# REGULATIONS TO CONTROL OZONE DEPLETING SUBSTANCES: A GUIDE BOOK









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# **Preface**

Ultimately, implementation and compliance, and thus the effectiveness of Multilateral Environmental Agreements, depend primarily on the existence and effectiveness of the corresponding national legislation, institution and policies, including those that ensure access to judicial and administrative fora, national capacity and political will.

UNEP, Global Environmental Outlook 2000, pg. 203

Developing countries are at a critical stage in their implementation of the Montreal Protocol. With the shift in emphasis from individual projects to phase out ozone depleting substances (ODS) to ensuring overall compliance, developing countries must demonstrate through their reported data that they fully meet specific legal obligations under the Protocol according to agreed timetables. These compliance targets are only achievable if the proper policies, regulations, economic incentives and voluntary initiatives are designed, implemented and enforced.

It is now widely recognized that if technical projects to eliminate, reduce or recycle ODS are to succeed, appropriate and effective national policy frameworks must be in place. The Technology and Economic Assessment Panel has stated that "evidence indicates that cost-effective ODS phase out in Article 5(1) countries require the assistance of the Multilateral Fund to complement domestic resources in the design and implementation of national policies and programmes. Investment projects that phase out specified quantities of ODS, in conformity with the Multilateral Fund cost-effectiveness guidelines, are not sufficient on their own. The cost-effective implementation of investment projects could be facilitated by the application of integrated policy frameworks that embrace both investment and non-investment projects."

This publication is one in a series of publications jointly produced by the United Nations Environment Programme (UNEP) and the Stockholm Environment Institute (SEI) designed to support the development of national policy frameworks in developing countries required to implement the Montreal Protocol and its Amendments. It is a reference document written for ODS Officers and legal officers responsible for structuring and drafting regulations and other policies to control and eliminate the consumption and production of ODS. Although targeted at these groups, readers in developed countries and persons involved with environmental policies should also find it useful.

Drawing on the experience of 58 developed and developing countries around the globe, the information in the guidebook is based on the results of a survey sent to all Parties to the Montreal Protocol. The guidebook provides the reader with concise overviews of the ozone protection policies in different countries. Besides providing a core knowledge about regulations worldwide, the guidebook should also stimulate the reader to further investigate different policy options and facilitate contact with focal points in other countries who already have experience with developing similar measures.

The guidebook provides an overview of the structure and strategies in existing ODS regulations, which encompasses all governmental directives of a legally-binding nature (including, for example, legislation enacted by a Parliament, ordinances decided by a Cabinet and orders issued by a Minister or subordinate authority). Although they are not the guidebook's primary focus, information is also included about governmental guidelines, voluntary agreements with industry, cooperation with industry associations, economic disincentives and labelling schemes.

As indicated in the title, this document is an update to an earlier publication. Since the publication of its predecessor at the end of 1996, there have been many notable policy developments, including:

• The first compliance milestone for developing countries, the freeze of consumption and production of Annex A CFCs, came into effect on 1 July 1999.

 $<sup>^{\</sup>scriptscriptstyle 1}$  TEAP "Supplementary Report", pg. 35, and TEAP "Corrigendum to the Supplementary Report" (September 1999), pg. 1.

- The trend in ratification of the Montreal Protocol and its Amendments has continued upwards: 12 more countries have become Parties to the Montreal Protocol, bringing the total number to 175. One hundred and fourty-four countries are now Party to the London Amendment, and 118 to the Copenhagen Amendment.
- Two new Amendments have come into being during this time: Montreal and Beijing, the
  ratification process is well underway (52 countries have ratified the Montreal Amendment,
  and 5 countries have ratified the Beijing Amendment). With the entry into force of the former
  in November 1999, a phase out schedule for methyl bromide was established for developing
  countries and the schedule for developed countries was accelerated.
- Sectoral approaches have come to the forefront under the Multilateral Fund, including Refrigerant Management Plans for low-volume ODS-consuming countries and sector plans for large consuming countries. Both of these include policy components or pre-requisites, and their increasing use under the Multilateral Fund illustrates the convergence of technical and policy issues.
- Import and export licensing systems have become mandatory for all Parties, to support the
  collection of information related to compliance and to assist prevention of illegal traffic of
  ODS.

These issues, plus others of regional or national concern, have been addressed to varying degrees by the countries included in this guidebook. However, there is still much policy development work yet to do in developing countries. In many of them, particularly the smaller ODS consuming countries and those lacking institutional resources, the process may have barely begun at all. UNEP DTIE OzonAction Programme and the Stockholm Environment Institute hope that this book provides the inspiration and information necessary to develop regulations and other policies needed to ensure compliance with the Montreal Protocol.

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The working group provided important assistance in ensuring that the information asked for would cover the needs of the developing countries and could be provided in a reliable manner.

Information on national regulations was contributed by:

ODS officers in all the countries covered in the guidebook (see Annex 1 for a complete list)

This guidebook would not have been possible without the positive response from all these government officers. Of specific importance is the valuable contributions by countries which already have experience with ODS regulations. All respondents devoted a considerable amount of time and effort to respond to the questionnaire and review, correct and complement the text.

The guidebook has been sent for quality review to:

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# **TABLE OF CONTENTS**

Guid	le to	the reader	xxiii
Key	Elem	ents in Controlling ODS	XXV
		DS Regulations and Related By Country	1
Intro Afric		tion to Part I	3 7
Benin			9
	1	Status	9
	2	ODS Focal Point	9
	3	Regulations and Guidelines	9
	4	Monitoring Import of ODS	9
	5	Controls on Methyl Bromide	9
Egypt			11
	1	Status	11
	2	ODS Focal Point	11
	3	Regulations and Guidelines	11
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	11
	5	Controls on Import and Sale of Products Containing, Made with or Using ODS	12
	6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	12
	7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	12
	8	Controls on Methyl Bromide	12
	9	Voluntary Agreements	13
	10	Criteria for the Selection of Alternatives	13
The G	ambia		15
	1	Status	15
	2	ODS Focal Point	15
	3	Regulations and Guidelines	15
	4	Controls on ODS in Bulk	15
	5	Controls on Import and Sale of Products Containing, Made with or Using ODS	16
	6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	16
	7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	16
	8	Controls on Methyl Bromide	16
	9	Voluntary Agreements	16
	10	Economic Incentives and Disincentives	17
	11	Labelling Requirements	17
Niger			19
•	1	Status	19
	2	ODS Focal Point	19
	3	Regulations and Guidelines	19
	4	Monitoring Import of ODS	19
Seych	elles		21
•	1	Status	21
	2	ODS Focal Point	21
	3	Regulations and Guidelines	21
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	21
	5	Controls on Import and Sale of Products Containing, Made with or Using ODS	22

