



# HANDBOOK ON

# Data Reporting under the Montreal Protocol



United Nations Environment Programme  
Division of Technology, Industry and Economics  
OzonAction Programme



Multilateral Fund for the  
Implementation of the Montreal Protocol

# **Handbook on Data Reporting under the Montreal Protocol**



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## Foreword

Data on the production and consumption of ozone depleting substances (ODS) are literally the cornerstones that underpin the entire Montreal Protocol process: without reliable and timely data provided by all Parties, decision-makers at the national, regional and international levels could not formulate appropriate control measures, devise realistic phase-out strategies, or provide the necessary financial and technical assistance required by developing countries. The accurate, timely, and comprehensive reporting of data has therefore emerged as one of the key issues facing the Protocol today.

Recognising this, the Parties at their Ninth Meeting (Montreal, 15-17 September 1997) emphasised the importance of reporting data and the need for all Parties to give it greater consideration. Within this context, they requested the UNEP Industry and Environment centre to prepare a handbook to assist all Parties with fulfilling their data reporting obligations (Decision IX/28). This handbook has been prepared in response to that request, as part of UNEP's March 1998 Work Programme Amendment under the Multilateral Fund. The handbook reflects the latest decisions of the Parties taken at their Tenth Meeting (Cairo, 23-25 November 1998).

Data reporting is crucial for all Parties, not only for fulfilling their external obligations under the Protocol and its Amendments, but also internally for verifying their position vis-à-vis their national strategies to phase out ozone depleting substances. It should therefore be viewed as a useful tool, not simply as a requirement.

Reliable data reporting is particularly crucial for Article 5 countries, which will soon face their first control measure: the freeze in their consumption and production of Annex A CFCs at their 1995-1997 levels by 1 July 1999. Soon after, by 1 January 2002, the next freeze targets will come into effect for halons and methyl bromide, and subsequent control measures requiring consumption reductions will follow. Understanding and following the correct data reporting procedures will therefore be crucial for the establishment of the freeze levels and the subsequent progressive reductions of those ODS.

The handbook was developed in co-operation with the Ozone Secretariat, the Multilateral Fund Secretariat, and the other Implementing Agencies, and quality re-viewed by experts from ozone units, research institutes, and industry in Article 5 countries, developed countries, and Countries with Economies in Transition. The handbook, then, reflects the full diversity of perspectives and the breadth of knowledge of this representative slice of the Montreal Protocol community.

Though specifically written for National Ozone Units (NOUs) in Article 5 (i.e. developing) countries, the handbook will also be useful for Article 7 data reporting by non-Article 5 (i.e. industrialized) countries.

To make this document as widely available as possible to all Parties, it will be published in hard copy in six languages (Arabic, Chinese, English, French, Russian and Spanish) and be accessible through the NOU Support Centre on the OzonAction Programme's web site (<http://www.unepie.org/ozonaction.html>).

The UNEP TIE OzonAction Programme hopes that this publication will enable all Parties to provide accurate, comprehensive, and timely data as per their specific obligations.



# Annual Data Reporting to the Ozone Secretariat at a Glance



UNEP

Ozone Secretariat

## Who has to report?

All Parties to the Montreal Protocol.

## When do I have to report?

Annual data reports to the Ozone Secretariat in Nairobi are due by **30 September** of each year and have to contain data related to the previous year.

## What data do I have to report?

There are eight groups of controlled substances on which you may be obliged to report. These are contained in Annexes to the Montreal Protocol: CFCs and halons (Groups I and II of Annex A), other fully halogenated CFCs, carbon tetrachloride and methyl chloroform (Groups I, II and III of Annex B), HCFCs and HBFCs (Groups I and II of Annex C) and methyl bromide (Annex E). A country's data reporting on these groups is dependent on its ratification of the Montreal Protocol and its Amendments (➔ Section 1.1 of this Handbook).

In general, all countries are required to report on certain categories: imports, exports, production, some exempted categories of data as well as trade with Non-Parties. Whether you have to report on the categories is largely dependent on the specific characteristics of your country (➔ Section 1.1).

## Which Data Forms do I have to use?

There are 5 Data Forms provided by the Ozone Secretariat for annual data reporting by all the Parties (➔ Annex I):

- Data Form 1 – **Imports,**
- Data Form 2 – **Exports,**
- Data Form 3 – **Production,**
- Data Form 4 – **Amounts Destroyed,**
- Data Form 5 – **Imports from and/or Exports to Non-Parties.**

## How can the data be collected?

Various techniques can be used to collect data on the different categories. Details on these techniques are provided in Chapter 2.

## Are there other reporting requirements?

Countries might have other reporting requirements (which are not covered by the Data Forms 1-5). A special data form is provided for data reporting on essential uses. (➔ Annex III). No forms exist for other reporting requirements and the required reporting frequency varies (➔ Section 1.1).

# Annual Data Reporting to the Fund Secretariat at a Glance

## Who has to report?

All Article 5 Parties whose Country Programmes have been approved by the Executive Committee of the Multilateral Fund.



*Fund Secretariat*

## When do I have to report?

Annual data reports to the Fund Secretariat in Montreal are due by **1 May** of each year and have to contain data related to the previous year.

## What data do I have to report?

You have to report annually on all substances controlled under the Montreal Protocol (CFCs, halons, other fully halogenated CFCs, carbon tetrachloride, methyl chloroform, HCFCs, HBFCs and methyl bromide) (➡ Section 1.1).

Data on consumption (use) by sector, imports, exports and production should be reported. The data reported to the Fund Secretariat should be consistent with the data reported to the Ozone Secretariat (➡ Section 1.2).

## Which Data Forms do I have to use?

There is one data form of the Fund Secretariat which has to be completed by the Article 5 Parties annually (➡ Annex II).

- Data Form A – **Data on controlled substances.**

In addition, a data form to report on baseline data (Data Form B – Data on controlled substances for the baseline year) is provided for use as appropriate (➡ Section 1.2 and Annex II).

## How can the data be collected?

Various techniques can be used to collect data on the different categories. Details on these techniques are provided in Chapter 2.

## Are there other reporting requirements ?

Information on administrative and supportive actions in the implementation of Country Programmes has to be provided to the Fund Secretariat along with annual data reports (➡ Data Form C included in Annex II.). Article 5 Parties may also have to report further information to the respective Implementing Agency. To find out more about these requirements please contact the Implementation Agency in charge of your institutional strengthening project.



## Introduction

The Montreal Protocol on Substances that Deplete the Ozone Layer establishes the phase-out schedules for production and consumption of the most harmful ozone depleting substances (ODS). Different phase-out schedules apply to the industrialised and developing countries (➔ Section 5.1). The ODS phase-out is in different stages of implementation across the globe. Eventually, production and consumption of ODS need to be phased out globally. Only then will the ozone layer be able to recover.

### The Importance of Data Reporting

Monitoring of the implementation of ODS phase-out relies on data reporting to the Ozone Secretariat in Nairobi and the Multilateral Fund Secretariat in Montreal by the Parties to the Montreal Protocol. Under the Protocol, data reporting is a legal obligation for the Parties.



The Ozone Secretariat uses the data submitted by the Parties to assess compliance with the agreed phase-out schedules. The data also serve as the basis for monitoring the progress of the global efforts to protect the ozone layer and identifying any problems with reaching a timely transition to ozone-friendly alternatives. This enables the Parties to the Montreal Protocol to take timely action, if needed, so as to protect the ozone layer effectively.

Data reporting by developing countries to the Fund Secretariat enables the Multilateral Fund to assess the success of its efforts to support a smooth ODS phase-out in developing countries. It also provides the basis of planning the future activities of the Multilateral Fund including the efficient allocation of resources among the Parties.

For the Parties, collecting the necessary data will not only serve the purpose of fulfilling the reporting requirements under the Protocol. Such data collection is also essential as a sound basis for monitoring the national phase-out of ODS, planning further measures and developing national phase-out strategies. It involves more than adding and subtracting figures, namely employing specific data collection techniques (➔ Chapter 2).

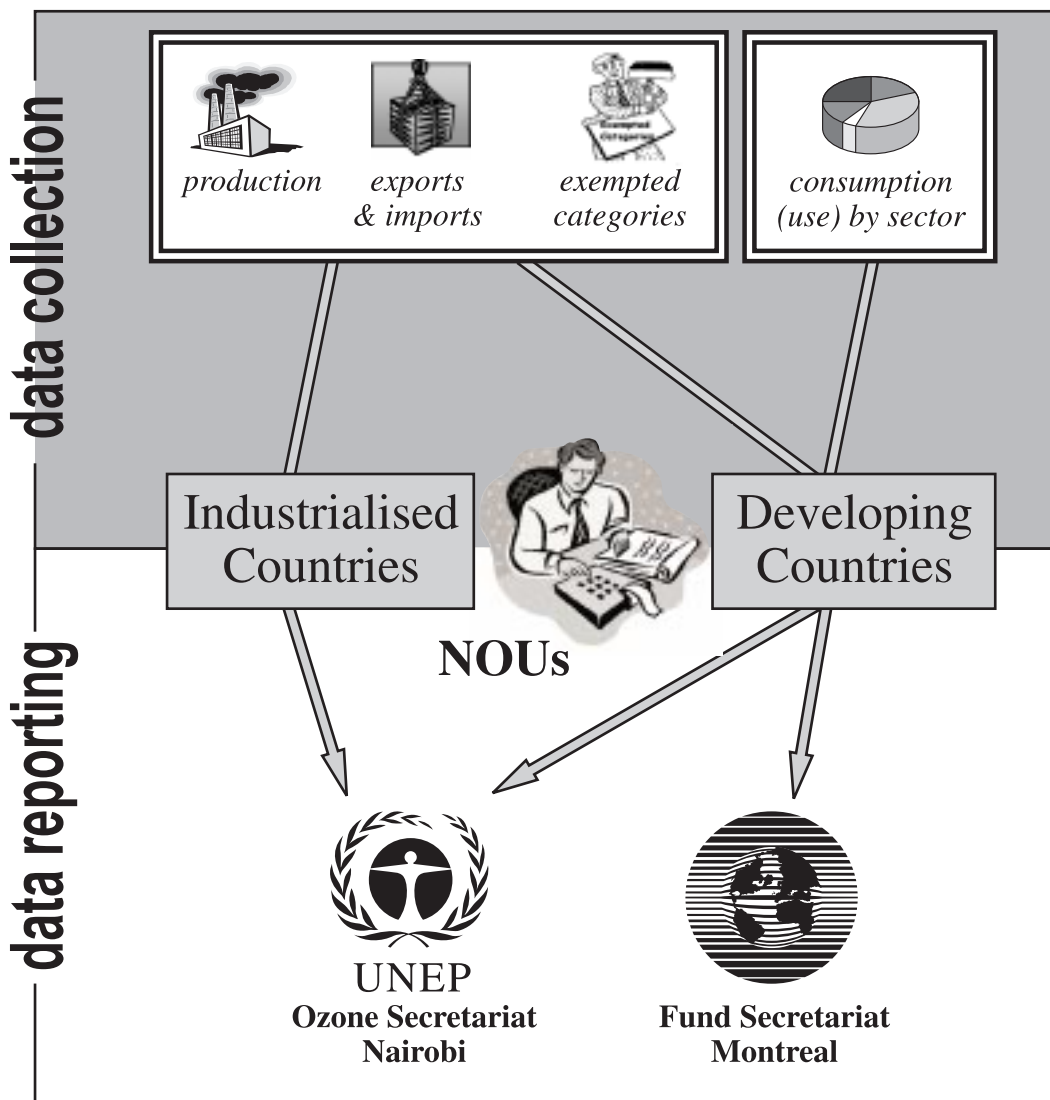
### The System of Data Reporting

For everyone involved in data reporting, it is important to be aware of the process of data reporting itself. On the one side, usually the governmental National Ozone Unit (NOU) collects the necessary information from various sources and reports it to the Ozone or the Fund Secretariat. On the other side, the Ozone Secretariat and the Fund Secretariat receive the data from the NOUs. The Secretariats assess fulfilment of reporting requirements, and analyse the information contained in the country data reports submitted by the NOUs.

As the NOUs have to report data to the individual Secretariats, each with differing data requirements, the two streams of data reporting have to be distinguished (➔ Figure 1):

1. All Parties have to collect and submit annually data on production, imports and exports of ODS in accordance with Article 7 of the Protocol to the Ozone Secretariat located in Nairobi (➔ Section 1.1).
2. Developing country Parties operating under Article 5 of the Protocol and receiving assistance from the Multilateral Fund are required to submit data to the Fund Secretariat in Montreal. Data on production, imports, exports and consumption (use) by sector need to be reported in the course of preparing Country Programmes as well as annually thereafter (➔ Section 1.2).

**Figure 1: The Data Reporting System under the Montreal Protocol**



Upon receiving data reports by the Parties, the Ozone Secretariat will calculate production and consumption of the different groups of controlled substances and report these data to the Meeting of the Parties (➔ Chapter 5). On the basis

of these data, it will assess compliance with the phase-out schedules and report to the Implementation Committee under the Non-Compliance Procedure for the Montreal Protocol, if required.

The Fund Secretariat will also do some limited calculation of the data received (including conversion of metric tons to ODP tons, ➔ Glossary) and report them to the Executive Committee of the Multilateral Fund. The latter will then use the data to assess how the ODS phase-out is progressing as a basis for its planning of support to Article 5 Parties.

Under the Protocol,

$$\text{Consumption} = \text{production} + \text{imports} - \text{exports}$$

This consumption should not be mistaken for actual consumption (use) by sector to be reported to the Fund Secretariat. Consumption (use) by sector refers to ODS use in individual sectors. Production is defined as gross production *minus* amounts destroyed *minus* amounts used as feedstock (➔ Glossary).

Developing countries should make sure that the same government office reports data to both Secretariats. Ideally, this should be the NOU. In addition, data should be collected and data reports sent to the two Secretariats at the same time, if possible, to reduce any discrepancies.

## How to Use this Handbook

The Handbook on Data Reporting is structured to give the user a tool for reference when preparing and submitting data reports to the Ozone and Fund Secretariats. Proper reporting of data involves four main Tasks and one Good Practice:



**Task 1:** Identify your country's reporting obligations.

**Task 2:** Collect the necessary data.

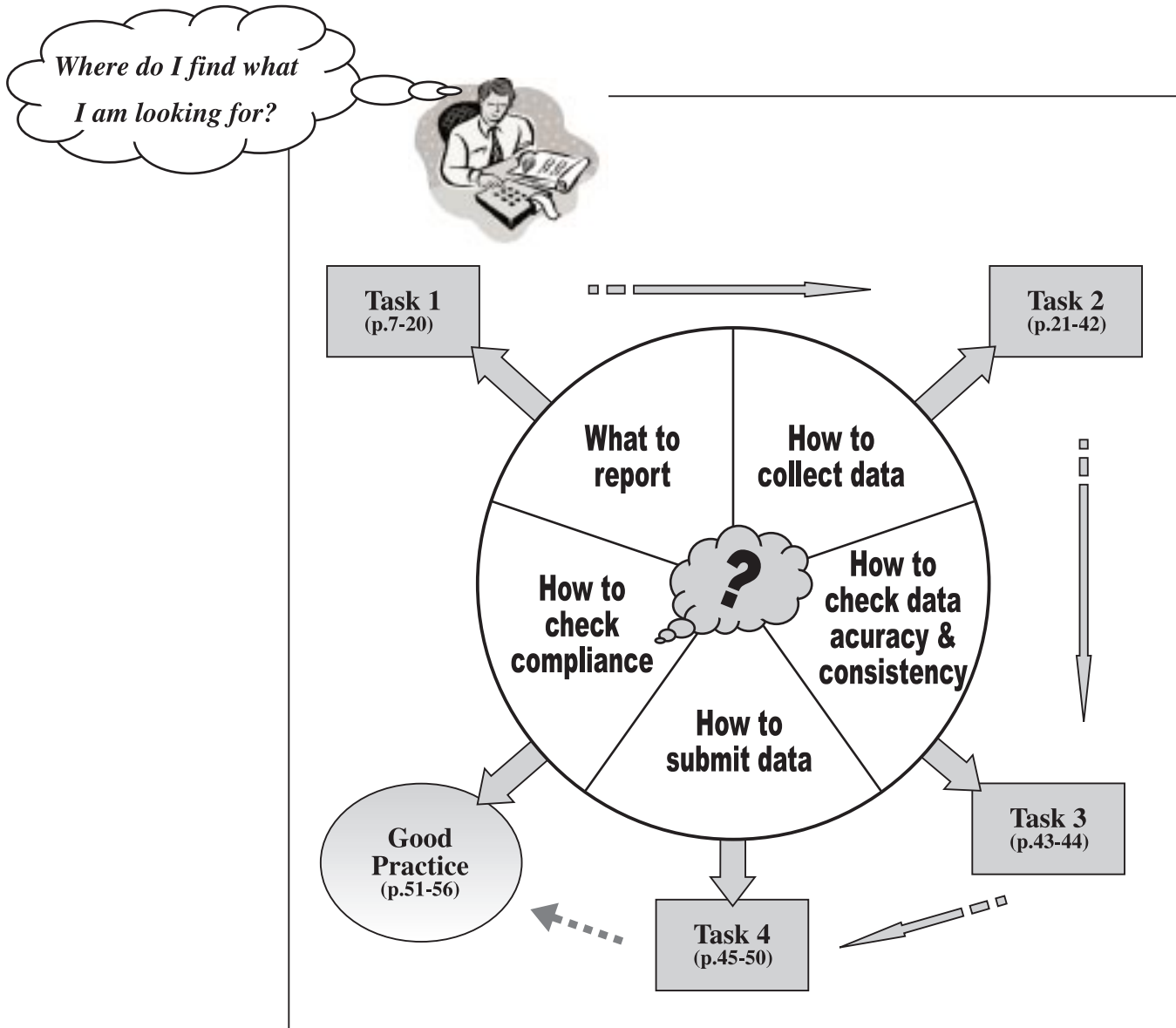
**Task 3:** Check the data for accuracy and consistency.

**Task 4:** Communicate the data to the Ozone and Fund Secretariats in the proper prescribed formats.

### Good

**Practice:** How to check your own compliance with the phase-out schedules under the Montreal Protocol.

Guidance on how to accomplish the four Tasks and conduct the Good Practice is provided in the subsequent five Chapters. You can also refer to the individual Chapters depending on your needs. For example, if you know your country's reporting obligations, but are uncertain about how to collect the necessary data, then you should go to Task 2 in Chapter 2. Here again you can select the data categories (imports, consumption (use) by sector, exports, production, exempted categories) according to your needs.



If questions remain unanswered after referring to the relevant sections of this Handbook, you may contact a number of different institutions or consult appropriate literature. Relevant addresses and references are given in Chapter 6.



















The Glossary of Terms will assist you in clarifying the meaning of the central terms of data reporting under the Montreal Protocol. The Annexes contain the data forms to be used for reporting to the two Secretariats (Annexes I-III) and some material that may assist NOUs in fulfilling the different Tasks

involved in reporting properly under the Montreal Protocol. The Index will guide you to the sections of the Handbook that deal with specific topics of interest to you.

Throughout the Handbook, Decisions of the Meeting of the Parties to the Montreal Protocol are referred to. The full decisions can be found in the *Handbook for the International Treaties for the Protection of the Ozone Layer and its 1997 Update* (➔ Section 6.2). The following symbols are repeatedly used:



*These symbols indicate:*

	=	<i>Ozone Secretariat Nairobi</i>		=	<i>Licensing system</i>
	=	<i>Fund Secretariat Montreal</i>		=	<i>Customs data</i>
	=	<i>National Ozone Units</i>		=	<i>Information from importers/exporters</i>
	=	<i>Production</i>		=	<i>Estimating/ calculating data</i>
	=	<i>Imports &amp; exports</i>		=	<i>Common questions and answers</i>
	=	<i>Consumption (use) by sector</i>		=	<i>For further information</i>
	=	<i>Exempted categories</i>		=	<i>Particularly important</i>
	=	<i>Additional reporting requirements</i>		=	<i>Go to ...</i>
	=	<i>Due date for reporting</i>		=	<i>For example</i>





## 1. Task 1: Identify Your Country's Reporting Obligations

Each NOU has to determine its country's reporting obligations. All Parties to the Montreal Protocol are obliged to report data annually to the Ozone Secretariat in Nairobi (➔ Section 1.1). Developing country Parties operating under Article 5 of the Protocol (Article 5 Parties) and receiving assistance from the Multilateral Fund also have to submit data annually to the Fund Secretariat in Montreal (➔ Section 1.2). This Chapter provides guidance for identifying your country's data reporting requirements to both Secretariats. It includes information on consequences of non-reporting and further reporting requirements.

### 1.1 What to Report to the Ozone Secretariat and by When

According to Article 7 of the Montreal Protocol, all Parties have to report data to the Ozone Secretariat in Nairobi, using the approved data forms contained in Annex I. In identifying your country's data reporting obligations to the Ozone Secretariat, you have to answer the following questions:



➔ **Which substances** do I have to report on?

➤ *go to p. 7*

➔ **Which categories** of data do I have to report on?

➤ *go to p. 9*

➔ For **which years** do I have to report data?

➤ *go to p. 14*

➔ **When** do I need to report?

➤ *go to p.14*



#### ➔ **Which Substances?**

Your country's reporting obligations can refer to ODS contained in different groups listed in the Annexes of the Montreal Protocol. There are currently eight such groups:

Table 1: Groups of ODS Controlled by the Montreal Protocol

	Annex	Group	Substances
<b>Montreal Protocol</b>	A	I	<b>fully halogenated CFCs:</b> CFC-11, CFC-12, CFC-113, CFC-114, CFC-115
		II	<b>Halons:</b> halon-1211, halon-1301, halon-2402
<b>London Amendment</b>	B	I	<b>other fully halogenated CFCs:</b> CFC-13, CFC-111, CFC-112, CFC-211-217
		II	<b>Carbon Tetrachloride</b>
		III	<b>Methyl Chloroform (1,1,1-trichloroethane)</b>
	C	I	<b>HCFCs</b>
<b>Copenhagen Amendment</b>	C	II	<b>HBFCs</b>
	E	I	<b>Methyl Bromide</b>

For the purposes of this Handbook, these groups are referred to as “A I,” “A II” substances etc.

The **Montreal Protocol of 1987** regulated only the two groups of substances in Annex A of the Protocol. By an Amendment adopted in London in 1990 (the **London Amendment**), Annex B substances were included for control in the Protocol and HCFCs (C I) were included only for reporting. Another Amendment agreed upon in Copenhagen in 1992 (the **Copenhagen Amendment**), further introduced HCFCs (C I), HBFCs (C II) and methyl bromide (E I) as controlled substances (for the applicable control measures ➔ Section 5.1).

Countries have a legal obligation to submit data to the Ozone Secretariat to the extent that they have ratified the respective amendments:

- If your country has ratified the Montreal Protocol of 1987, you have to report on each substance listed in Annex A.
- If your country has also ratified the London Amendment, you have to report on each substance listed in Annexes A, B and C I.
- If your country has also ratified the Copenhagen Amendment, you have to report on all controlled substances.

**Box 1: Status of Ratification and Identification of Non-Parties**

Information on the status of ratification by each Party to the Montreal Protocol is regularly updated by the Ozone Secretariat. It is available as a document (UNEP/OzL.Rat/[No]) and at its website at <<http://www.unep.org/unep/secretar/ozone/ratif.htm>>. Non-Parties are countries whose names do not appear on the list of ratifications. Any questions about the status of a particular country as a Party or Non-Party should be directed to the Ozone Secretariat.



Even if your country has not yet ratified some or all of the Amendments or if ratification is still in process, you are welcome to report on all the substances listed on the data forms reproduced in Annex I. It will be useful for planning and implementing your country's ODS phase-out if you collect and report the data on all controlled substances even before formal ratification.

**Box 2: Bulk Substances**

Note that data reporting is only required on bulk substances, i.e. on ODS in containers used for transportation and storage. Bulk substances are not part of a "use system" (a product that is applied directly to realise its intended use; e.g. a refrigerator or a fire extinguisher). They need to be transferred from a bulk container to another container or piece of equipment in order to realise their intended use. Therefore, ODS contained in imported/exported equipment like refrigerators, air conditioners, heat pumps, foam pre-polymers, foams, spray cans, fire extinguishers or an installed container incorporating a release device are not subject to reporting (Decision I/12A). Bulk ODS shipped together with equipment need to be reported. However, methyl bromide in cylinders and any other container is regarded as a bulk substance, even if it can be used directly from the container (Decision VIII/14). Refer to Decisions I/12A and VIII/14 of the Meeting of the Parties for more detail.

**Which Categories of Data?**

According to Article 7 of the Montreal Protocol, each Party is required to report on three main categories of data: **imports**, **exports** and **production** for each of the controlled ODS. Data on these main categories have to be reported in specific forms contained in Annex I (Data Forms 1, 2 and 3). Additional data forms exist for amounts destroyed (Data Form 4), and imports from and exports to Non-Parties (Data Form 5). The specific data categories to be reported in the data forms are the following:



imports



exports



productions

for example



- Data Form 1 on Imports.** Parties need to report data on all bulk ODS (➔ Box 2 on p. 9) imported, irrespective from where and for what purposes, using this data form. The total imports to be reported are divided into imports of new (virgin) substances and imports of recovered or reclaimed substances (used substances, ➔ Glossary). Imports of some exempted categories (feedstock, essential uses and methyl bromide for quarantine and pre-shipment applications [QPS]), which form part of the total imports of new (virgin) substances, have to be reported separately in the same data form (➔ Instruction I in Annex I).
- Data Form 2 on Exports.** Parties are required to report data on all bulk ODS (➔ Box 2 on p. 9) exported, irrespective to where and for what purposes, using this data form. The total exports to be reported are divided into exports of new (virgin) substances and exports of recovered or reclaimed substances (used substances, ➔ Glossary). Exports of some exempted categories (feedstock, essential uses and methyl bromide for QPS), which form part of the total exports of new (virgin) substances, have to be reported separately in the same data form. In addition, based on Decision VII/9 of the Meeting of the Parties, destinations of exports of Annex A and B substances have to be given (➔ Instruction II in Annex I).
- Data Form 3 on Production.** Parties that produce ODS have to report data on total production of ODS, irrespective of what purpose the ODS is finally put to. Production of some exempted categories (feedstock, essential uses, increased production and methyl bromide for QPS), which form part of the total production, has to be reported separately in the same data form (➔ Instruction III in Annex I).
- Data Form 4 on Amounts destroyed.** Parties that have destroyed ODS using approved technology can claim credit for this destruction by reporting the amounts destroyed (➔ Instruction IV in Annex I). This special exempted category is dealt with in more detail on p. 12 (below).
- Data Form 5 on Import from and Export to Non-Parties.** Parties need to report data on ODS imported from and exported to Non-Parties using this data form. The amount reported in this data form should be part of the total imports and exports reported in the Data Forms 1 and 2. A Non-Party is defined by its status vis-à-vis the Montreal Protocol of 1987, the London Amendment and the Copenhagen Amendment respectively. A country Party to the Montreal Protocol that has ratified the London, but not the Copenhagen Amendment, for example, is considered a Non-Party with respect to Annex C and E substances (➔ Instruction V in Annex I). Most of the major (known) exporters of Annex A and B substances are Parties to the Montreal Protocol and the London Amendment. For guidance on identifying Parties and Non-Parties refer to Box 1 on p. 9.

