



**United Nations
Environment
Programme**



Distr.
Limited

UNEP/OzL.Pro/ExCom/32/37
8 November 2000

ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Thirty-second Meeting
Ouagadougou, 6-8 December 2000

**REVISED DATA FOR CHINA'S COUNTRY PROGRAMME UPDATE
(Follow-up to decision 30/58)**

Part I

Note from the Secretariat

1. Pursuant to decision 30/58, the Government of the People's Republic of China has submitted the attached document which provides revised data for the China country programme update.
2. The Executive Committee may wish to take note of the revised data reported by the Government of the People's Republic of China contained in Part II of the present document.

Part II

Revised Data for “Update of Country Programme for Ozone Depleting Substances Phaseout in China”

I. Background

In January 1993, the Chinese Government (hereinafter Government) approved the Country Programme for the Phaseout of Ozone Depleting Substances (hereinafter Country Programme). In March 1993, at its 9th Meeting, the Executive Committee (hereinafter ExCom) recognized the Country Programme.

China started to implement ODS phaseout actions with the support of the Multilateral Fund for the Implementation of the Montreal Protocol (MLF) under the guidance of the Country Programme. During 1997-1999, with UNDP’s assistance, the Government updated the Country Programme using information and data up to the end of 1997. The Update of China’s Country Programme for Ozone Depleting Substances Phaseout (hereinafter CP Update) was approved by State Council in November 1999, submitted to the 30th ExCom. The CP Update was taken notice by the ExCom at its 30th Meeting held in Montreal in March 2000.

By implementing the Country Programme, China has controlled the increase of ODS production and consumption. The Government established a Project Management Office (hereinafter PMO) and a system for implementing the Montreal Protocol on Substances that Deplete the Ozone Layer (hereinafter Montreal Protocol). By the end of 1997, excluding medical usage, China has phased out CFC consumption in Aerosol Sector. The implementation of the Halon Sector Plan, approved by the ExCom at its 23rd Meeting in November 1997, was started at the same time.

The Country Programme was updated based on the original Country Programme. The following factors were considered during the update: (1) The guidelines from the Multilateral Fund (MLF); (2) changes in the factors affecting country programme design and implementation; (3) new approaches to implementation and (4) alternative technologies development. ODS production and consumption was surveyed when updating the Country Programme.

After 1997, ODS phaseout activities were speeded up and covers many sectors and different size of enterprises. China has reduced the CFC production and consumption to meet the Montreal Protocol freeze limit by the end of 1999, a half-year earlier than the Montreal Protocol requirement. This achievement was made possible with contribution by the implementation of Sector Plan for CFC Production Phaseout and Sector Plans for the consumption sectors, which China has

committed with the phaseout schedules set up by sector plans in Halon Sector, Mobile Air Condition Sector, Solvent Sector, Tobacco Sector and CFC Production Sector.

According to the current ODS phaseout status and requirement, this report presents updated production and consumption data and incremental cost for future ODS phaseout up to the end of 1999. New phaseout strategy, policy and measure are also included in this report.

II. Current Status

The total ODS production and consumption in 1999, the latest data available, were 53,492 tons and 58,613 tons respectively. ODS production, net stockpile, consumption and import/export data in 1999 are summarized in Table 1. The CFC production in 1999 is lower than the Montreal Protocol 1999 freeze level, while the CFC consumption in 1999 is much lower than the Montreal Protocol 1999 freeze level. The ODS consumption by sectors are summarized in Table 2. ODS consumption by chemicals and sectors in 1999 are summarized in Table 3.

Table 1 ODS Production, Consumption and Import/Export Data in 1999 (unit: tons)

ODS		Production		Net stockpile ODS***	Import ODS	Export ODS	Consumption	
		ODS	ODP				ODS	ODP
Annex A	Group I							
CFC-11		22,681	22,681	1,000	2,671	747	25,605	25,605
CFC-12		18,518	18,518	1,600	713	4,369	16,462	16,462
CFC-113		4,223	3,378		75	111	4,187	3,350
CFC-114,115*		270	170		433	425	278	175
<i>Sub-total</i>		45,692	44,747		3,892	5,652	46,532	45,592
Annex A	Group II							
Halon1211		5,964	17,892		0	780	5,184	15,552
Halon1301		484	4,840		0	185	299	2,990
<i>Sub-total</i>		6,448	22,732		0	965	5,483	18,542
Annex B	Group I							
CFC-13		27	27		0	0	27	27
Annex B	Group II							
CTC**		100	110		0	0	100	110
Annex B	Group III							
TCA		1,225	123		5,348	102	6,471	647
Total		53,492	67,739	2,600	9,240	6,719	58,613	64,918

* Import/export data of CFC-114 and CFC-115, are reported without separation by the Customs.