	6	Controls on the Use of ODS (Other than Methyl Bromide)	22
	_	- "End-Use Controls"	22
	7	Controls on Service and Installation of Air-Conditioning	23
	0	and Refrigeration Equipment	22
	8	Controls on Methyl Bromide	23
	9	Voluntary Agreements / Co-operation with Industry Economic Incentives and Disincentives	23
	10 11		23 23
	12	Labelling Requirements Criteria for the Selection of Alternatives	23
South	Africa		25
Journ	1	Status	25
	2	ODS Focal Point	25
	3	Regulations and Guidelines	25
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	25
	5	Controls on Import and Sale of Products Containing,	25
		Made with or Using ODS	
	6	Controls on the Use of ODS (Other than Methyl Bromide)	26
	7	<ul><li>- "End-Use Controls"</li><li>Controls on Service and Installation of Air-Conditioning</li></ul>	26
		and Refrigeration Equipment	
	8	Controls on Methyl Bromide	26
	9	Voluntary Agreements	26
	10	Economic Incentives and Disincentives	26
	11	Labelling Requirements	26
	12	Criteria for the Selection of Alternatives	26
Togo			27
	1	Status	27
	2	ODS Focal Point	27
	3	Regulations and Guidelines	27
	4	Controls on Import and Sale of Products Containing ODS	27
	5 6	Controls on Methyl Bromide	27
Zimba		Voluntary Agreements	28
ZIIIIDo	1	Status	29 29
	2	ODS Focal Point	29
	3	Regulations and Guidelines	29
	4	Monitoring Import of ODS	29
	5	Controls on Methyl Bromide	29
	6	Voluntary Agreements	29
۸cia	and	the Pacific	31
Bahra		the racine	33
Dailia	1	Status	33
	2	ODS Focal Point	33
	3	Regulations and Guidelines	33
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	33
	5	Controls on Import and Sale of Products Containing,	34
		Made with or Using ODS	•
	6	Controls on the Use of ODS (Other than Methyl Bromide)	34
		– "End-Use Controls"	
	7	Controls on Service and Installation of Air-Conditioning	35
		and Refrigeration Equipment	
	8	Controls on Methyl Bromide	35
Brune	i Daru	ssalam	37
	1	Status	37
	2	ODS Focal Point	37
	3	Regulations and Guidelines	37
	4	Monitoring Import of ODS	37

China	ì		39
	1	Status	39
	2	ODS Focal Point	39
	3	Regulations and Guidelines	39
	4	Controls on ODS in Bulk	40
	5	Controls on Import and Sale of Products Containing, Made with or Using ODS	43
	6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	43
	7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	44
	8	Controls on Methyl Bromide	44
	9	Economic Incentives and Disincentives	45
	10	Labelling Requirements	45
	11	Criteria for the Selection of Alternatives	45
Fiji			47
	1	Status	47
	2	ODS Focal Point	47
	3	Regulations and Guidelines	47
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	47
	5	Controls on Import and Sale of Products Containing, Made with or Using ODS	49
	6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	50
	7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	50
	8	Controls on Methyl Bromide	51
	9	Economic Incentives and Disincentives	51
	10	Labelling Requirements	51
Indor	nesia	3 1	53
	1	Status	53
	2	ODS Focal Point	53
	3	Regulations and Guidelines	53
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	53
	5	Controls on Import and Sale of Products Containing, Made with or Using ODS	54
	6	Controls on the Use of ODS (Other than Methyl Bromide)  — "End-Use Controls"	54
	7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	54
	8	Controls on Methyl Bromide	54
	9	Labelling Requirements	55
Iran		3 1	57
	1	Status	57
	2	ODS Focal Point	57
	3	Regulations and Guidelines	57
	4	Controls on Import and Sale of ODS in Bulk	57
	5	Controls on Import and Sale of Products Containing, Made with or Using ODS	58
	6	Controls on the Use of ODS (Other than Methyl Bromide)  - "End-Use Controls"	58
	7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	58
	8	Controls on Methyl Bromide	58
Japar		25 5.6 Gir i Iddiyi Bi Silindo	59
pui	1	Status	59
	2	ODS Focal Point	59
	3	Regulations and Guidelines	59

4	Controls on ODS in Bulk (Other than Methyl Bromide)	60
5	Controls on Import and Sale of Products Containing,	60
	Made with or Using ODS	
6	Controls on the Use of ODS (Other than Methyl Bromide)	60
Ū	- "End-Use Controls"	00
7		60
/	Controls on Service and Installation of Air-Conditioning	60
_	and Refrigeration Equipment	
8	Controls on Methyl Bromide	61
9	Voluntary Agreements	61
10	Economic Incentives and Disincentives	61
11	Labelling Requirements	62
12	Criteria for Selection of Alternatives	62
Jordan		63
1	Status	63
2	ODS Focal Point	63
3	Regulations and Guidelines	63
4	Controls on ODS in Bulk (Other than Methyl Bromide)	63
5	Controls on Import and Sale of Products Containing,	64
	Made with or Using ODS	
6	Controls on the Use of ODS (Other than Methyl Bromide)	64
	– "End-Use Controls"	
7	Controls on Service and Installation of Air-Conditioning	65
•	and Refrigeration Equipment	
8	Controls on Methyl Bromide	65
9	•	65
	Voluntary Agreements	
10	Economic Incentives and Disincentives	65
11	Labelling Requirements	65
12	Criteria for Selection of Alternatives	65
Kiribati		67
1	Status	67
2	ODS Focal Point	67
3	Regulations and Guidelines	67
4	Controls on ODS in Bulk (Other than Methyl Bromide)	67
Malaysia		69
1	Status	69
2	ODS Focal Point	69
3	Regulations and Guidelines	69
4	Controls on ODS in Bulk (Other than Methyl Bromide)	70
5	Controls on Import and Sale of Products Containing,	71
	Made with or Using ODS	
6	Controls on the Use of ODS (Other than Methyl Bromide)	71
	<ul><li>"End-Use Controls"</li></ul>	
7	Controls on Service and Installation of Air-Conditioning	73
	and Refrigeration Equipment	
8	Controls on Methyl Bromide	73
9	Voluntary Agreements	73 74
10	Economic Incentives and Disincentives	74
11	Labelling Requirements	74
12	Criteria for Selection of Alternatives	75
Maldives		77
1	Status	77
2	ODS Focal Point	77
3	Regulations and Guidelines	77
4	Monitoring Import of ODS	77
5	Controls on Service and Installation of Air-Conditioning	77
J	and Refrigeration Equipment	//
	and nemgeration Equipment	