A Questionnaire is included with the instructions for filling the data reporting forms of the Ozone Secretariat (➔ Annex I). This Questionnaire should guide you in identifying which categories of data need to be reported for your country. You might wish to consider the following while assessing whether your country has to report data on the main categories imports, exports and production (Data Forms 1, 2 and 3):

- Almost all Parties have to report **imports** of ODS (Data Form 1).
- If your country produces ODS for export or re-exports ODS without being a producer, you will have to report on **exports** of ODS (Data Form 2). A limited number of countries act as re-exporters. Some 20 non-producing Parties have reported on exports of ODS for 1995/96. More countries might re-export without having reported data on such exports.
- Only a few countries currently have chemical manufacturers that produce ODS and thus have to report on **production** of ODS (Data Form 3). Table 2 lists countries that have reported production of ODS from 1986-1996. It might assist you in assessing whether your country produces ODS. However, production facilities can be established relatively easily in particular for manufacturing halons and carbon tetrachloride.

**Table 2: Producers of ODS 1986-1996**

Industrialised Countries	Group of Substances	Developing Countries	Group of Substances
Australia	A I, C I	Argentina	A I, B I + II, C I
Belarus	A I	Brazil	A I, B II + III, C I
Belgium	B II	China	A I + II, B II + III, C I, E I
Canada	A I, B II + III, C I, E I	India	A I + II, B II + III, C I, E I
Czech Rep.	A I, B I + II	Mexico	A I, B II, C I
France	A I + II, B II + III, C I, E I	North Korea	A I, B II + III
Germany	A I + II, B I, II + III, C I	Romania	A I, B II + III, E I
Greece	A I, C I	South Korea	A I + II, B II, C I
Israel	E I	South Africa	A I, B II, C I
Italy	A I + II, B II, C I	Venezuela	A I, C I
Japan	A I + II, B I, II + III, C I, E I		
Netherlands	A I, B I + II, C I		
Poland	B II		
Russia	A I + II, B I, II + III, C I		
Spain	A I, B II, C I		
Ukraine	B II, E I		
United Kingd.	A I + II, B I, II + III, C I		
USA	A I + II, B I, II + III, C I, E I		



**Note:** Argentina, China, India, North Korea and South Africa are Non-Parties to the Copenhagen Amendment.

Source: Data of the Ozone and Fund Secretariats.



exempted categories

**Exempted Categories:** As mentioned in the description of the data forms, you may need to report data on a number of categories that are exempted from controls (exempted categories). Whether you are required to submit data on these exempted categories in the Data Forms 1-4 depends on the specifications of your country. The following explanations might assist you in assessing whether your country has to report on exempted categories:

- **Feedstock.** Any amount of controlled ODS used in the production of other chemicals and transformed totally in this process is a feedstock. Imports, exports and production of ODS for use as feedstock have to be reported in Data Forms 1, 2 and 3 (➔ Annex I). Some 25 Parties have reported on feedstock for 1996; most of these countries have large chemical manufacturers. The feedstock exemption has also been applied to amounts of controlled substances used as **process agents** for 1996 and 1997 (Decision VII/10). Process agents are used in the production of other chemicals (e.g. as a catalyst) without being consumed. Only the ODS uses listed in Table 8 on p. 41 are considered as process agent uses. From 2002, only amounts of ODS used as process agents in plants and installations in operation before 1999 are exempted. In industrialised countries, this exemption applies provided that emissions of controlled substances have been reduced to insignificant levels (as defined in table B of Decision X/14). In developing countries, the exemption will be dependent on the emissions not exceeding levels agreed to be reasonable by the Executive Committee of the Multilateral Fund. All Parties have to submit separate data on imports and production for process-agent applications for 2000 and each year thereafter (Decision X/14). In industrialised countries, process-agent uses of ODS will continue to be treated in a manner similar to feedstock until 2001 (Decision X/14). Few countries use ODS as process agents. If needed, Parties may seek advice on their reporting obligations on process agents directly from the Ozone Secretariat.
- **Quarantine and pre-shipment applications (QPS).** Many Parties have to report on imports, exports and production of methyl bromide for QPS (➔ Data Forms 1, 2 and 3 in Annex I). Quarantine applications are uses of methyl bromide for combating and controlling quarantine pests (including diseases) so as to avoid their introduction or spreading. Pre-shipment applications are those treatments applied directly preceding and in relation to export of goods, to comply with official sanitary and phytosanitary requirements of the importing or exporting country (Decision VII/5). For a full definition of QPS ➔ the Definitions in Annex I of this Handbook.
- **Amounts destroyed.** Amounts destroyed refer to amounts of controlled substances that are destroyed using approved destruction technology. The amounts destroyed are to be calculated on the basis of the destruction efficiency of the facility employed. They are to be reported separately in Data Form 4 of the Ozone Secretariat (➔ Annex I). The Meeting of the Parties to

the Montreal Protocol has approved a number of destruction processes/technologies (➔ Annex IV). The operation of approved destruction facilities is subject to a code of good housekeeping, details of which are in Section 2.4 of the *Handbook for the International Treaties for the Protection of the Ozone Layer* (➔ Decision IV/11). Thus far, few countries have reported on amounts destroyed (less than 10 in 1996).



- **Used substances (recovered and reclaimed).** Used substances are ODS which have been recovered from machinery, equipment, etc. and recycled and/or reclaimed (for definitions ➔ Glossary). Imports and exports of such used ODS are to be reported separately in Data Forms 1 and 2 (➔ Annex I). Less than 15 Parties have reported imports or exports of used controlled substances in 1996.
- **Essential uses.** Parties may apply for an essential use exemption, which is subject to prior approval by the Meeting of the Parties, after total phase-out of a controlled substance. Reporting on essential uses is, therefore, not relevant for Article 5 Parties until the phase-out of ODS in 2010. Only few industrialised countries have been granted exemptions for essential uses and thus have to report on them in Data Forms 1, 2 and 3 (➔ Annex I) as well as in a separate data form on essential uses (➔ Annex III). In addition, a global essential use exemption has been granted for **laboratory and analytical uses** of Annex A and B substances until 2005 (Decision X/19). The conditions applied to the exemption for laboratory and analytical uses are contained in section 2.5 of the *Handbook for the International Treaties for the Protection of the Ozone Layer* of 1996. In addition, the Meeting of the Parties is to decide each year on any ODS use which should no longer be eligible under the exemption for laboratory and analytical uses, and from which date. The Ozone Secretariat will make available a consolidated list of uses that are no longer eligible (Decision X/19).
- **Increased production.** Producer countries are allowed to increase production, above control levels, to meet the basic domestic needs of Article 5 Parties. This allowance is restricted to 10% of 1986, 1989 and 1991 levels of Annex A, B and E substances respectively and increases to 15% after total phase-out. The provision is currently relevant only to industrialised countries. It will become applicable to developing country producers when their production becomes subject to controls, i.e. in mid-1999 for CFCs (➔ Section 5.1). Increased production is to be reported in Column 6 of Data Form 3 (➔ Annex I).



In the following table, all data categories you may have to report on in the data forms of the Ozone Secretariat are summarised (➔ Annex I).



**Table 3: Reporting Obligations to the Ozone Secretariat**

<i>Data Form 1:</i> <b>Imports</b>		<i>Data Form 2:</i> <b>Exports</b>		<i>Data Form 3:</i> <b>Production</b>	<i>Data Form 4:</i> <b>ODS Destroyed</b>	<i>Data Form 5:</i> <b>Trade with Non-Parties</b>
<i>Total Imports of:</i>		<i>Total Exports of:</i>		• Total Production	• amounts destroyed	• imports from Non-Parties • exports to Non-Parties
• new ODS	• used ODS	• new ODS	• used ODS			
<i>for:</i>		<i>for:</i>		<i>Production for:</i>		
• QPS (E I)		• QPS (E I)		• QPS (E I)		
• feedstock		• feedstock		• feedstock within your country		
• essential uses		• essential uses		• essential uses within your country		
		Destination (Annex A & B substances)		• developing countries (incr. prod.)		

### **For Which Years?**

All Parties have to submit data reports for all years beginning with the year in which the Protocol entered into force for the reporting country (90 days after ratification). In addition, data for the years 1986 (Annex A substances), 1989 (Annex B and C substances) and 1991 (Annex E substance) have to be submitted. If no data are available, best estimates should be reported.

- In addition, **developing countries** need to report on 1995, 1996 and 1997 for Annex A substances, 1998, 1999 and 2000 for Annex B substances and 1995, 1996, 1997 and 1998 for Annex E substance, as these years are used to establish the baseline for controls (➡ Section 5.1).
- **Industrialised countries** that are Parties to the Copenhagen Amendment need to submit data on A I substances for 1989 to establish the baseline for HCFC controls.

### **When?**

Annual data reports to the Ozone Secretariat are due by 30 September of each year and contain data related to the previous year. The data for 1986, 1989 and 1991 have to be submitted within three months of the entry into force of the Protocol or the respective Amendments, as applicable.










30 September

### **Other Reporting Requirements**

All Parties are generally required to submit the following information under the Montreal Protocol (as of December 1998):

Table 4: Other Reporting Requirements




	Subject of Report	When ?
	List of reclamation facilities and their capacities (Decision VI/19) / <b>(to the Ozone Secretariat)</b>	<i>annually</i>
	Summary of activities on research, development, public awareness and exchange of information (Article 9) / <b>(to the Ozone Secretariat)</b>	<i>every two years</i>
	Measures taken to regulate import and export of products & equipment containing Annex A & Annex B substances and technology used in their manufacture (Decision VII/32) / <b>(to the Ozone Secretariat)</b>	<i>unspecified</i>
	Information on the implementation of trade controls (Decision IV/17A) / <b>(to the Ozone Secretariat)</b>	<i>unspecified</i>
	National or regional strategy for the management of halons (Decision X/7) / <b>(to the Ozone Secretariat)</b>	<i>unspecified (Non-Art. 5: 31 July 2000)</i>
	List of regulations that mandate the use of methyl bromide for QPS (Decision X/11) / <b>(to the Ozone Secretariat)</b>	<i>by the end of 1999</i>
	Information relevant to international halon bank management (Decision V/15) / <b>(to UNEP TIE OzonAction Programme, Paris).</b>	<i>unspecified</i>



*additional reporting*

The following additional data reporting requirements are relevant only to a few countries. Please note that this information is not to be included while submitting Data Forms 1-5, but needs to be reported to the Ozone Secretariat separately. A special reporting form exists only for essential uses, (➔ Annex III).

Table 5: Other Data Reporting Obligations to the Ozone Secretariat

Category	Relevant to Parties...	Subject of Report	When ?
 <i>exempted categories</i>	... that have <b>approved essential uses</b>	➔ data form reproduced in Annex III (Decision VIII/9)	<i>annually</i>
	... that use ODS for <b>exempted laboratory and analytical uses</b>	purity, quantity and application of the ODS; specific test standard and procedures requiring its use; status of efforts to eliminate its use (Decision VI/9)	<i>annually</i>
	... that use ODS as process agents	use, levels of emissions, applied containment technologies (Decision X/14)	<i>annually from 2000 (30 Sept.)</i>
 <i>HCFC consumption</i>	... that <b>transfer HCFC consumption (Non-Article 5 only)</b> / (no known case)	notification of the transfer (Article 2.5bis)	<i>as and when it occurs</i>
 <i>production</i>	... that <b>transfer allowed production</b> of Annex A, B and E substances	notification of the transfer (Article 2.5)	<i>as and when it occurs</i>
	... that have <b>"increased production"</b>	summary of related requests from developing countries (Decisions V/25 and VI/14A)	<i>annually</i>

## Consequences of Non-Reporting

Developing countries temporarily classified as operating under Article 5 of the Montreal Protocol that do not report data on the years 1986 (for Annex A substances) and 1989 (for Annex B and C substances), as required by the Protocol, risk to lose their Article 5 status after two years. If they seek the assistance of the Multilateral Fund and the Implementation Committee (➔ Glossary), this period may be extended for another two years. Within one year of the approval of the Country Programme and the institutional strengthening by the Executive Committee of the Multilateral Fund, the data must be submitted (Decision VI/5).

In general, countries not submitting data or submitting inconsistent data will be requested by the Ozone Secretariat to comply with the data reporting requirements. Such cases can also be put on the agenda of the Implementation Committee of the Montreal Protocol, which may ask Parties concerned for explanations and could recommend suitable action to the Meeting of the Parties.



Fund Secretariat

## 1.2 What to Report to the Multilateral Fund Secretariat and by When

Only developing countries accessing the resources of the Multilateral Fund need to report data (and other information) to the Fund Secretariat. In identifying your country's reporting obligations to the Fund Secretariat, you have to answer the same questions as in the case of the Ozone Secretariat:

- ➔ **Which substances** do I have to report on?  
➤ *go to p. 16*
- ➔ **Which categories** of data do I have to report on?  
➤ *go to p. 17*
- ➔ For **which years** do I have to report data?  
➤ *go to p. 19*
- ➔ **When** do I need to report?  
➤ *go to p.19*



### ➔ **Which Substances?**









The Fund Secretariat on its data forms reproduced in Annex II requires data reporting on all controlled ODS (➔ Section 1.1). As no use of HBFCs (C II) is

known and use of other fully halogenated CFCs (B I) has been negligible in developing countries, data reporting to the Fund Secretariat focuses on the other controlled ODS.

## Which Categories?

The Fund Secretariat requires reporting of **consumption (use) data in total as well as divided into specific sectors** (aerosols, foam, fire fighting, refrigeration, solvent applications, fumigation, other) (➔ Data Forms A and B in Annex II). The reason for requiring consumption (use) data by sector is that the Multilateral Fund aims at assisting in phasing out the **use** of ODS in Article 5 Parties. Therefore, the progress of this phase-out has to be followed in the different sectors in order to provide appropriate assistance. Such sector-specific data will also be useful for developing your country's phase-out strategies.

In addition to consumption (use) data, the Fund Secretariat requires data reporting on **imports, exports and production**. The import, export and production data reported to the Fund Secretariat (the first column of the following figure) should be consistent with the data reported to the Ozone Secretariat (➔ Section 1.1). Amounts of ODS that do not need to be phased out (feedstock, amounts destroyed, methyl bromide for QPS) should not be included in the data reported to the Fund Secretariat. The formula in the second column of the following figure has to be applied:

Fund Secretariat	Ozone Secretariat
Imports 	total imports of new (virgin) substances  imports used for feedstock  imports used for QPS
Exports 	total exports of new (virgin) substances to Parties
Production 	total production  amounts destroyed  amounts produced for domestic feedstock uses  amounts produced for domestic QPS



exports & imports



productions

Please note that few countries have production facilities or use ODS as feedstock and a limited number of countries export ODS. **For many countries, therefore, imports to be reported to the Fund Secretariat equal total imports of new (virgin) substances to be reported to the Ozone Secretariat (minus imports for QPS in the case of methyl bromide).** See Box 1 on p. 9 on how to determine Parties and Non-Parties to the Montreal Protocol.

By applying the formula in the second column of the table above, the import, export and production data reported to the Fund Secretariat will be consistent with the data submitted to the Ozone Secretariat. Note, however, that dis-



crepancies might occur between consumption data calculated by the Ozone Secretariat (➔ Section 5.2) and the consumption (use) data reported to the Fund Secretariat (➔ Box 3 on p. 18).



### Box 3: Discrepancies in Data Reporting

Ideally, the data reported to the Fund Secretariat should match the data submitted to the Ozone Secretariat. Hence, “total consumption” (use) reported to the Fund Secretariat should equal consumption as calculated by the Ozone Secretariat according to the Montreal Protocol (➔ Section 5.2):

$$\text{consumption} = \text{production} + \text{imports} - \text{exports.}$$

However, sectoral consumption (use) data required by the Fund Secretariat reflects actual “use,” since it is this use of ODS that needs to be phased out in specific sectors. Consequently, discrepancies might occur between consumption data calculated by the Ozone Secretariat and the consumption (use) reported to the Fund Secretariat. These inconsistencies might occur due to the application of different data collection techniques (➔ Chapter 2). The reasons for this can be that:

- **Stockpiling** might lead to lower or higher consumption (use) of controlled substances as compared to consumption calculated by the Ozone Secretariat (production + imports – exports) depending on whether stocks are increased or reduced in any one year. Increases and reductions in stocks should balance in the longer term. It might, however, lead to considerable discrepancies in a given year.
- Imports of **used substances** (recovered and reclaimed) are not included in the consumption as calculated by the Ozone Secretariat (➔ Section 5.2), but are part of the total consumption (use) reported to the Fund Secretariat. As there are only very limited imports of such used ODS in developing countries, this has not yet been a serious problem.
- According to Article 3 (c) of the Protocol, **(re-)exports to Non-Parties** are not deducted by the Ozone Secretariat when calculating consumption (➔ Section 5.2). Thus, the consumption figure of the Ozone Secretariat might be higher than the actual ODS consumption (use) reported to the Fund Secretariat. As most of the major importers/consumers of Annex A and B substances are Parties to the Montreal Protocol and the London Amendment, this problem should in reality not have led to major discrepancies to date.
- Some **re-exports from Article 5 Parties to other Parties** may not be reported. In this case, consumption (use) reported to the Fund Secretariat by the re-exporting country might be lower than the consumption calculated by the Ozone Secretariat for the same country.

## **For Which Years?**

- In the Country Programme, data are submitted for the year selected as the reference year (varies depending on time of preparation of Country Programme).
- Data reports have to be provided to the Fund Secretariat **annually** after the approval of the Country Programme (➔ Data Form A in Annex II).
- Developing countries reporting to the Fund also need to submit baseline data for 1995, 1996 and 1997 for Annex A substances, 1998, 1999, and 2000 for Annex B substances, and 1995, 1996, 1997, and 1998 for Annex E substance (➔ Data Form B in Annex II).

## **When?**

Annual reports to the Fund Secretariat containing data on the previous year are due by **1 May**.



1 May

## **Other Reporting Requirements**

In addition to annual data reporting to the Fund Secretariat, further Country Programme-related reporting requirements to the Multilateral Fund and the Implementing Agency responsible for your country exist, but these are not dealt with in this Handbook. For example, annual reporting on the progress of implementation to the Fund Secretariat includes information on administrative and supportive action (➔ Data Form C in Annex II). Also, the Fund Secretariat sends out a questionnaire annually asking NOUs to verify consumption data and to comment on problems faced or assistance needed. Please refer to the Implementing Agency in charge of your country's institutional strengthening project for further guidance.



additional reporting



## **Consequences of Non-Reporting**

The Multilateral Fund and its Implementing Agencies (UNDP, UNEP, UNIDO and the World Bank) need to have information on the state of the ODS phase-out as an input for their planning processes. In the case of non-reporting, the Fund Secretariat will initially request you to report. Resource flows from the Multilateral Fund might be delayed or temporarily halted. It is therefore in each country's interest to provide complete data on time to the Fund Secretariat.

### 1.3 Common Questions and Answers

#### Task 1



- *What do I have to report under the Montreal Protocol?*

In accordance with Article 7 of the Montreal Protocol, each country which is a Party to the Protocol is obliged to submit annually statistical data on its production, imports and exports of controlled ODS and some exempted categories of data to the Ozone Secretariat in Nairobi. The substances and years for which data have to be reported are dependent on your country's status of ratification (➔ Section 1.1 for further guidance).

In addition, Article 5 Parties are required to submit annually statistical data on production, imports, exports and consumption (use) by sector of all controlled substances to the Secretariat of the Multilateral Fund in Montreal (➔ Section 1.2 for further guidance).

- *Why is it important to report properly and on time?*

Annual data reporting enables the assessment of compliance of the Parties with the phase-out schedules of the Montreal Protocol and the identification of implementation difficulties. Furthermore, a review of your country's trends in production and consumption of controlled substances facilitates the monitoring of your country's phase-out strategy.

- *When are the current year's data reports to the two Secretariats due?*

Article 5 Parties' annual reports on the progress of implementation of Country Programmes to the Fund Secretariat in Montreal are due by 1 May of the following year. Each Party has to submit annual data to the Ozone Secretariat in Nairobi by 30 September of the following year.

- *What happens if I fail to submit data reports or submit data late?*

You will be requested to report by the Secretariats or the Implementing Agencies as appropriate. Resource flows from the Fund to your country may be endangered or delayed. The Ozone Secretariat lists non-reporting Parties in its annual report on data reporting to the Meeting of the Parties. If you persistently fail to report to the Ozone Secretariat, this will be discussed by the Implementation Committee, which may recommend suitable action under the Non-Compliance Procedure to the Meeting of the Parties.

- *Can I submit changes to earlier data if I find errors?*

Yes, you can submit amended data to the Ozone and Fund Secretariats and inform them of the inaccuracies found in the earlier report. The Secretariats will subsequently replace the incorrect data with the amended data.

- *Where can I find further information and assistance?*

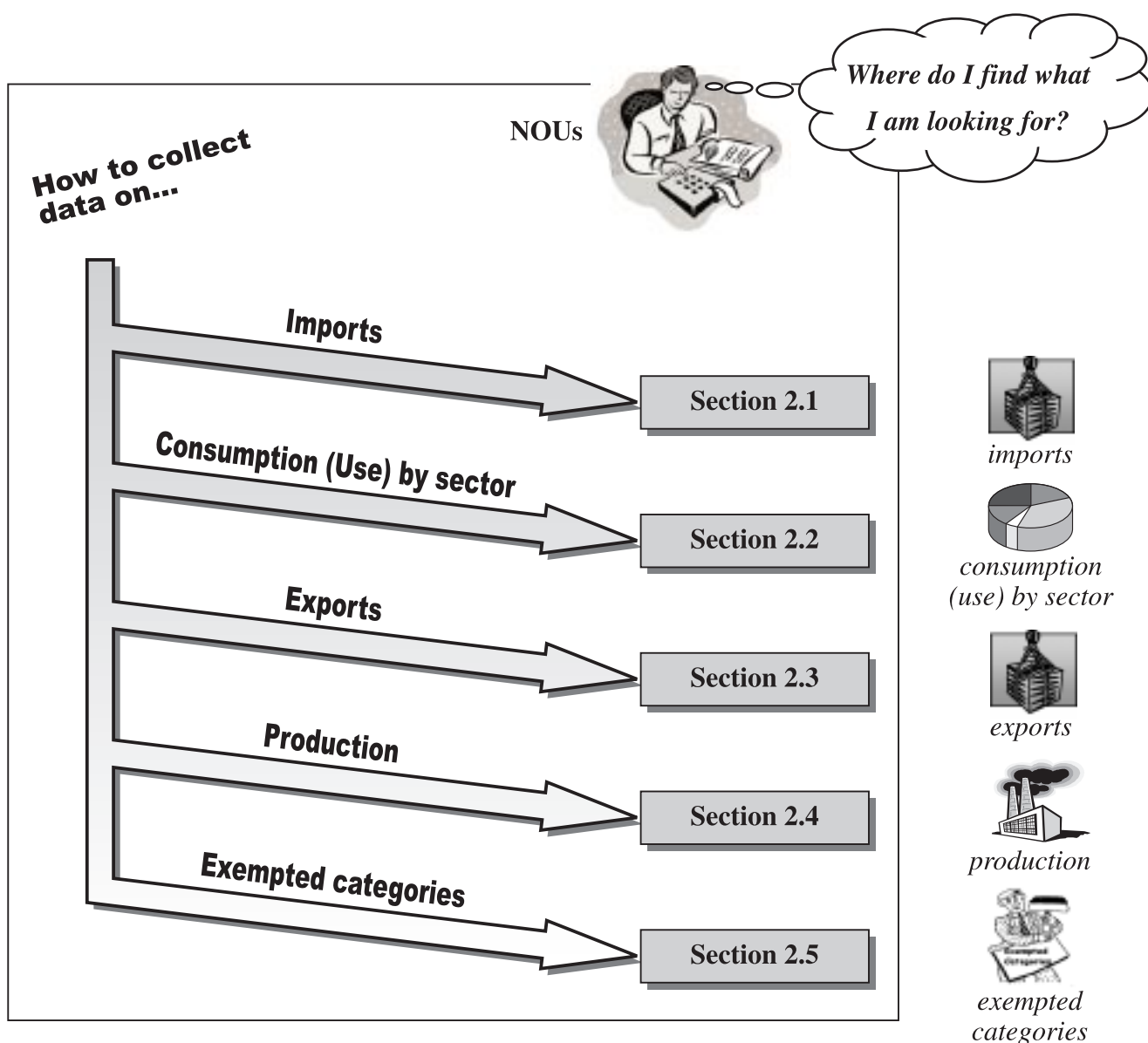
You will find detailed information in the previous subsections of this Handbook and the Glossary. If you need further assistance, you may approach the contacts given in Chapter 6 of this Handbook.

## 2. Task 2: Collect the Necessary Data

Once you have identified your country's reporting obligations, you need to collect the necessary data. Article 5 Parties reporting to both Secretariats should make sure that data collection for this is done in one effort.

- **Which substances** you have to collect data on depends on your reporting obligations as outlined in Chapter 1.
- **Which categories** of data you need to collect depends on the characteristics of your country. All Parties to the Protocol have to collect import data. For guidance on whether you have to collect data on other categories (exports, production, exempted categories, consumption (use) by sector) refer to Chapter 1.

