences could include a requirement for full and accurate labelling of the contents of each cylinder in each consignment, again helping to raise the deterrence threshold against illegal activities. More effort could also be devoted to cross-checking import and export licences, helping reveal possible cases of illegal behaviour.

74. Licences are not usually required for shipments in transit, but this could be changed; the prior notification and consent system established for hazardous wastes under the Basel Convention (see annex II) requires consent from every transit State. A requirement for a transit licence could be introduced for ODS, helping significantly to bring under control a common means of illegal trade.

75. In 1996, decision VIII/20 of the Eighth Meeting of the Parties urged non-Article 5 Parties to establish systems requiring validation and approval of imports of used, recycled and reclaimed ODS, obliging importers to provide proof that the ODS had actually been used. Introduction of this requirement into import licences – as is already the case in some countries – would certainly assist in controlling this common route for laundering virgin ODS into legitimate trade.

76. Some countries' licensing systems also cover products containing ODS, and, as mentioned in paragraphs 17 and 62 above, a growing number of countries ban the export and/or import of products containing or designed to use particular categories of substances, particularly CFCs. Given the difficulties of identifying products containing ODS through labelling or through customs codes, it makes sense to ensure that licensing systems do cover them where feasible, and countries should be encouraged to design their regulations along such lines.

77. Any restrictions on trade, including labelling requirements and licences, are potentially subject to the disciplines of the trade agreements administered by the World Trade Organization (WTO) and based on the General Agreement on Tariffs and Trade (GATT). On the face of it, a requirement for export and import licences would appear to conflict with Article XI of the GATT, "General Elimination of Quantitative Restrictions", which forbids any restrictions other than duties, taxes or other charges on imports from and exports to other WTO members. However, Article XX of the GATT, "General Exceptions", does offer exemptions from that blanket prohibition.

78. In recent years, UNEP and MEA secretariats, including those of the Montreal Protocol and Basel Convention, have held regular meetings with the WTO Committee on Trade and Environment, and there has never been any suggestion that the requirement for licences, whether simply for exports and imports or for transit, as under the Basel Convention, is likely to prove incompatible with WTO rules. In any case, since the Parties to the Montreal Protocol have agreed the imposition of licences between themselves, it is hardly likely that they would bring a dispute on the matter to WTO for resolution.

#### D. Chemical tracers

79. It has been suggested that unique chemical identifiers or markers could be added to ODS at the point of production; detection equipment would then allow any sample of a product to be traced back to its original producer. There are only a limited number of production plants world wide and it would not be difficult to identify them each individually. It is certainly technically feasible to produce such tracers, and indeed one company, Rhodia, has already done so in order to combat the problem of counterfeiting of its proprietary refrigerants.

80. There are, however, several drawbacks. ODS manufactured by different producers are sometimes mixed together further down the supply chain; this is particularly true where recycling or reclamation is involved, as reclamation plants usually recover ODS from many different uses and users. The chemicals used as tracers cannot be too complicated in structure or they would break down too rapidly, but the simpler they are the easier they are to duplicate. Even without duplication, the tracer chemical itself would acquire a value as it would be used to legitimize production, and therefore those with access to it would be vulnerable to bribery or theft. In any case, chemical analysis would be needed to determine the presence and origin of the tracer. There are also some doubts over whether it would be possible to include tracers in ODS destined for uses requiring high levels of purity, such as pharmaceuticals or some feedstock uses.

81. It is possible that these problems might be overcome, and there may indeed be a use for tracers in investigating specific instances of illegal trade; such as tracking suspected smuggling routes; however, it is not likely that tracers can be of use in a wider application. As discussed in chapter V below, the production of ODS is probably the point at which the Montreal Protocol is most effectively applied; there are a limited number of sources and all, including those outside developed countries, are subject to controls and monitoring. Illegal activities tend to occur further down the supply chain, between the point of production and end use, and chemical tracers cannot help identify those. Such a system could be of general application only if substantial illegal production were occurring and entering the market, but there is no reason to that this is so, at least at present.

## E. Practical suggestions

### 1. Labelling

82. In this chapter we examined various options for improving identification and tracking systems for ODS mixtures and products containing ODS. In the area of labelling, the following conclusions are drawn:

(a) For virgin substances, given the wide range of labelling systems already in place and the relative ease with which they can be falsified, together with the existence of other ways of tracking movements of ODS such as customs codes and export and import licences, there is no value in trying to introduce a new, universal labelling system;

(b) For used substances, where the volume in trade is much lower and the problem of illegal trade is particularly strong, the reverse, however, is true. A consultation exercise involving the industry and Governments could therefore usefully be undertaken to identify more clearly the feasibility, costs and benefits of labelling used ODS;

(c) Given the large number of products containing ODS in trade, a universal labelling system would be exceptionally difficult to introduce, although it might be possible to develop a labelling system for key products such as refrigeration and air-conditioning equipment. A consultation exercise should be undertaken with the industry over the feasibility, costs and benefits of introducing a voluntary common system for identifying the ODS contained in such products.

### 2. Customs codes

83. Customs codes provide an alternative and in many ways superior method of identifying substances, mixtures and products in trade. Parties may wish to consider the following measures to assist in combating illegal trade:

(a) Listing the most commonly traded HCFCs, and also the most common HFCs, under separate HS codes. The Ozone Secretariat could pursue this matter with WCO, but pending the outcome of any discussions, all Parties to the Protocol should be encouraged to develop their own national codes for these ODS;

(b) Development of specific sub-headings for ODS mixtures, initially as recommendations for national codes and potentially for eventual incorporation into the Harmonized System proper. Discussions on this matter are already under way in the Montreal Protocol ad hoc Customs Codes Discussion Group;

(c) A review and possible revision of decision I/12A to specify clearly that no matter which customs code is given to an ODS-containing mixture, such a mixture must be considered to be a substance subject to the phase-out schedules;

(d) Development of customs codes to identify key products containing ODS. Further consideration of feasibility is required in this regard.

### 3. Export and import licences

84. The most productive method of controlling legal international trade and reducing illegal trade lies in a more rigorous application of an existing means of controlling trade: export and import licences. Efforts to ensure that every Party ratifies the Montreal Amendment and introduces licensing systems, together with the provision of appropriate training, should remain a high priority. In addition, the following measures, if taken by the Parties, would improve the value of export and import licenses in combating illegal trade:

(a) Most Article 5 countries which possess licensing systems have not had them in place for very long and there is relatively little experience with their operation and effectiveness. It would be useful to collect and distribute information in this case in order to draw lessons for the future;

(b) The more visible the system is to the users – if, for example, applications for licenses must be accompanied by declarations certifying the accuracy of the information, signed by the importer or exporter – the more effective they are likely to be. Individual shipment licences, the extension of licences to products containing ODS, checking whether licences are actually used when issued and if so how, the wider use of export licences, a requirement for clearance in advance from the importing country, and cross-checking import and export licences would enhance the value of licence systems in monitoring the market and detecting possible illegal activity;

(c) The development of a system of transit licences for ODS would be of particular value in bringing under control a common means of illegal trade;

(d) A requirement for proof that ODS labelled as used actually are used ODS could be introduced into import licences to assist in controlling a common route for laundering virgin ODS into legitimate trade.

## III. ENFORCEMENT

85. Successfully combating illegal trade depends on the ability of enforcement authorities – customs, police, judiciary, environment and other officials – to detect and take action against it. This requires political and personal will and resources and a willingness to collaborate between agencies at national and at international levels. The international community can help through the provision of financial, technical and training support and the establishment of appropriate enforcement units and networks, and the institutions of the Montreal Protocol itself could be reformed to enhance their ability to assist countries in combating illegal trade. This chapter examines possible means of enhancing national and international action against illegal trade in ODS.

### A. National enforcement

86. Chapters I and II pointed to the crucial role of enforcement authorities in combating illegal trade through applying the requirements for import and export licences, collecting intelligence and carrying out physical inspections of shipments on the basis of by risk analyses. Various agencies – customs, environment Ministries and environment and trade inspectorates, depending on the country in question are responsible for carrying out these functions, and close collaboration between them is crucial.

87. Single individuals can make a substantial difference: the appointment of a single special investigator in Miami in the mid 1990s led to a jump in the number of cases of illegal trade detected.<sup>16</sup> The appointment of special agents such as these can reap substantial dividends; an alternative, or additional, option is to station environment officials at a country's main entry points, working together with customs officials.

88. This is likely to be possible only at a few entry points in a few countries, however, so customs officials throughout the country should benefit from training and awareness-raising. As instances of environmental crime become more widespread, it makes sense to incorporate a basic level of information about them into customs officers' normal training programmes, backed up by more specialist and targeted training later on in their careers. The provision of training and information materials through various electronic media is becoming more common and can help to supplement and reinforce initial, classroom-based training.

89. In 2001, UNEP took the initiative to bring together the Montreal Protocol, CITES and Basel Convention secretariats to develop joint customs training programmes covering all three areas, and customs training is increasingly conducted jointly. It is likely that the chemicals Conventions (the Stockholm and Rotterdam Conventions – see annex II) will be included in these programmes once they enter into force and implementation begins. This should assist national agencies in implementing all these conventions in an integrated manner.

90. The customs service is not the only enforcement agency of importance, and training must be extended beyond it: in many countries, environment or trade inspectors have the responsibility for making the appropriate checks, both at the border and internally at the site of sale and/or use. The police and judiciary may also be involved in action against illegal trade. Collaboration between all these agencies is essential to success. The inter-agency group established in the United States of America involving the Environmental Protection Agency, Internal Revenue Service, Customs Service and Departments of Commerce and Justice has provided a useful model to follow and has been extended to include joint meetings with Canadian and Mexican enforcement authorities. Another model is provided by the Netherlands, which has established a national environmental crime unit under the responsibility of the Ministry of Justice but bringing together officials from a wide range of backgrounds and departments to share experience and information.

91. Collaboration is not always as satisfactory as it might be; customs authorities often prove reluctant to release import data to environment agencies (sometimes for reasons of commercial confidentiality, or may release it only several months after the fact and environment agencies may therefore find it useful to use trade data from commercial sources or statistical bureaux. Real-time data on imports combined with automatic alerts from customs agents when specified goods cross the border are immensely valuable in delivering effective enforcement.

92. The analysis in chapter I of the means of illegal trade highlighted the importance of intelligence in providing the analyses needed to underpin decisions to undertake physical inspections. Intelligence includes close monitoring of trade patterns, including imports and trans-shipments and requests for import and export licences, particularly for used ODS but also for other substances that may be used as cover for smuggling ODS. It includes also collaboration with the industry to project future patterns of demand and supply and determine customer use profiles. All this can help build up a picture of normal market operations against which anomalous behaviour by particular companies, and countries, will stand out and can be monitored more closely.