Mong	olia		79
- 3	1	Status	79
	2	ODS Focal Point	79
	3	Regulations and Guidelines	79
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	79
	5	Controls on Import and Sale of Products Containing,	80
	5	Made with or Using ODS	00
	6	Controls on the Use of ODS (Other than Methyl Bromide)	80
	Ü	- "End-Use Controls"	00
Myan	mar	End ode condition	81
,	1	Status	81
	2	ODS Focal Point	81
	3	Regulations and Guidelines	81
	4	Monitoring Import of ODS	81
Philip		Plofittoring Import of ODS	83
Fillip	1	Status	83
	2	ODS Focal Point	83
	3	Regulations and Guidelines	83
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	84
	5	Controls on Import and Sale of Products Containing,	85
	_	Made with or Using ODS	
	6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	85
	7	Controls on Service and Installation of Air-Conditioning	86
		and Refrigeration Equipment	
	8	Controls on Methyl Bromide	86
	9	Voluntary Agreements	86
	10	Economic Incentives and Disincentives	87
	11	Labelling Requirements	87
	12	Criteria for Selection of Alternatives	87
Syria	12	Criteria for Selection of Alternatives	89
Зупа	1	Status	89
	2	ODS Focal Point	89
	3		89
		Regulations and Guidelines	
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	89
	5	Controls on Import and Sale of Products Containing,	89
	_	Made with or Using ODS	00
	6	Controls on Service and Installation of Air-Conditioning	89
	_	and Refrigeration Equipment	
	7	Controls on Methyl Bromide	90
	8	Voluntary Agreements	90
	9	Labelling Requirements	90
	10	Criteria for Selection of Alternatives	90
Thaila	and		91
	1	Status	91
	2	ODS Focal Point	91
	3	Regulations and Guidelines	91
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	92
	5	Controls on Import and Sale of Products Containing,	93
		Made with or Using ODS	
	6	Controls on the Use of ODS (Other than Methyl Bromide)	93
		- "End-Use Controls"	
	7	Controls on Service and Installation of Air-Conditioning	93
	-	and Refrigeration Equipment	23
	8	Controls on Methyl Bromide	93
	9	Voluntary Agreements	94
	10	Economic Incentives and Disincentives	94
	11	Labelling Requirements	94
	12	Criteria for Selection of Alternatives	94
			J 1

Tuvalı	J		95
	1	Status	95
	2	ODS Focal Point	95
	3	Regulations and Guidelines	95
Vietna	am		97
	1	Status	97
	2	ODS Focal Point	97
	3	Regulations and Guidelines	97
	4	Controls on ODS in Bulk	97
	5	Controls on Methyl Bromide	98
	6	Economic Incentives and Disincentives	98
	7	Voluntary Agreements	98
East	ern	Europe	99
Beları			101
	1	Status	101
	2	ODS Focal Point	101
	3	Regulations and Guidelines	101
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	102
	5	Controls on Import and Sale of Products Containing,	103
		Made with or Using ODS	
	6	Controls on the Use of ODS (Other than Methyl Bromide)  — "End-Use Controls"	103
	7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	103
	8	Controls on Methyl Bromide	103
	9	Economic Incentives and Disincentives	103
Bulga		Economic Incentives and Disincentives	105
Duiga	1	Status	105
	2	ODS Focal Point	105
	3	Regulations and Guidelines	105
	4	Controls on ODS in Bulk	106
	5	Controls on Import and Sale of Products Containing,	107
	•	Made with or Using ODS	107
	6	Controls on the Use of ODS (Other than Methyl Bromide)	108
	Ü	- "End-Use Controls"	100
	7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	108
	8	Controls on Methyl Bromide	109
	9	Economic Incentives and Disincentives	109
	10	Labelling Requirements	109
Croat		Labelling requirements	111
o. out	1	Status	111
	2	ODS Focal Point	111
	3	Regulations and Guidelines	111
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	112
	5	Controls on Import and Sale of Products Containing, Made with or Using ODS	113
	6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	113
	7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	113
	8	Controls on Methyl Bromide	114
	9	Voluntary Agreements	114
	10	Economic Incentives and Disincentives	115
	11	Labelling Requirements	115
	12	Criteria for Selection of Alternatives	115