This Chapter is organised as follows:

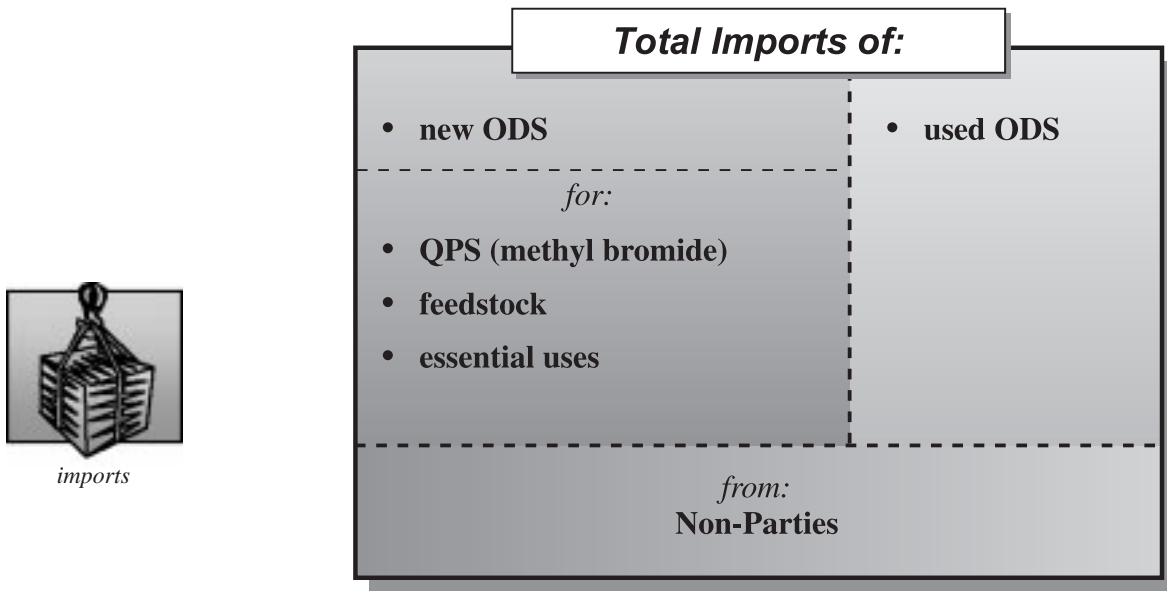




## 2.1 Collecting Data on Imports

### Which Data to Collect on Imports

All Parties to the Montreal Protocol have to report on imports of ODS (➔ Chapter 1 and Annexes I and II). Therefore, a Party might have to collect import data on the following data categories:



**For many Parties,** imports of new (virgin) substances and imports of methyl bromide for QPS will be the only categories which will require reporting. See Section 1.1 for guidance on assessing on which categories you have to collect data and report. For data collection on exempted categories (QPS, feedstock, essential uses) ➔ Section 2.5.

Note that under the Montreal Protocol only data on **bulk substances** need to be collected (➔ Box 2 on p. 9). The bulk ODS can be in the form of a **pure substance** or a component of a mixture (➔ Box 4 on p. 23).

### How to Collect Data on Imports

Four techniques for collecting data on imports are available. These data collection techniques are outlined below:

1. A properly designed **licensing and monitoring system** may be the best way to collect import data.
2. **Customs data** is easily accessible and might help to generate approximate import figures but will not suffice to meet the specific data requirements.
3. Direct **information from importers** can also be used, but may not be complete.



4. **Data Estimates** will only deliver crude results and may only be used for double-checking other data sources and as a last resort.



Application of a combination of these techniques is advisable in order to double-check results and thus generate data of a high quality. In the following sections, the four data collection techniques are described. Information on how to use the technique for collecting import data as well as on the benefits and limitations of the techniques is given. For licensing systems and customs data, some background information is also provided. Please note that your country's specific circumstances need to be taken into account when using the techniques.

#### Box 4: Mixtures

Import and Export of bulk ODS can be in the form of a pure substance or a mixture containing two or more ODS or one or more ODS mixed with other non-ozone depleting chemicals. A number of mixtures containing ODS have been introduced in recent years as replacements for pure ODS. In particular, a large number of ODS mixtures used as refrigerants and solvents exist. Mixtures are, however, also in use in other sectors. An illustrative list of refrigerant and fumigant mixtures is contained in Annex I; for a more comprehensive list of mixtures see *1998 Report of the Technology and Economic Assessment Panel* (➔ Section 6.2).

Only those parts of mixtures that consist of the specific ODS you report on should be included in the substance-specific data to be reported to the two Secretariats. For example, R-406A contains 55% HCFC-22, 41% HCFC-142b, and 4% HC-600a. If your country imported 1.5 metric tons of R-406A, this would add 0.825 metric tons to your HCFC-22 figure (1.5 multiplied by 0.55) and 0.615 metric tons to your HCFC-142b figure (1.5 multiplied by 0.41). Hydrocarbon 600a is not an ODS (nor are HFCs) and does not need to be reported. Other ODS containing mixtures are to be treated accordingly.



### 2.1.1 Import/Export Licensing and Monitoring System

In 1997, the Meeting of the Parties to the Montreal Protocol agreed that each Party should adopt a licensing system for the import and export of new, used, recycled and reclaimed controlled ODS by 1 January 2000. This will help control trade in ODS and ensure compliance with the phase-out schedules under the Montreal Protocol (➔ Section 5.1). Exemptions were made for developing countries which can delay the establishment of such a licensing system for methyl bromide until 1 January 2002 and for HCFCs until 1 January 2005. Many countries already use a licensing system.



licensing system

## How Does an Import and Export Licensing System Work?

The basic principle of an import (and export; ➔ Section 2.3) licensing system is that designated authorities in a country are made responsible for granting licences for import and export of ODS. A licence would be required for both pure ODS and mixtures containing ODS (on mixtures ➔ Box 4 on p. 23). In practice, a licence can be granted for a specific use of ODS, for single shipments or for a certain period of time (e.g. annually renewable licence). All importers (and exporters) of ODS are then expected to have such a licence or permit prior to undertaking trade in bulk ODS. For guidance on designing and implementing such a licensing system, please refer to *ODS Import/Export Licensing Systems: A Resource Module* (➔ Section 6.2).



A licensing system can take diverse forms. In the crudest form, the designated authority can issue licences for importing (and exporting) a certain quantity of ODS, without requiring feedback reporting by the importing/exporting company. However, the designated authority can set a mandatory requirement on the importer/exporter to report back to it on actual amounts of ODS traded under the licence. In general, feedback reporting by the importers/exporters can be required on all needed categories of import/export data.

## How to Use a Licensing System for Collecting Import Data

To have access to the data collected under a licensing system, the NOU has to establish contact with the designated authority operating the licensing system (e.g. the economics ministry or some other government agency), if this system is not operated by the NOU itself. The designated authority should then transfer to the NOU the information on the licences granted and any feedback reports on trade in ODS received from importers/exporters. On this basis, the NOU will be able to calculate country-wide data from the company-specific information.

The different forms of a licensing system clearly differ in usefulness as a means of data collection. Without feedback reporting by importers/exporters, the designated authority can only collect data on the ODS quantity it has permitted to be shipped into and out of the country. It will be uncertain how much of the allowance has actually been used by the company. This uncertainty will be smaller if the licence is granted for a single shipment rather than a period of time. In any event, a licensing system without feedback reporting will only be an approximate source of overall import (and export) data, giving an upper limit rather than an exact figure.

A licensing system can, however, also generate all needed import (and export) data, if it requires feedback reporting on all categories of import/export data (new/used ODS, feedstock, essential uses, QPS). Requesting information on the country of origin/destination of ODS trade will make it possible to monitor and prohibit ODS imports from (and exports to) Non-Parties. Please note that a licensing system can be adapted so that it generates all import/export data required.

## Benefits and Limitations of Collecting Import Data Using a Licensing System

A licensing system may be the best source of the import/export data that need to be reported to the Ozone Secretariat. However, if no reporting is required in the framework of a licensing system, it will be insufficient for collecting the needed import/export data. In this case, it is likely to generate information about upper import/export limits rather than exact traded quantities.

The designated authority might need to balance the need for the information with the creation of additional work for companies and government workers to process applications and other available options to collect the same data. Even if all needed data are collected, perfect enforcement of the licensing system will remain a challenge. It is therefore advisable for Parties to use other data sources in addition to a licensing system to double-check the data collected.

### 2.1.2 How to Use Customs Data

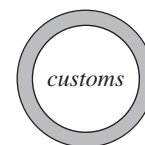
For checking ODS imports (and exports; ➔ Section 2.3), customs statistics are an obvious source of data. The customs authorities of most countries use common customs codes in their customs statistics. These are laid down in the framework of an international customs agreement: the Harmonised Commodity Description and Coding System (in short, the **Harmonised System** or **HS**) under the HS Convention of 1988. As of March 1998, 91 countries were Party to the Harmonised System Convention, but many more countries are believed to apply the HS, giving it almost global coverage.

The HS can be reviewed and adapted. This is generally done once every four years. Developing countries are allowed to delay the application of certain parts of the HS. The HS has been adapted to take into account the concerns of the Parties to the Montreal Protocol and might be changed further in this respect in the future.

### How Does the Harmonised Customs Coding System Work?

The Harmonised System is organised in 96 Chapters. These are subdivided into different Headings and Subheadings. A traded product or a class of traded products is subsumed under a specific Subheading. It may be identified by a number containing up to 6 digits, where:

1. the first two digits indicate the **HS Chapter** under which the product is categorised,
2. the next two digits indicate the relevant **Heading**, and
3. the last two digits indicate the **Subheading** under which the product is subsumed.



While each Party to the HS Convention has to use the agreed HS number of up to 6 digits, countries may decide to further subdivide the international nomenclature by adding more national digits. The Parties to the HS Convention cooperating in the framework of the World Customs Organisation (WCO) can recommend assigning of such national digits to specific goods. Any such recommendation is only binding to Parties that accept it.

All **pure ODS** are contained in different Subheadings of Chapter 29 “Organic Chemicals”, Heading 03 “Halogenated Derivatives of Hydrocarbons.” The 6-digit number of any controlled substance thus usually takes the following form:

HS 6-digit code of the controlled substance	<b>29</b>	<b>03.</b>	<b>XX</b>	<b>[yy]</b>
representing the numbers indicating	Chapter	Heading	Subheading	national extension
for pure ODS	Organic Chemicals	Halogenated Derivatives of Hydrocarbons	depending on Subheading	depending on national code system

**Mixtures containing one or more ODS** (➔ Box 4 on p. 23) are to be classified in one of the Chapters 30-38 of the HS depending on the function they are meant to perform. **Note**, however, that a chemical that contains an anti-dusting agent or colouring or odoriferous substance to facilitate its identification or for safety reasons is considered a pure chemical under the HS, provided that the additions do not render the product particularly suitable for specific use rather than for general use. The same applies to products dissolved in other solvents for reasons of safety or for transport.

### How to Use Customs Data for Data Collection on Imports

To collect information on ODS imported (and exported) based on customs codes, you must work together with the customs authority of your country. You should inform them about the relevant customs codes and ask for information on amounts and country of origin (or destination). The latter will enable you to check which amounts of ODS might have been traded with Non-Parties (➔ Box 1 on p. 9 for guidance on how to identify Non-Parties).

The customs authority should then be able to provide data on imports (and exports) that have occurred under each code within a specified period of time (e.g. the calendar year). This should enable you to add up the total imports of substances for which there are specific codes and obtain maximum quantities for codes which have more than one substance or mixture included in them. For further information on how to monitor imports using customs statistics see also *Monitoring Imports of Ozone-Depleting Substances: A Guidebook* (➔ Section 6.2).



The following table shows the current customs codes of pure controlled substances under the HS:

**Table 6: Customs Codes of Pure Controlled Substances**

A n n e x	G r o u p	Substance	HS Code	in force since	separate national codes
		A	I	CFC-11	2903.41
CFC-12	2903.42			1.1.96 <sup>1</sup>	
CFC-113	2903.43			1.1.96 <sup>1</sup>	
CFC-114	2903.44			1.1.96 <sup>1</sup>	
CFC-115					
II	halon-1211 halon-1301 halon-2402		2903.46	1.1.96 <sup>1</sup>	
B	I	CFC-13 CFC-111 CFC-112 CFCs-211-217	2903.45	1.1.96 <sup>1</sup>	separate national codes recommended since 20 June 1995
	II	Carbon Tetrachloride	2903.14	start of HS	
	III	Methyl Chloroform	part of 2903.19		separate national codes recommended since 20 June 1995
C	I	HCFCs	part of 2903.49	1.1.96 <sup>1</sup>	separate national codes to be recommended for the following HCFCs: <ul style="list-style-type: none"> <li>• 22</li> <li>• 123</li> <li>• 124</li> <li>• 141 &amp; 141b</li> <li>• 142 &amp; 142b</li> <li>• 225, 225ca, 225cb</li> <li>• 21, 31, 133</li> </ul>
C	II	HBFCs	part of 2903.49	1.1.96 <sup>1</sup>	
E	I	Methyl Bromide	part of 2903.30	start of HS	

<sup>1</sup> application recommended since 26 June 1990.

Source: UN doc. UNEP/OzL.Pro/WG.1/17/2, Issues before the Open-Ended Working Group at Its Seventeenth Meeting.

**Mixtures containing one or more ODS.** If there is no code reflecting the function (as in the case of refrigerants) or no function is specified, CFC-containing mixtures would be subsumed under code 3824.71 (in force since 1 January 1996). Other ODS-containing mixtures that do not have a code reflecting their function would fall under 3824.90 (“Other”). Halon-containing mixtures might be traded under Heading 38.13 (fire extinguishants) and methyl bromide mixtures under 38.08 (including soil fumigants). Note, however, that methyl bro-

mide mixtures that contain methyl bromide and chloropicrin which is added as an odoriferous substance for safety reasons can be classified under code 2903.30, as the addition does not render the product particularly suitable for specific use. Apart from these, ODS mixtures could fall under a large number of Headings and Subheadings of Chapters 30-38. Trade in ODS mixtures might involve substantial amounts of controlled substances.

### Benefits and Limitations of Collecting Import Data Using Customs Data

Customs codes can be used to generate import (and export) data in particular for the pure ODS for which unique customs codes exist: CFCs 11, 12, 113 and carbon tetrachloride. The situation with respect to methyl chloroform (1,1,1-trichloroethane) and other fully halogenated CFCs (B I) depends on the application of recommended separate national codes. In any case, however, it will not be possible to identify whether and to which extent the imported amounts belonged to an exempted category (used controlled substances, feedstock, essential uses).

Furthermore, customs data will hardly allow you to generate substance-by-substance data for other pure controlled substances, since

- CFCs 114 and 115, the three halons and all HCFCs are each subsumed under one common customs code (➔ Table 6 on p. 27), and
- methyl bromide is subsumed under a customs code that also covers other substances.

In these cases, substance-specific data can only be collected if customs authorities can provide additional information, e.g. on trade names of traded substances. By using the inventory of trade names available from UNEP TIE Ozon-Action Programme (➔ Section 6.2) you might then be able to determine which substance has been imported/exported.



In the case of mixtures, the inadequacy of customs codes is even greater. The indicated customs codes do not exclusively cover mixtures containing ODS. Furthermore, ODS mixtures may be recorded in many separate parts of the HS. Customs data, therefore, do not allow you to easily identify imports of ODS mixtures.

In addition, you should note that

- not all customs authorities necessarily use the HS, especially if application is only recommended;
- some HS codes have only entered into force or been recommended recently (➔ Table 6 on p. 27). This is relevant if you want to collect historical data.

In conclusion, by using customs data, you are likely to miss some imports (and exports) of ODS and will not be able to collect all necessary data. Customs data may, therefore, serve mainly for a first approximation of import (and export) data. In order to meet all the reporting requirements, data collection on ODS

imports has to draw on additional sources, as presented in the previous and subsequent sections.

### 2.1.3 How to Use Information from Importers

#### How to Collect Import Data from Importers

In the absence of legal requirements (e.g. under a licensing system), a voluntary submission of data on imported quantities by importers has been widely used as a source of data. In order to collect complete data, all relevant importers need to be covered by the reporting scheme. In this respect, it is important to note that some user industries might import directly for their own use. Also, wholesalers that import need to be covered.

In identifying the ODS importers, it might be useful to refer to the inventory of trade names available from UNEP TIE OzonAction Programme (➔ Section 6.2), since many of the relevant companies will know the traded products by trade name rather than substance/ODS. Note that the inventory is not necessarily exhaustive. Please inform UNEP TIE OzonAction Programme if you discover additional trade names that are not on the list.

The data collection process itself can be organised in two different ways:

1. The import data can be reported regularly by the importers or their trade associations to the NOU.
2. The NOU can conduct regular surveys of the importers asking them for the relevant data. Note that such surveys can be combined with surveys of ODS users by Article 5 Parties to generate consumption (use) data by sector to be reported to the Fund Secretariat (➔ Section 2.2).

#### Benefits and Limitations of Using Direct Information from Importers

All relevant categories of import data can, in general, be collected through this voluntary system. To what extent all needed data are supplied by the importers depends, however, on the negotiations with them. In addition:

- It is very difficult and often impossible to determine whether the information is complete and accurate, as it is collected on a voluntary basis.
- Data can easily be double-counted or omitted. Some importers might be overlooked.
- No legal action can be taken to force an importer to provide (accurate) data.

Because of these limitations, it is advisable not to rely exclusively on the voluntary approach for generating import data but to consult additional data sources. More information on experiences with voluntary reporting on imports



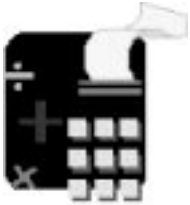
*information  
from importers*







is contained in *Monitoring Imports of Ozone-Depleting Substances: A Guidebook* (➔ Section 6.2).



data estimates

### 2.1.4 Data Estimates

A particular problem is posed by the requirement of the Montreal Protocol to report import, export and production data for past years irrespective of when a country became a Party to the Protocol (➔ Chapter 1). In these cases, it might be necessary to report on years for which actual data are not available. If so, the Protocol requires Parties to submit estimates.

#### How to Estimate Import Data

For production, it should not be necessary to estimate past data; for exports, it will hardly be possible (➔ Sections 2.3 and 2.4). In the case of imports, existing data can be used to extrapolate estimates for past years. For example, a non-producing non-exporting country may have imported and consumed 12 tons of CFC-11 in 1990 and 24 tons in 1994. Under the assumption of constant annual growth rates, you might estimate imports of 6 tons for 1986.

Such extrapolation will only yield very crude results. Better results will be achieved if you take into account any change that might have occurred in the factors influencing ODS imports (economic growth, ODS consuming industries, etc.). In particular, there is a correlation between the growth of Gross National Product (GNP) and ODS consumption.

Estimating import data of countries producing and/or exporting ODS will be more difficult. Imports have to be estimated not only on the basis of past import data, but estimation has to take into account available production/export data. Thus, imports may decrease if a country increases its production. In contrast, imports may increase if exports grow.

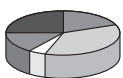
#### Benefits and Limitations of Estimating Import Data

The same techniques may be applied for estimating past and present import data. However, estimates generate only crude results. Data should therefore be estimated only as a last resort. Estimation is especially useful, and might be needed, for generating data for past years (including baseline years) when other data sources are unavailable. In addition, estimates can be done to check the accuracy and consistency of data collected from other sources.

## 2.2 Consumption (Use) by Sector

### Which Data to Collect on Consumption (Use) by Sector

Article 5 Parties accessing resources of the Multilateral Fund have to report data on consumption (use) by sector to the Fund Secretariat (➔ Section 1.2 and



consumption  
(use) by sector

for example



Annex II). Therefore, sector-specific consumption (use) data have to be collected by these Parties.

For this purpose, identification of the main ODS using sectors is an important first step (➔ Section 2.2.1). Information on how to use three different techniques for collecting the consumption (use) data by sector (licensing system, surveys, estimation) is provided in Section 2.2.2. Because of the limitations of each of these techniques, it is best to apply them together as outlined in Section 2.2.3.

### 2.2.1 What are the Main User Sectors?

The following table shows the major sectors and sub-sectors that use controlled ODS. The ODS most commonly used in these sectors are listed (main substances in bold). The sectors mentioned in the table are the same ones your country has to report on to the Fund Secretariat (➔ Annex II):

**Table 7: The Main Sectors Using ODS**

Sector	Sub-sectors	ODS mainly used (pure or mixture)
<b>Aerosols and Sterilants</b>	–	CFCs <b>11, 12</b> , 113, 114
<b>Foams</b>	Polyurethane foam, phenolic foams, polyolefin foams, extruded polystyrene (in particular for various kinds of insulation, packaging, cushions/bedding)	<b>CFCs 11, 12, 113, 114</b> ; HCFCs 22, 123, 124, <b>141b</b> , 142b,
<b>Fire Fighting</b>	Fire extinguishing	<b>Halons 1211, 1301</b> , 2402; HCFCs 22, 123, 124
<b>Refrigeration</b>	Domestic, commercial, industrial, transport refrigeration; food processing and storage; heat pumps; air conditioning	<b>CFCs 12, 11, 113, 114, 115</b> ; <b>HCFCs 22, 123, 124, 142b</b> ; other fully halogenated CFCs (CFC 13, 112)
<b>Solvent applications</b>	Electronics; precision cleaning, metal cleaning, dry cleaning; coatings and inks; aerosols	<b>CFC-113, Methyl Chloroform (1,1,1-trichloroethane), Carbon Tetrachloride</b> , HCFCs 225, <b>225ca, 225cb</b> , 123, 141b
<b>Fumigation etc.</b>	Fumigation of soil, durables, perishables, and structures and transportation	<b>Methyl Bromide</b>
<b>Other</b>	e.g. tobacco fluffing	<b>CFC-11</b>

Note: Small amounts of ODS that are not indicated in the table might be used in some sectors. For example, halon 1211 and 1301 can be used as refrigerants, named R12B1 and R13B1. The following substances are not included in the list:

- B I substances (other fully halogenated CFCs) are rarely used.
- C II substances (HBFCs) are not used.

Source: *Protecting the Ozone Layer, Vol. 1-6* (➔ Section 6.2).



For more information on the relevant sectors and sub-sectors using ODS and the available alternatives please refer to *Protecting the Ozone Layer*, Volumes 1-6 (➔ Section 6.2). If you are uncertain which sector an ODS consuming company belongs to, you may ask the Implementing Agency in charge of your Country Programme for assistance.

### 2.2.2 How to Collect Data on Consumption (Use) by Sector (Three Data Collection Techniques)

Collecting data on consumption (use) by sector is a complicated task. Generally, three different techniques can be used for collecting data on consumption (use) by sector: use of a licensing system, surveys of user companies, and estimation. Use of these techniques for this purpose is described in the following.

#### How to Collect Consumption (Use) Data by Sector Using an Import and Export Licensing System



licensing system

In the framework of an import/export licensing system (➔ Section 2.1.1), importers can be required to provide data on the intended use/application for which the ODS is imported (or exported). In such a system, importers would have to keep records of their ODS sales and the intended uses. The information can then either be inspected by the designated authority operating the licensing system or reported by the importers on a regular (e.g. annual) basis. This enables the designated authority to collect data on consumption (use) by sector. A well-designed licensing system can generate all data that need to be reported.

The NOU, if not operating the licensing system itself, needs to acquire this information from the designated authority (➔ Section 2.1.1 on import data). For more information on the proper design of a licensing system for generating consumption (use) data, refer to *ODS Import/Export Licensing Systems: A Resource Module* (page 40 and Figure 11) and *Monitoring Imports of Ozone-Depleting Substances: A Guidebook* (Section 3.3).



#### How to Collect Consumption (Use) Data by Sector Using Surveys

For conducting regular surveys of ODS using companies, you should have an inventory of relevant companies. This inventory needs to include companies using ODS in a production process (e.g. production of refrigerators and foams), servicing equipment (e.g. re-filling refrigerators and fire extinguishers) and applying them (e.g. for cleaning and, in the case of methyl bromide, fumigation). Wholesalers that might sell ODS to small end-users also need to be covered, since importers will only have limited knowledge of the final use of imported ODS. Such an inventory can be created based on knowledge about the main user sectors and sub-sectors (➔ Section 2.2.1).

Please keep in mind that only companies consuming bulk ODS (in pure or mixed form) are relevant for the Montreal Protocol (➔ Box 2 on p. 9 and Box 4 on p. 23). Many of the relevant companies will know the ODS used by the trade name rather than substance. In such cases, you can refer to the inventory of trade names of ODS available from UNEP TIE OzonAction Programme (➔ Section 6.2) to identify relevant users and when conducting the survey. The list of trade names is, however, not necessarily comprehensive. Please inform the UNEP TIE OzonAction Programme if you discover additional trade names that are not on the list.



Consultants or government officers (NOUs) can conduct the surveys. Please note that this can be done in combination with surveys on imports (➔ Section 2.1.3). The surveyed companies need to provide the consumption (use) data in these data collection efforts. This is best achieved if it is a legal requirement on companies. ODS users should support their reported figures with any additional material available (e.g. records of sales/imports). If the survey is not done by the NOU itself, the NOU should collect the data generated from the consultants or government officers conducting the surveys.

### How to Estimate Consumption (Use) Data by Sector

The consumption (use) by companies and sectors can also be estimated. For example, a producer of refrigerators may be known to use CFC and to produce “x” number of household refrigerators per year. In this case, you might multiply the number of refrigerators produced “x” with the average CFC use per unit. The average CFC use per unit could be derived from past experience of your country. Such use per unit depends on the applied technology. In this way, you will arrive at the estimated annual consumption of CFC-12 by the manufacturer in question. You can proceed in a similar way with respect to other sectors and may even arrive at consumption (use) estimates for entire sectors.



*for example*

The consumption (use) of sectors may be estimated on the basis of the known net imports of controlled substances (import – export + production). However, the possibility of discrepancies between net imports and consumption (use), in particular because of stockpiling and unrecorded exports needs to be taken into account (➔ Box 3 on p. 18). As most ODS are only used in a limited number of user sectors (➔ Table 7 on p. 31), you may then derive sector-specific consumption (use) data from (net) imports data of major ODS. For example, the total consumption (use) of carbon tetrachloride (excluding its use as feedstock) and methyl chloroform (1,1,1-trichloroethane) (B II and B III substances) can be assigned to the solvents sector in total. Problems arise especially with respect to CFC-11, CFC-12 and some HCFCs that can be used in more than one sector (➔ Table 7 on p. 31). For estimating the sectoral consumption of these substances more detailed knowledge about the structure and importance of the relevant sectors is needed (e.g. number of cars equipped with air conditioners, types of foam-producing companies). If possible, you may evaluate the consumption (use) in the major manufacturing companies in the relevant sector



*data estimates*



to reduce the quantities which have to be estimated on a more uncertain basis. For assistance in estimating consumption (use), please contact the Implementing Agency in charge of your Country Programme.