** CTC does not include CTC used as processing agent, nor CTC production for feedstock.

*** The net stockpile equal to stockpile in the end of the year minus stockpile in the first of the year. Since China started to limit CFC production in 1999, the CFC production in 1998 was affected.

Table 2 ODS/ODP Consumption by Sector in 1999 (tons and percentage)

Sector	Foam	Refrigeration	Halon	Aerosol	Solvent	Tobacco	Total
ODS	23,143	16,092	5,483	2,100	10,758	1,037	58,613
%	39.5%	27.5%	9.4%	3.6%	18.4%	1.8%	100.0%
ODP	23,143	15,989	18,542	2,100	4,107	1,037	64,918
%	35.6%	24.6%	28.6%	3.2%	6.3%	1.6%	100.0%

Table 3 ODS Consumption in 1999 Disaggregated by Sectors and Final Applications (tons)

Sector	Sub-sector	ODS	Applications	Consumption in ODS	Consumption in ODP
Foam	Extruded Polyolfin	CFC-12	PS sheet, PE tubes and sticks	3,981	3,981
	Flexible and Rigid Polyurethane	CFC-11	Mattress, sponge, automobile inner decorations, Insulating boards, tubes	19,162	19,162
	<i>Sub-total</i>			23,143	23,143
Refrigeration	Domestic Refrigerators	CFC-11	Boards foaming	4,800	4,800
		CFC-12	New products and refilling	1,500	1,500
	Air-conditioning	CFC-12	New products	1,931	1,931
	Industrial & Commercial Refrigeration	CFC-11	Turbo refrigeration	606	606
		CFC-12	Other ACs, cold storage, and transportation	6,950	6,950
		CFC-114 CFC-115	Low temp. Refrigeration Food Freezer	278	175
		CFC-13	Low electronic medical appliance	27	27
	<i>Sub-total</i>	CFC-11		5,406	5,406
	<i>Sub-total</i>	CFC-12		10,381	10,381
	<i>Sub-total</i>	CFCs		16,092	15,989
Solvent		CFC-113	Solvent	4,187	3,350
		CTC	Solvent	100	110
		TCA	Solvent	6,471	647
	<i>Sub-total</i>			10,758	4,107
Halon		Halon1211	Extinguishers Extinguishing system	5,184	15,552
		Halon1301	Extinguishing system	299	2,990
	<i>Sub-total</i>			5,483	18,542
Tobacco		CFC-11	Tobacco expansion	1,037	1,037
Aerosol	Medical usage	CFC-12		2,100	2,100
Total				58,613	64,918

III. Phaseout Strategy

China is implementing the phaseout strategy following the Country Programme. However, the phaseout strategy needs update according to the current phaseout status, such as speeds of phaseout and alternative technology development and introduction. Phaseout strategy for Foam Sector, Industrial & Commercial Refrigeration Sector, Domestic Refrigeration Sector, Tobacco Sector and other matters concerned were updated as following.

Phaseout Strategy at Sector Level

Foam Sector. By adopting terminal umbrella projects and/or sector plans, phaseout of CFC used in PS/PE enterprises by 2005 and in PU horizontal/vertical foam, PU sheet and pipe-type foam, spring PU and box-type foam enterprises by 2010.

Industrial/Commercial Refrigeration Sector. CFCs consuming in industrial and commercial refrigeration sector will be phased out according to a sector plan which is being developed. CFC-11 and CFC-12 used in new refrigeration units will be phased out by 2003, and CFC-11 and CFC-12 used in refilling practice will be stopped by 2010.

Domestic Refrigeration Sector: An enterprise level survey on the remaining CFC consumption for the remaining less than 20 medium and small-size refrigerator enterprises is underway. CFC-11 and CFC-12 used in these remaining enterprises will be phased out by a terminal umbrella project.