93. Random spot checks are also of value and can usefully be carried out both at the border and at points of sale or use. The prospect of being investigated at the point of import or sale, whether on a random or targeted basis, acts as a deterrent to illegal traders, and can be reinforced by high-profile cases of seizures and arrests these can be publicized widely through the news media, helping raise public awareness as well as deter smugglers.

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16. "Report of the Interagency Commission on Crime and Security in U.S. Seaports, Fall 2000", p. 49.

94. The first step in enforcement of Protocol commitments is introduction of the appropriate legislation and regulations, coupled with the political will to enforce them. We have stressed the need for basic legislation incorporating systems such as import and export licences, but other areas of legislation also need attention. In some countries, penalties for involvement in the illegal ODS trade are inadequate or non-existent. Enforcement will be more effective if all countries possess reasonably comparable penalties for illegal behaviour so long as these are not reduced to the lowest common denominator; the EurOzone project (see paragraph 104 below) is partly designed to harmonize penalties across Western Europe. Other areas of criminal legislation, including those relating to money laundering or tax evasion, which often carry higher penalties, may also be worth addressing; sometimes legislation targeted at other types of illegal trade, such as the illicit trade in narcotics, can be adapted to illegal trade in ODS. Cross-border collaboration, possibly formalized through mutual legal assistance treaties, can be of significant help.

95. The importance of collaboration with the industry, both with individual companies and through trade associations, in improving the collection of intelligence and enforcement has been highlighted. Collaboration with non-governmental organizations can also be useful in gathering intelligence and raising public and media awareness. Investigations by non-governmental organizations into illegal trade, such as those carried out over the last few years by the internationally-based Environmental Investigation Agency, can publicize the issue, provide useful information and motivate Governments to take more effective enforcement action.

96. Developing countries and countries with economies in transition will need substantial capacity-building assistance in designing and implementing these policy and regulatory reforms. The decision of the Multilateral Fund Executive Committee, early in the life of the Fund, to permit the disbursement of financial support for institutional strengthening, including activities such as customs training and the establishment of export and import licensing systems, was vital for the development of the ozone regime. UNEP/DTIE now provides a very wide range of training activities and materials and is currently decentralizing its efforts, providing more assistance directly at the regional level rather than from its central office in Paris. The more training is tailored to local circumstances, the more effective it will be. Surveys of local enforcement capacities, for example, on the availability of computer equipment, are also beginning to be carried out.

97. A major drawback in relying on regular customs agents is that they often have little incentive to try to combat shipments of illegal ODS: they are difficult substances to detect; there may be little if any financial reward to the customs agency concerned, and customs agents may face pressure from industry to facilitate the movement of goods. As argued in paragraph 87 above, officers whose sole responsibility it is to track and detect illegal ODS – and perhaps other forms of international environmental crime – are likely to be more effective than regular customs officials handling all types of imports.

## B. International cooperation

98. Collaboration between agencies should of course extend to the international level. The Guidelines on Compliance with and Enforcement of MEAs adopted by the UNEP Governing Council in February 2002, stresses the need for the “designation and establishment of channels of communication and information exchange among UNEP, the secretariats of multilateral environmental agreements, the World Customs Organization and relevant intergovernmental entities, research institutes and non-governmental organizations, and international law enforcement agencies such as the International Criminal Police Organization (Interpol)...”<sup>17</sup>

99. Timely exchanges between customs agencies of information such as pre-arrival notification of shipments of ODS based on export licences would make the international tracking of movements much easier, but in fact these are rather rare. As discussed in chapter II above, cross-checking of export and import licence data could help reveal instances of illegal trade. There is a need for a central coordinating function; this is considered further in paragraph 114 below.

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17. See document UNEP(DEPI)/MEAs/WG.1.3, para 48 (a).

100. The WCO Customs Enforcement Network provides a route for exchange of information between customs agencies. WCO itself is collaborating increasingly with UNEP and environmental convention secretariats in combating international environmental crime, and memoranda of understanding currently exist between the WCO, CITES and Basel Convention secretariats covering information exchange, joint technical meetings, cooperation between environment and customs officials at national level and training and awareness-raising exercises. A similar memorandum of understanding between WCO, the Ozone Secretariat and the UNEP OzonAction programme is under consideration and it would be helpful if it could be concluded soon.

101. Interpol facilitates information exchange between national police authorities, it does not investigate or prosecute cases itself. Interpol has memoranda of understanding with WCO and the CITES and Basel Convention secretariats, and a similar memorandum between Interpol, the Ozone Secretariat and the UNEP OzonAction programme is also under consideration. The Interpol Working Party on Environmental Crime was set up in 1993, with subgroups on wildlife crime and pollution, with the aim of improving information exchange and analysis. Interpol has supported regional working groups of law enforcement officers in these areas and instigated training-for-trainers courses on environmental criminal investigation. Although the subgroup on pollution covers ODS, there has been relatively little effort devoted to this area recently as cases of illegal trade seem to be falling in number; however, the use of CFCs as feedstock in the production of a number of synthetic drugs including methamphetamines, appears to be stimulating the illegal trade in some countries.

102. In the mid 1990s, Interpol introduced the ECOMESSAGE system for the collection and analysis of information in cases concerning international environmental crime, developed to tackle common problems in areas such as wildlife crime or illegal dumping of hazardous wastes. These problems included the need to collect information from widely scattered sources; the lack of uniform reporting methods between member countries; a lack of organized collection, storage, analysis and circulation of information about suspects; and a lack of knowledge about which law enforcement and other agencies must be contacted. The ECOMESSAGE system aims to provide a uniform format for use by the national central bureaux, the Interpol contact points in each country; the General Secretariat in Lyons, France acts as a central collection and dissemination point. However, wide variations in what is legal and what is illegal between Interpol member countries, a lack of commonly agreed definitions of certain terms, including "waste", the involvement of a huge range of law enforcement agencies, not just the police, a general lack of knowledge of environmental crimes amongst many of them, and the absence in some countries of any appropriate agency with which to communicate have all combined to render the ECOMESSAGE system less useful than had been hoped.

103. It may be more fruitful to strengthen international networks dealing specifically with environmental enforcement, particularly since in many countries much of the enforcement-related legislation prescribes civil rather than criminal offences. Beginning with bilateral cooperation between the Governments of the United States of America and the Netherlands, the International Network for Environmental Compliance and Enforcement (INECE) came into being in the mid 1990s as an international, primarily intergovernmental partnership to promote effective environmental compliance with and enforcement of the requirements of domestic environmental laws and international environmental agreements. INECE engages in networking, capacity-building and enforcement cooperation. The Parties to the Montreal Protocol could approach INECE with a proposal to establish a special working group or task force on illegal trade in ODS.

104. Similarly, within the European Community the European Network on the Implementation and Enforcement of Environmental Law (IMPEL) was established in 1992, and the Chemical Legislation European Enforcement Network (CLEEN) in 2000. The CLEEN EurOzone project<sup>18</sup> was initiated to improve contacts between those responsible for enforcing regulations on ODS and to increase convergence between enforcement practices and penalties. Regional collaboration should be of significant benefit in tackling the problem of illegal ODS, and UNEP/DTIE endeavours to foster it through regional networks and training.

### C. Enforcement capacity in the Montreal Protocol

105. To answer the question of how the institutions of the Montreal Protocol itself can best contribute to supporting national and international enforcement efforts, a UNEP workshop on enforcement of and compliance with multilateral environmental agreements was held in July 1999. The workshop involved many participants with experience of the Montreal Protocol and produced a series of recommendations on matters such as exchanges of best practice in legislation and tracking systems; the submission of information on the extent of illegal trade; data exchange and analysis; the building of networks between enforcement officials and the possible appointment, within the Ozone Secretariat, of an international liaison officer from the enforcement community.<sup>19</sup> The workshop also drew comparisons with the experience of tackling similar issues within the Basel Convention and CITES; the experience of the latter is particularly instructive, as illegal trade in wildlife has been a continuing problem since CITES was first adopted in 1973.

106. The proposals set out below fall under three headings: reporting and data collection; analysis and information exchange; and enforcement assistance. Many parts of the ozone regime – the Ozone Secretariat, UNEP/DTIE and the Multilateral Fund – already play an important role in these areas and there is no point in duplicating their efforts. Also, direct bilateral contacts between environment and enforcement agencies within the Parties to the Protocol is encouraged and is extremely valuable. However, in each of these three areas it is possible to identify ways in which existing efforts to combat illegal trade can be enhanced.

#### 1. Reporting and data collection

107. Decision VII/33 of the Seventh Meeting of the Parties to the Montreal Protocol, in 1995, requested the Secretariat to collect information from the Parties on illegal trade and report to the Meeting of the Parties at their Eighth Meeting, an exercise which led to decision VIII/20, urging non-Article 5 Parties to establish systems requiring validation and approval of imports of used, recycled and reclaimed ODS. The Lyon Group of Senior Experts on Transnational Organized Crime (the Lyon Group) of the G8 countries set up an international database on suspected ODS smuggling activity, maintained by the United States Environmental Protection Agency, though its use appears to be limited.<sup>20</sup> Apart from this, there has been no systematic attempt to collect data on illegal trade in ODS. UNEP/DTIE collects such incidents as come to its attention but the information is usually partial and anecdotal. Such figures that do exist are at best educated guesses by the industry, non-governmental organizations and research institutes.

108. The same issue has been faced by other MEAs. Under the Basel Convention, Parties have an obligation to report cases of illegal trade in hazardous waste, but in reality very few instances are reported, perhaps no more than 1 per cent.<sup>21</sup> Under CITES, the Conference of the Parties in 1997 recommended that Parties should provide to the Secretariat detailed information on significant cases of illegal trade and inform

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18. Countries participating in EurOzone include all European Community member States apart from Luxembourg, plus Norway.

19. "Enforcement of and Compliance with MEAs: The Experiences of CITES, Montreal Protocol and Basel Convention", UNEP, Nairobi, 1999, Vol. I, Chapter V, Annex II, para. 19.

20. See Bruce Pasfield, "The G8 Nations' Contribution to the Fight Against Illegal Trade", in, "Illegal Trade in Ozone-Depleting Substances: Is There a Hole in the Montreal Protocol?", OzonAction Newsletter Special Supplement No. 6, UNEP/DTIE, Paris, 2001.