### 2.2.3 Limitations of the Techniques for Collecting Consumption (Use) Data and How to Overcome Them

There are specific limitations to each of the techniques that can be used for collecting data on consumption (use) by sector. You should thus be aware that:

1. The ODS may have been used for a different use from that reported under a **licensing system**. This is because importers cannot guarantee the final use of the ODS. Besides, not every country necessarily has the administrative capacity to operate such an elaborate licensing system. In general, the simpler the licensing system, the easier it will be for government and industry to implement, but the information provided will be limited (➔ Section 2.1.1).
2. **Surveyed** user companies might not necessarily supply correct or complete information. Companies, especially small and medium-sized enterprises, might be overlooked or missed within a sector. On the other side, amounts of ODS can easily be double-counted. This can occur because importers, end-users and wholesalers might report on the same quantities of ODS which they traded among themselves. Surveys can also be labour intensive and may be costly if conducted by consultants.
3. If net imports are based on accurate data, **estimates** of consumption (use) by sector can be quite reliable for ODS predominantly used in one sector. However, in the case of CFC-11, CFC-12 and a number of HCFCs, the uncertainties will remain. Also, estimates of consumption (use) by single companies generate only crude results.



licensing system



information from exporters



data estimates

#### How to Overcome the Limitations

Estimates of consumption (use) by single companies might only be applied if no other data sources are available and for cross-checking the results of other data collection techniques. The limitations of the individual techniques for collecting consumption (use) data might be overcome by applying as many of the techniques as you can.

Data on (net) imports and a rough sectoral distribution may be collected using a licensing system. Surveys can provide more detailed information on the sectoral distribution of ODS consumption (use) in your country. Such surveys can most easily be applied to generate information from the major ODS-consuming companies. Furthermore, you can allocate any unaccounted ODS amounts to specific sectors using the outlined estimation technique.

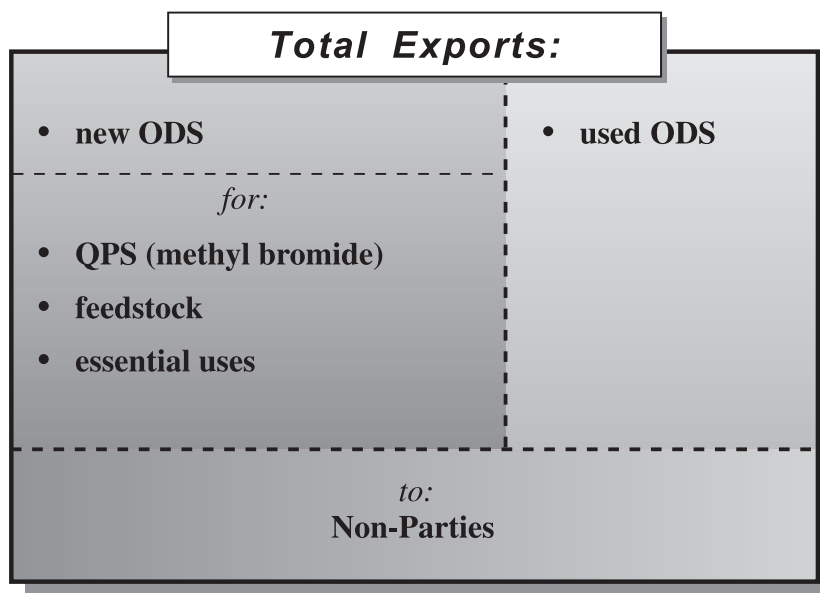
Combining the collection techniques also implies that you have to look for plausible explanations for any differences in the collected data. Survey data, data collected in the framework of a licensing system and estimates of consumption (use) data may diverge because of the limitations mentioned above and the possibility of stockpiling (➔ Box 3 on p. 18). Any differences should be reconciled by referring back to your data sources. For assistance, contact the Implementing Agency in charge of your institutional strengthening project.



## 2.3 Collecting Data on Exports

### Which Data to Collect on Exports

A limited number of countries export ODS in large quantities. These are generally the producing countries. However, many other countries may re-export small quantities of ODS and ship ODS to neighbouring countries. Exporting countries might have to collect data on one or more of the following categories (➔ Section 1.1 and Annexes I and II):



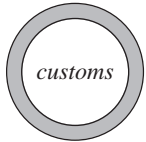
In addition, exporting countries need to include information on the destinations of exports of Annex A and B substances. ➔ Section 1.1 for more detail and for guidance on assessing whether you might have to report on these categories.

### How to Collect the Data on Exports

It is very difficult to estimate export data, since – in contrast to the situation with respect to consumption (use) by sector (➔ Section 2.2) – no criteria for deriving such estimates are available. Apart from that, the same data collection techniques as in the case of imports can in general be applied for exports:



licensing system



customs



information from exporters

- A **licensing system** can and should generally be designed to cover imports and exports. The Meeting of the Parties to the Montreal Protocol agreed in 1997 that each Party should adopt a licensing system for the import and export of controlled ODS by 1 January 2000. Exemptions were made for developing countries which can delay the establishment of such a licensing system for methyl bromide until 1 January 2002 and for HCFCs until 1 January 2005. Such a licensing system can, in general, be used to generate all export data needed. The data can be collected in the same way as in the case of imports (➔ Section 2.1.1).
- As customs authorities register not only imports but also exports, **customs data** can also be used to generate export figures. Since the same limitations as regarding imports apply, this source will at best deliver approximate export figures. To collect data on exempted categories, additional sources will need to be used. The data can be collected in the same way as in the case of imports (➔ Section 2.1.2).
- Collection of export data can also rely on **self-reporting** of exporters and surveys of potential exporters. To draw on this source, you have to identify the exporting companies. While the large exporters are identified relatively easily, experience in a number of countries has shown that even very small companies might be involved in ODS export. These exporting companies should not be overlooked. Otherwise, data collection can proceed similarly to the data collection on imports (➔ Section 2.1.3).

### Box 5: Trans-shipment and Re-export of ODS

A distinction has been drawn by the Meeting of the Parties to the Montreal Protocol between the trans-shipment and the import and re-export of ODS (Decision IV/14). Trans-shipment occurs if a controlled substance is only shipped through a third (transit) country (without leaving the port or designated bonded warehouse or store) on its way from the country of origin of the ODS to the country of final destination. While the countries of origin and destination have to report on their export and import, as appropriate, the transit country is not required to report.

In contrast, ODS can be imported by a country, stored and/or processed (e.g. by repackaging it) and subsequently re-exported. In such cases, the import and the (re-)export have to be treated as two separate transactions. The country of origin would report export to the country of intermediate destination. The latter is responsible for reporting the import from the country of origin as well as the re-export to the country of final destination, which has to report the import.

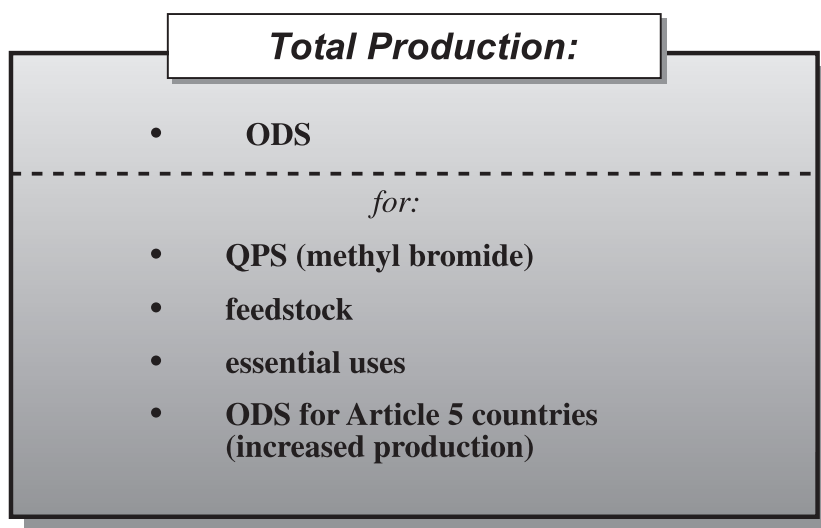
Experience in several countries has shown that customs data on exports are frequently deficient. You should, therefore, rely mainly on a licensing system and direct information from exporters for collecting your export data. Missing some

exports will let your country's consumption figure calculated by the Ozone Secretariat appear to be higher than it is in reality (➔ Section 5.2). Giving credit for an export so that the exporting company can import an equivalent amount of ODS can help improve reporting on exports. You should draw on as many of the indicated data sources (including customs data) as possible for double-checking the data collected. Article 5 Parties reporting to the Fund Secretariat should also check whether their data on imports, exports and production are consistent with their consumption (use) data to be reported to the Fund Secretariat (➔ Box 3 on p. 18).

## 2.4 Production

### Which Data to Collect on Production

Few countries produce ODS. The chemical manufacturers that produce ODS often also use them as feedstock. Producing countries might have to collect data on one or more of the following categories of data (➔ Section 1.1 and Annexes I and II):



Separate from the data forms, producing countries might have to report on the transfer of production of Annex A, B or E substances according to Article 2.5 of the Montreal Protocol as and when it occurs. ➔ Section 1.1 and Annex I of this Handbook for further guidance on assessing whether and to which extent you might have to report on these categories.

### How to Collect the Data on Production

The relevant data on all categories of production are to be provided by the manufacturers based on voluntary or mandatory reporting. The manufacturers of ODS are usually large chemical companies and are, therefore, in most cases



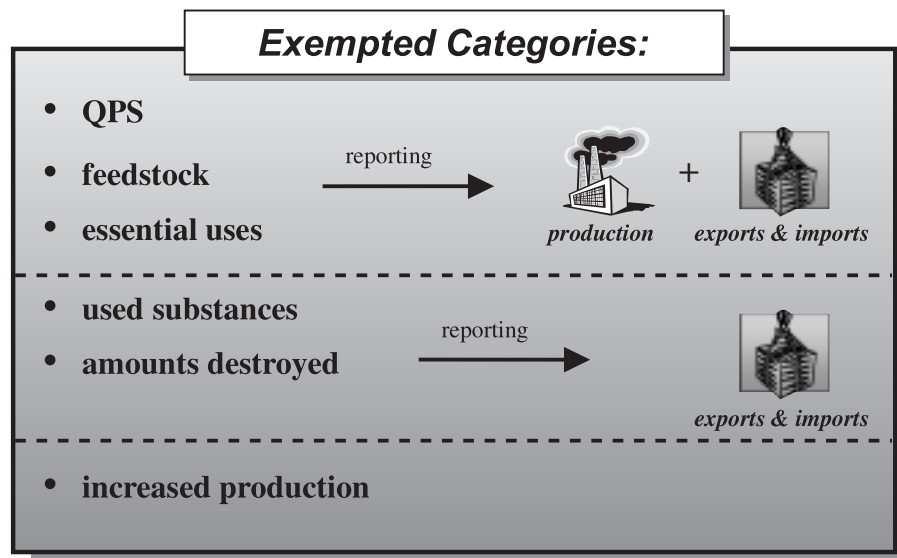
identified relatively easily. Note, however, that halons and carbon tetrachloride may also be manufactured on a smaller scale. For these, you might need to spend some effort to identify relevant companies.

To ensure high data quality, the information provided by industry can be audited by an independent consultant and verified with the help of on-site inspections and inspection of the company's documentation. In the case of increased production, companies not only have to provide data, but also the related requests from developing countries (➔ Section 1.1).

## 2.5 How to Generate Data on Exempted Categories

### Which Data to Collect on Exempted Categories

In addition to production, imports and exports, some Parties to the Montreal Protocol will have to report data on a number of exempted categories of ODS (➔ Section 1.1). **Please note that the exempted categories are only relevant to a small number of countries.** The following categories are exempted:



For more details and for guidance on assessing whether you might have to report on these categories ➔ Section 1.1.

### How to Collect the Data on Exempted Categories

For collecting data on production (including data on production for use as feedstock and process agents, for essential uses, QPS and increased production), you can rely on the sources mentioned in Section 2.4. For export-related data, the sources mentioned in Section 2.3 can be used. In addition, countries may have to report on amounts destroyed as well as imports of used substances (recovered

and reclaimed ODS), for QPS, for feedstock (including process agents) and for essential uses (currently relevant to industrialised countries only). You should note that you might need to verify any data on exempted categories.

**Amounts Destroyed.** Parties can claim credit for amounts of ODS destroyed, i.e. they are allowed to either import or manufacture an equivalent amount of new (virgin) substances, because there will be no increase in the country's consumption or in the damage to the ozone layer. If equipment like a household refrigerator containing ODS is scrapped, this does not by itself represent a destruction of ODS. Only if the ODS itself is completely destroyed can Parties be sure that it will not affect the ozone layer. Therefore, Parties only report amounts destroyed using approved highly efficient destruction processes. These are set out in Annex IV. The operation of approved destruction facilities is subject to a code of good housekeeping, details of which are in Section 2.4 of the *Handbook for the International Treaties for the Protection of the Ozone Layer*. Thus far, few countries have reported on such substances (less than 10 in 1996). Data on amounts destroyed are to be provided by relevant industry operating approved destruction technologies contained in Annex IV.

**Used Substances (recovered and reclaimed).** As of 1998, only Non-Article 5 Parties have reported on imports of used controlled substances. Customs codes do not distinguish between new (virgin) and used (recovered and reclaimed) substances and there are no criteria available to arrive at estimates of imports of used ODS. The only way to generate such data, therefore, is by placing a special reporting obligation on importers, which can be implemented in the framework of an import (and export) licensing system (➔ Section 2.1.1). Any import of used controlled substances should carry appropriate documentation in this respect. Importers should be willing to supply this information, as imports of such used substances are not restricted. To avoid over-reporting, reports on import of used ODS have to be verified carefully.

**QPS Applications.** Customs codes will not provide you with the needed information on imports of methyl bromide for QPS applications. Reporting by importers, preferably within the framework of a licensing system that issues special licences for QPS, might help generate the necessary data. However, importers might not be able to guarantee the use of imported methyl bromide for QPS. To cross-check (or to get the information if there is no licensing system available), border control authorities and companies engaged in pest control (including on exported products) should report on methyl bromide used for QPS to the NOU. Differences between reports by importers and actual users might appear because of stockpiling or use of existing stockpiles (➔ Box 3 on p. 18). As a last resort, QPS might also be estimated on the basis of existing data on the amount of shipments requiring pre-shipment treatment and a proxy number of applications for official pest control. In many developing countries, most methyl bromide usage will be for QPS. This will be true especially where the country exports primary produce to the US or Japan.



**Feedstock and Process Agents.** Customs codes will also not provide you with the needed information on imports for feedstock and process-agent applications. All Parties have to collect and report data on process agents separately from feedstock data from the year 2000 on (➔ Section 1.1). Reporting by importers, preferably within the framework of a licensing system, can best help generate the necessary data. The importers should specify for which production of other chemicals or process-agent application the ODS import is to be used to allow for verification. The number of eligible process-agent applications is strictly limited (➔ Table 8 on p. 41). Frequently, chemical companies using ODS as a feedstock or process agent import the amounts needed themselves. If not, the end-user of any imports of ODS for feedstock or process-agent application might be requested to report separately, in order to double-check use of the amounts declared by the importer. Table 8 on p. 41 may assist you in identifying companies using ODS as process agents.

**Essential Uses.** Reporting on essential uses is currently relevant only to industrialised countries with respect to substances already phased out by them (Annexes A and B). Special information is required on essential uses approved by the Meeting of the Parties and on laboratory and analytical uses. This is the only data category that requires information to be submitted in addition to the data contained in the regular annual data report to the Ozone Secretariat. Reporting on approved essential uses is part of the essential use process that is described in detail in the *Handbook on Essential Use Nominations* of 1997 (➔ Section 6.2). A special reporting framework also applies to the global essential use exemption for **laboratory and analytical uses** (➔ Section 2.5 of the *Handbook for the International Treaties for the Protection of the Ozone Layer* of 1996). As essential use exemptions are to be granted by governments on application by companies, data on actual essential uses are to be collected directly from the applicants.



**Table 8: List of Uses of Controlled Substances as Process Agents**

No.	Substance	Process agent uses (applications)
1	Carbon Tetrachloride	elimination of NCl <sub>3</sub> in the production of chlorine and caustic soda
2	Carbon Tetrachloride	recovery of chlorine in tail gas from production of chlorine
3	Carbon Tetrachloride	manufacture of chlorinated rubber
4	Carbon Tetrachloride	manufacture of endosulphan (insecticide)
5	Carbon Tetrachloride	manufacture of isobutyl acetophenone (ibuprofen – analgesic)
6	Carbon Tetrachloride	manufacture of 1-1, Bis (4- chlorophenyl) 2,2,2-trichloroethanol (dicofol insecticide)
7	Carbon Tetrachloride	manufacture of chlorosulphonated polyolefin (CSM)
8	Carbon Tetrachloride	manufacture of poly-phenylene-terephthal-amide
9	CFC-113	manufacture of fluoropolymer resins
10	CFC-11	manufacture of fine synthetic polyolefin fibre sheet
11	Carbon Tetrachloride	manufacture of styrene butadiene rubber
12	Carbon Tetrachloride	manufacture of chlorinated paraffin
13	CFC-113	manufacture of virorelbine (pharmaceutical product)
14	CFC-12	photochemical synthesis of perfluoropolyetherpolyperoxide precursors of Z-perfluoropolyethers and difunctional derivatives
15	CFC-113	reduction of perfluoropolyetherpolyperoxide intermediate for production of perfluoropolyether diesters
16	CFC-113	preparation of perfluoropolyether diols with high functionality
17	Carbon Tetrachloride	production of pharmaceuticals – ketotifen, anticol and disulfiram
18	Carbon Tetrachloride	production of tralomethrine (insecticide)
19	Carbon Tetrachloride	bromohexine hydrochloride
20	Carbon Tetrachloride	diclofenac sodium
21	Carbon Tetrachloride	cloxacilin
22	Carbon Tetrachloride	phenyl glycine
23	Carbon Tetrachloride	isosorbid mononitrate
24	Carbon Tetrachloride	omeprazol
25	CFC-12	manufacture of vaccine bottles



**Note:** Parties may propose additions to this list by sending details to the Secretariat, which will forward them to the Technology and Economic Assessment Panel. The Panel will then investigate the proposed change and make a recommendation to the Meeting of the Parties whether or not the proposed use should be added to the list by decision of the parties.

Source: UNEP/OzL.Pro.10/9, Decision X/14

## 2.6 Common Questions and Answers

- *How do I collect data for submission?*

The different data categories on which you may need to report according to Article 7 of the Montreal Protocol require varying efforts to collect data. For import data, which is the category most widely applicable, generally four data sources are available: (1) an import and export licensing and monitoring system, (2) customs data, (3) information from importers, and (4) own estimates. To collect consumption (use) data to be reported to the Fund Secretariat, you can draw on a licensing system, information from users and estimates. For how to make use of these data collection techniques and how to collect data on other categories, please refer to the previous sections of this Chapter.



- *What shall I do if the different data sources generate varying data?*

Minor differences might be due to varying imperfections of the applied data collection techniques. You might then opt for the results of the more reliable source or calculate the average. If there are major differences, you should check your data sources and look for explanations (e.g. major imports of mixtures unaccounted for in customs data, major stockpiling causing differences of import and consumption (use) data, unaccounted exports). If this does not lead to satisfactory results, please ask for assistance (➔ Section 6.1).

- *What can I do if available data sources do not tell me what specific CFC, halon or HCFC was imported?*

In this case, you have two options. First, you can estimate the split based on the results of other years taking into account the pattern of ODS use in your country. Please indicate accordingly in your data report. Second, you can report the respective amounts as "unidentified" CFCs, halons or HCFCs, which might enable the Secretariat to do some preliminary allocation to specific substances. In any case you should try to ensure that specification is possible in the future. Secretariat in Nairobi by 30 September of the following year.

- *How can I generate data for the past to be reported to the Ozone Secretariat according to Article 7 of the Protocol?*

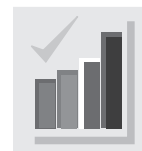
In principle, you might apply the same data collection techniques as for your current annual data reports. If it proves impossible, however, to generate statistical data for past years, you may submit estimates taking into account relevant changes of framework conditions (economic growth, establishment of new ODS consuming companies etc.; ➔ also Section 2.1.4). action under the Non-Compliance Procedure to the Meeting of the Parties.

- *Where can I find further information and assistance*

You will find detailed information in the previous Sections of this Handbook and the Glossary. If you need further assistance, you may approach the contacts given in Chapter 6 of this Handbook.



### 3. Task 3: Check the Data for Accuracy and Consistency



Proper reporting of data is essential. If inaccurate or inconsistent data are reported to the Ozone Secretariat, your country might be questioned about its fulfilment of the Protocol's provisions. Good data are also important as a basis for your government's monitoring of, and planning for, the ODS phase-out. In order to secure high data quality, it is advisable to check the accuracy of the data before submitting them. To do so, you should first add up all the collected data so that you arrive at aggregate figures for the data categories to be reported on for each individual controlled substance. Several methods can be used for checking the accuracy and consistency of the data:

#### Check Time Series

One of the easily available indicators of the accuracy and consistency of your data reporting are your past reports. If you have access to these records, before submitting of your country's annual data report, you should compare the data of several past years with the current data. By doing such a check of the time series, you may be able to identify any unusual changes in the current year. If you detect such changes – e.g. if the current figures are much higher or lower than the numbers of previous years – you can check for a plausible explanation. For example, an ODS consuming industry might have been established or closed down, or applied data collection techniques/methodologies could have changed etc. Otherwise, an error might have occurred while collecting (e.g. incorrect data reports by industry) or calculating (e.g. typing errors) the data.

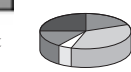
#### Compare Results of Different Data Sources

For import, consumption (use) and export data, you can and should draw on different data sources and data collection techniques as outlined in Sections 2.1, 2.2 and 2.3 (licensing system, customs data, information from importers/exporters/users and own estimation, as applicable). By cross-checking the overall results of the different data sources, you might detect discrepancies. If so, you should look for plausible explanations. For example, import data reported by companies might be higher than customs data because the latter have missed some imports of ODS mixtures. Also, importers might report an ODS import in December, while it appears in customs data in January. Or, amounts reported as imported by wholesalers may also be included in amounts reported by importers. This can lead to double-counting (➔ Sections 2.1, 2.2 and 2.3).

If no plausible explanation exists, you should double-check your calculation and the sources of your data (typing errors, errors in the data sources, incorrect reports by industry). Producing and exporting countries should be aware that discrepancies between consumption (use) data to be reported to the Fund Secretariat and consumption data calculated by the Ozone Secretariat (imports



imports & exports



consumption (use) by sector

– exports + production; (➔ Section 5.2) might be caused by inaccurate data on production or exports. Inconsistent data might also be due to illegal imports that would need to be investigated further.

### Check Production Data



productions

Production data for CFCs can be checked roughly by comparing ODS output with the input of carbon tetrachloride as feedstock. The input of carbon tetrachloride to produce one ton of CFC-11 is approximately 1.14 tons and for CFC-12 approximately 1.3 tons. CFC production figures should be matched by corresponding data on imports and production of carbon tetrachloride.

Auditing the relevant plants by an independent consultant and verification by government officials on site can help check data accuracy. If a reliable reporting system for imports and exports is in place, inaccurate production data will in the end also show up as questionable consumption figures, as calculated by the Ozone Secretariat (production + imports – exports; ➔ Chapter 5).

### Check Your Consumption per Capita/per Unit GNP

Other factors being equal, consumption of ODS per capita usually increases along with GNP. You may thus calculate per-capita consumption of certain groups of ODS and compare them with values of countries which have a similar GNP per capita.

Relevant data on ODS consumption can be found in the Ozone Secretariat's annual report on data reporting under Article 7 of the Montreal Protocol to the Meeting of the Parties and in *Production and Consumption of Ozone Depleting Substances* (➔ Section 6.2). Data on GNP per capita are, for example, published regularly by the World Bank. Be aware that in judging the available consumption figures, the varying implementation of policies to phase out ODS have to be taken into account. In case of large deviations, you might again double-check your data sources and calculation. Applying this method requires time and special efforts.



#### Box 6: Keep in Mind a Number of “Rules of Thumb”

- There is no known production or consumption of **HBFCs (C II substances)**. If your data shows figures other than zero for these substances, you should double-check your data.
- **Other CFCs (B I substances)** are rarely used. If your data indicate anything other than insignificant amounts, please check the data sources.
- Only a few of the **HCFCs** listed in Group I of Annex C of the Protocol are commonly used (HCFCs 21, 22, 31, 123, 124, 133, 141b, 142b, 225, 225ca, 225cb). If your data show significant amounts of HCFCs other than those indicated in the Ozone Secretariat's data forms, you should make sure an error has not occurred in data collection.

## 4. Task 4: Communicate the Data to the Ozone and Fund Secretariats

After having collected the necessary data (Chapter 2) and having checked its accuracy and consistency (Chapter 3), you need to submit them in a proper format to the Fund and Ozone Secretariats. The due date for submitting annual data reports of the year to which they relate is 1 May of the following year for the Fund Secretariat and 30 September of the following year for the Ozone Secretariat. To avoid inconsistencies and duplication of work, Article 5 Parties are encouraged to submit their annual data to the Ozone Secretariat at the time of reporting to the Fund Secretariat.

General guidelines relevant to both streams of data reporting as well as those referring to the specific requirements of each Secretariat are provided in the following sections. Please read them before filling in the data forms contained in Annex I (Ozone Secretariat) and Annex II (Fund Secretariat).

### 4.1 General Guidelines

#### General Guidelines for Filling in Data Forms

- Make sure that you indicate your country and the year to which the data report relates at the top of the reporting format.
- To avoid misunderstandings and confusion, use the English format for numbers. Use a decimal point, not a comma. Use a comma to separate thousands (3,000.00 to indicate 3000).
- Make sure that you are reporting metric tons, not any other measure (be it ODP tons, grams or kilograms; conversion in ODP tons will be done by the Fund Secretariat and the Ozone Secretariat).
- If your data indicates figures other than zero for C II substances, or significant amounts of B I substances, or C I substances other than those listed in the data forms, double-check your data for accuracy.
- Make sure that in the data that you report for each substance, you include the amounts that are imported as components of mixtures. Guidance on how to make the necessary calculations is provided in Box 4 on p. 23. For an illustrative list of mixtures ➔ Annex I.
- Article 5 Parties should ensure that it is the same government authority reporting to both Secretariats. Ideally, this should be the ODS officer within the NOU. In addition, data should be collected and data reports sent concurrently, if possible, to reduce any discrepancies.







UNEP

Ozone Secretariat

## 4.2 How to Report to the Ozone Secretariat

For reporting to the Ozone Secretariat, you are requested to complete a Questionnaire contained in Annex I. The Questionnaire should guide you in identifying which forms are relevant for your country. You will then fill in the reporting forms contained in Annex I that are relevant to the specifics of your country's obligations (➔ Section 1.1).