Tobacco Sector CFC-11 consumption in tobacco sector will be phased out according to the Sector Plan approved at the 30th ExCom Meeting. China will phaseout CFC-11 in tobacco sector by the end of 2006.

Servicing and processing agent sectors China has started the sector plan preparation this year, the phaseout strategy and incremental cost for these two sectors will be clarified in next few years.

Technology Selection

Considering methylene chloride exposure has been restricted since April 2000 in China, technology selection for foam sector was revised as following:

Foam Sector

- PS/PE extruded foam will use butane, butane/CO₂, or CO₂ technologies;

- Flexible PU foam will use CO₂ or variable pressure process;
- Rigid PU foam will use pentane, HCFC-141b or 100% water-based technology;
- New foam substitutes, such as HFC-245fa, will be adopted when available.

ODS Phaseout Approach

ODS productions and consumptions in 1999 are lower or close to what was predicated in Tables 7, 8, 9, 11 and 12 in the CP Update dated December 1999. Based on phaseout progress during 1997-1999, the ODS productions and consumptions in 2005 would not exceed the objectives in Tables 7, 8, 9, 11 and 12 in the CP Update.

Table 7 Estimate of CFC Consumption (tons)

	2005		2007		2010	
	ODS	ODP	ODS	ODP	ODS	ODP
CFC-11	10,400	10,400	4,490	4,490	0	0
CFC-12	7,600	7,600	3,770	3,770	0	0
CFC-113	688	550	0	0	0	0
CFC-114, 115/13	300	200	150	100	0	0
TOTAL	18,988	18,750	8,410	8,360	0	0
Foam	9,793	9,793	4,370	4,370	0	0
ICR	4,257	4,157	2,170	2,120	0	0
DOM	400	400	200	200	0	0
MAC servicing	1,200	1,200	670	670	0	0
Aerosol	2,500	2,500	1,000	1,000	0	0
Solvent	688	550	0	0	0	0
Tobacco	150	150	0	0	0	0
TOTAL	18,988	18,750	8,410	8,360	0	0

Table 8 Estimate of Halon Consumption (tons)

Annex A: Group II	2005		2010	
	ODS	ODP	ODS	ODP
Halon1211	1,890	5,670	0	0
Halon1301	150	1,500	0	0
Total	2,040	7,170	0	0

Table 9 Estimate of CTC and TCA Consumption (tons)

	2005		2010	
	ODS	ODP	ODS	ODP
CTC*	0	0	0	0
TCA	4,240	424	0	0

* Note: Does not include feedstock and process agent.

Table 11 Production Estimate of CFCs (tons)

	2005		2007		2010	
	ODS	ODP	ODS	ODP	ODS	ODP
CFC-11	10,400	10,400	4,130	4,130	0	0
CFC-12	7,600	7,600	4,130	4,130	0	0
CFC-113	688	550	0	0	0	0
CFC-114, 115/13	300	200	150	100	0	0
Total	18,988	18,750	8,410	8,360	0	0

Table 12 Production Estimate of Other Controlled Substances (tons)

	2005		2010	
	ODS	ODP	ODS	ODP
Halon1211	1,990	5,970	0	0
Halon1301	600	6,000	0	0
Sub-total	2,590	11,970	0	0
CTC*	0	0	0	0
TCA	992	99	0	0
Total	3,512	12,069	0	0

* Excluding the quantity of feedstock and processing agent.

IV. Incremental Cost for Phaseout

Using on the same methodology and cost effectiveness applied in the CP Update for calculating incremental cost for ODS phaseout, the incremental cost for future phaseout activities, such as ODS production and consumption phaseout, recycling and servicing and technical assistance, were recalculated.

Incremental cost of Methyl Bromide, aerosol essential users, ODS for process agent, CTC production closure, and HCFCs are not included in this report because of the uncertainties of alternative technologies, strategies and absence of guidelines so far. Thus incremental costs will be determined later and included in future update of the Action Plan.