Czech Repu	blic	117
1	Status	117
2	ODS Focal Point	117
3	Regulations and Guidelines	117
4	Controls on ODS in Bulk (Other than Methyl Bromide)	118
5	Controls on Import and Sale of Products Containing, Made with or Using ODS	118
6	Controls on the Use of ODS (Other than Methyl Bromide)  — "End-Use Controls"	119
7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	119
8	Controls on Methyl Bromide	119
9	Economic Incentives and Disincentives	119
10	Labelling Requirements	119
Estonia		121
1	Status	121
2	ODS Focal Point	121
3	Regulations and Guidelines	121
4	Controls on ODS in Bulk (Other than Methyl Bromide)	122
5	Controls on Import and Sale of Products Containing,	123
3	Made with or Using ODS	125
6	Controls on the Use of ODS (Other than Methyl Bromide)  — "End-Use Controls"	123
7	Controls on Methyl Bromide	124
Hungary	Controls on Field, Bronniae	125
1	Status	125
2	ODS Focal Point	125
3	Regulations and Guidelines	125
4	Controls on ODS in Bulk (Other than Methyl Bromide)	125
5		
	Controls on Import and Sale of Products Containing, Made with or Using ODS	126
6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	126
7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	127
8	Controls on Methyl Bromide	127
9	Economic Incentives and Disincentives	127
10	Labelling Requirements	128
Lativa		129
1	Status	129
2	ODS Focal Point	129
3	Regulations and Guidelines	129
4	Monitoring Import of ODS	129
5	Voluntary Agreements	130
6	Economic Incentives and Disincentives	130
Macedonia	Economic Incentives and Disincentives	131
	Ctatus	
1	Status ODS Facel Baint	131
2	ODS Focal Point	131
3	Regulations and Guidelines	131
4	Controls on ODS in Bulk (Other than Methyl Bromide)	131
5	Controls on Import and Sale of Products Containing, Made with or Using ODS	132
6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	132
7	Controls on Methyl Bromide	132

Moldo	ova		133
	1	Status	133
	2	ODS Focal Point	133
	3	Regulations and Guidelines	133
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	133
	5	Controls on Import and Sale of Products Containing, Made with or Using ODS	134
	6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	134
	7	Controls on Methyl Bromide	134
Roma	nia	,	135
	1	Status	135
	2	ODS Focal Point	135
	3	Regulations and Guidelines	135
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	136
	5	Controls on Import and Sale of Products Containing, Made with or Using ODS	137
	6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	137
	7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	137
	8	Controls on Methyl Bromide	138
	9	Labelling Requirements	138
Slove	nia		139
	1	Status	139
	2	ODS Focal Point	139
	3	Regulations and Guidelines	139
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	139
	5	Controls on Import and Sale of Products Containing, Made with or Using ODS	141
	6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	141
	7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	142
	8	Controls on Methyl Bromide	142
Lati	n Am	erica and the Caribbean	143
Barba	idos		145
	1	Status	145
	2	ODS Focal Point	145
	3	Regulations and Guidelines	145
	4	Monitoring Import of ODS	145
	5	Co-operation with Trade Associations	146
	6	Controls on Methyl Bromide	146
	7	Economic Incentives and Disincentives	146
Belize	9		147
	1	Status	147
	2	ODS Focal Point	147
	3	Regulations and Guidelines	147
	4	Monitoring Import of ODS	147

Brazil			149
	1	Status	149
	2	ODS Focal Point	149
	3	Regulations and Guidelines	150
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	150
	5	Controls on Import and Sale of Products Containing, Made with or Using ODS	151
	6	Controls on the Use of ODS (Other than Methyl Bromide)  — "End-Use Controls"	151
	7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	151
	8	Controls on Methyl Bromide	152
	9	Voluntary Agreements	152
	10	Economic Incentives and Disincentives	153
	11	Labelling Requirements	153
	12	Criteria for Selection of Alternatives	153
Chile			155
	1	Status	155
	2	ODS Focal Point	155
	3	Regulations and Guidelines	155
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	155
	5	Controls on Import and Sale of Products Containing,	156
		Made with or Using ODS	
	6	Controls on the Use of ODS (Other than Methyl Bromide)	156
		- "End-Use Controls"	
	7	Controls on Service and Installation of Air-Conditioning	156
		and Refrigeration Equipment	
	8	Controls on Methyl Bromide	157
El Sal	vador		159
	1	Status	159
	2	ODS Focal Point	159
	3	Regulations and Guidelines	159
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	159
	5	Controls on Import and Sale of Products Containing,	160
		Made with or Using ODS	
	6	Controls on Service and Installation of Air-Conditioning	160
		and Refrigeration Equipment	
	7	Controls on Methyl Bromide	160
Hond			161
	1	Status	161
	2	ODS Focal Point	161
	3	Regulations and Guidelines	161
_	4	Monitoring Import of ODS	
Jama			163
	1	Status	163
	2	ODS Focal Point	163
	3	Regulations and Guidelines	163
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	163
	5	Controls on Import and Sale of Products Containing,	164
		Made with or Using ODS	. =
	6	Controls on Methyl Bromide	164
	7	Economic Incentives and Disincentives	165
	8	Labelling Requirements	165

Panama		167
1	Status	167
2	ODS Focal Point	167
3	Regulations and Guidelines	167
4	Controls on ODS in Bulk (Other than Methyl Bromide)	167
5	Controls on Import and Sale of Products Containing,	168
J	Made with or Using ODS	100
6	Controls on the Use of ODS (Other than Methyl Bromide)	168
7	- "End-Use Controls"	160
7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	168
8	Controls on Methyl Bromide	168
9	Voluntary Agreements	168
10	Economic Incentives and Disincentives	168
11	Labelling Requirements	169
12	Criteria for Selection of Alternatives	169
St Lucia		171
1	Status	171
2	ODS Focal Point	171
3	Regulations and Guidelines	171
4	Monitoring Import of ODS	171
5	End Use Controls	171
6	Co-operation with Industry Organisations	171
Uruguay	, 3	173
1	Status	173
2	ODS Focal Point	173
3	Regulations and Guidelines	173
4	Controls on ODS in Bulk (Other than Methyl Bromide)	173
5	Controls on Import and Sale of Products Containing,	174
	Made with or Using ODS	
6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	174
7	Controls on Service and Installation of Air-Conditioning	174
0	and Refrigeration Equipment	174
8	Controls on Methyl Bromide	174
9	Voluntary Agreements	175
10	Labelling Requirements	175
	n Europe and others	177
Australia		179
1	Status	179
2	ODS Focal Point	179
3	Regulations and Guidelines	179
4	Controls on ODS in Bulk (Other than Methyl Bromide)	182
5	Controls on Import and Sale of Products Containing,	184
	Made with or Using ODS	
6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	186
7	Controls on Service and Installation of Air-Conditioning	189
0	and Refrigeration Equipment	100
8	Controls on Methyl Bromide	192
9	Voluntary Agreements	192
10	Economic Incentives and Disincentives	193
11	Labelling Requirements	193
12	Criteria for Selection of Alternatives	193