Annex I also contains instructions for filling in the forms, some definitions of key terms as agreed by the Parties to the Protocol, a list of reporting requirements and an illustrative list of mixtures containing ODS. Please follow the instructions given in Annex I carefully when filling in the forms.

You can make copies of the Questionnaire and the relevant reporting forms from Annex I of this Handbook to submit your data to the Ozone Secretariat. The reporting forms may be used for annual reports as well as data on other years which might have to be reported (➔ Section 1.1). You can also retrieve the data forms and instructions from the Ozone Secretariat's website at <<http://www.unep.org/unep/secretar/ozone/reports.htm>>.

You have to submit your annual report to the Ozone Secretariat (for address details (➔ Section 6.1) by 30 September of the year following the one to which the data relate, but you may submit your report earlier (e.g. concurrently with reporting to the Fund Secretariat). There are special reporting procedures for submitting data on essential uses (➔ Box 7 on p. 46).



### Box 7: Reporting on Essential Uses

Data on the production, import and export for all exempted essential uses (i.e. essential uses approved by the Meeting of the Parties and laboratory and analytical uses) are to be included in Data Forms 1-3 contained in Annex I. In addition, the data form contained in Annex III should be used for reporting annually on approved essential uses only (i.e. excluding laboratory and analytical uses). Laboratory and analytical uses are to be reported separately on an annual basis following the guidance provided in Section 2.5 of the *Handbook for the International Treaties for the Protection of the Ozone Layer*.



Once your annual data report has been received by the Ozone Secretariat, it will be processed. Aggregate ODP-weighted data (➔ Section 5.2) for each group of substances will be published in the annual report of the Ozone Secretariat on data reporting to the Meeting of the Parties. As only aggregate ODP-weighted figures on groups of substances are published, production/consumption of individual substances remains confidential. You should check whether the data entries of your country in the report of the Ozone Secretariat correspond to the data you have submitted. In order to match your data with the published data of

the Ozone Secretariat, you will need to do some additional calculations. Guidance in this respect is provided in Chapter 5.

In addition to the instructions in Annex I, you should keep the following in mind while filling in the data forms:

### General guidelines for Reporting to the Ozone Secretariat

- Reporting on **exempted essential uses** (production, import and export, (Box 7 on p. 46) is currently required only of industrialised countries.
- Controlled ODS are used as **feedstock** and **process agents** by only a few countries. Reporting on feedstock (including process agents) (production, import and export) is required only of these few countries (➔ Section 1.1).
- **Recovered and reclaimed** ODS are exported and imported only by a limited number of countries, mainly industrialised countries. Most countries are therefore currently unlikely to have to report on imports and exports of such used substances in Data Forms 1 and 2. This might change in the future when the availability of new ODS decreases.
- **Data Form 1 on Imports** is relevant to most countries.
- **Data Form 2 on Exports** is relevant to a limited number of countries, generally producing countries and other countries re-exporting ODS. A number of countries do not export ODS and do not have to fill in or send this form. If you belong to these countries, be sure to tick “NO” for Export in the Questionnaire in Annex I.
- **Data Form 3 on Production** is relevant only to producing countries, which are limited in number (compare the list in Section 1.1). The majority of non-producing countries do not have to fill in or send this form. If you belong to this majority, be sure to tick “NO” for Production in the Questionnaire in Annex I.
- **Data Form 4 on Amounts Destroyed.** Only very few countries have reported destruction using approved technologies. Most countries do not need to fill in or send this form. If you belong to this majority, be sure to tick “NO” for Amounts Destroyed in the Questionnaire in Annex I.
- **Data Form 5 on Trade with Non-Parties.** Before filling in this form, you need to identify which countries are to be considered Non-Parties with respect to which controlled substances. For guidance on this, ➔ Box 1 on p. 9. As nearly all exporters of Annex A and B substances are Parties to the respective agreements, imports of these substances from Non-Parties should be a rare exception. Trade with Non-Parties in Annex C and E substances might be more common. If you do not trade ODS with Non-Parties, be sure to tick “NO” for trade with Non-Parties in the Questionnaire in Annex I.





Fund Secretariat

### 4.3 How to Report to the Fund Secretariat

For annual data reporting to the Fund Secretariat, you are requested to fill in Data Form A contained in Annex II. Article 5 Parties accessing the resources of the Multilateral Fund also have to provide data for calculating baseline data. This requires data on Annex A substances for 1995, 1996 and 1997, Annex B substances for 1998, 1999, and 2000, and Annex E substance for 1995, 1996, 1997, and 1998 (➔ Section 1.2 above). A separate Data Form B is available in Annex II for providing such baseline data on Annex A and E substances for past years.

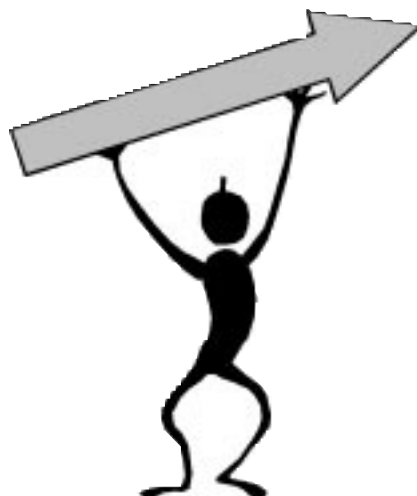
Annex II also contains instructions which you should follow carefully when filling in the forms. For your convenience, Form C on administrative and supportive actions in the implementation of Country Programmes has been included in the same Annex. This form needs to be filled in and submitted along with the data forms.

You may receive the data forms in an electronic format (Microsoft Excel 5) on diskette or as a hard copy from the Fund Secretariat. The data forms are contained in the *Policies, Procedures, Guidelines and Criteria* of the Multilateral Fund published by the Fund Secretariat (➔ Section 6.2). You can also make copies of the reporting forms from Annex II of this Handbook for reporting data to the Fund Secretariat.

You have to submit your annual data to the Fund Secretariat (for address details ➔ Section 6.1) by 1 May of the year following the one to which the data relate. This has to be done annually after the approval of the Country Programme. The reporting forms on baseline data have to be filled in and submitted to the extent that such baseline data have not been submitted before.

Once your annual data report has been received by the Fund Secretariat, it will be used to assess progress in the implementation of your Country Programme and the phase-out of ODS. The Fund Secretariat may publish aggregate ODP-weighted data for each group of substances in its documents.

In addition to the instructions given in Annex II, you should keep the following in mind while filling in the data forms:



### General Guidelines for Reporting to the Fund Secretariat

- **Consumption (use) Data.** Consumption here refers to actual use by sector in the respective year. You have to provide data on your country's total consumption (use) of each ODS as well as a sectoral breakdown. If no sector-specific data are available, you should submit a reasonable estimate of this breakdown. Consumption (use) by the single sectors should add up to the total.
- **Data on Imports, Exports and Production** should be consistent with the data reported to the Ozone Secretariat. The data forms of the Ozone Secretariat require reporting on several categories of production, imports, and exports each (➡ Section 1.1). In contrast, only one figure on production, imports and exports each is to be reported to the Fund Secretariat. The following rules apply (➡ Section 1.2):
  - **Data on Imports** are relevant to most countries. Imports to be reported to the Fund Secretariat equal *total imports of new (virgin) substances – imports used for feedstock (- imports for QPS)* to be reported to the Ozone Secretariat. ODS are used for feedstock only by few countries.
  - **Data on Exports** are relevant to producing countries and countries which re-export ODS (➡ Section 1.1). Exports to be reported to the Fund Secretariat equal *total exports of new (virgin) substances to Parties* to be reported to the Ozone Secretariat.
  - **Data on Production** are only relevant for producing countries, which are limited in number (➡ Section 1.1). The majority of countries do not have to fill in the related column. Production to be reported to the Fund Secretariat equals *total production – quantities produced for domestic feedstock use – amounts destroyed (- quantities produced for domestic QPS, in the case of methyl bromide)* to be reported to the Ozone Secretariat.
  - **Discrepancies of Data.** Total consumption (use) should ideally equal *imports – exports + production* (= calculated consumption). As total consumption (use) reported to the Fund Secretariat is derived from sectoral use, it does not necessarily equal this formula (➡ Box 3 on p. 18). You should ensure that discrepancies between calculated consumption and consumption (use) reported to the Fund Secretariat are explained.
  - Neither **B I substances** (other fully halogenated CFCs) nor **C II substances** (HBFCs) have been included in the data form since they have never been used (C II) or are used in very small quantities (B I). If your country has consumed these substances, please indicate so separately.
  - **C I substances.** Only those HCFCs known to be used by Article 5 Parties are listed on the data form. If other HCFCs have been used in your country, these should be reported under “other” HCFCs. Please specify which “other” type of HCFC is being included in the report.

## 4.4 Common Questions and Answers

- *Which data forms should I use to fill and submit to the Ozone and Fund Secretariats?*

The data forms that should be used for data reporting are contained in Annex I (Ozone Secretariat) and Annex II (Fund Secretariat) of the Handbook. In the case of the Ozone Secretariat, you will also find a questionnaire in Annex I that should help you find out which of the five formats you need to fill in and submit.

- *What if it has proven impossible to determine whether an import or export of ODS originated from, or was destined for, a Non-Party?*

In this case, you should indicate this when submitting the data to the Ozone Secretariat. Since most of the exporting countries are Parties to the Montreal Protocol and to the London Amendment, it is unlikely that imports of Annex A and B substances would come from a Non-Party. Especially trade in methyl bromide and HCFCs might at times involve Non-Parties, since a number of relevant countries have not yet ratified the Copenhagen Amendment.

- *What if I detect that earlier data submissions were incorrect?*

You have the option of submitting amended data to the Ozone and Fund Secretariats and informing them of the inaccuracies found in the earlier report. The Secretariats will subsequently replace the incorrect data with the amended data. If doubts exist, however, the Secretariats might ask for explanations.

- *What shall I do if I detect inconsistencies of the two data sets generated for submission to the Fund and Ozone Secretariats?*

You should check the reason for any inconsistency that may occur. If stockpiles have been increased or reduced in the reporting years, consumption (use) reported to the Fund Secretariat may be different from consumption calculated by the Ozone Secretariat. If such explanations exist, inform the Secretariats accordingly. Otherwise, inconsistencies are a sign of errors and you should check your data collection and reporting (see Chapter 3).

- *What if a company does not provide the needed data?*

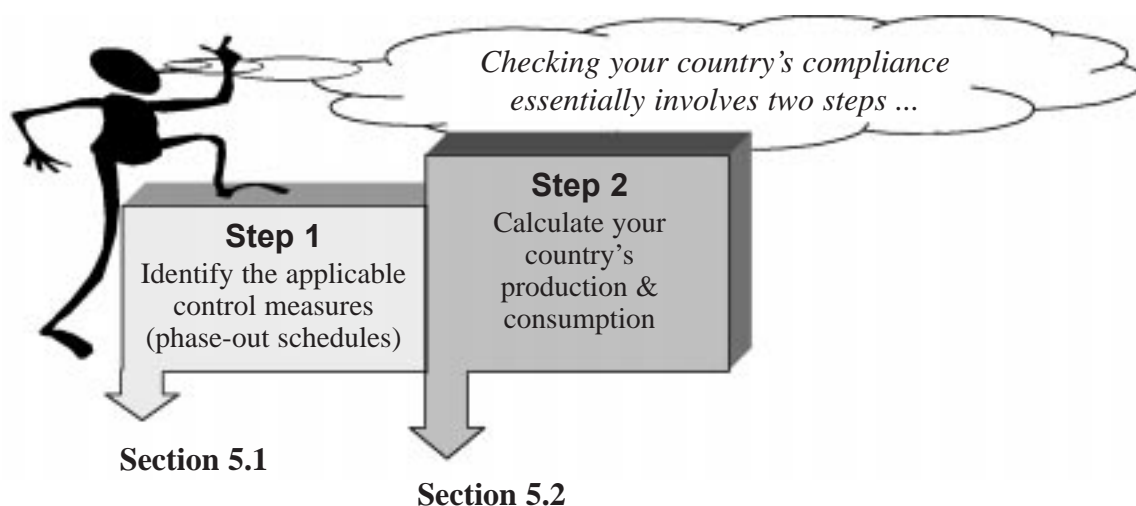
As a Party to the Montreal Protocol, you should ensure that companies are legally obliged to provide the necessary data. Specific concerns about the commercial sensitivity of data should be discussed with the relevant Secretariat.

- *Where can I find further information and assistance?*

You can find detailed information in the previous subsections of this Handbook and in the Glossary. If you need further assistance, you may approach the contacts given in Chapter 6 of this Handbook.



## 5. Good Practice: How to Check Your Own Compliance



Calculation of production and consumption also allows you to check the processing of your data by the Ozone Secretariat, which publishes them in an aggregate form in its annual report on data reporting to the Meeting of the Parties.

### 5.1 Step 1: Identify the Applicable Phase-out Schedules

Different phase-out schedules and baselines from which to calculate reduction steps for controlled ODS apply to Article 5 Parties and Non-Article 5 Parties. Three classes of Parties to the Montreal Protocol have to be distinguished in both groups of countries regarding the **phase-out schedules**:

1. Countries that have ratified only the **Montreal Protocol of 1987** are bound to the phase-out schedules relating to Annex A substances (Groups I and II: CFCs and halons).
2. Parties that have also ratified the **London Amendment of 1990** have to meet phase-out schedules applying to Annex A substances and Annex B Substances (Groups I, II, and III: other fully halogenated CFCs, carbon tetrachloride, and methyl chloroform [1,1,1-trichloroethane]).
3. Parties that have also ratified the **Copenhagen Amendment of 1992** are committed to phase-out schedules applying to Annex A and B substances as well as those substances contained in Annex C (Groups I and II: HCFCs and HBFCs) and Annex E (methyl bromide).

To check which phase-out schedules apply to your country (or any other, for that matter), you have to know which agreements your government has ratified. A list of ratifications is prepared and regularly updated by the Ozone Secretariat (➔ Box 1 on p. 9). You can then use the following table to identify the phase-out schedules currently applicable to your country.

**Table 9: Phase-out Schedules under the Montreal Protocol**

**Note:** The control periods run from 1 January to 31 December of the indicated years except for the freeze of Annex A I substances which starts at 1 July 1989 for industrialised countries and 1 July 1999 for Article 5 Parties. Parties can adjust the phase-out schedules without the need for subsequent ratification. They have

		Developing Countries		Industrialised Countries	
		Baseline	Phase-out Schedule	Baseline	Phase-out Schedule
(1) Parties to the <b>Montreal Protocol</b>					
<b>A I</b> (5 major CFCs)	Average of 1995-97	07/1999: freeze	2005: -50% 2007: -85% 2010: -100%	1986	07/1989: freeze 1994: -75% 1996: -100%
<b>A II</b> (Halons)	Average of 1995-97	2002: freeze	2005: -50% 2010: -100%	1986	1992: freeze 1994: -100%
(2) Additional Obligations after Ratification of the <b>London Amendment</b>					
<b>B I</b> (10 other CFCs)	average of 1998-2000	2003: -20%	2007: -85% 2010: -100%	1989	1993: -20% 1994: -75% 1996: -100%
<b>B II</b> (Carbon Tetrachloride)	average of 1998-2000	2005: -85%	2010: -100%	1989	1995: -85% 1996: -100%
<b>B III</b> (Methyl Chloroform)	average of 1998-2000	2003: freeze	2005: -30% 2010: -70% 2015: -100%	1989	1993: freeze 1994: -50% 1996: -100%
(3) Additional Obligations after Ratification of the <b>Copenhagen Amendment</b>					
<b>C I</b> (HCFCs)	2015	2016: freeze	2040: -100%	1989 + 2.8% of 1989 A I consumption	1996: freeze 2004: -35% 2010: -65% 2015: -90% 2020: -99.5% 2030: -100%
<b>C II</b> (HBFCs)	-	1996: -100%		-	1996: -100%
<b>E I</b> (Methyl Bromide)	average of 1995-98	2002: freeze	2005: -20% 2015: -100%	1991	1995: freeze 1999: -25% 2001: -50% 2003: -70% 2005: -100%

done so, *inter alia*, in 1990 (Annex A substances), 1992 (Annex A and B substances, not applied to Article 5 Parties), 1995 (baseline of HCFC controls for industrialised countries; HCFC and methyl bromide controls) and 1997 (methyl bromide controls for all Parties); see *Handbook for the International Treaties for the Protection of the Ozone Layer* and its 1997 Update.

These schedules can be revised by the Meeting of the Parties to the Montreal Protocol. Depending on your country's status of ratification, it can be subject to controls under:

- (1) the Montreal Protocol of 1987 or
- (2) the Montreal Protocol and the London Amendment or
- (3) the Montreal Protocol and the London Amendment and the Copenhagen Amendment.

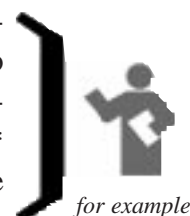
## 5.2 Step 2: Calculate Your Country's Production and Consumption

One of the main purposes of data reporting under the Montreal Protocol is to assess Parties' compliance with the phase-out schedules. To do so, individual substances are not considered, but instead groups of substances as contained in the Annexes of the Protocol (A I, A II, B I, B II, B III, C I, C II, E I). The environmental impact of amounts of different controlled substances are made comparable by devising special values to each of them: **their ozone depleting potential (ODP)** (➔ Annex V).

On this basis, compliance is assessed by the Ozone Secretariat and can be double-checked by you. In order to do this, you have to multiply the number of metric tons that you have reported to the Ozone Secretariat by the ODP value, substance by substance (as their ODP values differ). You can therefore create **ODP-weighted data** from your report in metric tons. In the case of HCFC-141b, for example, 10 metric tons would equal 1.1 ODP tons, as HCFC-141b has an ODP value of 0.11 ( $10 * 0.11 = 1.1$ ). In contrast, 10 metric tons of halon-1211 would equal 30 ODP tons, as halon-1211 has an ODP value of 3.0 ( $10 * 3.0 = 30.0$ ). ODP tons are thus a measure of relative environmental damage rather than a physical quantity.

The ODP values of all ODS known to be currently in use are contained in Annex V. The ODP values of all controlled substances (including the ones currently not in use) can be found in the respective Annexes of the Montreal Protocol as, for example, contained in the *1997 Update of the Handbook for the International Treaties for the Protection of the Ozone Layer*.

Under the Montreal Protocol, both production and consumption of the different groups of substances are subject to control (except for HCFCs where only consumption controls apply). To check your country's compliance, you therefore first have to add up the ODP-weighted values of the substances in Annex A I, A II, etc. to arrive at aggregate data for the groups of substances. On this basis, you have to calculate your country's production (if applicable) and consumption of the groups of controlled substances. While this may sound simple, care has to be taken since compliance with the production and con-





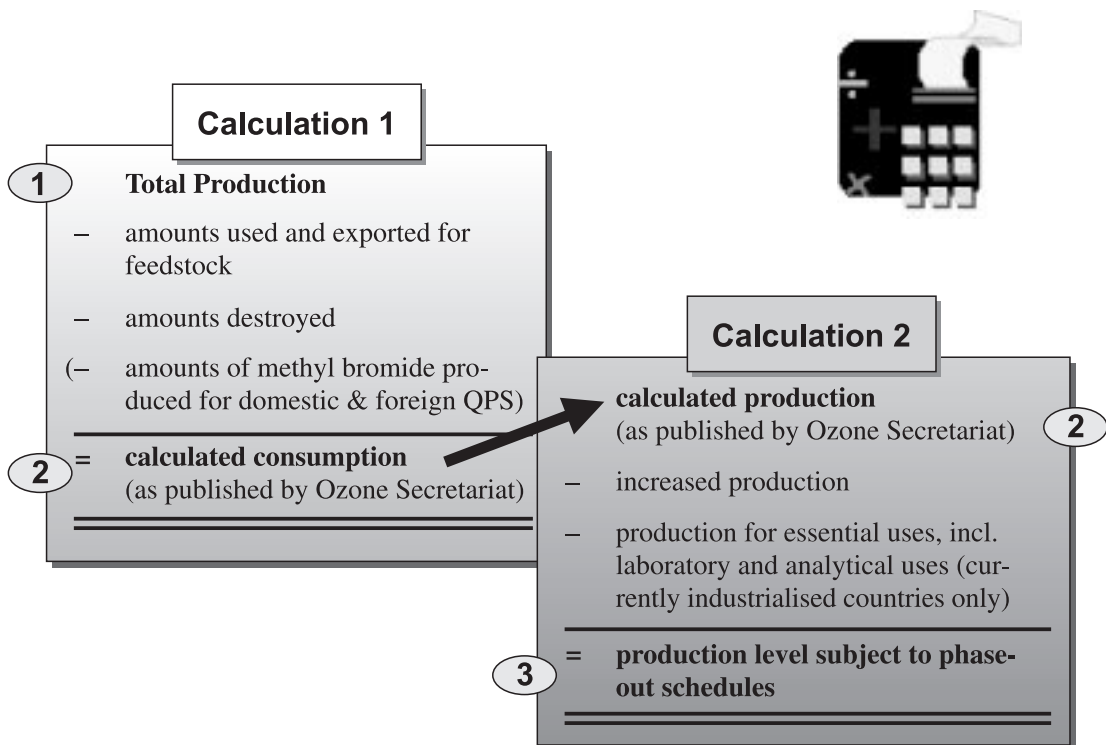
sumption limits is assessed by special calculations under the Protocol, as described below:

## Production



According to the Protocol, some categories are exempted from the calculation of production. Thus, amounts used as feedstock by the chemical industry and amounts destroyed are being subtracted from total production (1) to arrive at **calculated production** (2). Amounts exported for use as feedstock in other countries are also subtracted. In the case of methyl bromide, produced amounts to be used for quarantine and pre-shipment applications (QPS) (including exports for this purpose) are also exempted. The Ozone Secretariat deducts the reported amounts of these exempted categories and publishes the results as calculated production (2) in its annual report on data reporting.

Not deducted by the Ozone Secretariat, but taken into account while assessing compliance, are amounts produced for essential uses or for meeting the basic domestic needs of developing countries (“increased production”). Please remember that such increased production is limited to 10% of 1986, 1989 and 1991 levels of Annex A, B and E substances respectively before total phase-out and 15% afterwards. Please refer to Chapters 1 and 2 for guidance on assessing whether these categories might be relevant to your country and how to collect the necessary data. The production level subject to the phase-out schedules (3) contained in Table 9 on p. 52 can therefore be derived as follows (separately for each group of controlled substances):



The calculated production (2) as determined by you can be used to check whether your country's data has been received and processed accurately by the Ozone Secretariat. If done properly, the calculated production should yield the same figure as the one published by the Ozone Secretariat in its data report. The final production figure (3) gives the production level that is subject to the phase-out schedules contained in Table 9 on p. 52 and may be used to assess your country's compliance with the phase-out schedules.

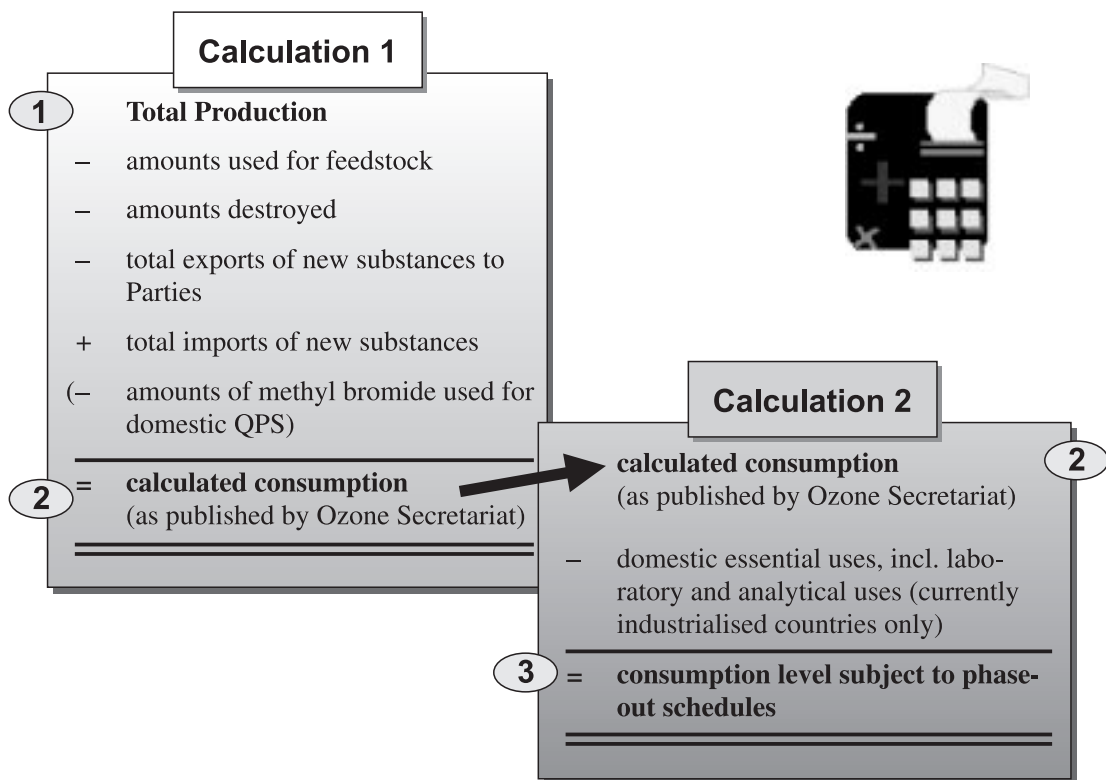
To do so, you first need to calculate your country's calculated production (2) for the baseline applicable to your country (➔ Table 9 on p. 52). If the result of Calculation 2 for the year in question is above the percentage of this calculated baseline production allowed to your country for the year in question (➔ Table 9 on p. 52), your country will be in non-compliance. When verifying compliance with production limits, any transfer of production according to Article 2.5 of the Protocol needs to be taken into account.

## Consumption

As regards **calculated consumption**, the Protocol defines it as production *plus* imports *minus* exports. In this case, production is determined to be total production – amounts used as feedstock domestically – amounts destroyed. To avoid exports to Non-Parties, exports to Parties only are deducted (see Article 3 (c) of the Protocol). Imports and exports of used ODS (recovered and reclaimed) remain unaccounted in calculating consumption. Thus, only imports of “new” (unused or virgin) substances are added. In the case of methyl bromide, amounts used for QPS are to be deducted. The Ozone Secretariat determines calculated consumption (2) accordingly and publishes the resultant consumption figures in its annual report on data reporting.