21. Basel Convention Secretariat, personal communication.

the Secretariat, when possible, about convicted illegal traders and persistent offenders”.<sup>22</sup> Despite patchy adherence to this requirement, the report on alleged infractions prepared for each Conference of the Parties between 1987 and 2000, which covered both illegal trade and non-compliance with CITES, was generally regarded as a reliable and impartial instrument reinforcing national implementation and accountability.<sup>23</sup> More recently, a computerized intelligence and information system, TIGERS (Trade Infraction and Global Enforcement Recording System) has been developed and made accessible to management authorities and designated enforcement agencies. Some of the most valuable information has been provided by Traffic International, the joint wildlife trade monitoring programme set up in 1976 by the Worldwide Fund for Nature (WWF) and the World Conservation Union (IUCN), now operating through a worldwide network of offices.

109. The lack of systematic attempts to collect data on illegal trade represents a key weakness in efforts under the Montreal Protocol to address the problem. It will never be possible to collect precise data on the extent of illegal trade, but it is also true that illegal activities proceed more freely if no one is looking for them. It would be helpful for a system to be established, similar to that used under CITES, to collect:

- (a) Information on all cases of illegal trade detected, including the volumes and types of ODS involved, the means of smuggling, the means of detection (where appropriate) and the penalties imposed;
- (b) Information on how the seized ozone-depleting substances were disposed of;
- (c) Best estimates of the volume of illegal trade that may be proceeding unchecked;
- (d) Summaries of threat analysis studies showing the likelihood of illegal trade in each country;
- (e) Information on systems in place for detecting and preventing illegal trade.

110. Precisely how this data should be collected must be a matter for further consideration. A decision of the Meeting of the Parties could request all Parties to report such data regularly to the Secretariat; some of it is published by national enforcement agencies and it would not be difficult to collect and transmit it through a central point. Many countries, however, suffer from a lack of capacity, and assistance in data collection would need to be provided, to developing countries in particular. A possible solution would be to task the Ozone Secretariat with working with countries experiencing particular problems with illegal trade (see also paragraph 116 below) by giving it additional functions through the creation of a monitoring and compliance unit. The use of non-governmental organizations or research institutes to collect data as Traffic International does for CITES could also be considered.

111. If the Meeting of the Parties does decide to request Parties to report the incidence of illegal trade, the question will arise of how the data should be dealt with. Illegal imports, if used in the country of import, contribute to its emissions of ODS and in theory could be counted as “consumption”. However, they are by definition not regulated by the Government of the country concerned and if illegal imports were to be added to legal consumption figures there would be a strong incentive not to report them at all. It should therefore be made clear that reported illegal trade does not count towards the reporting Party’s ODS consumption.

## 2. Analysis and information exchange

112. The 1999 UNEP workshop placed considerable emphasis on the communication of data and examples of best practice, a function that follows naturally from the improved data collection envisaged above. Unless

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22. CITES Resolution Conf 9.8 (Rev.) (1997), now incorporated into Resolution Conf 11.3 (2000), “Compliance and Enforcement”.

23. Peter H. Sand, “Commodity or Taboo? International Regulation of Trade in Endangered Species”, in Green Globe Yearbook 1997. The format of the most recent Infractions Report was changed by the CITES Secretariat at the eleventh Meeting of the Conference of the Parties, in 2000, and the latest report contains far less detailed information. Specific reporting systems have also been put in place to monitor illegal killing of elephants and illegal trade in ivory.

there is any commercial or national confidentiality involved, the data collected should be reported to Meetings of the Parties to the Montreal Protocol and made widely available by being placed on the Secretariat's public Website, or on a restricted "intelligence" part of it. It may be useful for the Protocol's Implementation Committee to be allocated the function of considering the data and producing recommendations for further action. As an extension of the Implementation Committee's mandate, a logical one given its responsibilities for considering reports on data and on compliance, this would require a decision by the Meeting of the Parties.

113. The collection of data on illegal trade proposed in paragraph 109 above would enable a database of common origins, routes, destinations and methods of illegal trade to be compiled and would facilitate the exchange of experience and best practice between Parties. The data on production and consumption of ODS already collected by the Secretariat under Article 7 of the Protocol is also relevant to the control of illegal trade, and further analysis of that data and following up any discrepancies would be helpful in identifying possible illegal trade flows, as would an analysis of projected future demands for and likely trade flows in ODS, most probably based on the work of the Technology and Economic Assessment Panel.

114. Similarly, there is no central coordination of information collection, analysis and exchange concerning the use and cross-checking of export and import licences. Under CITES, the collection and analysis of export and import permit information is carried out on behalf of the Parties by the World Conservation Monitoring Centre (WCMC), originally a non-governmental organization but now part of UNEP. If resources were made available, WCMC could carry out a similar function for the Montreal Protocol.

115. As noted in paragraph 104, the creation of regional and international networks of environment and enforcement officials is of significant help in enhancing international collaboration in combating illegal trade. UNEP/DTIE has already devoted much effort to building regional networks amongst developing countries and countries with economies in transition, providing customs training and supplying assistance in developing and implementing appropriate legislation and regulations. This work is of crucial importance and should continue.

### 3. Enforcement assistance

116. Developing countries are likely to bear the brunt of illegal activities in the next few years yet often lack the capacity to design and implement comprehensive enforcement operations. There is therefore a clear role for the Ozone Secretariat in discharging the functions contemplated above in paragraph 110 above in working to enhance Parties' own capacity to control illegal trade.

117. A model for this kind of operation already exists within the CITES Secretariat. After the Conference of the Parties to CITES in 1997, the Enforcement Assistance and Permit Confirmation Unit was expanded into an Enforcement Assistance Unit with a staff of six including, importantly, some individuals from an enforcement (police) background. In addition to providing training, the Unit carries out missions to countries experiencing implementation problems. For example, in 2000 the Tiger Enforcement Task Force, coordinated by the Unit and comprising law enforcement and customs officers from consumer and range States, was established to target illicit trade in tigers and tiger parts and derivatives. The Unit provides technical assistance on wildlife crime and illicit trade, and intelligence support to Parties, with country representatives being responsible for operations within their territory. It may also provide training, and liaises with Interpol, WCO and appropriate regional law enforcement groups.

118. The volume of world trade falling within the purview of the Montreal Protocol is much smaller than in the case of CITES so the same functions could be carried out by a smaller staff. Nevertheless, it would be of value to create, within the Protocol's institutions, the ability to perform equivalent tasks. In addition to collecting and analysing data and coordinating the exchange of information and best practice between Parties, the Ozone Secretariat could also be responsible for:

(a) Working with countries experiencing particular problems with illegal trade to help them improve their enforcement activities;

- (b) Helping coordinate countries' efforts with those of neighbouring countries;
- (c) Encouraging the formation of regional networks of enforcement officials;
- (d) Liaising with and drawing on the resources of WCO, Interpol, INECE and other international networks;
- (e) Providing assistance to UNEP/DTIE in designing and implementing targeted training materials and activities to combat illegal trade.

#### D. Practical suggestions

119. Effective enforcement is key to the prevention of illegal trade. There is growing experience in many countries with good practice in enforcement, and lessons should be learned and best practice disseminated. In particular, at the national level Parties may wish to consider taking the following measures to encourage:

- (a) Close collaboration between enforcement agencies – customs, environment Ministries, environment and trade inspectorates, police and judiciary – supported by appropriate training and awareness-raising;
- (b) Where feasible, the appointment of special investigative agents and/or the stationing of environment officials at a country's main entry points, working together with customs officials;
- (c) The provision of real-time data on imports combined with automatic alerts from customs agents when specified goods cross the border;
- (d) The collection and analysis of appropriate intelligence and the close monitoring of trade patterns including imports and trans-shipments and requests for import and export licences;
- (e) Collaboration with the industry to project future patterns of demand and supply and customer use profiles, and liaison with and support for non-governmental organizations carrying out investigations into illegal trade;
- (f) High-profile publicity for seizures and arrests, helping raise public awareness as well as deter smugglers, and attempts to ensure convergence between penalties for involvement in illegal behaviour, so long as these are not reduced to the lowest common denominator.

120. At the international level, Parties may wish to consider developing and building upon existing networks, including:

- (a) Collaboration between national enforcement agencies. In particular, timely exchanges between customs agencies of information such as pre-arrival notification of shipments of ODS based on export licences, and cross-checking of export and import licence data, could help reveal instances of illegal trade;
- (b) Conclusion of Memorandums of Understanding between WCO, Interpol, the Ozone Secretariat and UNEP/DTIE;
- (c) An approach to INECE with a proposal to establish a special working group or task force on illegal trade in ODS;
- (d) The development of regional collaboration and regional networks and training.

121. The institutions of the Montreal Protocol itself could usefully be restructured to add value to existing efforts to control illegal trade and in particular to provide enforcement assistance to developing countries, which will bear the brunt of illegal activities in the near future. In this regard, the Parties may wish to consider the following new tasks that are required:

(a) The collection of data on illegal trade. Parties should be encouraged, and where necessary assisted, to report all cases of illegal trade detected, including the volumes and types of ODS involved, the means of smuggling, the means of detection (where appropriate) and the penalties imposed; how the seized materials were disposed of; best estimates of the volume of illegal trade that may be proceeding unchecked; summaries of threat analysis studies showing the likelihood of illegal trade in that country; and the systems in place for detecting and preventing illegal trade. In this connection, it must be made clear that reported illegal trade does not count towards the reporting Party's consumption;

(b) Analysis both of information on illegal trade, enabling a database of common origins, routes, destinations and methods of illegal trade to be compiled, and of the data already collected on production and consumption of ODS, including following up any discrepancies, and analysis of projected future demand for and likely trade flows in ODS;

(c) Analysis and central coordination of the issuance, use and cross-checking of export and import licences;

(d) The communication of data and examples of best practice through reports to the Meetings of the Parties and through the Secretariat Website, or a restricted "intelligence" part of it, and possible extension of the mandate of the Implementation Committee;

(e) Creation of regional and international networks of environment and enforcement officials, building on the crucial efforts of UNEP/DTIE;

(f) The provision of enforcement assistance, including expert assistance to UNEP/DTIE in designing and implementing targeted training materials and activities to combat illegal trade; working with countries experiencing particular problems with illegal trade to help them improve their enforcement activities; helping coordinate those countries' efforts with those of neighbouring countries and encouraging regional networks of enforcement officials; and liaising with and drawing on the resources of WCO, Interpol, INECE and other international networks.

122. Although some of these functions can be carried out to a greater or less extent within the existing capacity of the Protocol's institutions, there is a strong argument for creating additional functions within the Ozone Secretariat to support, coordinate and enhance these efforts. This would build on the successful experience of the CITES Enforcement Assistance Unit; the recommendation of the 1999 UNEP workshop to consider appointing an individual from within the enforcement community should also be borne in mind. The possible use of non-governmental organizations or research institutes to collect data on illegal trade and of UNEP-WCMC to provide a central collection and analysis point for import and export licences should also be considered.