Austria		195
1	Status	195
2	ODS Focal Point	195
3	Regulations and Guidelines	195
4	Controls on ODS in Bulk (Other than Methyl Bromide)	196
5	Controls on Import and Sale of Products Containing,	197
3	Made with or Using ODS	137
6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	197
7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	199
8	Controls on Methyl Bromide	199
9	Voluntary Agreements	199
10	Economic Incentives and Disincentives	199
11	Labelling Requirements	199
12	Criteria for Selection of Alternatives	
	Criteria for Selection of Alternatives	200
Canada	Chahara	201
1	Status	201
2	ODS Focal Point	201
3	Regulations and Guidelines	201
4	Controls on ODS in Bulk (Other than Methyl Bromide)	203
5	Controls on Import and Sale of Products Containing,	207
	Made with or Using ODS	
6	Controls on the Use of ODS (Other than Methyl Bromide)	211
	– "End-Use Controls"	
7	Controls on Service and Installation of Air-Conditioning	220
	and Refrigeration Equipment	
8	Controls on Methyl Bromide	228
9	Economic Incentives and Disincentives	228
10	Labelling Requirements	229
Denmark	Labelling Requirements	231
1	Status	231
2	ODS Focal Point	231
3	Regulations and Guidelines	231
4	Controls on ODS in Bulk (Other than Methyl Bromide)	232
5	Controls on Import and Sale of Products Containing, Made with or Using ODS	232
6	Controls on the Use of ODS (Other than Methyl Bromide)	233
	– "End-Use Controls"	
7	Controls on Service and Installation of Air-Conditioning	235
	and Refrigeration Equipment	225
8	Controls on Methyl Bromide	235
9	Voluntary Agreements	235
10	Economic Incentives and Disincentives	235
11	Labelling Requirements	235
12	Criteria for Selection of Alternatives	236
European l	Jnion	237
1	Status	237
2	ODS Focal Point	237
3	Regulations and Guidelines	237
4	Controls on ODS in Bulk (Other than Methyl Bromide)	237
5	Controls on Import and Sale of Products Containing,	241
J	Made with or Using ODS	
6	Controls on the Use of ODS (Other than Methyl Bromide)	242
O	- "End-Use Controls"	272
7	Controls on Service and Installation of Air-Conditioning	244
/		Z <del>11</del>
0	and Refrigeration Equipment	244
8 9	Controls on Methyl Bromide	244
9	Labelling Requirements	245

Finland		247
1	Status	247
2	ODS Focal Point	247
3	Regulations and Guidelines	247
4	Controls on ODS in Bulk (Other than Methyl Bromide)	248
5	Controls on Import and Sale of Products Containing,	248
	Made with or Using ODS	
6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	248
7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	250
8	Controls on Methyl Bromide	250
9	Economic Incentives and Disincentives	250
10	Labelling	250
11	Criteria for Selection of Alternatives	251
Germany	orienta for selection of Alternatives	253
1	Status	253
2	ODS Focal Point	253
3	Regulations and Guidelines	253
4	Controls on ODS in Bulk (Other than Methyl Bromide)	254
5	Controls on Import and Sale of Products Containing,	254
3	Made with or Using ODS	251
6	Controls on the Use of ODS (Other than Methyl Bromide)	255
O	- "End-Use Controls"	255
7	Controls on Service and Installation of Air-Conditioning	257
,	and Refrigeration Equipment	257
8	Controls on Methyl Bromide	257
9	Voluntary Agreements	258
10	Economic Incentives and Disincentives	258
11	Labelling Requirements	258
12	Criteria for Selection of Alternatives	258
New Zeala		259
New Zeala	Status	259
2	ODS Focal Point	259
3		259
4	Regulations and Guidelines Controls on ODS in Bulk (Other than Methyl Bromide)	260
5		
5	Controls on Import and Sale of Products Containing,	262
6	Made with or Using ODS  Controls on the Use of ODS (Other than Methyl Bramide)	262
6	Controls on the Use of ODS (Other than Methyl Bromide)	262
7	- "End-Use Controls"	262
7	Controls on Service and Installation of Air-Conditioning	263
	and Refrigeration Equipment	242
8	Controls on Methyl Bromide	263
9	Voluntary Agreements	263
10	Economic Incentives and Disincentives	264
11	Labelling Requirements	264
12	Criteria for Selection of Alternatives	264

Spain			265
	1	Status	265
	2	ODS Focal Point	265
	3	Regulations and Guidelines	265
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	265
	5	Controls on Import and Sale of Products Containing,  Made with or Using ODS	266
	6	Controls on the Use of ODS (Other than Methyl Bromide)  — "End-Use Controls"	266
	7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	266
	8	Controls on Methyl Bromide	266
	9	Voluntary Agreements	266
	10	Economic Incentives and Disincentives	266
	11	Labelling Requirements	266
	12	Criteria for Selection of Alternatives	267
Swede		Chema for Selection of Alternatives	269
Sweak	1	Status	269
	2	ODS Focal Point	269
	3	Regulations and Guidelines	269
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	271
	5	Controls on Import and Sale of Products Containing, Made with or Using ODS	271
	6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	272
	7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	275
	8	Controls on Methyl Bromide	276
	9	Voluntary Agreements	276
	10	Economic Incentives and Disincentives	276
	11	Labelling Requirements	276
	12	Criteria for Selection of Alternatives	276
United			277
	1	Status	277
	2	ODS Focal Point	277
	3	Regulations and Guidelines	277
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	278
	5	Controls on Import and Sale of Products Containing,	278
		Made with or Using ODS	
	6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	278
	7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	279
	8	Controls on Methyl Bromide	280
United		es of America	281
	1	Status	281
	2	ODS Focal Point	281
	3	Regulations and Guidelines	281
	4	Controls on ODS in Bulk (Other than Methyl Bromide)	282
	5	Controls on Import and Sale of Products Containing,	284
		Made with or Using ODS	_
	6	Controls on the Use of ODS (Other than Methyl Bromide)  – "End-Use Controls"	284
	7	Controls on Service and Installation of Air-Conditioning and Refrigeration Equipment	284
	8	Controls on Methyl Bromide	286
	9	Voluntary Agreements	286
	10	Economic Incentives and Disincentives	286
	11	Labelling Requirements	286
	12	Criteria for Selection of Alternatives	287

Part II: ODS Regulations and Related Measures Summarised in Tables	289
Introduction to Part II	291
Table of Content	293
Tables for Australia to Latvia	295
Tables for Macedonia to Zimbabwe	309
Annexes	323
Annex 1 Persons Providing Information to the Guidebook	325
Annex 2 Contact List	329
Annex 3 About the UNEP DTIE OzonAction Programme	359
Annex 4 The Stockholm Environment Institute	365

## **Guide for the Reader**

### 1 Who should use this Guidebook?

This guidebook is intended for government officers who design strategies to eliminate the use of ozone depleting substances (ODS) and the legal officers who assist them in preparing regulations to implement these strategies.