Amounts used domestically for essential uses (including laboratory and analytical uses) are not deducted by the Ozone Secretariat when calculating consumption, but are taken into account while assessing compliance. This is currently relevant only to industrialised countries (➔ Section 1.1). ODS consumption under the Montreal Protocol is therefore to be calculated as follows (separately for each group of controlled substances):





Since the majority of countries do not have many of the activities listed (➔ Section 1.1), the calculation is often simple:

**imports = calculated consumption = consumption level subject to phase-out schedules.**

The calculated consumption (2) can be used to check the annual data reports of the Ozone Secretariat to see whether the latter has received and processed your country's data accurately. The final consumption figure (3) gives the consumption level that is subject to the phase-out schedules contained in Table 9 on p. 52 and may be used to assess your country's compliance with the phase-out schedules. To do so, you first need to calculate your country's calculated consumption (2) for the baseline applicable to your country (➔ Table 9 on p. 52). If the result of Calculation 2 for the year in question is above the percentage of this calculated baseline production allowed to your country for the year in question (➔ Table 9 on p. 52), your country will be in non-compliance. When verifying compliance with consumption limits, any transfer of production (according to Article 2.5 of the Protocol) that might have occurred needs to be taken into account.

## 6. Sources of Further Information

### 6.1 Contact Addresses

The following contact addresses include the Ozone and Fund Secretariats, the Implementing Agencies of the Multilateral Fund (UNDP, UNEP, UNIDO, and the World Bank) and the Regional and Sub-Regional Networks established in the framework of the Fund Activities. Developing country NOUs looking for further information are advised to contact their regional/sub-regional network coordinator who will direct them as necessary.

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

#### ***Multilateral Fund Secretariat***

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***United Nations Industrial Development Organisation (UNIDO)***

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Vienna International Centre  
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Montreal Protocol Unit  
Global Environment Department  
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Tel.: (1-202) 473-5865      Fax: (1-202) 522-3258  
Email: [sgorman@worldbank.org](mailto:sgorman@worldbank.org).

## 6.2 Relevant Publications and Websites



### UNEP (Ozone Secretariat)

#### Website:

- ◆ <http://www.unep.org/unep/secretar/ozone/home.htm>
- ◆ <http://www.unep.ch/ozone/>

#### Available at the website are, inter alia:

- list of ratifications,
- reports of the Meetings of the Parties to the Montreal Protocol (includes texts of Decisions of the Meetings of the Parties),
- production and consumption data as reported by the Parties in accordance with Article 7 of the Protocol.

#### Relevant publications:

*Ad-Hoc Technical Advisory Committee on ODS Destruction Technologies, May 1992.*

*1998 Report of the Technology and Economics Assessment Panel (1998 Assessment), April 1998.*

*Handbook for the International Treaties for the Protection of the Ozone Layer: The Vienna Convention (1985) The Montreal Protocol (1987).*

*1997 Update of the Handbook for the International Treaties for the Protection of the Ozone Layer: The Vienna Convention (1985) The Montreal Protocol (1987).*

*Production and Consumption of Ozone Depleting Substances 1986-1995 (1997).*

*Handbook on Essential Use Nominations (1997).*

### Multilateral Fund Secretariat

#### Website:

- ◆ <http://www.unmfs.org>

#### Available at the website are, inter alia:

- documentation and registration for upcoming meetings of the Executive Committee of the Multilateral Fund.

### UNEP TIE OzonAction Programme

#### Website:

- ◆ <http://www7.unepie.org/ozonaction.html>



Available at the website are, inter alia:

- *Inventory of Trade Names of Chemical Products Containing Ozone Depleting Substances and their Alternatives* (also available as a hard copy),
- *Policies, Procedures, Guidelines and Criteria of the Multilateral Fund.*

Relevant publications:

*Inventory of Trade Names of Chemical Products Containing Ozone Depleting Substances and their Alternatives* (also available at website).

*Protecting the Ozone Layer. Aerosols, sterilants, carbon tetrachloride and miscellaneous uses* (Volume 5) (1992).

*Protecting the Ozone Layer. Foams.* (Volume 4) (1992).

*Protecting the Ozone Layer. Halons for fire fighting* (Volume 3) (1992).

*Protecting the Ozone Layer. Methyl bromide.* (Volume 6) (1992).

*Protecting the Ozone Layer. Refrigerants.* (Volume 1) (1992).

*Protecting the Ozone Layer. Solvents, coatings and adhesives.* (Volume 2) (1992).

*Monitoring Imports of Ozone-Depleting Substances: A Guidebook* (UNEP TIE OzonAction Programme; Stockholm Environment Institute (SEI); Swedish International Development Co-operation Agency 1996).

*ODS Imports/Exports Licensing Systems: Resource Module* (UNEP TIE OzonAction Programme; Stockholm Environment Institute 1998).

**Technology and Economic Assessment Panel (TEAP)**Website:

- ◆ <http://www.teap.org>

Available at the website are, inter alia:

- *1998 Report of the Technology and Economics Assessment Panel (1998 Assessment)*, April 1998.
- *Handbook on Essential Use Nominations* (1997).

**German Agency for Technical Cooperation (GTZ)**Relevant publications:

*Production and Consumption of Ozone Depleting Substances 1986-1995: The Data Reporting System under the Montreal Protocol* (1997) (also available from GTZ via E-Mail <PROKLIMA@GTZ.de>).

## Glossary of Terms and Abbreviations

This glossary of terms provides quick and easy-to-understand definitions of the main terms used in the Montreal Protocol's data reporting system. Cross-references are indicated in *italics*.

### Amounts destroyed

Quantities of *ODS* destroyed through approved *destruction technologies*, and calculated on the basis of the destruction efficiency of the facility used, are exempted from controls under the Montreal Protocol (*exempted category*) and are to be deducted from production (and consumption; ► Section 5.2).

### Annex A substances

Annex A of the Montreal Protocol contains two Groups of *controlled substances*, five *CFCs* (Group I) and three *halons* (Group II).

### Annex B substances

Annex B of the Montreal Protocol contains three Groups of *controlled substances*, 10 other fully halogenated *CFCs* (Group I), *carbon tetrachloride* (Group II) and *methyl chloroform* (also known as 1,1,1-trichloroethane) (Group III).

### Annex C substances

Annex C of the Montreal Protocol contains two groups of *controlled substances*, 34 *HCFCs* (Group I) and 34 *HBFCs* (Group II).

### Annex E substance

Annex E of the Montreal Protocol contains one (group of) *controlled substance*, *methyl bromide* (Group I).

### Article 5 Parties

Developing countries which have ratified the Montreal Protocol and have a consumption of *Annex A substances* of less than 0.3 kg/capita and Annex B substances of less than 0.2 kg/capita per annum operate under Article 5 of the Protocol.

### Baseline Data

In addition to annual data, each *Party* must submit statistical data (or best estimates) of *production*, *imports* and *exports* of *controlled substances* for specified base years to establish the baseline of controls. For specification of the baseline

of the different groups of *controlled substances* for Article 5 and Non-Article 5 Parties ➔ Section 5.1 of this Handbook.

### Basic domestic needs of developing countries

*Article 5 Parties* are allowed a grace period for the phase-out of *controlled substances* (➔ Section 5.1) in order to meet their basic domestic needs. However, *Article 5 Parties* may not use this allowance to increase production of products containing *ODS* for export (Article 5 and Decision I/12C).

### Bulk chemicals/substances

Only a *controlled substance* or a *mixture of controlled substances* that is not part of a use system (a product that is applied directly to realise its intended use; e.g. a refrigerator or a fire extinguisher) is controlled under the Montreal Protocol. A substance that is contained in a manufacturing product other than a container used for storage or transport of the substance is not considered bulk controlled substance. However, methyl bromide in cylinders and any other container is regarded as a bulk substance, even if it can be used directly from the container (Decisions I/12A and VIII/14).

### Carbon tetrachloride

This *controlled substance* containing chlorine is included in Group II of *Annex B* of the Montreal Protocol. It is used as a *feedstock* in the production of *CFCs* and other chemicals and as a solvent.

### CFCs (Chlorofluorocarbons)

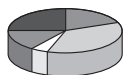
These *ODS* contain fluorine and chlorine. The five main CFCs are controlled as *Annex A substances* (Group I) by the Montreal Protocol. Ten other, less common fully halogenated CFCs are controlled in *Annex B* (Group I). CFCs are entirely anthropogenic in origin and are primarily used as aerosols, refrigerants, solvents and for foam blowing.

### Consumption

Under the Montreal Protocol consumption refers to *production plus imports minus exports*. *Article 5 Parties* reporting to the *Multilateral Fund* are requested to provide sectoral *consumption (use)* data.

### Consumption (use) by sector

*Article 5 Parties* accessing resources of the *Multilateral Fund* have to report annual data on consumption (use) of *controlled substances* by sector to the *Fund Secretariat* (➔ Section 1.2 and Annex II). These data should reflect the actual amount of *ODS* used in the different sectors (➔ Table 7 on p. 31) irre-



spective of whether these amounts came from production, imports or stock-piles.

### Controlled substances

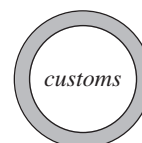
All *bulk chemicals* listed in *Annexes A, B, C, and E* to the Montreal Protocol, whether existing as *pure substances* or as *mixtures*, are referred to as controlled substances. *Production* and *consumption* of these substances is controlled (for phase-out schedules (➡ Section 5.1)).

### Country Programme

*Article 5 Parties* wishing to receive assistance from the *Multilateral Fund* need first to elaborate a Country Programme containing data on current and forecast *ODS production* and *consumption*, phase-out projects and strategy, institutional framework and more. The Fund provides guidelines for and offers assistance in preparing the Country Programme. For more information, contact the *Fund Secretariat* or an *Implementing Agency*.

### Customs codes

Traded goods are generally assigned specific numbers serving as customs codes. Custom authorities in most countries use the *Harmonised System* of customs codes to assist in the easy identification of traded goods. Knowledge about the relevant customs codes can be helpful for collecting import and export data of *controlled substances* (➡ Section 2.1.2).



### Destruction process/technology

*Controlled substances* can be destroyed using an approved destruction process that results in the permanent transformation or decomposition of all or a significant portion of these substances. Any *amounts destroyed* in this way and reported to the Ozone Secretariat are deducted when calculating production and consumption (*exempted category*). The seven destruction processes currently approved under the Protocol are listed in Annex IV.

### Entry into force

The Montreal Protocol of 1987, the London Amendment of 1990 and the Copenhagen Amendment of 1992 each enter into force for any country on the ninetieth day following the date of deposit of its related instrument of ratification, acceptance, approval or accession. Information on the status of ratification by each *Party* to the Montreal Protocol is regularly updated by the Ozone Secretariat. It is available as a hardcopy document and as a webpage at their website at <<http://www.unep.org/unep/secretar/ozone/ratif.htm>>.



### Essential uses

An exemption from the total phase-out of *controlled substances* can be granted for certain essential uses upon application, if approved by the Meeting of the Parties on a case-by-case basis (*exempted category*). This requires that the *ODS* is either necessary for health, safety or for the functioning of society and no acceptable alternative is available. A global exemption has been granted for laboratory and analytical uses. For the essential use process see the *Handbook on Essential Use Nominations* (➔ Section 6.2).



### Executive Committee

An Executive Committee directs the activities of the *Multilateral Fund*. It consists of seven representatives of *Article 5 Parties* and seven representatives of Non-Article 5 Parties. The Executive Committee develops and monitors the implementation of specific operational policies and administrative arrangements, including the disbursement of resources, for achieving the objectives of the Multilateral Fund.

### Exempted categories

A number of categories are not subject to control (*production* and/or *consumption*, as appropriate) under the Montreal Protocol and are thus exempted from control. These include *feedstock*, *amounts destroyed*, *used substances*, *QPS*, *essential uses* (including *laboratory and analytical uses*), and *increased production*.



### Feedstock

*Controlled substances* that are used in the manufacture of other chemicals and are completely transformed in the process are defined as feedstock. For example, *carbon tetrachloride* is commonly used in the production of *CFCs*. Amounts used as feedstock are exempted from controls (*exempted category*) and need to be reported (➔ Section 1.1 on p. 12).

### Fund Secretariat

The day-to-day operation of the *Multilateral Fund* is undertaken by the Fund Secretariat located in Montreal. The Fund Secretariat, *inter alia*, receives and evaluates data reports from *Article 5 Parties* receiving assistance from the Fund.



### Halons

These *ODS* contain fluorine, bromine and, possibly, chlorine. Three halons are controlled in Group II of *Annex A* of the Montreal Protocol. Halons are primarily used in fire extinguishers.



### Harmonised System (HS)

In most countries imports and exports are registered using the internationally Harmonised System (HS) of *custom codes* maintained by the World Customs Organization. The HS has been adjusted to include separate codes for some of the *controlled substances* when traded as *pure chemicals* (➔ Section 2.1.2).

### HBFCs (Hydrobromofluorocarbons)

These *ODS* contain fluorine and bromine and are controlled in Group II of *Annex C* of the Montreal Protocol. There is no known production or consumption of HBFCs.

### HCFCs (Hydrochlorofluorocarbons)

These are partially halogenated *ODS* with chlorine and fluorine and controlled in Group I of *Annex C* of the Montreal Protocol. While HCFC-22 has been in use for a number of years, HCFCs are primarily used as substitutes for *CFCs*.

The text "HCFC" is enclosed in a grey, horizontally-oriented oval shape with a slight gradient.

### HS

Refers to the Harmonised Commodity Description and Coding System (known as the *Harmonised System*)

### Implementation Committee

The Implementation Committee under the Non-Compliance Procedure for the Montreal Protocol consists of five representatives of *Article 5 Parties* and five representatives of *Non-Article 5 Parties*. It deals with the implementation of the Montreal Protocol, including the data reporting by *Parties* under Article 7. The Implementation Committee can make recommendations to the Meeting of the Parties to improve the implementation of the Protocol and on actions in case of non-compliance.

### Implementing Agencies

Phase-out activities in *Article 5 Parties* supported by the *Multilateral Fund* are implemented through so-called Implementing Agencies. *UNDP*, *UNEP*, *UNIDO* and the *World Bank* serve as Implementing Agencies (for addresses ➔ Section 6.1).

### Increased production (for the *basic domestic needs* of developing countries)

Under the Protocol, a *Party* is allowed to increase its production of *Annex A*, *B* and *E substances* above the restricted levels in order to supply the *basic domestic needs* of *Article 5 Parties*. Such increased production is, within limits, exempted from controls (*exempted category*) and needs to be reported (➔ Section 1.1 of this Handbook).

### Laboratory and analytical uses



*Production*, import and export of phased-out *controlled substances* are allowed under a global *essential use* exemption for specified laboratory and analytical uses (➔ Section 2.5 of the *Handbook for the International Treaties for the Protection of the Ozone Layer* for specifications). The Meeting of the Parties is to decide each year on any *ODS* use which should no longer be eligible under the exemption for laboratory and analytical uses, and from which date. The *Ozone Secretariat* will make available a consolidated list of uses that are no longer eligible (Decision X/19). Special reporting obligations apply to this data category (➔ Section 1.1 of this Handbook).

### Licensing system



In accordance with the Montreal Amendment of the Montreal Protocol, each *Party* to the Montreal Protocol (that has ratified the Montreal Amendment of 1997) has to adopt an import/export licensing system for monitoring the trade in *controlled substances* by 1 January 2000. In case the Amendment has not entered into force for the country by then, the licensing system has to be established within three months after the entry into force of the Amendment. Such a licensing system can be used to collect data needed for reporting to the *Ozone Secretariat* and *Fund Secretariat* (➔ Section 2.1.1).

### Methyl bromide

This partially halogenated *ODS* (also known as bromomethane) contains bromine and is controlled in Group I of *Annex E* of the Montreal Protocol. It is primarily used as a fumigant on soils, commodities and in *quarantine* and *pre-shipment applications*.

### Methyl chloroform

This partially halogenated *ODS* (also known as 1,1,1-trichloroethane) contains chlorine and is controlled in Group III of *Annex B* of the Montreal Protocol. It is primarily used as a solvent for cleaning metals. Note that neither methylene chloride nor 1,1,2-trichloroethane is a *controlled substance*.

### Mixtures of ODS

Chemicals which contain two or more *controlled substances* or one or more *controlled substances* mixed with other non-ozone depleting chemicals are defined as mixtures of *ODS*. For an illustrative list of mixtures used as refrigerants and fumigants ➔ Annex I; for a more comprehensive list of mixtures ➔ *1998 Report of the Technology and Economic Assessment Panel*; ➔ also *UNEP TIE's Inventory of Trade Names of Chemical Products Containing Ozone Depleting Substances and Their Alternatives* (➔ Section 6.2).



## Multilateral Fund

The Multilateral Fund for the Implementation of the Montreal Protocol was established in 1990 to assist *Article 5 Parties* financially and technically to eliminate *controlled substances*. It is directed by an Executive Committee, served by the *Fund Secretariat*, and implemented by four *Implementing Agencies*.

## National Ozone Units (NOUs)

The government unit that is responsible for managing the national *ODS* phase-out strategy as, in the case of *Article 5 countries*, specified in the *Country Programme*. NOUs are responsible for, inter alia, fulfilling the data reporting obligations under the Montreal Protocol. Although the term “National Ozone Unit” usually refers to *Article 5 Parties* under the *Multilateral Fund*, for the purposes of this Handbook it also refers to industrialised countries.



## New Substances

Any *controlled substance* that has not been *recovered*, *reclaimed* or *recycled* prior to use is a new substance. It contrasts with *used substances* that have been *recovered*, *reclaimed* and/or *recycled*.

## Non-Party

Any country whose government has not ratified, accepted, approved or accessed the Montreal Protocol or one or more of its specific Amendments is a Non-Party to the Protocol or to that particular amendment/those particular amendments (➔ also Box 1 on p. 9).

## NOUs

Refers to *National Ozone Units*

## ODP

Refers to *Ozone Depleting Potential*

## ODP-weighted data/ODP tons

ODP-weighted data are generated when an amount of a *controlled substance* is multiplied by its *ODP* value. By this procedure, metric tons are converted into *ODP* tons which indicate the relative environmental damage rather than the physical quantity (➔ Section 5.2).

## ODS

Refers to *Ozone Depleting Substance(s)*



**ODS officer**

A member of an *NOU*

**Ozone depleting potential (ODPs)**

Each *controlled substance* is assigned a value indicating its impact on the stratospheric ozone layer per unit mass of a gas, as compared to the same mass of *CFC 11*. These ODP values for each of the *controlled substances* are given in the Annexes of the Montreal Protocol (➔ also Annex V of this Handbook).

**Ozone depleting substances (ODS)**

All substances having an *ODP* above zero are, in principle, ODS. These are generally chemicals containing chlorine or/and bromine. The most important ODS are *controlled substances* under the Montreal Protocol. A smaller number of ODS are not (yet) controlled under the Protocol because they have not been produced or consumed in significant quantities. The term ODS in most cases refers to *controlled substances*.

**Ozone Secretariat**

The Ozone Secretariat is the Secretariat for the Vienna Convention for the Protection of the Ozone Layer of 1985 and the Montreal Protocol on Substances that Deplete the Ozone Layer of 1987. It is based at UNEP headquarters in Nairobi, Kenya. The Ozone Secretariat receives and analyses data reports under Article 7 of the Montreal Protocol from all Parties.

**Party or Parties**

Any country or regional economic integration organisation becomes a Party to the Montreal Protocol and its Amendments 90 days after its ratification, acceptance, approval or accession of the Protocol or the particular amendment.

**Pre-shipment applications**

Amounts of *methyl bromide* applied directly preceding and in relation to export of a product to meet phytosanitary or sanitary requirements of the exporting or importing country are exempted from control (*exempted category*) (Decision VII/5). Such pre-shipment applications need to be reported as *QPS*.

**Process agent**

Some amounts of *controlled substances* are used in the production of other chemicals (e.g. as a catalyst or an inhibitor of a chemical reaction) without being consumed. Only those uses of *controlled substances* listed in Table 8 on p. 41 are considered uses of process agents. For the reporting requirements on process agents ➔ Section 1.1 on p. 12.



## Production

Under the Montreal Protocol, production of *controlled substances* by a country is calculated as total production minus *amounts destroyed* minus amounts used as *feedstock*. Controls do not apply for production for *exempted categories*.



## Pure substances

A pure *controlled substance* contains only one *ODS*. It contrasts with a *mixture of ODS* that is defined as any other product containing two or more *controlled substances* or one or more *controlled substances* mixed with other non-ozone depleting chemicals. Note, however, that a chemical that contains an anti-dusting agent or colouring or odoriferous substance to facilitate its identification or for safety reasons can be traded under the *HS* customs code of a pure chemical, provided that the additions do not render the product particularly suitable for specific use rather than for general use. The same applies to products dissolved in other solvents for reasons of safety or for transport.

## QPS

Refers to *quarantine and pre-shipment applications*

## Quarantine applications

Amounts of *methyl bromide* used to prevent the introduction, establishment and/or spread of quarantine pests (including diseases) and/or to ensure their official control are exempted from control (*exempted category*) (Decision VII/5). Such quarantine applications need to be reported as QPS.

## Reclaimed substances

Imports and exports of *recovered controlled substances* that have been re-processed and upgraded to a specified quality through filtering, drying, distillation and/or chemical treatment are exempted from controls (*exempted category*). Imports and Exports of such reclaimed *used substances* in *bulk* need to be reported.



## Recovered substances

Imports and exports of *controlled substances* that have been collected from machinery, equipment, containment vessels, etc. during servicing or prior to disposal are exempted from controls (*exempted category*). Imports and exports of such recovered *used substances* in *bulk* that have been part of a prior use system need to be reported.

## Recycled substances

*Recovered controlled substances* are re-used after a basic cleaning process such as filtering and drying are exempted from controls (*exempted category*). Report-

ing of such recycled *used substances* is not relevant, as recycling usually involves recharge back into equipment. Recycled *ODS* are thus usually neither imported nor exported in *bulk*.

### Re-export



*ODS* can be imported by a country, stored and/or processed, and subsequently re-exported. In such cases, the import and the (re-)export have to be treated as two separate transactions (contrasting the treatment of *trans-shipments*). In addition to the import from the country of origin, the country of intermediate destination has to report on the re-export to the country of final destination.

### Stockpile

A *controlled substance* can be stored or accumulated for use in the future. An increase or decrease in a country's stockpiles can lead to discrepancies in the consumption calculated by the *Ozone Secretariat* and the *consumption (use)* as reported to the *Fund Secretariat*.

### Trade names



*Pure controlled substances* as well as *mixtures of ODS* are produced by a number of companies which give their products commercial trade names, rather than the name of the *ODS*. These trade names are indicated on the product packaging and transaction/manifest papers. Knowledge about trade names thus helps identify *ODS*. An inventory of trade names is available from *UNEP TIE Ozone Action Programme* (➔ Section 6.2).

### Transfer of consumption

A *Non-Article 5 Party* can transfer to another such *Party* a portion of its consumption of *HCFCs*, if the transferring *Party's* consumption of *CFCs* contained in Group I of Annex A did not exceed 0.25kg/capita in 1989 (Article 2.5bis). Such transfers must be notified to the *Ozone Secretariat* but have not occurred yet.

### Transfer of production

A *Party* can transfer to another *Party* any portion of its *production* of the *Annex A, B and E substances* provided that their combined production should not exceed the limits set in the Protocol (Article 2.5). Such transfers must be notified to the *Ozone Secretariat*.

### Trans-shipment

Trans-shipment occurs if a *controlled substance* is shipped through a third country on its way from the original exporter to the final importer. In this case, the country of origin of the *ODS* shall be regarded as the exporter and the country

of final destination as the importer. The transit country does not have to report (in contrast to the situation with respect to *re-exports*).

### **UNDP**

United Nations Development Programme. It is one of the Multilateral Fund's Implementing Agencies.

### **UNEP (IE)**

United Nations Environment Programme (Industry and Environment Centre) . It is one of the Multilateral Fund's Implementing Agencies.

### **UNIDO**

United Nations Industrial Development Organisation. It is one of the Multilateral Fund's Implementing Agencies.

### **Used substances**

*Controlled substances* that have been part of a product, or manufacturing process, and are *recovered*, *reclaimed* or *recycled* prior to re-use are termed as used substances.

### **World Bank**

Formerly known as the "International Bank for Reconstruction and Development," it is one of the Multilateral Fund's Implementing Agencies.



## Annexes

### Annex I: Data Forms for Reporting to the Ozone Secretariat<sup>1</sup>

This Annex contains the data forms to be used for annual reporting of data to the Ozone Secretariat including instructions to be followed when filling them. The forms are available as Microsoft Excel file and the instructions as a text file from the Ozone Secretariat's website at <<http://www.unep.org/unep/secretar/ozone/reports.htm>>. You can also receive them as a hard copy from the Ozone Secretariat. Alternatively, you may use copies of the reporting formats reproduced below for reporting data to the Ozone Secretariat.

The forms and corresponding instructions might be adapted in the future to changing needs and circumstances. Please refer to the Ozone Secretariat to receive the most recent version.

In addition to the Instructions provided below, please also read the general guidelines provided in Sections 4.1 and 4.2 before filling the forms. This will especially help you report data in a consistent way to the Ozone and Fund Secretariats. Before filling the data forms you are asked to answer a questionnaire, which will help you assess which data forms you need to submit. [*References to the Handbook in italics*]

The following is included in this Annex:

1. Questionnaire
2. Introduction
3. Reporting Requirements
4. General Instructions
5. Definitions
6. INSTRUCTION I: Data on Imports of ODSs (Data Form 1)
7. INSTRUCTION II: Data on Exports of ODSs (Data Form 2)
8. INSTRUCTION III: Data on Production of ODSs (Data Form 3)
9. INSTRUCTION IV: Data on Destruction of ODSs (Data Form 4)
10. INSTRUCTION V: Data on Imports from and Exports to Non-Parties (Data Form 5)
11. ILLUSTRATIVE LIST OF MIXTURES CONTAINING ODS
  - Data Form 1: Data on Imports
  - Data Form 2: Data on Exports
  - Data Form 3: Data on Production
  - Data Form 4: Data on Quantity of Substances Destroyed
  - Data Form 5: Data on Imports from and/or Exports to Non-Parties

<sup>1</sup> Source: Ozone Secretariat (<http://www.unep.org/unep/secretar/ozone/reports.htm>) as of July 1998.

### Data Reporting Forms

Party: \_\_\_\_\_

Reporting Year: \_\_\_\_\_

Respondents are requested to read the Introduction on page 2 [page 77], the General Instructions on page 4 [page 80] and the Definition on pages 5-6 [pages 81-82] carefully before proceeding to the questionnaire and to refer to them as necessary when completing the data forms.

#### 1. Questionnaire

- 1.1. Did your country import CFCs, halons, carbon tetrachloride, methyl chloroform, HCFCs, or methyl bromide in the reporting year?