By 2010, China needs total US\$ 698 million for ODS phaseout, including US\$ 331 million which has been approved by the ExCom as of August 2000. In addition to the US\$ 202.5 million which was also approved for implementing Halon Sector, CFC Production Sector, Solvent Sector and Tobacco Sector plans during 2001-2010, China needs funding of US\$ 164 million for other ODS phaseout activities during 2000 to 2010. Incremental cost for phasing out remaining ODS in China is shown in Table 16. The essential annual cash flow projection derived from the Action Plan is shown in Table 17.

Table 16-1 Incremental Cost and Phaseout Target by August 2000

(Based on Inventory Data of the MLF Secretariat for Approval up to the 31st ExCom Meeting)

Sector	Subsector	Investment Projects (US\$)	Non-Investment Projects (US\$)	Total Approved (US\$)	ODP to be Phased out (tons)	ODP Production Closure (tons)	ODP Phased out (tons)
AEROSOL	Contract Filler	6,430,041			16,667		16,667
	Filling Plant	547,675			1,224		
	Technical Assistance (TA)		75,000				
	Sub-Total Aerosol	6,977,716	75,000		17,891		16,667
	TOTAL AEROSOL SECTOR			7,052,716			
FOAM	Flexible	16,820,849			3,876		1,832
	Integral skin	1,914,095			180		20
	Multiple-subsectors	852,600			77		77
	Polystyrene/polyethylene	20,054,867			5,102		3,259
	Rigid	34,538,328			5,013		1,758
	Polyol Production	1,005,000					
	TA		880,019				
	Project Preparation (PRP)		1,030,000				
	Sub-Total Foam	75,185,739	1,910,019		14,248		6,946
	TOTAL FOAM SECTOR			77,095,758			
HALON	Extinguisher	1,241,000			2,310		5,080
	Halon Conversion	900,000			1,200		3,600
	Recovery/recycling	890,000			200		231
	Sectoral phaseout plan	32,700,000			19,021	23,535	32,874
	TA/Support	702,437			222		74
	Training		314,345				
	PRP		424,011				
	Sub-Total Halon	36,433,437	738,356		22,953	23,535	41,859
	TOTAL HALON SECTOR			37,171,793			

PRODUCTION	CFC closure	33,000,000				10,429	5,498	
	Halon closure	107,120				1,200	1,200	
	PRP		590,000					
	Sub-Total Production	33,107,120	590,000			11,629	6,698	
	TOTAL PRODUCTION SECTOR			33,697,120				
REFRIGERATION	Compressor	57,633,742			1,677		1,214	
	Domestic	74,350,178			10,296		5,156	
	MAC	11,110,291			40		795	
	MAC Compressor	3,173,039			1		759	
	MAC recovery/recycling	659,936			18		11	
	Recovery/recycling	539,400			30		10	
	TA		1,116,110					
	Training		111,732					
	PRP		769,245					
	Sub-Total Refrigeration	147,466,586	1,997,087		12,062		7,945	
		TOTAL REFRIGERATION SECTOR			149,463,673			
	SOLVENT	CFC-113	4,463,855			385		274
		Combined CFC-113 & TCA	3,703,150			277		
TCA		284,900			7			
Multiple Solvents		524,734			0			
Solvent Sector Plan		6,750,000						
TA			582,329					
PRP			277,500					
Sub-Total Solvent		15,726,639	859,829		669		274	
		TOTAL SOLVENT SECTOR			16,586,468			
PROCESS AGENT	PRP		100,000					
	TOTAL PROCESS AGENT		100,000	100,000				

FUMIGANT	Methyl bromide		588,300				
	TA		237,000				
	Sub-Total Fumigant		825,300				
	TOTAL FUMIGANT SECTOR			825,300			
OTHER	PA tobacco		76,499				
	PRP tobacco		250,000				
	TOTAL OTHER SECTOR		326,499	326,499			
SEVERAL	Country Programme/Survey		1,565,076				
	Ozone Unit Support		1,050,000				
	TA		50,000				
	Training		437,900				
	PRP/Supervision		5,203,732				
	TOTAL SEVERAL SECTOR		8,306,708	8,306,708			
	TOTAL ALL SECTORS	314,897,237	15,728,798		67,823	35,164	80,389
GRAND TOTAL FUNDING FOR CHINA				330,626,035			