Please note that the guidebook is not intended for reading from the beginning to the end - it is a reference document. It should help you to find out where to look for experience on various types of regulations to control the use of ozone depleting substances and how to contact those who are directly involved in designing and implementing these regulations.

### 2 What is the scope of the Guidebook?

This guidebook is intended to provide information on regulations that are already enacted. The word "regulation" here - and in the rest of the report – is used in a wide sense. It includes all kinds of binding governmental directives, from laws enacted by a Parliament to administrative orders by subordinated authorities. The main focus is on controls by such regulations. The guidebook also contains, however, some limited information on similar but not formally binding governmental guidelines and related measures, such as formal voluntary agreements with industry associations and economic incentives or disincentives (duty reductions, special taxes, etc.).

### 3 How is the Guidebook Structured?

The guidebook is divided in two main parts, one with brief descriptions of control measures by country (Part I), and one with tables to help you to find countries with a certain type of experience (Part II). All country descriptions in Part I follow the same pattern and typically include the following headings:

- 1 Status;
- 2 ODS Focal Point;
- 3 Regulations and Guidelines (listing the regulations with references);
- 4 Controls on ODS in bulk (other than methyl bromide);
- 5 Controls on Import and Sale of Products Containing, Made With or Designed for ODS;
- 6 Controls on Use of ODS (other than methyl bromide) "End Use Controls";
- 7 Controls on Service and Installation of Refrigeration and Air-conditioning Equipment;
- 8 Controls on Methyl Bromide;
- 9 "Voluntary Agreements";
- 10 Economic Incentives and Disincentives;
- 11 Labelling Requirements; and
- 12 Criteria for Selection of Alternatives.

References below under "Key Elements in Controlling ODS" refer to such sections under each country in Part I. Section numbers can, however, vary as all headings are not included for all countries. Many countries are at a preliminary stage of regulating ODS and for these countries only the information regarding action taken is included. Countries which have progressed in their efforts to control ODS and the fact that a certain approach has not been chosen are sometimes mentioned.

### 4 How Should the Guidebook be Read?

The guidebook can be read in several ways. Reading the whole description of a certain country gives an overview of the legal approach taken by that country. When looking for experience on a particular approach it is useful to start with the tables in Part II which give an indication on which countries have used that particular approach. The descriptions by country in Part I will then provide more details, with reference to adopted regulations and, where it has been possible, the relevant sections in the regulations. Copies of the cited regulations are generally available from UNEP DTIE on request. Names and contact details for those in charge of the implementation are included in the country descriptions in Part I and summarised in Annex 2. Contact persons are likely to change over time but even outdated information can help you to locate the right person.

# **Key Elements in Controlling ODS**

ODS regulations vary considerably from country to country, both in content and structure. They are all a result of prevailing legal and administrative structure and traditions, conveniently available general legislation, the size and type of ODS consumption, available information on alternatives at the time when the regulations were enacted and compromises between different interests, etc. This guidebook does not attempt to make any judgement on good or bad regulations; in fact, not enough information is currently available to evaluate how effective various approaches have been. ODS regulations from other countries should be used as sources of inspiration, not as models that can be copied blindly. Elements can be picked from different countries and combined in new, perhaps better combinations to suit your own needs.

Having said this, there are, however, some key elements to consider in controlling ODS which are universally relevant.

Establish a reliable system to control and monitor import and export of ODS

An important first step is to establish a reliable system to control and monitor import and export of ODS in bulk (and production when relevant) on a regular basis. Reliable information on the consumption year by year is the key to evaluate how effective various actions to phase out ODS really are. The Parties to the Montreal Protocol have through the Montreal Amendment prescribed that all parties should have established an import and export licencing system for control and monitoring purposes by February 10 2000. However, Article 5 countries may postpone the inclusion of HCFC and HBFC into the licensing system until January 1 2005 and and methyl bromide until 2002.

A control on imports and exports of ODS in bulk can be structured in many ways. Summaries of actions taken are found in the country specific descriptions in Part I (normally in Section 4 under each country). Two SEI/UNEP publications may give further advice on this important matter: "ODS Import/Export Licensing Systems - Resource Module" gives a step by step guide on how to set up a licensing system; "Monitoring Imports of Ozone Depleting Substances" gives more details on how countries belonging to the ODS Officers Network for Southeast Asia/Pacific (ODSONET/SEAP) have tackled this task. The publications are available from UNEP DTIE's web site or from UNEP's distribution agent for publications (www.earthprint.com).

### Consider all ODS and all their applications

When developed countries started controlling ODS in the late 1970s there was no consensus on which chemicals to include or even on the need to control ODS at all. Controls on aerosols with CFC propellants became the first target, with a precautionary measure targeting non-essential use. As the international consensus developed further the targets for national regulations became broader. This gradual development is reflected in the way the regulations have developed and how they are structured in many developed countries.

Now it is better to plan for controls on all ODS in all their applications. This is particularly important with regard to ODS which can be used as substitutes for other ODS such as 1,1,1-trichloroethane, carbon tetrachloride, "other CFCs", HCFCs and HBFCs. This does not imply that all ODS and all applications must be - or can be - controlled equally or immediately, but the legal and administrative structure should be planned for their total elimination. It is also important that such signals reach the ODS users to guide their investigations on alternatives.