Yes [  ]No [  ]

If No, ignore data form 1 and go to question 1.2. If Yes, go to data form 1 and enter the relevant data. Please read Instruction I on page 7 [page 83] carefully before filling in the form.

- 1.2. Did your country export CFCs, halons, carbon tetrachloride, methyl chloroform, HCFCs, or methyl bromide in the reporting year?

Yes [  ]No [  ]

If No, ignore data form 2 and go to question 1.3. If Yes, go to data form 2 and enter the relevant data. Please read Instruction II on page 8 [page 84] carefully before filling in the form.

- 1.3. Did your country produce CFCs, halons, carbon tetrachloride, methyl chloroform, HCFCs, or methyl bromide in the reporting year?

Yes [  ]No [  ]

If No, ignore data form 3 and go to question 1.4. If Yes, go to data form 3 and enter the relevant data. Please read Instruction III on page 9 [page 85] carefully before filling in the form.

- 1.4. Did your country destroy any ODSs in the reporting year?

Yes [  ]No [  ]

If No, ignore data form 4 and go to question 1.5. If Yes, go to data form 4 and enter the relevant data. Please read Instruction IV on page 10 [page 86] carefully before filling in the form.

- 1.5. Did your country import from or export to non-Parties in the reporting year?

Yes [  ]No [  ]

If No, ignore data form 5. If Yes, go to data form 5 and enter the relevant data. Please read Instruction V on page 10 [page 86] carefully, and, particularly, the definition of non-Parties before filling in the form.

Name of reporting officer: .....Signature: .....

Designation: .....

Organization: .....

Contact details: (Postal Address, Phone, Fax and E-Mail Address) .....

Country: .....

Date: .....

## 2. INTRODUCTION

2.1 The attached data forms have been designed to make reporting easier for the Parties. The reporting is prescribed by Article 7 of the Montreal Protocol and by various decisions of the Meeting of the Parties.

2.2 The major features of the forms are as follows:

- (a) Five separate data forms are provided for imports, exports, production, destruction of ozone depleting substances (ODSs) and trade with non-Parties, respectively. Please use only those data forms applicable to your country and ignore the other forms, after ticking off the respective “No” box in the questionnaire on the page 1 [page 76] above. For example, many Parties only import and do not export, produce, destroy or trade with non-Parties in any of the substances. If this is the case, please use only the Imports Data Form 1 and ignore the other forms, after ticking off the “No” boxes for questions 1.2 – 1.5 on page 1 [page 76].
- (b) A row has been provided for each of the substances in Annex A. However, for categories of Annex B CFCs and HCFCs, the form is made shorter by providing rows only for substances which have been reported by Parties in the past. A few blank rows are provided for more substances, if needed. HBFCs (Annex C, Group II) have already been phased out by all Parties. Hence, only one blank row has been provided for them, as a formality. You can use the computerized forms supplied by the Secretariat or paper forms. Parties who use the computerized forms can easily add more rows as needed; if using paper forms, Parties are free to add pages as required.
- (c) The following are the exempted categories of ODSs:
  - Feedstocks for all the substances,
  - Essential uses for substances as approved by a Meeting of the Parties from time to time,
  - Quarantine and pre-shipment applications for Methyl Bromide, and
  - Critical or emergency uses of Methyl Bromide as approved from time to time.

It is necessary for each Party to specify how much of its production, export or import is used for these exempted categories. The Secretariat will deduct these exempted quantities from the total figures. Provision is made in the data forms for these exempted categories.

- (d) The same forms can be used for the base year and other years.
- (e) The basis for reporting requirements and definitions are given in section 3 and section 5 below, respectively.



### 3. REPORTING REQUIREMENTS

Reporting requirements under the Montreal Protocol and pursuant to decisions on requests for data by Meetings of the Parties are as follows:

Basis for reporting	Information to be provided
(a) To verify implementation	- Increased (annual) production of each ODS to meet of Articles 2A – 2H the basic domestic needs of Article 5 Parties.
(b) Article 7	- Production, imports and exports of each of the controlled substances. - Amounts used for feedstock. - Amounts destroyed. - Imports from and exports to non-Parties. - Imports and exports of recycled halons and HCFCs.
(c) Article 9	Summary of activities (every two years).
(d) Article 2, paragraphs 5, 5 bis 6,7	- Transfer or addition of production (as and when it occurs).
(e) Decision IV/11, paragraph 3	- Report on statistical data on the actual quantities of ODS destroyed.
(f) Decision IV/17 A, paragraph 1	- Information on the implementation of Article 4.
(g) Decision IV/24, paragraph 2	- Import and export of recycled and used controlled substances.
(h) Decision V/15	Information relevant to international halon bank management (to UNEP TIE PAC).
(i) Decision V/25 and VI/14 A	Parties supplying ODS to Article 5 Parties to provide annually summary of requests from importing Parties.
(j) Decision VI/9, paragraph 3	- Reports on each controlled substance produced for laboratory and analytical uses.
(k) Decision VI/19, paragraph 4	- List of reclamation facilities and their capacities.

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- |                                  |  |
|----------------------------------|--|
| (l) Decision VII/9, paragraph 4  | - Types, quantities and destinations of exports of Annex A and Annex B substances.   |
| (m) Decision VII/30              | - Importing countries to report to the Secretariat on the volumes of controlled substances imported for feed stock.  |
| (n) Decision VII/32              | - Report on measures taken to regulate import and export of products and equipment containing Annex A and Annex B substances and technology used in their manufacture. |
| (o) Decision VIII/9, paragraph 9 | - Report on quantities and uses of ODSs produced and consumed for essential uses.  |

## 4. GENERAL INSTRUCTIONS

- 4.1 Parties are requested to report the production and consumption of bulk ODSs in metric tonnes, without multiplying by the relevant ODPs (ozone depleting potentials). [➔ *also Section 4.1*]
- 4.2 In order to avoid duplication, quantities contained in manufactured products should not be included in a country's consumption, regardless of whether the end-products are imported or exported. [➔ *Box 2 on bulk substances on p. 9*]
- 4.3 The data reported in accordance with the data forms will be used to determine the calculated levels of production and consumption, upon which the control measures are based. It is, therefore, crucial that data be provided separately for each individual substance listed in the forms.
- 4.4 When calculating consumption, the Montreal Protocol allows countries to deduct amounts of ODS used for feedstock uses, exempted essential uses and for quarantine and preshipment applications. However, when reporting data, Parties should not deduct these figures from their data. The Secretariat will make the necessary deductions.
- 4.5 It should be noted that both paragraphs 1 and 2 of Article 7 of the Montreal Protocol provide that the Parties may submit the best possible estimate of data for the base year if actual data are not available. [*for guidance on how to estimate data* ➔ *Section 2.1.4*]
- 4.6 Parties producing or consuming controlled substances for approved essential uses should also report to the Secretariat using the form approved by decision VIII/9, paragraph 9.
- 4.7 Parties might import or export mixtures containing controlled substances. If this is the case, the Parties should calculate the quantity of each substance in the mixtures and fill in the appropriate quantities of those substances in the data form and not the quantities of the mixtures. In case of, for example, R-502 (HCFC-22 48.8%; CFC-115 51.2%), please report the quantity of the individual controlled substances contained in the mixture by entering the appropriate data under each controlled substance (e.g. R-502 should be reported as CFC-115 and HCFC-22). An illustrative list of mixtures containing ODS with their compositions is given in section 11, pages 11-12 [*pages 87-88*]. For further information about the composition of other mixtures containing ODS, please refer to the diskette data base reference tool known as the OAIC-DV MKV, circulated by UNEP Industry and Environment OzonAction Programme, 39-43, Quai André Citroën, 75739, Paris, Cedex 15, France, or refer to the OzonAction website at: <http://www.unepie.org/ozonaction.html>.
- 4.8 The Montreal Protocol stipulates, under paragraph 4 of Article 7, that the requirements in respect of statistical data on imports and exports shall be satisfied if a regional economic integration organization provides data on imports and exports between the organization and States that are not members of that organization. However, if any member of such an organization (the European Community) produces and exports substances to other Parties for exempted uses (e.g. feedstock, essential uses, quarantine and pre-shipment applications for methyl bromide), such members should report these by completing the relevant columns in data form 2. This will enable the Secretariat to deduct their exports for exempted purposes from their levels of production which they report in data form 3.

## 5. DEFINITIONS

- 5.1 “Consumption” means production plus imports minus exports of controlled substances (Montreal Protocol, Article 1).
- 5.2 “Controlled substance” means a substance in Annex A, Annex B, Annex C or Annex E to the Protocol, whether existing alone or in a mixture. It includes the isomers of any such substance except as specified in the relevant Annex, but excludes any controlled substance or mixture (blend) which is in a manufactured product other than a container used for the transportation or storage of that substance (Montreal Protocol, Article 1).
- 5.3 “Destruction process” is one which, when applied to controlled substances, results in the permanent transformation or decomposition of all or a significant portion of such substances (decisions I/12F, IV/11, V/26 and VII/35).
- 5.4 “Production” means the amount of controlled substances produced, minus the amount destroyed by technologies approved by the Parties and minus the amount entirely used as feedstock in the manufacture of other chemicals. The amount recycled and reused is not to be considered as production (Montreal Protocol, Article 1). The data forms prescribe reporting of feedstock use and of quantities destroyed separately, and reporting of total production without deduction. The Secretariat would make the necessary deduction.
- 5.5 The amounts recovered, reclaimed or recycled (or reused) is not to be considered as “Production”, even though they are to be reported.

“Recovery, Recycling and Reclamation” have been defined by the Parties (Decision IV/24) as follows:

- (a) “Recovery”: The collection and storage of controlled substances from machinery, equipment, containment vessels, etc., during servicing or prior to disposal;
- (b) “Recycling”: The reuse 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”;
- (c) “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.

5.6 “Quarantine and preshipment applications” have been defined by the Parties (decision VII/5) as follows:

- (a) “Quarantine applications”, with respect to methyl bromide, are treatments to prevent the introduction, establishment and/or spread of quarantine pests (including diseases), or to ensure their official control, where:
  - (i) Official control is that performed by, or authorized by, a national plant, animal or environmental protection or health authority;
  - (ii) Quarantine pests are pests of potential importance to the areas endangered thereby and not yet present there, or present but not widely distributed and being officially controlled.
- (b) “Pre-shipment applications” are those treatments applied directly preceding and in relation to export, to meet the phytosanitary or sanitary requirements of the importing country or existing phytosanitary or sanitary requirements of the exporting country.

5.7 The Parties decided at their Fourth Meeting (Decision IV/14):

“To clarify Article 7 of the amended Protocol so that it is understood to mean that, in cases of transshipment of controlled substances through a third country (as opposed to imports and subsequent re-exports), the country of origin of the controlled substances shall be regarded as the exporter and the country of final destination shall be regarded as the importer. Cases of import and re-export should be treated as two separate transactions; the country of origin would report shipment of the country of intermediate destination, which would subsequently report the import from the country of origin and export to the country of final destination, while the country of final destination would report the import.”

5.8 “The Parties decided at their Eighth Meeting (Decision VIII/14):

“To clarify decision I/12A of the First Meeting of the Parties as follows: trade and supply of methyl bromide in cylinders or any other container will be regarded as trade in bulk in methyl bromide.”

5.9 “Regional Economic Integration Organization” means an organization constituted by sovereign States of a given region which has competence in respect of matters governed by the Vienna Convention or its protocols and has been duly authorized, in accordance with its internal procedures, to sign, ratify, accept, approve or accede to the instruments concerned. The only such organization for the purpose of the Montreal Protocol is the European Community.

The Montreal Protocol stipulates, under paragraph 8(a) of Article 2, that any Parties which are member States of a regional economic integration organization as defined above may agree that they shall jointly fulfil their obligations respecting consumption provided that their total combined calculated level of consumption under Articles 2, 2A and 2H of the Protocol does not exceed the levels required by these Articles.

## 6. INSTRUCTION I: Data on Imports of ODSs (Data Form 1)

- 6.1 For reporting data on imports of substances listed in Annex A (CFCs and halons), Annex B (other fully halogenated CFCs, methyl chloroform and carbon tetrachloride), Annex C (HCFCs or HBFCs) or Annex E (methyl bromide), please use data form 1.
- 6.2 In column 2 of Data Form 1, all substances of Annex A and Annex B (Groups II and III) have been listed. For Annex B Group I (Other fully halogenated CFCs) and Annex C Group I (HCFCs), only substances which have been reported by Parties in the past are listed. HBFCs have already been phased out by all Parties and hence for HBFCs only one blank row has been provided as a formality. If you are importing controlled substances other than those listed, please use the blank space to report data on these substances, and use additional pages, if necessary.
- 6.3 If your country imported mixtures (blends) of controlled substances, e.g. R-502 (HCFC-22 48.8%; CFC-115 51.2%), please report the quantity of the individual controlled substances contained in the mixture by entering the appropriate data under each controlled substance (e.g. R-502 should be reported as CFC-115 and HCFC-22). An illustrative list of mixtures with their compositions is given in section 11 on pages 11-12 [*pages 87-88*]. For further information about the composition of other mixtures, please refer to the diskette data base reference tool known as the OAIC-DV MKV, circulated by UNEP Industry and Environment OzonAction Programme, 39-43, Quai André Citroën, 75739, Paris, Cedex 15, France, or refer to the OzonAction website at: <http://www.unepie.org/ozonaction.html>.
- 6.4 Please enter the number of metric tonnes imported in column 3 of Data Form 1 for each substance imported. If you did not import any of the substances listed, or if you have imported only recovered or reclaimed substances, please enter zero (0) in column 3 for “New” for each substance. If you imported any recovered or reclaimed substances, please enter the data in column 4. [*➔ Section 5.2 for information on calculated consumption*]
- 6.5. When calculating a Party’s consumption, substances used as feedstock for the production of other chemicals are exempted. Substances so used are completely transformed in the manufacturing process of the new chemical. In reporting total quantities of new substances imported in column 3, the quantities imported for feedstocks, reported in column 5, should not be deducted. Similarly, the quantities imported for essential uses, reported in column 6, should not be deducted. The Secretariat will make the necessary deductions.
- 6.6 When calculating a Party’s consumption of methyl bromide, the quantities used for quarantine and pre-shipment (QPS) applications are exempted. In data form 1, quantities of methyl bromide imported for quarantine and pre-shipment applications should be entered separately at the bottom of the form, and not deducted from the total quantity imported. The Secretariat will make the necessary deductions.

## 7. INSTRUCTION II: Data on Export of ODSs (Data Form 2)

- 7.1. For reporting data on exports of substances listed in Annex A (CFCs and Halons), Annex B (other fully halogenated CFCs, methyl chloroform and carbon tetrachloride), Annex C (HCFCs or HBFCs) or Annex E (methyl bromide), please use data form 2.
- 7.2. The first column (“SUBSTANCES”) has been left blank because each Party may export different substances. Please add the names and relevant information of only those substances being exported by your country. [➔ *Section 2.3 on how to collect exports data*]
- 7.3. If your country exported mixtures (blends) of controlled substances, e.g. R-502 (HCFC-22 48.8%; CFC-115 51.2%), please report the quantity of the individually controlled substances contained in the mixture by entering the appropriate data for each controlled substance (e.g. R-502 should be reported as CFC-115 and HCFC-22). An illustrative list of mixtures with their compositions is given in section 11 on pages 11-12 [*pages 87-88*]. For further information about the composition of other mixtures, please refer to the diskette data base reference tool known as the OAIC-DV MKV, circulated by UNEP Industry and Environment OzonAction Programme, 39-43, Quai André Citröen, 75739, Paris, Cedex 15, France, or refer to the OzonAction website at: <http://www.unepie.org/ozonaction.html>.
- 7.4. Decision VII/9, paragraph 4, requests the Parties to report on the destination of Annex A and Annex B substances (new, recovered or reclaimed) that are exported. Fill in column 2 on the destination of exports.
- 7.5. If your country is exporting new ODS, please provide in column 3 the quantity of metric tonnes for the chemical(s) you exported. If you exported any recovered or reclaimed substances, please enter the data in column 4.
- 7.6. When calculating a Party’s consumption, the Montreal Protocol does not include ODSs used as feedstock for the production of other chemicals. ODSs so used are completely transformed in the manufacturing process of new chemicals. On reporting in column 3 the total quantities of new substances exported, the quantities exported to be used as feedstock reported in column 5, should not be deducted. Similarly, the quantities exported for essential uses, reported in column 6, should not be deducted. The Secretariat will make the necessary deductions. [➔ *Section 5.2 for information on calculated consumption*]
- 7.7. When calculating a Party’s consumption of methyl bromide, quantities used for quarantine and pre-shipment (QPS) applications are exempted. In Data Form 2, quantities of Methyl Bromide exported for quarantine and pre-shipment applications should be entered separately, and not deducted from the quantity exported. The Secretariat will make the necessary deductions.

## 8. INSTRUCTION III: Data on Production of ODSs (Data Form 3)

- 8.1. For reporting data on production of substances listed in Annex A (CFCs and Halons), Annex B (other fully halogenated CFCs, methyl chloroform and carbon tetrachloride), Annex C (HCFCs and HBFCs), or Annex E (methyl bromide), use data form 3.
- 8.2. In column 2 of data form 3, all substances in Annex A and Annex B, Groups II and III, have been listed. For Annex B, Group I (other fully halogenated CFCs) and Annex C, Group I (HCFCs), only substances which have been reported by Parties in the past are listed. HBFCs have already been phased out by all Parties and hence for HBFCs only one blank row has been provided as a formality. If you are producing controlled substances other than those listed, please use the blank space to report data on these substances, or use additional pages, if necessary. [➡ *Section 2.4 for guidance on how to collect production data*]
- 8.3. In column 3 of data form 3, please give the total production of your country without making any deductions for feedstock, destruction, export for feedstock uses, or any other use. The quantity of production used for feedstock within your country reported in column 4, and for essential uses within your country reported in columns 5, should not be deducted from the total production. Similarly, production for supply to Article 5 Parties filled in the form in column 6, should not be deducted from the total production. Please report exports of ODS to be used for feedstock by the importing country in column 5 of data form 2 (Data on Exports) and not in data form 3 (this form). The Secretariat will make the necessary deductions. [➡ *Section 5.2 for calculated production*]
- 8.4. When calculating a Party's consumption, the Montreal Protocol does not include ODS which is used as a feedstock for the production of other chemicals. ODS so used is completely transformed in the manufacturing process of the new chemical. If your country produced ODS for feedstock use within the reporting period, please provide data on the quantity of each ODS produced for feedstock purposes in column 4. [➡ *Section 5.2 for information on calculated consumption*]
- 8.5. Producers of Annex A and Annex B substances are allowed to produce additionally, 10 per cent (prior to phase out) or 15 per cent (after phase out), of their base-year production to meet the basic domestic needs of Parties operating under Article 5 paragraph 1. If your country produced ODS for this purpose, please enter the amount so produced in column 6 on Data Form 3.
- 8.6. When calculating a Party's consumption of methyl bromide, quantities produced for quarantine and preshipment (QPS) applications are exempted. In data form 3, the total quantities of methyl bromide produced for quarantine and preshipment applications should be entered separately at the bottom of the form and not deducted from the total quantity produced. The Secretariat will make the necessary deduction.



## 9. INSTRUCTION IV: Data on Destruction of ODSs (Data Form 4)

- 9.1. Very few countries have the capacity to destroy ODSs using approved destruction technologies [**► Annex IV for the list of approved destruction technologies**]. If your country has destroyed any of the substances listed in Annex A (CFCs and Halons), Annex B (other fully halogenated CFCs, methyl chloroform and carbon tetrachloride), Annex C (HCFCs and HBFCs), or Annex E (methyl bromide) in the reporting period, please use data form 4.
- 9.2. The first column (“SUBSTANCES”) has been left blank because each Party may destroy different substances. Please list only the names of those substances destroyed in the reporting year.
- 9.3. When calculating a Party’s consumption, the Montreal Protocol does not include the amount of substances destroyed, if destruction occurred through the use of a Protocol-approved technology. If you have destroyed any substance in the reporting year, do not deduct the quantity destroyed reported in column 2 of Data Form 4 from the quantity produced reported in column 3 of Data Form 3. The Secretariat will make the necessary deductions.

## 10. INSTRUCTION V: Data on Imports from and Exports to Non-Parties (Data Form 5)

- 10.1 Please use Data Form 5 for reporting data on imports from and exports to non-Parties of substances of Annex A (CFCs and halons), Annex B (Other fully halogenated CFCs, methyl chloroform and carbon tetrachloride), Annex C (HCFCs and HBFCs) or Annex E (methyl bromide).
- 10.2. The first column “SUBSTANCES” has been left blank because each Party may import different substances from and/or export different substances to non-Parties. Please fill in only the names of those substances that were imported from and/or exported to non-Parties.
- 10.3. “Non-Party” means:
- With respect to Annex A substances, all countries that have not ratified the 1987 Montreal Protocol.
  - With respect to Annex B substances, all countries that have not ratified the London Amendment.
  - With respect to Annexes C and E substances, all countries that have not ratified the Copenhagen Amendment.
- 10.4 The status of ratification of the 1987 Montreal Protocol and of the London and Copenhagen Amendments to the Montreal Protocol, can be found in a document published by the Secretariat and updated four times a year. This information is also available on the website of the Ozone Secretariat, at: <http://www.unep.org/unep/secretar/ozone/ratif.htm>.

## 11. ILLUSTRATIVE LIST OF MIXTURES CONTAINING ODS\*

### 11.1: Zeotrope Mixtures

No.	Refrigerant Number (Trade Name) of Mixture	Composition							
		Component 1		Component 2		Component 3		Component 4	
1	R401A (MP 39)	HCFC22	53%	HFC152a**	13%	HCFC124	34%		
2	R401B (MP 66)	HCFC22	61%	HFC152a**	11%	HCFC124	28%		
3	R401C (MP 52)	HCFC22	33%	HFC152a**	15%	HCFC124	52%		
4	R402A (HP 80)	HFC125**	60%	HC290**	2%	HCFC22	38%		
5	R402B (HP 81)	HFC125**	38%	HC290**	2%	HCFC22	60%		
6	R403A (69S)	HC290**	5%	HCFC22	75%	FC218**	20%		
7	R403B (69L)	HC290**	5%	HCFC22	56%	FC218**	39%		
8	R405A (G2015)	HCFC22	45%	HFC152a**	7%	HCFC142b	6%	C318	43%
9	R406A (GHG-12)	HCFC22	55%	HC600a**	4%	HCFC142b	41%		
10	R408A (FX10)	HFC125**	7%	HFC143a**	46%	HCFC22	47%		
11	R409A (FX56)	HCFC22	60%	HCFC124	25%	HCFC142b	15%		
12	R409B (FX 57)	HCFC22	65%	HCFC124	25%	HCFC142b	10%		
13	R411A (G2018A)	HC1270**	2%	HCFC22	88%	HFC152a**	11%		
14	R411B (G2018B)	HC1270**	3%	HCFC22	94%	HFC152a**	3%		
15	R412A (TP5R)	HCFC22	70%	FC218**	5%	HCFC142b	25%		
16	R414B(Hotshot)	HCFC22	50%	HCFC124	39%	HCFC142b	9.5%	HC600a**	1.5%

### 11.2: Azeotrope Mixtures

No.	Refrigerant Number (Trade Name of Mixture)	Composition			
		Component 1		Component 2	
1	R500	CFC12	74%	HFC152a**	26%
2	R501	HCFC22	75%	CFC12	25%
3	R502	HCFC22	49%	CFC115	51%
4	R503	HFC23**	40%	CFC13	60%
5	R504	HFC32**	48%	CFC115	52%
6	R505	CFC12	78%	HCFC31	22%
7	R506	HCFC31	55%	CFC114	45%
8	R507A (AZ50)	HFC125**	50%	HFC143a**	50%
9	R509 (TP5R2)	HCFC22	46%	FC218**	54%

\* A more extensive list of trade names for mixtures and pure substances can be obtained from UNEP TIE's OzonAction Programme at Email address: [ozonaction@unep.fr](mailto:ozonaction@unep.fr), or at website: <http://www.unepie.org/ozonaction.html>

\*\* Not ozone-depleting substances.

### 11.3: Unnamed Mixtures

No.	Trade Name of Mixture	Composition							
		Component 1		Component 2		Component 3		Component 4	
1	FX20	HFC125**	45%	HCFC22	55%				
2	FX55	HCFC22	60%	HCFC142b	40%				
3	D136	HCFC22	50%	HCFC124	47%	HC600a**	3%		
4	Daikin Blend	HFC23**	2%	HFC32**	28%	HCFC124	70%		
5	FRIGC	HCFC124	39%	HFC134a**	59%	HC600a**	2%		
6	Free Zone	HCFC142b	19%	HFC134a**	79%	Lubricant	2%		
7	GHG-HP	HCFC22	65%	HCFC142b	31%	HC600a**	4%		
8	GHG-X5	HCFC22	41%	HCFC142b	15%	HFC227ca	40%	HC600a**	4%
9	NARM-502	HCFC22	90%	HFC152a**	5%	HFC23**	5%		
10	NASF-S-III*	HCFC22	82%	HCFC123	4.75%	HCFC124	9.5%		3.75%

### 11.4: Methyl Bromide Mixtures

No.	Trade Name of Mixture	Composition			
		Component 1		Component 2	
1	methyl bromide with chloropicrin**	methyl bromide	67%	chloropicrin	33%
2	methyl bromide with chloropicrin**	methyl bromide	98%	chloropicrin	2%

\* A halon alternative

\*\* Not ozone depleting substances.