Table 16-2 Incremental Cost for ODS phaseout in future

	Approved Sector Plan			Needs to be approved	
	Approved Incremental Cost (US\$ 1,000)	Consumption Phaseout Targets (tons ODP)	Production Phaseout Targets (tons ODP)	Incremental Cost (US\$ 1,000)	Consumption Phaseout Targets (tons ODP)*
Total	202,550	18,395	58,108	163,782	18,004
Solvent Sector Plan	45,250	3,565			
Tobacco	11,000	1,090			
Production	117,000		39,988		
Halon	29,300	13,740	18,120		
Foam				96,000	16,000
I&C Refrigeration				12,000	1,012
Domestic Refrigeration				6,000	992
TCA Production				5,635	
Servicing				29,258	
Others				14,889	
Medical Aerosol				Needs to be calculated	
Process Agent				Needs to be calculated	
HCFC				Needs to be calculated	
Methyl Bromide				Needs to be calculated	

* The data here refers to all consumption including eligible and ineligible consumption. The eligible consumption share is about 80% of total consumption.

Note: Incremental cost of Methyl Bromide, aerosol essential users, CTC production closure, process agent and HCFCs are not included because of the uncertainties of alternative technologies, strategies and absence of guidelines.

Table 17 Incremental cost of ODS phaseout in different sector of China (x10³ US\$, 1999 Price)

		Total	2000*	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Approved Sector Plan	Halon	29,300		4,500	3,700	5,900	1,200	1,800	11,400	400	300	100	0
	CFC Production	117,000		13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	0
	Solvent	45,250		6,955	6,330	5,755	5,555	5,680	5,055	5,480	1,480	1,480	1,480
	Tobacco	11,000		2,400	2,300	2,200	2,100	1,000	1,000				
	Total	202,550		26,855	25,330	26,855	21,855	21,480	30,455	18,880	14,780	14,580	1,480
Needs to be approved	Foam	96,000	24,000	20,000	20,000	16,000	16,000	0	0	0	0	0	0
	Industrial and commercial refrigeration	12,000		8,000	4,000	0	0	0	0	0	0	0	0
	Domestic Refrigeration	6,000	1,000	3,000	2,000	0	0	0	0	0	0	0	0
	Production of TCA	5,635	0	0	257	273	227	1,404	233	232	229	222	2,558
	Recycling	29,258	0	0	3,438	2,478	4,678	8,200	5,260	5,200	4	0	0
	TA	14,889	2,844	3,348	3,094	2,447	2,149	660	24	23	23	22	256
	Total	163,782	27,844	34,348	32,789	21,198	23,054	10,264	5,517	5,455	256	244	2,814

* Incremental cost and phaseout target for sector plans are included in Table 16.

V. Policy, Monitoring and Supervision

Chinese Government speeds up the legislation design and implementation since the approval of the CP Update in November of 1999. Nine pieces of policies have been issued from November 1999 to September 2000 (see Table 18). Of which, the Air Pollution Prevention and Treatment Law and Management for ODS Import and Export in China are the most important ones.

The *Air Pollution Prevention and Treatment Law in China* was approved on April 29 2000 by the National People's Congress. The main contents related to ODS is as following:

- (1) Government encourages the production & consumption of the ODS substitutes, gradually decreases ODS production and consumption until its complete phase out.
- (2) Within time limit prescribed by the Government, enterprises and organizations produce and/or import ODS must produce and/or import ODS follow the quota issued by related administration departments under the State Council.
- (3) Disobeying Article 2, Decree 45 of the law and producing & importing in excess of the quota prescribed by the relevant departments of the State Council within the time limit prescribed, enterprises and organizations will be fined from RMB 20,000R to RMB 200,000 by provinces, autonomous regions and municipalities, where the enterprises and organization are located. Enterprises and organizations which have seriously transgressed the law will have it quota canceled by the relevant departments of the State Council.