#### IV. DEALING WITH ILLEGAL OZONE-DEPLETING SUBSTANCES

123. This chapter deals with the problem of disposing of illegal ODS seized by customs or other enforcement authorities. Disposal poses real problems for the authorities as all the five main options currently available to them have drawbacks. The decision matrix included in the UNEP/DTIE Training Manual for Customs Officers is reproduced in annex III.

##### A. Return

124. The seized materials may be returned to the exporter. This is the route which would be followed under the Basel Convention for illegal exports of hazardous waste. Unlike wastes, however, the ODS in question have a positive value and the illegal trader would probably simply export them again. Also, the country of import would have to bear the cost of returning the seized materials.

### B. Sale

125. The materials may be sold, most usually at auction, to a licensed user in the country of import; however, this is obviously impossible when the substances in question are banned in that country and the materials can be sold only to a country where consumption is still legal, which in the case of CFCs or halons means developing countries. To avoid increasing aggregate consumption of ODS, agreement could be sought that the overall consumption and/or, in the case of producers, production of the seizing country would be offset by the amount sold on. Nevertheless, whatever arrangements are arrived at, the sale of seized material will almost certainly displace and possibly undercut the products of legitimate producers. Also, authorities should be reducing rather than extending countries' dependence on ODS.

### C. Mandatory retrofitting

126. In the case of products using ODS, the importing company could be compelled to retrofit the equipment to use legal ODS or, if that is not possible, to dispose of the products safely. This assumes both that the company can be identified and that it possesses the financial capacity to do so.

### D. Destruction

127. The materials may be destroyed, if destruction technologies approved by the Montreal Protocol are available. The costs, however, of destruction of ODS, which generally require incineration at high temperatures, are significant and where the illegal traders cannot be arrested and fined these costs may have to be borne by the authorities. There are costs associated also with the creation of wastes from the incineration process, and with the interim storage and transport of the seized ODS. If the costs must be borne by customs, they create a disincentive to seize illegal ODS.

128. It is likely, however, that greater quantities of ODS will be destroyed in the near future as phase-out progresses and use controls increasingly remove any possibility of use for some substances. Industry and Governments are increasingly turning their attention to this issue: in some countries, including Canada and Australia, not-for-profit corporations established by the industry collect surplus virgin and recovered CFCs for disposal; the costs are met by a levy on the industry. There is increasing interest in developing incineration technologies, and it may be that the processes will become cheaper as throughput increases.

### E. Storage

129. The seized materials can be placed in long-term storage until a cheaper and more satisfactory solution can be found. However, this option again implies costs. Most ODS, which are gases under pressure in normal ambient conditions, leak out of their containers over a period of a few years, and storage in leak-proof premises and regular changing of containers is normally required. Again, the question arises of who must bear the costs.

### F. Conclusions

130. There is no easy solution to this problem, and indeed there is no single solution; the optimum course of action will vary depending on the circumstances of the country in question. For many countries, particularly developing countries, the costs of the various alternatives suggest sale at auction as the least worst outcome. In all cases, however, national regulations should clearly state which agency has the responsibility for taking the decision and bearing the cost. The costs involved in storage and destruction should not fall on the enforcement agency which seizes the goods in order to avoid creating negative incentives.

## V. CONSUMPTION AND PRODUCTION CONTROLS

131. The bulk of this report focuses on improving means of detecting and stopping illegal movements of ODS. However, there are other options which can contribute to a reduction in illegal activities. This chapter examines the role of controls on consumption and on production, including consideration of the way in which the Montreal Protocol deals with used ODS.

### A. Tightening consumption and reducing demand

132. Unlike many other instances of international environmental crime, the problem of illegal trade in ODS will in due course solve itself as all ODS-using equipment is eventually replaced by new machinery using replacements, though not, of course, before causing further damage to the ozone layer. The replacement process can be accelerated by applying use controls in particular sectors and instituting ODS sales bans, stockpile bans and/or import bans on recycled and/or virgin material. European Community regulations have included phased use bans for some time; although this option may imply additional costs to industry as equipment is retired before the end of its working life, if the controls are applied after timely and comprehensive consultation with the industry involved the costs will be minimal. This option is probably the easiest to implement and enforce.

133. Another option for affecting the pattern of demand lies in the use of economic incentives and disincentives such as taxes or import duties. The price of CFC substitutes, and particularly of HFCs, in developing countries is still sufficiently in excess of those of CFCs to act as a disincentive to conversion. Prices of CFCs could be increased through taxes and/or import duties to increase the incentive to convert, or, conversely, taxes on non-ozone-depleting substances could be reduced. The United States of America experience, however, of applying an excise tax to CFCs to speed up phase-out was that this also raised the incentives, and rewards, for illegal trade, and the tax will not be applied to HCFCs. Given the generally lower enforcement capacities in developing countries, the widespread use of tax incentives and disincentives does not seem a realistic option.

134. The exemption of used ODS from the Protocol's control schedules has created a significant loophole for illegal trade. The Protocol itself does not explicitly exclude used ODS from consumption controls although they are excluded from the calculation of production, and the initial intention of the Parties, reflected in decision I/12H in 1989, was to include imports and exports of used ODS in the calculation of consumption. This was reversed in 1992 through decision IV/24, which clarified the differences between recovered, recycled and reclaimed ODS and exempted them all from the calculation of consumption so long as data on imports and exports were reported under Article 7.

135. The data reporting forms that Parties complete and return to the Ozone Secretariat contain columns for export and import of used ODS. However, very little used ODS is currently traded; in 2000, for example, only 17 Parties reported any imports or exports, and the total amount has been falling over the past few years. In general, used ODS is reused very near the point of recovery. It may be that trade in used ODS, particularly in halons, will become more important the nearer countries approach to total phase-out.

136. It may therefore be worthwhile for the Parties to revisit decision IV/24 and consider whether decision I/12H should be readopted. This would not impose any controls on consumption of used ODS within the country where recovery takes place but imports and exports would be counted in the calculation of consumption. This would further reduce the incentive to import used ODS, helping shut off a common route for illegal trade.

137. A more radical solution would be to ban international trade in used ODS altogether. Paragraph 1 of Article 4A of the Protocol does require a ban on the export of used, recycled and reclaimed substances, except for purposes of destruction, where a party is unable to cease production of the substances for domestic consumption, in other words, if it is in non-compliance. The extension of this provision to Parties in compliance would require an amendment to the Protocol, a fairly lengthy procedure, although individual Parties could decide to ban the use, including imports, of used ODS, and/or used equipment containing ODS.

138. There are other ways, however, to reduce the trade in used ODS. As discussed in paragraph 75 above, decision VIII/20 urged non-Article 5 Parties to establish systems requiring validation and approval of imports of used, recycled and reclaimed ODS, requiring the importers to provide proof that the ODS had actually been used. This provision could be re-emphasized and extended to Article 5 parties, perhaps backed by a comprehensive survey of reclamation and recovery facilities by the Ozone Secretariat or implementing agencies. There could be a presumption against importing used ODS from countries which produce virgin ODS of the same types – a state of affairs which is highly suggestive of illegal trade – and limits could be placed on the types of containers allowed. For example, used ODS could be permitted entry only in large containers or ISO tanks. All these factors could be listed in a decision of the Parties, giving encouragement for the appropriate modifications to domestic legislation.

#### B. Tightening production and reducing supply

139. Unlike almost all MEAs, which in general regulate or limit unsustainable behaviour, the Montreal Protocol will end it entirely; in due course, the production and consumption of all ODS will cease. The option is therefore available of accelerating this process by ending production – buying out producers and shutting down their plants. Where these are suspected sources of illegal trade, this may well prove to be a more cost-effective means of reducing illegal activities than investing substantial sums in customs training and equipment, monitoring and licensing systems and so on. These enforcement activities will still be necessary so long as ODS are produced, traded and consumed, but they will be far more effective the lower the volume of ODS in circulation. Also, intervention at the point of production makes good sense: there are far fewer producers than consumers, worldwide, and all those in article 5 countries, whose monitoring capacity might otherwise be weak, are subject to close monitoring by the Multilateral Fund's implementing agencies.

140. ODS-producing capacity in the Russian Federation was bought out in this way, through a World Bank special initiative for production phase-out agreed in 1998; total phase-out of CFC and halon production was achieved by the end of 2000. If the Russian Federation had proved able to abide by its commitments under the Protocol, it would have achieved an earlier production phase-out itself but the Parties recognized the tremendous economic and political upheavals the country was undergoing throughout the 1990s and accepted that full compliance would not be possible. Significant amounts of CFCs produced in the Russian Federation in the mid 1990s were believed to have been traded illegally, and production phase-out has undoubtedly reduced levels of illegal trade.

141. Six developing countries produce CFCs, of which the largest are China (40 per cent) and India (20 per cent); China accounts also for 90 per cent of developing country halon production. In 1999 the Multilateral Fund agreed a production phase-out plan with China – for CFCs, involving a total phase-out by 2010, with specific annual targets for interim years – and with India. Other developing country producers may follow, once progress with the “big two” has been observed. If more resources could be made available through the Multilateral Fund, production sector phase-out in these and other countries could be accelerated, reducing the supply of materials into the black market. It would be important, however, to bear in mind the need for production and consumption phase-outs to proceed in balance, and it would be counterproductive either to see developing country production simply substituted by developed country exports or for premature CFC shortages to develop and cause significant hardship.

142. The other remaining source of production could also be reduced: the Protocol permits non-Article 5 countries to continue to produce ODS after total phase-out in their own countries for export to meet the “basic domestic needs” of Article 5 parties. The volumes of allowed production were reduced in 1999, through the Beijing Adjustment, and are now on a phase-out schedule of their own, reaching zero in 2010 for CFCs and halons. In fact no non-Article 5 party is currently producing up to its maximum permitted limit under these provisions, and the current low prices on world markets mean that they are unlikely to do so.

143. The analyses of future demand being carried out by the Technology and Economic Assessment Panel for the next replenishment of the Multilateral Fund, which is due to be decided at the Fourteenth Meeting of the Parties, in November 2002, provide an opportunity to assess future needs and reach a judgement about

future production allowances for basic domestic needs. Modifications to these percentages require an adjustment to the Protocol, not an amendment, and are therefore easier to achieve. Even without an adjustment, individual Parties could themselves decide to reduce their production capacities and volumes, and the UNEP Executive Director, Mr. Klaus Töpfer, has written to them urging them to do so on a voluntary basis. The Netherlands has already agreed to end its production for the “basic domestic needs” of Article 5 countries by the end of 2002.