1. Fill in this form only if your country imported CFCs, HCFCs, halons, methyl chloroform, carbon tetrachloride, or methyl bromide

**Data Form 1**

UNEP/OzL.Pro/Dataform97

DATA ON IMPORTS

2. Please read Instruction I carefully before filling in this form.

in metric tonnes (not ODP tonnes)

Annexes A, B, C and E substances

Party : \_\_\_\_\_

Period : January – December 19 \_\_\_\_

ANNEX/GROUP	SUBSTANCES	TOTAL QUANTITY IMPORTED FOR ALL USES		QUANTITY OF NEW SUBSTANCES IMPORTED AS FEEDSTOCK	QUANTITY OF NEW SUBSTANCES IMPORTED FOR EXEMPTED ESSENTIAL USES
		NEW	RECOVERED AND RECLAIMED		
1	2	3	4	5	6
A-Group I	CFC-11 (CFC1 <sub>3</sub> )				
	CFC-12 (CFC <sub>2</sub> Cl <sub>2</sub> )				
	CFC-113 (C <sub>2</sub> F <sub>3</sub> Cl <sub>3</sub> )				
	CFC-114 (C <sub>2</sub> F <sub>4</sub> Cl <sub>2</sub> )				
	CFC-115 (C <sub>2</sub> F <sub>5</sub> Cl)				
A-Group II	HALON 1211 (CF <sub>2</sub> BrCl)				
	HALON 1311 (CF <sub>3</sub> Br)				
	HALON 2402 (C <sub>2</sub> F <sub>4</sub> Br <sub>2</sub> )				
B-Group I	CFC-13 (CF <sub>3</sub> Cl)				
B-Group II	Carbon tetrachloride (CCl <sub>4</sub> )				
B-Group III	Methyl chloroform i.e. 1,1,1-Trichloroethane (C <sub>2</sub> H <sub>3</sub> Cl <sub>3</sub> )				

## Data Form 1 (continued)

UNEP/OzL.Pro/Dataform97

ANNEX/GROUP	SUBSTANCES	TOTAL QUANTITY IMPORTED FOR ALL USES		QUANTITY OF NEW SUBSTANCES IMPORTED AS FEEDSTOCK	QUANTITY OF NEW SUBSTANCES IMPORTED FOR EXEMPTED ESSENTIAL USES
		NEW	RECOVERED AND RECLAIMED		
1	2	3	4	5	6
C-Group I	HCFC-21 (CHFCI <sub>2</sub> )				
	HCFC-22 (CHF <sub>2</sub> Cl)				
	HCFC-31 (CH <sub>2</sub> FCI)				
	HCFC-123 (C <sub>2</sub> HF <sub>3</sub> Cl <sub>2</sub> )				
	HCFC-124 (C <sub>2</sub> HF <sub>4</sub> Cl)				
	HCFC-133 (C <sub>2</sub> H <sub>2</sub> F <sub>3</sub> Cl)				
	HCFC-141b (CH <sub>3</sub> CFCI <sub>2</sub> )				
	HCFC-142b (CH <sub>3</sub> CF <sub>2</sub> Cl)				
	HCFC-225 (C <sub>3</sub> HF <sub>5</sub> Cl <sub>2</sub> )				
	HCFC-225ca(CF <sub>3</sub> CF <sub>2</sub> CHCl <sub>2</sub> )				
	HCFC-225cb (CF <sub>2</sub> ClCF <sub>2</sub> CHClF)				
C-Group II	HBFCs				

E-Group I	Methyl bromide (CH <sub>3</sub> Br)				Quantity of New Methyl Bromide Imported to be Used for Quarantine and Preshipment Applications

1. Fill in this form only if your country exported CFCs, HCFCs, halons, methyl chloroform, or carbon tetrachloride.

**Data Form 2**

UNEP/OzL.Pro/Dataform97

DATA ON EXPORTS

2. Please read Instruction II carefully before filling in this form.

in metric tonnes (not ODP tonnes)

Annexes A, B, C and E substances

Party : \_\_\_\_\_ Period : January – December 19 \_\_\_\_

SUBSTANCES	COUNTRY OF DESTINATION OF EXPORTS*	TOTAL QUANTITY EXPORTED FOR ALL USES		QUANTITY OF NEW SUBSTANCES EXPORTED AS FEEDSTOCK**	QUANTITY OF NEW SUBSTANCES EXPORTED FOR EXEMPTED ESSENTIAL USES
		NEW	RECOVERED AND RECLAIMED		
1	2	3	4	5	6

methyl bromide (CH <sub>3</sub> Br)					Quantity of New Methyl Bromide Exported to be Used for Quarantine and Preshipment Applications

\* Applicable only to substances of Annexes A and B

\*\* Do not deduct from total production in column 3 of data form 3 (data on production)

## Data Form 3

1. Fill in this form only if your country produced CFCs, HCFCs, halons, methyl chloroform, carbon tetrachloride, or methyl bromide

## DATA ON PRODUCTION

2. Please read Instruction III carefully before filling in this form.

in metric tonnes (not ODP tonnes)

Annexes A, B, C and E substances

Party : \_\_\_\_\_ Period : January – December 19 \_\_\_\_

ANNEX/GROUP	SUBSTANCES	TOTAL PRODUCTION FOR ALL USES	PRODUCTION FOR EXEMPTED USES WITHIN YOUR COUNTRY		PRODUCTION FOR SUPPLY TO ARTICLE 5 COUNTRIES IN ACCORDANCE WITH ARTICLES 2A - 2H AND 5
			Production for Feedstocks within your Country	Production for Essential Uses within your Country	
1	2	3	4	5	6
A-Group I	CFC-11 (CFC1 <sub>3</sub> )				
	CFC-12 (CFC <sub>2</sub> Cl <sub>2</sub> )				
	CFC-113 (C <sub>2</sub> F <sub>3</sub> Cl <sub>3</sub> )				
	CFC-114 (C <sub>2</sub> F <sub>4</sub> Cl <sub>2</sub> )				
	CFC-115 (C <sub>2</sub> F <sub>5</sub> Cl)				
A-Group II	HALON 1211 (CF <sub>2</sub> BrCl)				
	HALON 1311 (CF <sub>3</sub> Br)				
	HALON 2402 (C <sub>2</sub> F <sub>4</sub> Br <sub>2</sub> )				
B-Group I	CFC-13 (CF <sub>3</sub> Cl)				
B-Group II	Carbon tetrachloride (CCl <sub>4</sub> )				
B-Group III	Methyl chloroform i.e. 1,1,1-Trichloroethane (C <sub>2</sub> H <sub>3</sub> Cl <sub>3</sub> )				

**Data Form 3 (continued)**

UNEP/OzL.Pro/Dataform97

ANNEX/GROUP	SUBSTANCES	TOTAL PRODUCTION FOR ALL USES	PRODUCTION FOR EXEMPTED USES WITHIN YOUR COUNTRY		PRODUCTION FOR SUPPLY TO ARTICLE 5 COUNTRIES IN ACCORDANCE WITH ARTICLES 2A - 2H AND 5
			Production for Feedstocks within your Country	Production for Essential Uses within your Country	
1	2	3	4	5	6
C-Group I	HCFC-21 (CHFCl <sub>2</sub> )				
	HCFC-22 (CHF <sub>2</sub> Cl)				
	HCFC-31 (CH <sub>2</sub> FCI)				
	HCFC-123 (C <sub>2</sub> HF <sub>3</sub> Cl <sub>2</sub> )				
	HCFC-124 (C <sub>2</sub> HF <sub>4</sub> Cl)				
	HCFC-133 (C <sub>2</sub> H <sub>2</sub> F <sub>3</sub> Cl)				
	HCFC-141b (CH <sub>3</sub> CFCI <sub>2</sub> )				
	HCFC-142b (CH <sub>3</sub> CF <sub>2</sub> Cl)				
	HCFC-225 (C <sub>3</sub> HF <sub>5</sub> Cl <sub>2</sub> )				
	HCFC-225ca (CF <sub>3</sub> CF <sub>2</sub> CHCl <sub>2</sub> )				
	HCFC-225cb (CF <sub>2</sub> CICF <sub>2</sub> CHClF)				
C-Group II	HBFCs				

E-Group I	Methyl bromide (CH <sub>3</sub> Br)			Total Quantity of New Methyl Bromide Produced for Quarantine and Pre-shipment Applications within your Country and for Export	









## Annex II: Data Forms for Reporting to the Fund Secretariat<sup>1</sup>

This Annex contains the data forms to be used for annual reporting on progress of implementation of Country Programmes to the Fund Secretariat including instructions to be followed when filling them. Separate forms are provided for past baseline years to enable presentation of data for the calculation of the baseline consumption for Annex A (average of 1995-1997) and Annex E (average of 1995-1998) substances. The forms are available in Microsoft Excel 5 on diskette as well as in hard-copy form from the Secretariat. Alternatively, you may use copies of the reporting formats reproduced below for reporting data to the Fund Secretariat.

The forms and corresponding instructions might be adapted in the future to changing needs and circumstances. Please refer to the Fund Secretariat or your Implementing Agency or the Regional Coordinators to receive the most recent version.

In addition to the Instructions provided below, please also read the general guidelines provided in Sections 4.1 and 4.3 before filling the forms. This will especially help you report data in a consistent way to the Ozone and Fund Secretariats. The following is included in this Annex [*References to the Handbook in italics*]:

- I. Instructions for Use with Electronic and Manual Versions of the Data Forms
- II. Instructions for Entering Data in the Electronic Format (Diskette Version)
- A. Progress of Implementation of Country Programmes: Data on Controlled Substances
- B. Progress of Implementation of Country Programmes: Data on Controlled Substances for the Baseline Year 199x
- C. Implementation of Country Programmes: Administrative and Supportive Actions (included for reasons of completeness)

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<sup>1</sup> Source: Multilateral Fund Secretariat as of August 1998.

## I. INSTRUCTIONS FOR USE WITH ELECTRONIC AND MANUAL VERSIONS OF THE DATA FORMS

These data forms have been designed with the view to making the reporting of data to the Executive Committee on progress of implementation of Country Programmes easier. It is also designed to facilitate the update of the data at any time e.g. following implementation or completion of projects that have impacts on the ODS consumption of the country or any time an Ozone Office conducts an ODS survey. For many countries it should facilitate reporting of data to the Ozone Secretariat as required under Article 7 of the Montreal Protocol.

1. For each sector enter data for controlled substances of the appropriate annex and group(s) of chemicals only and skip all other not applicable, e.g. for “methyl bromide uses” skip Annexes A-C chemicals.
2. Data should be provided in metric tonnes and not in ODP tonnes. i.e. the data in metric tonnes should not be multiplied by the ODP of the substance concerned. Conversion of the data to ODP will be done by the Fund Secretariat.
3. Import, export and production data should be consistent with data reported to or to be reported to the Ozone Secretariat. Where there is a discrepancy, please provide clarification in a separate note (MS Word 6.0 or higher format). [**➡** *Sections 1.2 and 4.3 for further guidance*]
4. Methyl bromide uses should not include quantities for preshipment, quarantine or feedstock applications.
5. Figures for consumption and production should not include quantities used as feedstock for producing other chemicals or quantities destroyed.
6. Quantities contained in end-products either imported or exported e.g. mobile automobile air conditioners (MACs), domestic refrigerators and freezers etc. should not be included in the country’s import, export or consumption figures.
7. Baseline Data
  - (a) Annex A Substances:

For Annex A controlled substances baseline data is based on the average of the data for the years 1995, 1996 and 1997. Hence the complete baseline data for Annex A substances

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should be available in 1998 following completion of the data form for 1997. If you have not yet reported on Annex A substances for these years, please fill the respective data forms and submit them to the Fund Secretariat.

(b) Annex B Substances:

For Annex B controlled substances baseline data is based on the average of the data for 1998, 1999 and 2000. Baseline data for Annex B substances will be obtained from data to be provided for 1998 to 2000. Separate baseline data forms will not therefore be required.

(c) Annex E Substance:

For Annex E controlled substance (methyl bromide) baseline data is based on the average of the data for 1995, 1996, 1997 and 1998. Therefore, baseline data for the Annex E substance is required for these years. As in the case of Annex A substances, *please fill the respective data forms and submit them to the Fund Secretariat, if you have not yet reported on Annex E substance for any of the passed baseline years.*

## II. INSTRUCTIONS FOR ENTERING DATA IN THE ELECTRONIC FORMAT (DISKETTE VERSION)

1. The diskette has been formatted as three Microsoft Excel 5 files.
2. The first file is in English, the second in French and the third is in Spanish.
3. Only one file, in the language of your choice, needs to be completed for your country.
4. The Microsoft Excel 5 diskette is organized by Worksheets corresponding to years (currently from 1995 to 2000), or nature of information (administrative measures).
5. The titles in the column and row fields are “locked” and cannot be changed.
6. The sub-total and total fields are “locked” and update automatically once data is entered.
7. Data should be provided in metric tons and not in ODP tonnes. The conversion to ODP tonnes will be made by the Fund Secretariat.
8. As much as possible, the consumption data should be consistent with the data reported to the Ozone Secretariat. Where there is a discrepancy, please provide clarification in a separate note (MS Word 6.0 or higher format). [**➡** *Sections 1.2 and 4.3 for further guidance*]
9. Any other additional information or comments may be provided separately.
10. Please fill in the sheets for the appropriate years (i.e. Sheet 1998 in 1999 and sheets on baseline data if not yet submitted to the Fund Secretariat). Sheets for current and future years require no immediate action. They are provided for future use.
11. When the diskette has been completed please return a copy to the Secretariat along with a corresponding print-out, by 1 May of the year following the year to which the data belong (i.e. filled Sheet 1998 should be submitted by 1 May 1999).

WORKSHEET NUMBER AND TITLE	REQUIRED ACTION
Sheet 1995 (Data on Controlled Substances January to December – 1995) (for baseline data)	<ol style="list-style-type: none"> <li>1. Enter Country field in the cell “XXXX”</li> <li>2. Enter data in the cells of the table for Annex A Group I (CFCs) Annex A Group II (Halons) and Annex E (methyl bromide) only. It is not required to enter any data in the cells for Annex B and Annex C (HCFCs). Ignore those cells.</li> </ol>
Sheets 1996 (Data on Controlled Substances January to December – 1996) (for baseline data)	Same as for Sheet 1995
Sheet 1997 (Data on Controlled Substances January to December -1997)	<ol style="list-style-type: none"> <li>1. Enter Country field in the cell “XXXX”</li> <li>2. Enter applicable data in the applicable cells. All the Annexes should be taken into account. These represent the current data for all the controlled substances used in the country in 1997.</li> </ol>
Sheets 1998, 1999, and 2000 (Data on Controlled Substances January to December -1998, 1999, and 2000, as appropriate)	Same procedure as for Sheet 1997, when applicable
Sheet Aver (Averages 1995 – 1997)	No action required – it will update automatically upon completion of Sheets 1995, 1996 & 1997
Sheets Adm & Adm2	<ol style="list-style-type: none"> <li>1. Enter country field in the cell “XXXX”</li> <li>2. In the last three columns, enter “y” for yes as appropriate in the three last columns. No other action is required (i.e. – leave blank for “no”).</li> </ol>



## A. PROGRESS OF IMPLEMENTATION OF COUNTRY PROGRAMMES

Data on Controlled Substances

YEAR: January to December 199.....

COUNTRY:

Substance <sup>1</sup>	Consumption by Sector in Metric Tonnes							Import	Export <sup>3</sup>	Production <sup>3</sup>
	Aerosol	Foam	Fire Fighting	Refrigeration	Solvent applications	Fumigation etc.	Other <sup>2</sup>			
<u>Annex A, Group I</u>										
CFC-11										
CFC-12										
CFC-113										
CFC-114										
CFC-115										
<b>Sub-Total</b>										
<u>Annex A, Group II</u>										
Halon 1211										
Halon 1301										
Halon 2402										
<b>Sub-Total</b>										
<u>Annex B, Group II</u>										
Carbon Tetrachloride										
<b>Sub-Total</b>										
<u>Annex B, Group III</u>										
Methyl Chloroform										
<b>Sub-Total</b>										
<u>Annex C, Group I</u>										
HCFC-22										
HCFC-141b										
HCFC-142b										
HCFC-123										
OTHER <sup>4</sup>										
<b>Sub-Total</b>										
<u>Annex E</u>										
Methyl Bromide										
<b>Sub-Total</b>										
<b>TOTAL</b>										

<sup>1</sup> Where the data involves a blend of two or more substances, the quantities of individual components of controlled substances must be indicated separately.  
e.g.: For R502 consisting of 51.2% CFC-115 and 48.8% HCFC-22, indicate the total quantity of each controlled substance (i.e., CFC-115 and HCFC-22) in the appropriate row.

<sup>2</sup> Indicate relevant sector, e.g. tobacco.

<sup>3</sup> Where applicable

<sup>4</sup> Indicate relevant controlled substance(s).

## B. PROGRESS OF IMPLEMENTATION OF COUNTRY PROGRAMMES

FORM FS-C.P.2

Data on Controlled Substances for the Baseline Year<sup>1</sup> 199x

**COUNTRY:**

Substance <sup>2</sup>	Consumption by Sector in Metric Tonnes							Import	Export <sup>4</sup>	Production <sup>4</sup>
	Aerosol	Foam	Fire Fighting	Refrigeration	Solvent applications	Fumigation etc.	Other <sup>3</sup>			
<u>Annex A, Group I</u>										
CFC-11										
CFC-12										
CFC-113										
CFC-114										
CFC-115										
Sub-Total										
<u>Annex A, Group II</u>										
Halon 1211										
Halon 1301										
Halon 2402										
Sub-Total										
<u>Annex E</u>										
Methyl Bromide										
Sub-Total										
<b>TOTAL</b>										

<sup>1</sup> THIS FORM IS TO BE COMPLETED ONE TIME ONLY.

<sup>2</sup> Where the data involves a blend of two or more substances, the quantities of individual components of controlled substances must be indicated separately, e.g.: For R502 consisting of 51.2% CFC-115 and 48.8% HCFC-22, indicate the total quantity of each controlled substance (i., e., CFC-115 and HCFC-11) in the appropriate row.

<sup>3</sup> Indicate relevant sector, e.g. tobacco.

<sup>4</sup> Where applicable

**C. IMPLEMENTATION OF COUNTRY PROGRAMMES  
ADMINISTRATIVE AND SUPPORTIVE ACTIONS**

FORM FS-C.P.3

**COUNTRY:**

YEAR: January to December 199.....

(Any comments concerning items can be put in on second page)

<b>TYPE OF ACTION / LEGISLATION</b>	<b>Action was proposed in country programme</b>	<b>Action taken this year or ongoing for less than 1 year</b>	<b>Action is ongoing for longer than 1 year</b>
1. REGULATIONS:			
1.1	Establishing general guidelines to control import (production and export) <sup>1</sup> of ODS		
1.2	Requiring special permits for import or sale of bulk ODS		
1.3	Requiring special permits for import or sale of products or equipment containing ODS		
	Banning import or sale of bulk quantities of:		
1.4	CFC-11		
1.5	CFC-12		
1.6	Halon 1211		
1.7	Halon 1301		
	Banning import or sale of:		
1.8	used CFC-containing domestic refrigerators or freezers		
1.9	ODS-containing aerosols except those for essential uses such as MDF		
1.10	automobiles containing mobile air conditioning equipment using CFC-12		
1.11	air conditioners and chillers using CFC		
1.12	Requiring training of refrigeration service technicians		
1.13	Requiring certification of refrigeration service technicians		
1.14	Banning the use of ODS in production of some or all types of foam		
	Other Regulations		
1.15			
1.16			
1.17			
2.	ESTABLISHMENT OF INSTITUTIONAL FRAMEWORK FOR MANAGEMENT OF ODS PHASE-OUT (e.g. national/sectoral committees, working groups)		

<sup>1</sup> Where applicable

<sup>2</sup> MDI: metered dose inhalers

TYPE OF ACTION / LEGISLATION	Action was proposed in country programme	Action taken this year or ongoing for less than 1 year	Action is ongoing for longer than 1 year
3. ESTABLISHMENT OF PROCEDURES FOR CERTIFICATION OF SERVICE TECHNICIANS			
4. ESTABLISHMENT OF CHANNELS FOR PUBLIC INFORMATION ON ODS CONTROL ACTIONS			
5. MONITORING ACTIVITIES:			
5.1 Establishment of a system for monitoring and monitoring of import, (production, export) <sup>1</sup> and use of ODS			
5.2 Establishment of monitoring and evaluation system for implementation of MLF projects and monitoring/evaluation of MLF projects			
5.3 Establishment of procedures for ODS data collection/update and transmission/dissemination			
5.4 Annual collection/update and transmission/dissemination of ODS data			
5.5 Monitoring of recovery and recycling of ODS <sup>1</sup>			
5.6 Monitoring and evaluation of training activities			
5.7 Establishment of product quality standards <sup>1</sup> , e.g.: "Ozone Seal", "Green Label", etc.			
5.8 Enforcement of product quality standards <sup>1</sup>			
6. OTHER <sup>2</sup>			

<sup>1</sup> Where applicable

<sup>2</sup> MDI: metered dose inhalers



### Annex III: Data Form for Reporting on Essential Uses

A Year of Essential Use	B Ozone- Depleting Substance	C Amount Exempted for Year of Essential Use	D Amount Acquired by Production	E Amount Acquired for Essential Uses by Import and Country(s) of Manufacture		F (D+E) Total Acquired for Essential Use	G (C-F) Authorised but not Acquired	H <sup>1</sup> On Hand Start of Year	I (H+F) Available for Use in Current Year	J Used for Essential Use	K Quantity Contained in Products Exported	L Destroyed	M (I-J-L) On Hand End of Year
				Amount	Country(s)								

All quantities expressed in metric tonnes.

Source: *Handbook on Essential Use Nominations (1997)*.

- <sup>1</sup> National Governments may not be able to estimate quantities on hand as at 1 January 1996 but can track the subsequent inventory of ODS produced for essential uses (Column M).
- <sup>2</sup> Carried forward as "on hand start of the year" for next year.
- <sup>3</sup> Note that essential use for a particular year may be the sum of quantities authorised by decision in more than one year.



## Annex IV: Approved Destruction Processes

*[Source: Annex VI of the report of the Fourth Meeting of the Parties, as subsequently amended]*

- **Thermal oxidation category**

- ✓ Liquid injection incineration [approved by Decision IV/11]
- ✓ Reactor cracking [approved by Decision IV/11]
- ✓ Gaseous/fume oxidation [approved by Decision IV/11]
- ✓ Rotary kiln incinerators [approved by Decision IV/11]
- ✓ Cement kilns [approved by Decision IV/11]
- ✓ Municipal solid waste incinerators (for foams containing ozone-depleting substances) *[approved by Decision V/26]*

Note: These technologies are described in the report of the Ad Hoc Advisory Committee on Destruction Technologies

- **Plasma destruction category**

- ✓ Radio frequency plasma destruction technology *[approved by Decision VII/35]*





## Annex V: ODP Values of the Most Important ODS

Only the ODP values of the most important ODS are listed below. Other ODS are rarely used and thus of little significance for reporting and assessing compliance. For a complete list of ODP values of controlled substances refer to the Annexes of the Montreal Protocol.

<i>Substance</i>	<i>Ozone-Depleting Potential</i>
<b>Annex A Group I</b>	
CFC-11	1.0
CFC-12	1.0
CFC-113	0.8
CFC-114	1.0
CFC-115	0.6
<b>Annex A Group II</b>	
halon-1211	3.0
halon-1301	10.0
Halon-2402	6.0
<b>Annex B Group I</b>	
CFC-13, CFC-111, CFC-112	1.0
CFC-211 – 217	
<b>Annex B Group II</b>	
Carbon Tetrachloride	1.1
<b>Annex B Group III</b>	
Methyl Chloroform	0.1
<b>Annex C Group I</b>	
HCFC-21	0.04
HCFC-22	0.055
HCFC-31	0.02
HCFC-123 <sup>1</sup>	0.02
HCFC-124 <sup>1</sup>	0.022
HCFC-133	0.06
HCFC-141b	0.11
HCFC-142b	0.065
HCFC-225	0.07
HCFC-225ca	0.025
HCFC-225cb	0.033
<b>Annex E Group I</b>	
Methyl Bromide	0.6

Source: 1997 Update of the Handbook for the International Treaties for the Protection of the Ozone Layer, Montreal Protocol, Annexes A, B, C and E

<sup>1</sup> Only the most commercially viable isomer is given.





## Annex VI: About the UNEP TIE OzonAction Programme

UNEP

Nations around the world are concerned about the emissions of man-made CFCs, halons, carbon tetrachloride, methyl chloroform, methyl bromide and other ozone-depleting substances (ODS) that have damaged the stratospheric ozone layer – a shield around the Earth which protects life from dangerous ultraviolet radiation from the Sun. More than 160 countries have committed themselves under the Montreal Protocol to phase out the use and production of these substances. Recognizing the special needs of developing countries, the Parties to the Protocol also established a Multilateral Fund and appointed implementing agencies to provide technical and financial assistance to enable the developing countries to meet their commitments under the treaty. UNEP is one of the Fund's implementing agencies; the others are UNDP, UNIDO and the World Bank.

Since 1991, the UNEP TIE OzonAction Programme in Paris has been strengthening the capacity of governments (especially National Ozone Units) and industry in developing countries to make informed decisions on technology and policy options that will result in cost-effective ODS phase-out activities with minimal external intervention. The Programme accomplishes this by delivering a range of need-based services, including:

### Information Exchange

*to enable decision makers to take informed decisions on policies and investments. Information and management tools already provided for developing countries include the OzonAction Information Clearinghouse (OAIC) diskette and World Wide Web site, a quarterly newsletter, sector-specific technical publications for identifying and selecting alternative technologies, and policy guidelines.*

### Training and Networking

*that provide platforms for exchanging experiences, developing skills, and tapping the expertise of peers and other experts in the global ozone protection community. Training and network workshops build skills for implementing and managing phase-out activities, and are conducted at the regional level (support is also extended to national activities). The Programme currently operates seven regional and sub-regional Networks of ODS Officers comprising more than 80 countries, which have resulted in member countries' taking early steps to implement the Montreal Protocol.*

### Country Programmes and Institutional Strengthening

*that support the development of national ODS phase-out strategies and programmes, especially for low-volume ODS-consuming countries. The Programme currently assists 74 countries in the development of their Country Programmes and implements Institutional-Strengthening projects for 50 countries.*

For more information about these services please contact:

UNEP TIE Ozonaction Programme  
39-43 quai André Citroën  
75739 Paris Cedex 15  
France  
Tel: +33 1 44 37 14 50 Fax: +33 1 44 37 14 74  
Email: [ozonaction@unep.fr](mailto:ozonaction@unep.fr)  
<http://www.unepie.org/ozonaction.html>

## About UNEP Industry and Environment

UNEP established its Industry and Environment office (UNEP TIE) in 1975 to bring industry and government together to promote environmentally-sound industrial development. UNEP TIE is located in Paris. Its goals are:

- to encourage the incorporation of environmental criteria in industrial development plans;
- to facilitate the implementation of procedures and principles for the protection of the environment;
- to promote preventive environmental protection through cleaner production and other pro-active approaches; and
- to stimulate the exchange of information and experience throughout the world.

To achieve these goals, UNEP TIE has developed the following main programme elements: Accident Prevention (APELL), Cleaner Production, Energy, OzonAction, Industrial Pollution Management and Tourism. UNEP TIE organizes conferences and seminars, and undertakes training and cooperative activities backed by regular follow-up and assessment. To promote the transfer of information and the sharing of knowledge and experience, UNEP TIE has developed three complementary tools: technical reports, the quarterly Industry and Environment review and a technical query-response service.

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