### Control new installations to prevent increased dependency on ODS

Increased use of ODS should be prevented as soon as possible to avoid a continued dependency on ODS technology. It is more difficult and costly to eliminate an already established use pattern than to prevent it from being established. Developing countries should take advantage of this more favourable situation, compared to the situation in industrialised countries which had already developed an extensive dependency on ODS technology when the Montreal Protocol was signed in 1987.

It is particularly important to prevent increased use in applications which involve investments in equipment with a long lifetime (both industrial and non-industrial equipment). Therefore, many developed countries prohibited installations of new ODS equipment for certain applications on short notice while allowing a longer time to phase out already installed equipment. You will find examples of such controls in the country descriptions in Part I, generally in Section 6.

Controls on new installations are also an important tool to minimise the dumping of old equipment which is designed for the use of ODS. Large quantities of second-hand ODS equipment now exist in developed countries and, in the absence of controls, are marketed in developing countries.

Control of supply or on end use applications - or both?

Some countries rely on controls on supply to eliminate an already established use of ODS by gradually limiting the quantities which can be imported and produced. Generally, you will find such examples in Section 4 of the country descriptions in Part I. Other countries concentrate their controls on the end use of ODS, prohibiting ODS by certain dates for specified applications. Such examples are generally found in Section 6 of the country descriptions. Many countries combine both approaches.

When deciding on the approach, it is worth taking the risk of illegal import into account. It is necessary to supplement controls on supply with actions targeting the end users to avoid creating a market for illegal import - which can develop if the users are unprepared and, therefore, a substantial demand still exists. Some countries in Europe with controls on supply only have experienced such problems. Controls on end uses make it necessary to discuss phase out dates and difficulties with representatives for the sectors involved. This in itself helps to alert the users on the need to start investigating alternatives.

### Controls on imported products can be necessary

Controls on imported products (articles) which contain or are made with ozone depleting substances can be a necessary complement to bans on ODS use in the national manufacturing industries. They can ensure that national products are not just replaced by imported products, which are produced with the same amount of ODS. This would lead to unfair competition at no gain for the ozone layer. Examples of actions taken can be found in the country descriptions in Part I, generally in Section 5. The Montreal Protocol prohibits trade in these products with non-parties. A list over the products can be found in Annex D to the protocol.

In addition, it is important to try to control the import of equipment relying on ODS for its use. As mentioned above there is a risk of having obsolete ODS using equipment dumped in Article 5 countries if no controls on the import and export of these products are in place, with future impediments to phase out strategies in the importing country as a consequence. Decision IX/9 of the Meeting of the Parties recommended that each party should adopt measures to control import and export of products relying on Annex A and B substances for their functioning and that Non-Article 5 countries should take measures to prevent export of second-hand equipment designed for those substances.

Decision X/9 reiterated that it is the joint responsibility for both importing and exporting parties to curb the trade in ODS using products. It also invited the parties which do not want to import the products listed in the decision (which are identical to those listed in Annex D to the protocol) to inform the Secretariat that they do not consent to the importation of these substances into their country.

Reduce use of ODS refrigerants by recovery and codes of practice!

Emissions of ODS refrigerants represent an important part of ODS consumption in most countries. As a rule, about one third can be attributed to intentional venting during service and disposal and about two thirds to leakage and other unintentional emissions. This ODS consumption can be reduced substantially through recovery and recycling, better maintenance and better design - measures which in the longer term are beneficial for all parties but require a substantial effort to achieve because of the many enterprises and users involved.

Examples of actions taken to reduce these emissions are generally included in Section 7 of the country descriptions in Part I. Such actions can include co-operation with the trade associations on codes of good practice, as well as regulations requiring the training of service technicians, mandatory recovery when servicing refrigeration and air-conditioning equipment, record keeping and restrictions on the right to purchase ODS refrigerants, etc.

Economic incentives and disincentives can be useful as supporting measures

Economic incentives (lower duties, favourable loans, etc.) and disincentives (higher duties, special fees, taxes or levies, high fees or levies on approved exemptions from certain regulations, non-eligibility for economic privileges, etc.) are used by some countries as one of several tools to phase out ODS use. They can be quite effective as supporting measures and are, in some countries, also used to fund the government units in charge of ozone protection and activities carried out by these units. There are, however, some problems involved. One is how to maintain equity between nationally

produced products and imported products, another is the risk of creating a market for illegal import of ODS, as experienced by the U.S.A. Economic incentives and disincentives are outside the main scope of this guidebook, but some information on actions taken is included, generally in Section 10.

All regulations should be preceded by consultations with industry

To be effective, all regulations should be developed in a dialogue with industry to ensure that the structure, coverage and time frames are realistic. If preceded by such dialogues, regulations are normally welcomed by the industry as they ensure that everyone is working under the same rules. The challenge for government officers is to find the right balance, accepting justified arguments without accepting all arguments on face value. Contacts with colleagues in other countries are very useful in this process.

# Part I: ODS Regulations and Related Measures By Country

### **Introduction to Part I**

The general structure of Part I follows a questionnaire that was sent to all the parties. However, headings, subheadings and the scope of information differ somewhat from country to country as they are adjusted to the situation in each specific country and the information provided. The sections 1-12 below are in the text referred to as "section X" in italics to distinguish them from references to sections of the various domestic regulations described. The responses have been checked against the relevant regulations when possible. When the writer has not had access to the relevant regulations this is noted in a footnote in the heading of the relevant country section. However, SEI cannot guarantee that the interpretation of the legislation of the guidebook is correct. Where the legal texts provided have seemed to be inconsistent and dubious the author has attempted to draft the text as closely to the text in the relevant regulation as possible to avoid misinterpretations. Copies of legislation provided by the countries are kept by UNEP DTIE and limited copies may be made available upon request. Some countries that were part of the previous version of the Guidebook did not submit any new information for the present version. Those country sections are still included in the Guidebook but have not been updated. A note in the heading of the country section states this fact when relevant.

Please note that the headings should not be read as an implicit indication that all types of measures should be implemented in all countries. Each government has to choose the approach and mix of measures which it finds most appropriate and adequate, considering the ODS consumption and resources available in its own country.

In general, the structure of Part I of the guidebook is the following:

#### 1 Status

This indicates when the Montreal Protocol and its Amendments were ratified, whether a country is an Article 5 or a Non-Article 5 country, and gives some other necessary background information, such as that a country is a federation of states or belongs to the European Community.