On December 4th 1999, SEPA with the Ministry of Foreign Economic and Trade Cooperation (MOFTEC) and the General Administration of Customs (GCA) jointly issued the *Management for ODS Import and Export in China*. This policy applies to the import and export activities of ODS and their products, equipment producing or consuming ODS. This policy covers that¹:

1. SEPA, MOFTEC and GCA perform overall supervision and administration on import and export of controlled ODS. They are responsible for promulgate List of ODS for Import and Export Control. A quota licensing system is implemented on import and export of the ODS in the List. A list of ODS to be totally banned for import and export is to be promulgated also.
2. Enterprises applying for import and export of listed ODS must submit written application to SEPA and MOFTEC three months prior to the import and export.
3. MOFTEC and SEPA are responsible for determining total quota for import and export of the listed ODS at national level and at enterprise level. They will review and approve the applications from enterprises and issue Approval of Import and Export of Controlled ODS.
4. Enterprises that hold the Approval of Import and Export of Controlled ODS should

¹ For details, see Annex 1 and Annex 2

- apply to authorities authorized by MOFTEC for Permit of Import and Export on a case-by-case basis.
5. Enterprises that export recycled ODS should get certificates of the recycled ODS from SEPA and apply directly to authorities authorized by MOFTEC for Permit of Export. The containers of recycled ODS should be labeled "Recycled ODS" issued uniformly by SEPA and with correct indication of name of the substances and contents.
 6. The customs will check and clear the import and export of listed ODS in accordance with the Permit of Import and Export issued by MOFTEC.

Table 18 The Policies Issued by Chinese Government since November 1999

	Year	Policy	Agencies issued the document
1	1999	<i>Circular on Time Limit for Stop Using CFC-12 MAC in New Auto Production</i>	SEPA, MMI
2	1999	<i>Circular on Management for ODS Import and Export</i>	SEPA, SETC, GCA
3	2000	<i>Circular on List of Controlled ODS Subject to Import and Export Control (First Batch)</i>	SEPA, SETC, GCA
4	2000	<i>Urgent notice on Prohibiting firms from importing the controlled ODS----- CTC</i>	SEPA, SETC, GCA
5	2000	<i>Circular on Stop Producing and Selling halon Products by Enterprises Implementing MLF Projects in 1998</i>	MPS
6	2000	<i>Circular on application for import& export quota of the controlled ODS in 2000</i>	SEPA
7	2000	<i>Regulations on Strengthening Management of ODS Import and Export</i>	SEPA, SETC, GCA
8	2000	<i>Circular on Labeling for recycling ODS</i>	SEPA
9	2000	<i>Air Pollution Prevention and Treatment Law in PRC</i>	NPC

VI. Key Parameters and Inputs for Calculating Incremental Cost

1. Production Sector

Annex Table 1: Key Parameters and Basic Information on Production Sector

Production Capacity of TCA (tons)	2800
TCA Production in 1999 (tons)	1225
Average Price of TCA in 1999 (\$/kg)	1.5
Compensation Profit Rate of all chemicals (%)	22.5
Remaining life time at end 1999 (year)	16
Unconstrained increase rate for current producers (%)	5

2. Foam Sector

Annex Table 2: Key Parameters and Basic Information for Foam Sector

1	Consumption in 1999 (tons ODP) (1=2+3)	23,143
2	Of which includes CFC-11	19,162
3	Of which includes CFC-12	3,981
4	ODP tons to be phase out by approved projects, Aug. 2000	14,248 ¹
5	Total Incremental costs approved, Aug. 2000 (US\$1,000)	75,186
6	Number of projects approved	143
7	Weighted average Cost effectiveness (\$/Kg ODP)	5.28
8	Completed phaseout by end of 1999 (ODP tons)	6,000
9	Remaining CFC Consumption to be phased out (ODP tons) [= \sum Annual phaseout _i ; Annual phaseout _i = Consumption _(i-1) - Consumption / (1+3%)]	16,000
10	Eligible consumption to be phased out (tons ODP)	13,500 ²
11	Phaseout cost effectiveness for the remaining consumption (\$/Kg ODP)	8

Note: The potential production of CFC-Foam was taken account into the phaseout. The increase rate is 3% per year.

1. This data is from ExCom database, which is different from SEPA statistic. SEPA is currently verifying this data.
2. The accurate eligible remaining consumption will be confirmed in the document of the foam sector plan.