### C. Practical suggestions

144. Discussions on combating illegal trade tend to focus on means of enhancing enforcement, tracking and detecting movements of the illegal products and taking more effective action against smugglers. All these measures will be necessary so long as ODS are produced and consumed, but it should be remembered that there are additional measures available that could prove as or more cost-effective in reducing illegal activities. In this regard, Parties may wish to consider:

(a) Use controls in particular sectors, and the imposition of ODS sales bans stockpile bans, and/or import bans for recycled and/or virgin material;

(b) Economic incentives such as taxes or import duties, to raise the relative price of ODS and/or lower the relative price of non-ODS alternatives, although the danger must be borne in mind of increasing the incentive for illegal trade by raising the price of substances;

(c) Whether decision I/12H, which included imports and exports of used ODS in the calculation of consumption, should be readopted in order to reduce the incentive to import used ODS, helping shut off a common route for illegal trade;

(d) A ban on the export of used, recycled and reclaimed substances except for purposes of destruction, which would require an amendment to the Protocol, or encouragement for individual Parties to ban the use of used ODS, including imports of used ODS and/or equipment containing them;

(e) Encouraging for Parties to adopt restrictions on trade in used ODS. Such restrictions might include implementation of decision VIII/20, which urged non-Article 5 Parties to establish systems requiring validation and approval of imports of used, recycled or reclaimed ODS and requiring importers to provide proof that the ODS had actually been used, and extension of that decision to Article 5 Parties; a presumption against importing used ODS from countries which produce virgin ODS of the same types; and limits on the types of containers, allowing used ODS entry only in large containers;

(f) Accelerated phase-out in the production sector in Article 5 Parties if more resources can be made available through the Multilateral Fund. It would be important, however, to bear in mind the need for production and consumption phase-outs to proceed in balance, and it would be counterproductive either to see developing country production simply substituted by developed country exports or for premature CFC shortages to develop and cause significant hardship;

(g) Reductions in production allowances in Article 5 Parties to meet “basic domestic needs” in non-Article 5 Parties, either through an adjustment to the Protocol rather than an amendment and/or through voluntary commitments on the part of the countries and industries concerned.

Annex IRelevant decisions of the Meetings of the PartiesDecision I/12 A: Clarification of terms and definitions: Controlled substances (in bulk)

The First Meeting of the Parties decided in decision I/12A to agree to the following clarification of the definition of controlled substances (in bulk) in Article 1, paragraph 4 of the Montreal Protocol:

- (a) Article 1 of the Montreal Protocol excludes from consideration as a “controlled substance” any listed substance, whether alone or in a mixture, which is in a manufactured product other than a container used for transportation or storage;
- (b) Any amount of a controlled substance or a mixture of controlled substances which is not part of a use system containing the substance is a controlled substance for the purpose of the Protocol (i.e. a bulk chemical);
- (c) If a substance or mixture must first be transferred from a bulk container to another container, vessel or piece of equipment in order to realize its intended use, the first container is in fact utilized only for storage and/or transport, and the substance or mixture so packaged is covered by Article 1, paragraph 4 of the Protocol;
- (d) 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;
- (e) Examples of use systems to be considered as products for the purposes of Article 1, paragraph 4 are inter alia:
  - (i) An aerosol can;
  - (ii) A refrigerator or refrigerating plant, air conditioner or air-conditioning plant, heat pump, etc;
  - (iii) A polyurethane prepolymer or any foam containing, or manufactured with, a controlled substance;
  - (iv) A fire extinguisher (wheel or hand-operated) or an installed container incorporating a release device (automatic or hand-operated);
- (f) Bulk containers for shipment of controlled substances and mixtures containing controlled substances to users include (numbers being illustrative), inter alia:
  - (i) Tanks installed on board ships;
  - (ii) Rail tank cars (10–40 metric tons);
  - (iii) Road tankers (up to 20 metric tons);
  - (iv) Cylinders from 0.4 kg to one metric ton;
  - (v) Drums (5–300 kg);

- (g) Because containers of all sizes are used for either bulk or manufactured products, distinguishing on the basis of size is not consistent with the definition in the Protocol. Similarly, since containers for bulk or manufactured products can be designed to be rechargeable or not rechargeable, rechargeability is not sufficient for a consistent definition;
- (h) If the purpose of the container is used as the distinguishing characteristic as in the Protocol definition, such CFC or halon-containing products as aerosol spray cans and fire extinguishers, whether of the portable or flooding type, would therefore be excluded, because it is the mere release from such containers which constitute the intended use.

Decision I/12H: Clarification of terms and definitions: Exports and imports of used controlled substances

The First Meeting of the Parties decided in decision I/12H with regard to exports and imports of used controlled substances: imports and exports of bulk used controlled substances should be treated and recorded in the same manner as virgin controlled substances and included in the calculation of a Party's consumption limits.

Note: This decision was annulled by decision IV/24 (see below).

Decision IV/24: Recovery, reclamation and recycling of controlled substances

The Fourth Meeting of the Parties decided in decision IV/24:

1. To annul decision I/12 H of the First Meeting of the Parties, which reads "Imports and exports of bulk used controlled substances should be treated and recorded in the same manner as virgin controlled substances and included in the calculation of the Party's consumption limits";
2. Not to take into account, for calculating consumption, the import and export of recycled and used controlled substances (except when calculating the base year consumption under paragraph 1 of Article 5 of the Protocol), provided that data on such imports and exports are subject to reporting under Article 7;
3. To agree to the following clarifications of the terms "recovery", "recycling" and "reclamation":

Recovery: The collection and storage of controlled substances from machinery, equipment, containment vessels, etc. , during servicing or prior to disposal;

Recycling: The re-use of a recovered controlled substance following a basic cleaning process such as filtering and drying. For refrigerants, recycling normally involves recharge back into equipment it often occurs "on-site";

Reclamation: The re-processing and upgrading of a recovered controlled substance through such mechanisms as filtering, drying, distillation and chemical treatment in order to restore the substance to a specified standard of performance. It often involves processing "off-site" at a central facility;

4. To urge all the Parties to take all practicable measures to prevent releases of controlled substances into the atmosphere, including, inter alia:
  - (a) To recover controlled substances in Annex A, Annex B and Annex C of the Protocol, for purposes of recycling, reclamation or destruction, that are contained in the following equipment during servicing and maintenance as well as prior to equipment dismantling or disposal:
    - (i) Stationary commercial and industrial refrigeration and air conditioning equipment;

- (ii) Mobile refrigeration and mobile air-conditioning equipment;
  - (iii) Fire protection systems;
  - (iv) Cleaning machinery containing solvents;
- (b) To minimize refrigerant leakage from commercial and industrial air-conditioning and refrigeration systems during manufacture, installation, operation and servicing;
  - (c) To destroy unneeded ozone-depleting substances where economically feasible and environmentally appropriate to do so;
5. To urge the Parties to adopt appropriate policies for export of the recycled and used substances to Parties operating under paragraph 1 of Article 5 of the Protocol, so as to avoid any adverse impact on the industries of the importing Parties, either through an excessive supply at low prices which might introduce unnecessary new uses or harm the local industries, or through an inadequate supply which might harm the user industries;
  6. To request the Scientific Assessment Panel to study and report, by 31 March 1994 at the latest, through the Secretariat, on the impact on the ozone layer of continued use of recycled controlled substances and of the utilization or non-utilization of available environmentally sound alternatives/substitutes and to request the Open-ended Working Group of the Parties to consider the report and to submit their recommendations to the Sixth Meeting of the Parties;
  7. To request the Technology and Economic Assessment Panel to review and report, by 31 March 1994 at the latest, through the Secretariat, on:
    - (a) The technologies for recovery, reclamation, recycling and leakage control;
    - (b) The quantities available for economically feasible recycling and the demand for recycled substances by all Parties;
    - (c) The scope for meeting the basic domestic needs of the Parties operating under paragraph 1 of Article 5 of the Protocol through recycled substances;
    - (d) The modalities to promote the widest possible use of alternatives/substitutes with a view to increasing their usage and release their reclaimed substances to Parties operating under paragraph 1 of Article 5 of the Protocol; and
    - (e) Other relevant issues and to recommend policies with respect to recovery, reclamation and recycling, keeping in mind the effective implementation of the Montreal Protocol;
  8. To request the Open-ended Working Group of the Parties to the Protocol to consider the reports of the Scientific Assessment Panel and the Technology and Economic Assessment Panel and any recommendations in this regard made by the Executive Committee and submit their recommendations to the Sixth Meeting of the Parties, in 1994.

Decision VI/19: Trade in previously used ozone-depleting substances

The Sixth Meeting of the Parties decided in decision VI/19:

1. To reaffirm the Parties' intent embodied in decision IV/24;

2. To restate that only used controlled substances may be excluded from the calculated level of consumption of countries importing or exporting such substances;
3. To note further that, as required by decision IV/24, such exclusions from a Party's calculated level of consumption is made contingent on reporting of such imports and exports to the Secretariat and Parties should make their best efforts to report this information in a timely manner;
4. To request all Parties with reclamation facilities to submit to the Secretariat prior to the Seventh Meeting of the Parties and on an annual basis thereafter a list of the reclamation facilities and their capacities available in their countries;
5. To request all Parties that export previously used substances to take, where appropriate, steps to ensure that such substances are labelled correctly and are of the nature claimed and to report any related activities through the Secretariat to the Seventh Meeting of the Parties;
6. To request such exporting Parties to make best efforts to require their companies to include in documentation accompanying such exports, the name of the source firm of the used controlled substance and whether it was recovered, recycled or reclaimed and any further information available to allow for verification of the nature of the substance;
7. To request the Ozone Secretariat, drawing on the experience of the Technology and Economic Assessment Panel and the Parties, to study and report on trade in used/recycled/reclaimed ozone-depleting substances, taking particular account of Parties' experience in the control of such trade and the concerns and interests of all Parties that have facilities for the production of ozone-depleting substances, in time for the issues to be considered by the Open-ended Working Group at its Twelfth Meeting.

Decision VII/32: Control of export and import of products and equipment containing substances listed in Annexes A and B of the Montreal Protocol

The Seventh Meeting of the Parties decided in decision VII/32:

1. To recommend that each Party adopt legislative and administrative measures, including labelling of products and equipment, to regulate the export and import, as appropriate, of products and equipment containing substances listed in Annexes A and B of the Montreal Protocol and of technology used in the manufacturing of such products and equipment, in order to avert any adverse impact associated with the export of such products and equipment using technologies that are or will soon be obsolete because of their reliance on Annex A or Annex B substances and which would be inconsistent with the spirit of the Protocol, including decision I/12C of the First Meeting of the Parties to the Protocol, held in Helsinki in 1989;
2. To recommend that Parties report on action taken to implement the present decision at future Meetings of the Parties.

Decision VII/33: Illegal imports and exports of controlled substances

The Seventh Meeting of the Parties decided in decision VII/33 to request that the Secretariat examine information available to it, and request further information from the Parties regarding dumping, illegal imports and exports, and uncontrolled production of Annex A and B substances and products containing them that could undermine the effectiveness of the Protocol, and report to the Eighth Meeting of the Parties, taking into account the non-compliance procedure under the Montreal Protocol.