### 2 ODS Focal Point

This indicates which authority has the primary responsibility for implementing ODS phase out strategies and who is the main contact person. This information is intended to facilitate direct contacts and exchange of experience between those government officers who are directly involved in preparing and implementing strategies to phase out ODS. Some countries have, however, indicated persons at very high levels, even at the ministerial level. In such cases, officers at a lower level might be referred to for discussions at a more detailed level.

### 3 Regulations and Guidelines

This section lists the regulations used to control ODS, with dates, official numbers and abbreviations used in the guidebook. Reference is given to the latest full text version and later partial revisions, if the regulation has been changed since it was enacted (provided that the country has submitted such information). Names of regulations and responsible authorities are given in both national language and English except for national names spelled in non-Latin letters.

This section also gives some indication on the relationship between special ODS regulations and more general laws as well as on sanctions in case of non-compliance.

### 4 Controls on ODS in Bulk

This section covers regulations on production, import and sale of ODS in bulk, with the exception of methyl bromide which is covered separately in Section 8 because of its relations to pesticide regulations. The section is normally divided in three sub-sections, covering:

- 4.1 Generally applicable regulations (e.g. on import without regard to its origin);
- 4.2 Monitoring ODS import (indicating the sources and the responsible authorities); and
- 4.3 Specific regulations on ODS import from and export to Non-Party countries.

# 5 Controls on Import and Sale of Products Containing or Made with or Designed for ODS

This section covers regulations targeting import or sale of products which contain, are made with or are designed for use of ODS, but not regulations targeting the use of ODS, e.g. to manufacture such products. Regulations targeting the use of ODS is covered in Section 6.

The choice of banning import and production of the ODS chemicals, import and/or sale of products containing or made with ODS, or use of ODS in manufacturing or servicing specified products is very much a technical legal question. A ban on use of ODS in the manufacturing processes can be fairly easy to control, especially with regard to products which are produced in larger, well known factories. A ban on the use of ODS when manufacturing certain products nationally might need to be supplemented by an import ban on import of the same type of products to avoid that the locally manufactured products being replaced with imported products, at no gain for the ozone layer. It can sometimes be difficult to prohibit and control import of such products, in particular those which are made with ODS but do no longer contain ODS when they are imported as finished products. Some countries might therefore prefer to prohibit selling the same type of products. The internal division of power between a federal government and state government might also influence the choice.

Regulations concerning products designed for ODS are primarily relevant for equipment such as dry cleaning machines and refrigeration or air-conditioning equipment. Banning import and/or sale of such products is a way of preventing dependency on ODS for operation and service - and dumping of second-hand equipment.

This section is normally divided in two subsections:

- 5.1 Generally applicable regulations; and
- 5.2 Import from non-party countries.

The latter heading refers to regulations specifically enacted to cover import from Non-Party countries of products defined in Annex D of the Montreal Protocol.

### 6 Controls on the Use of ODS - "End Use Controls"

This section covers regulations which target the use of ODS by its end use application (for aerosols, foams, refrigeration, etc.). It includes use in the manufacturing industries and the installation of new products, e.g. refrigeration and air-conditioning equipment, as well as use for servicing and operation of equipment which is already installed. As for previous sections, it does not cover methyl bromide. It also does not cover the use of ODS for servicing refrigeration or air-conditioning equipment as this is dealt with separately in section 7.

The information in this section is quite extensive for those countries, which have concentrated their regulations on end use controls. This section is therefore normally sometimes subdivided by type of ODS. The subheadings and scope of information is totally tailored to the structure of the regulations in the particular country.

### 7 Controls on Service and Installation of Refrigeration and Air-conditioning Equipment

ODS use for refrigeration and air-conditioning is a major and long lasting use in most countries and in particular in developing countries. Substantial reductions can be achieved in this sector by reducing the emissions through recovery and better design and maintenance of the equipment. It is, however, a difficult area to tackle as it involves many small and scattered enterprises and a very large number of equipment owners. The approaches taken by governments on this issue has therefore been assigned a separate section.

In this sector co-operation with trade organisations is of particular importance and includes the development of codes of practice. Some information on such co-operation is therefore included either here or in section 9 although such information is outside the main focus of the guidebook.

### 8 Controls on Methyl Bromide

Controls on methyl bromide have specific features. It involves a totally different group of users. The chemical is normally already controlled under pesticide regulations, although from a different perspective. Consequently, a new type of user and authority will generally be involved. The information on control of methyl bromide is therefore presented in a separate section. Some of the information provided in this section has been taken from the UNEP publication "Methyl Bromide Phase-Out Strategies: A Global Compilation of Laws and Regulations", 1999.

### 9 Voluntary Agreements

This section contains some limited information on "voluntary agreements" with industry as some countries have chosen such agreements as an alternative to unilateral government regulations. The section is primarily intended for general, formalised commitments by industry, e.g. to reduce or phase out the use of ODS by certain amounts and/or dates by sector of application. It is not intended to include the Multilateral Fund supported projects for individual enterprises, although it has in some cases been difficult to decide from the information provided if the agreement is of a general nature or related to individual enterprises. This information is outside the main focus of the guidebook and detailed information on such agreements has therefore not been collected.

### 10 Economic Incentives and Disincentives

Indications on economic incentives and disincentives are included in this section as they are generally based in regulations of some kind. The details are, however, outside the scope of the guidebook.

### 11 Labelling Requirements

Labelling requirements can vary widely, from requirements that refrigerant containers and equipment must identify the refrigerant and its status or instructions on who is allowed to service or dispose of the equipment, to warnings on ODS effects on the ozone layer. Labelling requirements should be seen as supporting measures - they are unlikely to be effective as stand-alone measures.

### 12 Criteria for Selection of Alternatives

This section is primarily intended to cover official criteria or requirements for the selection of alternatives. A typical example are the U.S.A. rules which make it unlawful to replace the ODS with a certain substitute if other available alternatives would reduce the overall risk to health and environment and, in addition, make the acceptability of each alternative depending on government decisions. Such rules are not very common as they require substantial resources to administer.