3. Refrigeration Sector

Annex Table 3: Key Parameters and Basic Information for Refrigeration Sector

		I&C	DOM
1	Consumption in 1999 (tons ODP) (1=2+5)	7,556	6,300
2	Of which includes CFC-11 (2=3+4)	606	4,800
3	Of which Servicing	556	
4	Of which New production	50	4,800
5	Of which includes CFC-12 (5=6+7)	6,950	1,500
6	Of which Servicing	3,437	500
7	Of which New production	3,513	1,000
8	ODP tons to be phase out by approved projects, Aug. 2000	4,017 ¹	10,296
9	Total Incremental costs approved, Aug. 2000 (US\$1,000)	44,320	74,350
10	Number of projects	20	37
11	Weighted average Cost effectiveness(\$/kg/ODP)	10.33	8.48
12	Completed phaseout by end of 1999 (ODP tons)	1,466	5,488
13	Remaining CFC Consumption for new production to be phased out	1,012	992
14	Eligible Consumption (tons ODP)	875	850 ²
15	Phaseout cost effectiveness for the remaining consumption (\$/kg/ODP)	12.0	12.0

1. Including indirect phaseout target for this sub-sector.

2. Including some projects to be cancelled in 2000 and projects to be submitted for approval, as explained in a fax to the ExCom Secretariat. The accurate eligible remaining consumption will be confirmed in the document of the terminal umbrella project. Figure shown is an estimate.

VII. Action Plan for Sectors

1. Control Targets for CFC Production Sector

Annex Table 4: Control Targets for CFC Production Sector (unit: tons ODP)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agreement Control Targets between China And ExCom	40,000	36,200	32,900	30,000	25,300	18,750	13,500	9,600	7,700	3,200	0
Current Projected Control Targets											
CFC-11	18,153	16,700	16,400	15,000	13,100	10,400	7,700	4,130	3,800	300	0
CFC-12	18,415	16,600	14,100	13,100	10,900	7,600	5,600	4,130	3,800	2,800	0
CFC-113	3,300	2,700	2,200	1,700	1,100	550	0	0	0	0	0
CFC-114/115/13	130	200	200	200	200	200	200	100	100	100	0
Total	39,998	36,200	32,900	30,000	25,300	18,750	13,500	8,360	7,700	3,200	0

Note: Save for CFC production that may be agreed by the Parties to be essential for China after 2010.

2. ODS Control Targets for Solvent Sector

Current projected control targets for Solvent Sector are the same as the control targets in the Agreement between China and the ExCom.

Annex Table 5: ODS Control Targets for Solvent Sector (unit: tons ODP)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
CFC-113	3300	2700	2200	1700	1100	550	0	0	0	0	²
TCA	621	613	605	580	502	424	339	254	169	85	0 ^{1,3}
CTC	110	110	110	55	0	0	0	0	0	0	0 ^{1,2}
Total	4031	3423	2915	2335	1602	974	339	254	169	85	0

¹ save for consumption of these ODS for feedstock and process agent uses.

² save for any CFC-113 consumption or CTC solvent consumption that may be agreed by the Parties to be essential for China after 2010.

³ save for any TCA solvent consumption that may be agreed by the Parties to be essential for China after 2015.

3. CFC-11 Consumption Control Target in Tobacco Sector

Current projected control targets for Tobacco Sector are the same as the control targets in the Agreement between China and the ExCom, but it is different in the Country Programme Update.

Annex Table 6: CFC-11 Consumption Control Target in Tobacco Sector(unit: tons ODP)

	2001	2002	2003	2004	2005	2006	2007
CFC-11 Consumption Control Targets	1,000	880	700	500	300	150	0

4. Production and Consumption Control Targets for Halon Sector (ODP)

Annex Table 7: Production and Consumption Control Targets for Halon Sector (unit: tons ODP)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Halon1211													
Production Control Targets	23,880	17,910	11,940	9,951	7,962	5,970	5,970	5,970	-	-	-	-	
Consumption Control Targets	21,480	16,110	10,740	9,351	7,962	5,670	5,670	5,670	-	-	-	-	
Halon1301													
Production Control Targets	6,180	6,180	6,180	6,000	6,000	6,000	6,000	6,000	1,500	1,500	1,500	1,500	-
Consumption Control Targets	3,000	3,000	3,000	3,000	1,500	1,500	1,500	1,500	1,000	1,000	1,000	1,000	-

Annex 1 - Circular on Issuing the Management Provision on the Import/Export of ODS

(SEPA [1999] No. 278)

To: Provincial, autonomous regional and municipal Environmental Protection Bureaus, Foreign Trade & Economic Cooperation Bureaus, Regional Customs Directly under General Customs Administration

Issued by:

State Environmental Protection Administration
Ministry of Foreign Trade and Economic Cooperation
General Customs Administration

3 December, 1999

Article 1

To implement the Montreal Protocol (London Amendment) and strengthen the management of import/export of ODS, as per Update of China's Country Programme For the ODS Phaseout approved by the State Council, herein enact management provision.