Decision VIII/20: Illegal imports and exports of controlled substances

The Eighth Meeting of the Parties decided in decision VIII/20:

1. To note with appreciation the report prepared by the Secretariat on illegal imports and exports of ozone-depleting substances;
2. To urge each Party not operating under Article 5 that has not already done so to establish a system requiring validation and approval of imports of any used, recycled or reclaimed ozone-depleting substances before they are imported. Importers should sufficiently demonstrate to approving authorities that the ozone-depleting substances have indeed been previously used;
3. To request each Party not operating under Article 5 to report to the Secretariat by the Ninth Meeting of the Parties on the establishment of the system described in paragraph 2 above;
4. That the exception in decision IV/24 (which provides that the import and export of recycled and used controlled substances not be taken into account in the calculation of the Party's consumption level) shall not apply to any Party not operating under Article 5 that has not established by 1 January 1998 a system such as that described in paragraph 2 above;
5. To request the Ninth Meeting of the Parties to consider instituting a system to require validation and approval of exports of used and recycled ozone-depleting substances from all Parties.

Decision IX/9: Control of export of products and equipment whose continuing functioning relies on Annex A and Annex B substances

The Ninth Meeting of the Parties decided in decision IX/9:

1. To recommend that each Party adopt legislative and administrative measures, including labelling of products and equipment, to regulate the export and import, as appropriate, of products, equipment, components and technology whose continuing functioning relies on supply of substances listed in Annexes A and B of the Montreal Protocol, in order to avert any adverse impact associated with the export of such products and equipment using technologies that are or will soon be obsolete because of their reliance on Annex A or Annex B substances and which would be inconsistent with the spirit of the Protocol, including decision 1/12 C of the First Meeting of the Parties to the Protocol, held in Helsinki in 1989;
2. To recommend to non-Article 5 Parties to adopt appropriate measures to control, in cooperation with the importing Article 5 Parties, the export of used products and equipment, other than personal effects, whose continuing functioning relies on supply of substances listed in Annexes A and B of the Montreal Protocol;
3. To recommend to Parties to report to the Tenth Meeting of the Parties on actions taken to implement the present decision.

Decision IX/22: Customs codes

The Ninth Meeting of the Parties decided in decision IX/22:

1. To express appreciation to the Multilateral Fund, UNEP and the Stockholm Environmental Institute for the useful information on the problems and possibilities of using customs codes for tracking imports of ozone-depleting substances (ODS) contained in the book "Monitoring Imports of Ozone-Depleting Substances: A Guidebook";
2. To recommend this book as a guide to Parties seeking more information on this issue;

3. In order to facilitate cooperation between customs authorities and the authorities in charge of ODS control and ensure compliance with licensing requirements, to request the Executive Director of UNEP:
  - (a) To request the World Customs Organization (WCO) to revise its decision of 20 June 1995, recommending one joint national code on all HCFCs under subheading 2903.49, by instead recommending separate national codes under subheading 2903.48 for the most commonly used HCFCs (e.g., HCFC-21; HCFC-22; HCFC-31; HCFC-123; HCFC-124; HCFC-133; HCFC-141b; HCFC-142b; HCFC-225; HCFC-225ca; HCFC-225cb);
  - (b) To further ask the World Customs Organization to work with major ODS suppliers to develop and provide the Parties to the Montreal Protocol, through UNEP, with a check-list of relevant customs codes for ODS that are commonly marketed as mixtures, for use by national customs authorities and authorities in charge of control of ODS to ensure compliance with import licensing requirements;
4. To request all Parties with ODS production facilities to urge their producing companies to cooperate fully with WCO in the preparation of this check-list.

Decision X/9: Establishment of a list of countries that do not manufacture for domestic use and do not wish to import products and equipment whose continuing functioning relies on Annex A and Annex B substances

The Tenth Meeting of the Parties decided in decision X/9:

1. To recall that decision IX/9 recommends:
  - (a) That each Party adopt legislative and administrative measures, including labelling of products and equipment, to regulate the export and import, as appropriate, of products, equipment, components and technology whose continuing functioning relies on supply of substances listed in Annex A and Annex B of the Montreal Protocol, in order to avert any adverse impact associated with the export of such products and equipment using technologies that are or will soon be obsolete because of their reliance on Annex A or Annex B substances and which would be inconsistent with the spirit of the Protocol, including decision I/12 C of the First Meeting of the Parties to the Protocol, held in Helsinki in 1989;
  - (b) That non-Article 5 Parties adopt appropriate measures to control, in cooperation with importing Article 5 Parties, the export of used products and equipment, other than personal effects, whose continuing functioning relies on supply of substances listed in Annex A and Annex B of the Montreal Protocol;
2. To note that in order for such export measures to be effective, both importing and exporting Parties need to take appropriate steps;
3. To note that the products and equipment listed below\* constitute categories of products and equipment whose continued use relies on the supply of substances listed in Annex A or Annex B;

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\* Products and equipment containing a controlled substance specified in Annex A or B of the Montreal Protocol: 1) Automobile and truck air conditioning units (whether incorporated in vehicles or not); 2) domestic and/or commercial refrigeration and air conditioning/heat pump equipment (when containing controlled substances in Annex A or Annex B as a refrigerant and/or in insulating material of the product) (e.g. refrigerators, freezers, dehumidifiers, water coolers, ice machines, air conditioning and heat pump units); 3) transport refrigeration units; 4) aerosol products, except medical aerosols; 5) portable fire extinguisher; 6) insulation boards, panels and pipe covers; 7) pre-polymers.

4. To invite, on a voluntary basis, those Parties that do not manufacture for domestic use products and equipment in a category listed below\* and that do not permit the importation of such products and equipment from any source, to inform the Secretariat, if they so choose, that they do not consent to the importation of such products and equipment;
5. To request the Secretariat to maintain a list of Parties that do not want to receive products and equipment from one or more categories listed below. \* This list shall be distributed to all Parties by the Secretariat at the Eleventh Meeting of the Parties and updated on an annual basis thereafter;\*\*
6. To acknowledge that the issue of imports and exports of products and equipment whose continued functioning relies on Annex A and Annex B substances should be further considered at the Eleventh Meeting of the Parties with a view to addressing more specifically the concerns of countries in the process of phasing out production of those products and equipment;

Decision X/18: Customs codes

The Tenth Meeting of the Parties decided in decision X/18:

Recalling decision IX/22 on customs codes and decision IX/28, paragraph 4, on data reporting,

Noting that the existing customs codes set out in the Harmonized System do not allow Parties to easily monitor the import and export of mixtures of substances and that this will be of particular concern for monitoring consumption of HCFCs as a number of the HCFCs will only be consumed as part of refrigerant mixtures being marketed to replace CFCs for some applications,

Noting that many Parties rely on the Harmonized System codes to cross-check and monitor their consumption of ozone-depleting substances and to ensure compliance with their obligations under the Montreal Protocol,

1. To request the Ozone Secretariat to continue discussions with the World Customs Organization on:
  - (a) The possibility of revising the Harmonized System to allow the inclusion of appropriate codes for mixtures containing HCFCs, especially those used for refrigeration;
  - (b) The confirmation of the proper classification of methyl bromide that contains 2 per cent chloropicrin as a pure substance and not as a mixture, as suggested in the illustrative list of methyl-bromide mixtures provided earlier to the Parties by the Ozone Secretariat;
2. To convene a group of five interested experts to provide advice to the Ozone Secretariat out of session on possible amendments to the Harmonized System;
3. To request the Ozone Secretariat to report to the Nineteenth Meeting of the Open-ended Working Group on progress towards this end.

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\*\* See [www.unep.org/ozone/decision9-10.shtml](http://www.unep.org/ozone/decision9-10.shtml).

Decision XI/26: Recommendations and clarifications of the World Customs Organization concerning customs codes for ozone-depleting substances and products containing ozone-depleting substances

The Eleventh Meeting of the Parties decided in decision XI/26:

Recalling decisions IX/22 and X/18 of the Parties to the Montreal Protocol dealing with customs codes for ozone-depleting substances and products containing ozone-depleting substances,

Noting that the issue of customs codes is of great importance for the prevention of the illegal traffic of ozone-depleting substances and for the purpose of data reporting in accordance with Article 7 of the Montreal Protocol,

1. To note, with appreciation, the actions undertaken so far by the World Customs Organization on the further extension of the Harmonized System customs nomenclature of ozone-depleting substances and products containing ozone-depleting substances;
2. To note the summary of the draft recommendation of the World Customs Organization concerning the insertion in national statistical nomenclatures of Harmonized System subheadings for ozone-depleting substances and products containing ozone-depleting substances and the clarification of the classification under the Harmonized System Convention of methyl bromide containing small amounts of chloropicrin provided in annex II to the report of the Nineteenth Meeting of the Open-ended Working Group (UNEP/OzL.Pro/WG.1/19/7);
3. To note that the group of experts convened in accordance with decision X/18 will conduct further work on recommendations relating to the Harmonized System codes for mixtures and products containing ozone-depleting substances in collaboration with the World Customs Organization.

Decision XII/10: Monitoring of international trade and prevention of illegal trade in ozone-depleting substances, mixtures and products containing ozone-depleting substances

The Twelfth Meeting of the Parties decided in decision XII/10:

Recognizing the threat of illegal trade in ozone-depleting substances, mixtures and products containing ozone-depleting substances to the global process of ozone layer protection,

Understanding the importance of control of trade in ozone-depleting substances, mixtures and products containing ozone-depleting substances in all Parties in view of the need for global implementation of the provisions of the Montreal Protocol,

Acknowledging that presently the effective control at national borders of trade in ozone-depleting substances, mixtures and products containing ozone-depleting substances is very difficult due to problems in ozone-depleting substances identification, the complexity of relevant customs codes, the lack of an internationally accepted common labelling system and the lack of specially trained customs officers, and the need to approach most of these problems by concerted action at the international level,

Acknowledging that it is important to understand the status of and take into account ongoing work in this area by other international bodies, and take into consideration previous decisions of the Parties, including decisions IX/22, X/18 and XI/26,

1. To request the Ozone Secretariat, in consultation, as appropriate, with the Technology and Economic Assessment Panel, the United Nations Environment Programme, the discussion group on customs codes for ozone-depleting substances and international trade and customs organizations, to examine the options for studying the following issues and to report on these options at the twenty-first meeting of the Open-ended Working Group for consideration by the Parties in 2001:
  - (a) Current national legislation on the labelling of ozone-depleting substances, mixtures containing ozone-depleting substances and products containing ozone-depleting substances;
  - (b) The need for, scope of and cost of implementation of a universal labelling and/or classification system for ozone-depleting substances, mixtures containing ozone-depleting substances and products containing ozone-depleting substances, including the feasibility of the introduction of a producer-specific marker, identifier or identification methodology;
  - (c) Methods for sharing experience between Parties on issues related to classification, labelling, compliance and incidents of illegal trade;
  - (d) The differences between products containing ozone-depleting substances and mixtures containing ozone-depleting substances, and the possibility of the creation of a list of categories of products containing ozone-depleting substances with the corresponding Harmonized System/Combined Nomenclature classification;
  - (e) Possible guidance for customs authorities on how to proceed with the illegally traded ozone-depleting substances seized on the border;
2. To express appreciation for the activities of the Division of Technology, Industry and Economics of the United Nations Environment Programme and to encourage further work with regard to providing information on the above to Article 5 Parties and countries with economies in transition, specifically through customs training at the regional and/or national level.