Article 2

This provision applies to all business activities related to import and /or export of ODS between Parties to the Montreal Protocol within the territory of the People's Republic of China. ODS referred to this provision includes ozone depleting substances themselves, as well as the facilities and products which could be used to produce and use ODS.

Article 3

State Environmental Protection Administration (SEPA), Ministry of Foreign Trade and Economic Cooperation (MOFTEC) and General Customs Administration, which exercise the unifying supervision and management of ODS import/export, are responsible for the following responsibilities:

1. Identify and promulgate the "**Category List of ODS Controlled for Import /Export**" and exercise the management of import/export quota licenses on ODS listed in this Category.
2. Identify and issue the "**List of ODS Forbidden for Import / Export**"

Article 4

Any enterprise that intends to import or export ODS listed in the **Category List of ODS Controlled for Import/Export**, as per the relevant national provisions, should submit written application form for ODS import /export quota to SEPA and MOFTEC three months before conducting business, and provide with related information and certificates on import/export, sale and use of specific ODS during this year of 1995--1997 and the year preceding year of application.

Article 5

MOFTEC and SEPA are responsible for determining the annual total amount of ODS to be exported and /or imported, listed in the **Category List of ODS Controlled for Import/Export** and the quota to be allocated to the applicant enterprises. They accept application from enterprises on import/ export quota of ODS listed in this Category; issue "Approval Form on Import/Export of Controlled ODS".

Article 6

Any enterprise which holds the "Approval on Import/Export of Controlled ODS " issued by SEPA/MOFTEC should acquire an "Import/Export License " from the authority to which MOFTEC has delegated its responsibilities.

Article 7

Any enterprise which exports recycled ODS should hold a certificate of recycling and directly apply to the authority designated by MOFTEC for import/export licenses.

The container, which is used to contain recycled ODS for export, should include a label "RECYCLED ODS" made and issued by SEPA, on which the name and content of recycled substance should be indicated accurately.

Article 8

Customs clearance of controlled ODS listed the Category should be done strictly according to the Import /Export License issued by MOFTC.

Article 9

Any enterprise which is engaged in business activities related to ODS import/export should abide by the provision identified in the Montreal Protocol and is forbidden to transfer and sell or purchase the quota and license for import/export of ODS.

Article 10

Governmental departments mentioned above separately exercise to handle the violations to this management provision, as per the related provisions of laws and regulations.

Article 11

SEPA, MOFTEC and General Customs Administration have the power to supervise and inspect import/export business activities.

Article 12

State Environmental Protection Administration, Ministry of Foreign Trade and Economic Cooperation and General Customs Administration may establish a specific operation office that will be responsible for the implementation of this management provision and promulgate more detailed provision on how to implement this management provision. This operation office will be located in SEPA office.

Article 13

SEPA, MOFTEC and General Customs Administration have authorities to explain the applications of this provision based on authorities.

Article 14

This provision comes into effect on the date of issuance.

Annex 2 List of Controlled ODS Subject to Import and Export Control (First Batch) (2000)

Issued by State Environmental Protection Administration, Ministry of Foreign Trade and Economic Cooperation and General Customs Administration, on January 19, 2000, to provincial authorities, General Customs Administration Guangdong Branch, and local customs

Main contents:

- (1) The first batch of controlled ODS subject to import and export control include: CTC (ban for import), CFC-11, 12, 113, 114, 115, 12, Halon-1211, 1301.
- (2) Any enterprises importing and exporting Listed ODS must file their signed contracts for import and export of Listed ODS at the Management Office for Control of ODS Import and Export, and they are required to complete their implementation of the contracts by March 31, 2000.

From April 1, 2000 on, import and export of CTC are prohibited. Quota licensing system will be applied on import and export of other listed ODS.