Decision XIII/12: Monitoring of international trade and prevention of illegal trade in ozone-depleting substances, mixtures and products containing ozone-depleting substances

The Thirteenth Meeting of the Parties decided in decision XIII/12:

1. To request the Ozone Secretariat, in consultation, as appropriate, with the Technology and Economic Assessment Panel, the World Customs Organization, the United Nations Environment Programme Division of Technology, Industry and Economics (UNEP/DTIE) and the World Trade Organization to undertake a study and present a report with practical suggestions on the issues contained in decision XII/10 to the Open-ended Working Group at its 22nd meeting, in 2002, for consideration by the Parties in 2002;
2. That in preparing the study, the Secretariat should use decision XII/10 as terms of reference and should study solely those issues discussed in that decision.

## Annex II

### Tracking mechanisms in international agreements

Several multilateral environmental agreements (MEAs) employ means of identifying the materials which they seek to control in international trade. The Convention in International Trade in Endangered Species (CITES) uses licensing systems to monitor and control exports and imports, while the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal uses a system of prior notification and consent. Other MEAs not yet in force, including the Rotterdam and Stockholm Conventions, dealing with various categories of chemicals, and the Cartagena Protocol, controlling trade in genetically modified products, will in due course employ similar systems, variously known as prior informed consent or advanced informed agreement. Another international agreement, the Kimberley Process to identify and eliminate the trade in conflict diamonds, also not yet in force, will similarly use a certificate-based system. The tracking mechanisms used in these agreements are described briefly below, followed by some conclusions that can be drawn from considering their effectiveness in controlling illegal trade.

#### Basel Convention

The 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal establishes a regime for controlling the international trade in hazardous and other types of wastes. The general objective of the treaty is to ensure that transboundary movements of wastes are reduced to a level consistent with environmentally sound and efficient management. The movement must be conducted in a manner which will protect human health and the environment. Parties have the right to prohibit the import of hazardous waste, and an export ban applies to States that have not given written consent to a specific import.

The Convention establishes a system of prior notification and consent for transboundary movements of wastes. The exporting State, generator or exporter must notify the importing State and any States of transit of any proposed transboundary movements. A movement document must accompany any shipment of waste from its origin to its disposal. Such a document must specify: the exporter of the waste; the generator and site of the waste generation; disposer of waste and site of disposal; carrier of waste; date the transboundary movement of waste started and date and signature on receipt by each person who takes charge of the waste; means of transport; general description of waste; declaration that the competent authorities of all concerned States do not object to the shipment; and certification by the disposer of receipt at the designated disposal facility and indication of the method of disposal and the approximate date of disposal.

Any traffic in waste that does not meet the notice and consent requirements, or fails to conform with the accompanying documents, or results in deliberate disposal in violation of the Basel Convention and general principles of international law, is held to be illegal and considered a criminal act. Transport and disposal of hazardous and other wastes may be carried out only by authorized persons, with the movements meeting generally accepted and recognized international rules and standards of packaging, labelling and transport, taking into account relevant internationally recognized practices.

Importing States respond to the notice in three ways: giving consent (with or without conditions); denying permission; or requiring additional information. Written consent of the importing State and confirmation from the exporting State of the existence of a contract between the exporter and the disposer specifying environmentally sound management of the wastes is required. Where the terms of the contract cannot be fulfilled, the exporting State has a duty to reimport the waste. Written consent is also needed from the transit State(s). Written consent may include conditions on the supply of certain information, such as the exact quantities or periodic lists of hazardous wastes or other wastes to be shipped.

Notice and consent covers a 12-month period so long as the waste has the same characteristics and is shipped regularly to the same disposer through the same exit office of the exporting State, entry office of the importing State, and customs office of the transit State. In addition, importing States and transit States can require the wastes to be covered by insurance or other guarantee.

Traffic in waste is considered to be illegal where it is carried out: without notice to all the Parties concerned; without the consent of all Parties concerned; where consent of the State was obtained through falsification, misrepresentation or fraud; with lack of conformity in a material sense with the accompanying documents; or there was a deliberate disposal in violation of the Basel Convention or international law. If the waste is deemed to be illegal, the exporting State, or the exporter or generator, has a responsibility to take back the waste, or if this is impracticable, to dispose of it in accordance with the Basel Convention, within 30 days of receiving notice of the illegal traffic. Parties are required to introduce national or domestic legislation to prevent or punish illegal traffic.

### CITES

The 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) aims to protect certain endangered species from overexploitation by controlling the international trade. Trade in such species, their products and their derivatives are regulated under a system of import and export permits. Species are placed on different lists indicating the level of requirements to be fulfilled and the corresponding scope of documentation.

Appendix I to CITES includes all species that are threatened with extinction. Such species may not be traded unless authorized under exceptional circumstances. Appendix II includes species that are not necessarily threatened with extinction but may become so unless trade in specimens of such species is subject to strict regulation. Appendix III includes species that a Party had identified as being subject to regulation for the purposes of preventing or restricting exploitation and where it needs the cooperation of other Parties in controlling trade. Amendments to Appendices I and II must be decided by the Conference of the Parties, while States Parties themselves may enter species into Appendix III.

Trade in any species under any list is not permitted except in accordance with CITES. Exports require prior grant of and the presentation of an export permit, which is given upon meeting specific conditions and must be presented to the customs authorities. For Appendix I, II and III species, the Management Authority of the exporting State must be satisfied that the specimen was not obtained in contravention of that State's laws for the protection of fauna and flora. The importing State is not required to make a similar statement, deferring to the exporting State on matters of legality relating to the taking of the species. Additional requirements exist depending on the appendix in which the species is listed. Exceptions from these requirements are made for transit or trans-shipment of species; specimens that were personal or household effects; specimens that were acquired prior to CITES applying to the specimen; non-commercial trade between scientists or scientific institutions in certain specimens; or certain specimens that are part of a travelling zoo, circus or other travelling exhibition. Parties may also make reservations from CITES for a listed species, upon becoming a party to CITES or upon an amendment to the appendix by the Conference of the Parties.

For Appendix I species, trade is strictly limited. Trade must not be detrimental to the survival of the species, must not be primarily for commercial purposes and must not be in relation to a species obtained in violation of the exporting State's laws. Any instance of trade in listed specimens requires a permit from both the importing and the exporting State. Certificates are required also for re-export of specimens.

Commercial trade in Appendix II specimens is allowed if it is not detrimental to the survival of the species and the specimen was not obtained in contravention of the exporting State's laws. An export permit is required and must be provided to the importing State's customs authorities.

Trade in Appendix III specimens requires the Management Authority of the exporting State to issue an export permit. Importers must verify that the shipment is accompanied by an export permit, if the shipment is from a State which has listed that species in Appendix III, or a certificate of origin, if from another State.

### Rotterdam Convention

The 1998 Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, which is not yet in force, aims to promote cooperation in and shared responsibility for the international trade in hazardous chemicals. The Convention applies to banned or severely restricted chemicals and severely hazardous pesticide formulations. Similar in principle to the system of prior notification and consent under the Basel Convention, under the Rotterdam Convention importing countries are given the power to determine whether they wish to import the chemical or ban it because of concerns that it cannot be managed safely. Exports of a chemical may take place only with the prior informed consent of the importing Party.

Annex III to the Convention lists the several pesticides and industrial chemicals that are to be controlled for health or environmental reasons. Each Party must notify the Convention Secretariat of its final decisions on the future import of these chemicals, indicating whether the Party will consent or not consent to such imports or whether it will give consent under certain conditions; or it must provide an interim response consenting with or without conditions or not consenting to the import; or it must provide a statement that the decision is under active consideration; or it must submit a written request to the Secretariat for more information or a request to the Secretariat for assistance in evaluating the chemical. Parties must transmit to the Secretariat responses with respect to each chemical listed in Annex III.

If a Party notifies the Secretariat that it will not consent or will consent with conditions to the import, it must also simultaneously prohibit or subject to the same conditions the import of the chemical from any source and also domestic production of the chemical for domestic use.

Where a chemical that is banned or severely restricted by a Party is exported from its territory, that Party must provide an export notification to the importing Party, including: the name of the chemical; a statement relating to the foreseen use of the chemical; and information on precautionary measures to reduce exposure to and emissions of the chemical. This notification must be provided prior to export after final regulatory action has been taken. However, the requirement to provide export certification may be waived by the designated national authority of the importing Party. Export notification is no longer required once the chemical has been listed in Annex III, the importing Party has provided a response to the Secretariat for that particular chemical and the Secretariat has distributed that Party's response to the other Parties.

Once the Convention has entered into force, the Conference of the Parties must encourage the World Customs Organization to assign a specific Harmonized System customs code for each Annex III chemical. Once the code has been assigned to the chemical, the shipping document must bear that code when exported. The Parties must require that Annex III chemicals, and chemicals banned or severely restricted, are subject when exported to labelling requirements that ensure adequate availability of information regarding risks and/or hazards to human health or the environment, taking into account international standards.

### Stockholm Convention

The Stockholm Convention on Persistent Organic Pollutants was signed in 2001 and is not yet in force. The objective of the Convention is to protect human health and the environment from persistent organic pollutants. Parties are required to prohibit or take measures necessary to eliminate the production and use of the substances listed in Annex A to the Convention, and their import and export. Production and use of the chemicals listed in Annex B must be restricted. Parties are required also to ensure that substances listed in Annex A and B are imported only for the purpose of environmentally sound disposal or for a use permitted for each Party as prescribed in either Annex A or B. Chemicals that are listed in Annex A and for

which any production or specific use exemption may be in effect may be exported only under specific conditions. This applies mutatis mutandis for Annex B substances for which any production or specific use exemption or acceptable purpose is in effect.

Both Annex A and B chemicals may be exported only for the purpose of environmentally sound disposal or to a Party that is permitted to use that chemical under Annex A or B, or to a non-Party that has provided an annual certification to the exporting Party.

Certification must specify the intended use of the chemical and include a statement that the importing State is committed to protecting human health and the environment by taking the necessary measures to minimize or prevent releases, and that State must take certain measures to reduce or eliminate wastes and releases from stockpiles. Also, in the case of DDT, currently the only substance in Annex B, the importing State must undertake to use the substance only for disease vector control in accordance with World Health Organization recommendations. Certification must also include copies of the applicable legislation, regulatory instruments, or administrative or policy guidelines.

### Cartagena Protocol

The Cartagena Protocol on Biosafety was agreed in 2000 but is not yet in force. The objective of the Protocol is to contribute to ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms (LMOs) resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity. The Protocol places specific emphasis on transboundary movements of LMOs. The development, handling, transport, use, transfer and release of any LMO must be undertaken in a manner that prevents or reduces the risks to biological diversity, taking into account also risks to human health.

The advance informed agreement procedure governs the import of LMOs for intentional introduction into the environment but not LMOs intended for direct use as food or feed, or for processing. For the former, the exporter is required to notify, in writing, the competent national authority of the Party of import. The Party of import must acknowledge receipt of the notification, although failure to do so does not imply consent to the import. The Party of import is then required to inform the notifier, and the Protocol's Biosafety Clearing House, in writing, whether the transboundary movement may proceed. In its decision, the Party of import must either approve the import, with or without conditions, including a statement of how the decision will affect future imports; or prohibit the import; or request additional information in accordance either with the its domestic regulatory framework or with Annex I to the Protocol. Decisions must be made following a risk assessment carried out by the importer, although the importer may allocate the costs of the assessment to the notifier.

For LMOs intended for direct use as food or feed, or for processing, the procedure is somewhat different: a Party that makes a decision regarding domestic use of these types of LMOs, which may be subject to transboundary movement, must inform all Parties of its decision through the Biosafety Clearing House. The notification must include all the information required under Annex II to the Protocol. Copies of any national laws, regulations and guidelines related to the import of LMOs must also be provided. Lack of scientific certainty and knowledge regarding the extent of the potential adverse effects of a living modified organism on the conservation and sustainable use of biological diversity may not preclude a Party from taking a decision not to allow the importation of LMOs.

The Protocol also allows Parties to act in accordance with a simpler procedure: provided that adequate measures are applied to ensure the safe, intentional transboundary movement of LMOs, a Party may communicate to the Biosafety Clearing House cases where movement of LMOs may take place simultaneously with notification, or notify it of imports that are exempt from the advance informed agreement procedure.

Parties are required to take necessary measures to ensure that LMOs are handled, packaged and transported under conditions of safety, taking into consideration relevant international rules and standards. Documentation accompanying shipments of LMOs intended for direct use as food or feed, or for processing, must clearly indicate that they may contain living modified organisms and are not intended for intentional introduction into the environment, and must also specify a contact point for further information. Two years after the entry into force of the Protocol, the Parties must agree on detailed requirements, including specification of the identity of LMOs and any unique identification.

Information must also be provided for LMOs that are for contained use, clearly identifying them as living modified organisms, and specifying any requirements for their safe handling, storage, transport and use and specifying the contact point for further information, including the name and address of the individual and institution receiving the consignment of LMOs. LMOs for intentional introduction into the environment must be clearly identified as LMOs and their identity and relevant traits and characteristics must be specified, together with any requirements for safe handling, storage, transport and use, the contact point for further information and, as appropriate, the name and address of the importer and exporter; also, they must be accompanied by a declaration that the movement is in conformity with the requirements of the Protocol applicable to the exporter.

Where domestic rules implementing the Cartagena Protocol in the import of LMOs have been violated, Parties are required to impose penalties for the transboundary movements in violation of those rules. Where an illegal transboundary movement has occurred, the importing Party may request the Party of origin to dispose of the LMOs by repatriation or destruction. Rules regarding liability and damages must be formulated by the Parties once the Protocol has entered into force.

#### Kimberley Process on conflict diamonds

The Kimberley Process to identify and eliminate the trade in conflict diamonds was initiated by the Government of South Africa in May 2000. In December 2000, United Nations General Assembly resolution 55/56 expanded this work into devising a simple and workable international certification scheme for rough diamonds based primarily on national certification schemes and internationally agreed minimum standards.<sup>24</sup>

As of late 2001, the process had not been finalized, but several principal elements of the control system are emerging from discussions. Basically, national authorities will issue certificates which will be cross-checked at point of import; internal controls involve industry participants and allow third-party auditing and verification of their actions.

Under the Kimberley Process certification scheme, national authorities of countries where diamonds are mined will be obliged to establish an import and export authority empowered to issue a certificate of origin, otherwise known as a Kimberley Process certificate, providing information in accordance with certain minimum standards attesting to the legal, verifiable and validated origin of diamonds for export. These minimum standards are specified in an annex to the draft Kimberley Process agreement and, if the Process succeeds, the scheme should enable considerable additional tax revenues to be collected by exporting countries. Under the scheme, all Kimberley participants must impose a requirement for a duly validated certificate to be produced before import is allowed and, on receipt of the certificate, the data it contains must be expeditiously transmitted back to the exporting authority.

The scheme introduces also independent monitoring of trade controls as the understanding was reached that any system of diamond industry self-regulation can be effective only if it provides for independent auditing, full traceability of transactions, including transactions in rough diamonds, and internal penalties by the industry. To ensure cooperation and transparency, the scheme specifies clear lines of communication between Parties and provides for mutual assistance in enforcement.

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24. See A/RES/55/56, para. 3.

One clear point where the Kimberley scheme is likely to differ from other trade controls is in the use of tamper-resistant containers, lessening the monitoring burden for trans-shipments.

#### Lessons for the control of illegal trade

The MEAs in force with which there is most experience, CITES and the Basel Convention, both require paper certificates or movement documents to accompany the traded goods. A key weakness of both systems is that the documents themselves acquire a value as a result, opening up possibilities for fraud and for theft, and for corruption in issuing them. Falsification of CITES permits is a common problem, particularly for high-value products such as caviar. The theft and sale of blank documents similarly undermines the system, whereas the vast majority of the illegal trade in hazardous waste is believed to involve falsified documentation.

A second key weakness lies in the lack of systematic cross-checking of documents and certificates. The World Conservation Monitoring Centre (WCMC), once a non-governmental organization and now part of UNEP, monitors the legal trade taking place not only under CITES but also under a number of other MEAs such as the Bonn Convention on Migratory Species, receiving copies of all import and export permits issued. Although strictly speaking it is not part of the WCMC mandate to investigate illegal trade, simple inspection of the permits sometimes reveals fraud. However, in common with all other MEAs, CITES lacks a comprehensive and independent system for monitoring and verifying the issuance and use of permits or for central reporting of data. The Kimberley Process on conflict diamonds, on the other hand, should provide for a cross-checking procedure which may prove more effective.

The third key weakness lies in the lack of systematic cross-checking of the documents against what is actually in the shipment. Only a tiny fraction of the huge volume of goods in international trade can ever be physically inspected. In the case of CITES, there are obvious problems in correctly identifying species out of the almost 25,000 which are listed. For the Basel Convention, hazardous waste can often be difficult to distinguish from non-hazardous wastes; indeed, the two are sometimes deliberately mixed together. In the case of such wastes, there is also an understandable reluctance on the part of customs officers to carry out inspections.

Even in highly developed countries it is clear that the CITES permit system is subject to abuse. An analysis of mahogany imports into the United States of America in 1997 and 1998<sup>25</sup> – mahogany is the most commonly traded timber species listed by CITES – estimated that at least 25 per cent of sawnwood imports, worth more than \$17 million a year, were illegal. The figure did not include trade unreported to United States of America customs and the true figure is therefore likely to be much higher.

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25. Arthur G. Blundell, "Mahogany: Unregulated Trade", United States of America Environmental Protection Agency, 2000.

Annex III

Seized ODS and ODS product/equipment decision matrix \*\*\*

Options	Ozone-depleting substances, e.g. CFC refrigerants, methyl bromide, etc.	Products containing ODS, e.g. aerosol cans, foams, paint, etc.	Equipment based on ODS, e.g. refrigerators, air-conditioners, etc.
<b>Re-export</b> to the country of origin or to any Party-country that wishes and which is entitled to legally import the seized goods	Cost for re-export to be borne by importer <ul style="list-style-type: none"> <li>risks to be smuggled again if auctioning off and disposal are not possible</li> </ul>	Cost for re-export to be borne by importer <ul style="list-style-type: none"> <li>risks to be smuggled again if disposal is not possible</li> </ul>	Cost for re-export to be borne by importer <ul style="list-style-type: none"> <li>risks to be smuggled again if retrofitting and disposal are not possible</li> </ul>
<b>Auctioning off</b> to a licensed importer and deducting the quantity from the importer's allowance	<b>If the import of ODS is not banned</b> <ul style="list-style-type: none"> <li><b>replaces legal imports</b></li> </ul>	If the import of ODS-containing products is not banned <ul style="list-style-type: none"> <li>usually there are no allowances for imports of products containing ODS to be avoided</li> </ul>	If the import of ODS-based equipment is not banned <ul style="list-style-type: none"> <li>usually there are no allowances for imports of equipment based on ODS</li> <li>increases the country's dependency on ODS to be avoided</li> </ul>
<b>Mandatory retrofitting</b> of ODS-based equipment by certified service company	Not applicable	Not applicable	<b>Cost for retrofitting to be born by illegal importer or by licensed importer who bought the equipment from Customs</b>
<b>Disposal or destruction</b> of the seized goods <ul style="list-style-type: none"> <li>cost to be borne by illegal importer or customs</li> <li>proper waste management practices should be applied</li> </ul>	If Montreal Protocol approved destruction technologies are available <ul style="list-style-type: none"> <li>if auctioning off is not possible</li> </ul>	<b>Recover ODS before disposal for re-use or disposal (not possible for paints or foams)</b>	Recover ODS and other working fluids before disposal for re-use or disposal if retrofitting is not possible
<b>Long-term storage</b> intermediate option which is costly for customs and requires final solution	If re-export, auctioning or disposal is not possible <ul style="list-style-type: none"> <li>to be avoided</li> </ul>	If re-export, auctioning or disposal is not possible <ul style="list-style-type: none"> <li>to be avoided</li> </ul>	If re-export, auctioning, retrofitting or disposal is not possible <ul style="list-style-type: none"> <li>to be avoided</li> </ul>

Note: ODS contained in imported products or equipment does not count towards a country's ODS consumption since it already counted towards the consumption of the exporting / producing country.

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\*\*\* Source: UNEP/DTIE Training Manual for Customs Officers, p. 47.