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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Forty-ninth Meeting
Montreal, 10-14 July 2006

PROJECT PROPOSALS: SYRIAN ARAB REPUBLIC

This document consists of the comments and recommendations of the Fund Secretariat on the following project proposals:

Fumigant

- Methyl bromide national phase-out plan (soil fumigation) UNIDO

Phase-out

- National CFC phase-out plan UNIDO

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**PROJECT EVALUATION SHEET – NON-MULTI-YEAR PROJECTS
SYRIAN ARAB REPUBLIC**

PROJECT TITLES **BILATERAL/IMPLEMENTING AGENCY**

(a)	Methyl bromide national phase-out plan (soil fumigation)	UNIDO
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NATIONAL CO-ORDINATING AGENCY	Ministry of Environment
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LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT

A: ARTICLE-7 DATA (ODP TONNES, 2004, AS OF MAY 2006)

Annex E, methyl bromide	113.58	
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B: COUNTRY PROGRAMME SECTORAL DATA (ODP TONNES, 2005, AS OF MAY 2006)

ODS Name	Sub-sector/quantity	Sub-sector/quantity	Sub-sector/quantity	Sub-sector/quantity
Methyl bromide	QPS: 9.00	Non-QPS: 91.40		

CFC consumption remaining eligible for funding (ODP tonnes)	
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CURRENT YEAR BUSINESS PLAN ALLOCATIONS		Funding US \$	Phase-out ODP tonnes
	(a)	108,000	2.9

PROJECT TITLE:	(a)
ODS use at enterprise (ODP tonnes):	48.0
ODS to be phased out (ODP tonnes):	48.0
ODS to be phased in (ODP tonnes):	
Project duration (months):	48
Initial amount requested (US \$):	410,371
Final project cost:	
Incremental Capital Cost (US \$)	373,065
Contingency (10%) (US \$)	37,306
Incremental Operating Cost (US \$)	
Total Project Cost (US \$)	410,371
Local ownership (%):	100
Export component (%):	n/a
Requested grant (US \$):	240,000
Cost-effectiveness (US \$/kg):	n/a
Implementing agency support cost (US \$):	21,600
Total cost of project to Multilateral Fund (US \$):	261,600
Status of counterpart funding (Y/N):	Y
Project monitoring milestones included (Y/N):	Y

SECRETARIAT'S RECOMMENDATION	For individual consideration
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PROJECT DESCRIPTION

1. On behalf of the Government of the Syrian Arab Republic (Syria), UNIDO has submitted a national methyl bromide (MB) phase-out plan (soil fumigation) at a total cost of US \$410,371 plus agency support costs of US \$30,778 for UNIDO for consideration by the Executive Committee at its 49th Meeting. Implementation of the project will result in the complete phase-out of MB used as a soil fumigant by the end of 2009.

Background

2. With regard to MB phase-out in Syria, the Executive Committee has approved:
- (a) A demonstration project on alternatives to the use of MB in horticulture and commodities fumigation at a total cost of US \$509,850 plus agency support costs for UNIDO (24th Meeting); and
 - (b) In principle, US \$1,084,139 for UNIDO as the total funds available to Syria to achieve the complete phase-out of MB used in grain fumigation (34th Meeting). Implementation of this project will result in the phase-out of 105 ODP tonnes of MB, with a remaining MB consumption eligible for funding of 8.0 ODP tonnes used as a soil fumigant (decision 34/57). The total funding for the project has been approved by the Executive Committee in three tranches (at the 34th, 41st and 47th Meetings).
3. The Executive Committee also approved a revision to its agreement with the Government of the Syria, extending the phase-out schedule to 2008 (decision 47/33).

Project proposal

4. The project proposal is to phase out 43 ODP tonnes of MB used as a soil fumigant in the following protected cultivated crops: tomatoes (77 per cent of the total fumigated area), other horticulture crops (16 per cent), and cut flowers (7 per cent). Taking into consideration that only 8.0 ODP tonnes of MB are eligible for funding, the project has been prepared more as a technical assistance programme, including training to farmers, rather than an investment phase-out project.

5. The proposed technical assistance programme is based on a “model-farm” format designed to train, equip, and monitor farmers for the effective use of various alternative technologies (alternative fumigants, solarization in combination with low-dose chemicals, grafting, biological control, bio-fumigation, substrate and soilless cultivation). A proposed number of 84 model farms (21 model farms per year) would be organized to reach some 2,000 farmers who are currently using MB, followed by an additional 2,000 farmers who are potential users of MB, followed by an additional 19,000 farmers who are not using MB. The training programme will be organized in collaboration with the Ozone Unit and the General Commission for Scientific Agricultural Research, and with the assistance of UNIDO. At the end of the project, the use of MB in soil fumigation will have been completely phased out.

6. The total cost of the project is US \$410,371 with the following breakdown: training (US \$289,427), equipment and farm tools (US \$83,638) and contingency costs (US \$37,306).

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

7. The Secretariat noted that the Government of Syria has committed to achieving the complete phase-out of all controlled uses of MB by 2009. The Secretariat also noted that the Government will phase-out about 40 ODP tonnes of MB used as a soil fumigant through resources outside the Multilateral Fund.

MB consumption

8. In 2004, the Government of Syria reported under Article 7 of the Montreal Protocol, MB consumption of 113.6 ODP tonnes. As reported in the progress report on the implementation of the country programme (submitted to the Fund Secretariat), MB consumption in 2005 was 91.4 ODP tonnes. The MB consumption baseline is 188.6 ODP tonnes.

Selection of alternatives and costs

9. The Secretariat pointed out that the large number of alternative technologies to be demonstrated (four different alternative chemicals, biological control, biofumigation, soilless and grafting), and the large number of model farms proposed (84 in total) cannot be justified for the following reasons:

- (a) The remaining MB consumption eligible for funding is only 8 ODP tonnes;
- (b) More than 84 per cent of the protected surface area is located in one region (Tartous); and more than 77 per cent of the total production is tomatoes;
- (c) Due to its high cost, MB is applied only by very few farmers over a surface area of 320 ha (or 8.5 per cent of the total protected horticulture); and
- (d) The cost-effectiveness and the long-term sustainability of several of the alternative technologies being proposed are in doubt. For example, as reported in the proposal, some technologies require a longer period for adaptation, some alternative chemicals have not yet been registered, and other technologies require high capital investment.

10. Based on the above observations, the Secretariat suggested that the project should focus mainly on providing technical assistance in soil solarization in combination with low-dosage alternative chemicals to a relatively small number of farmers in the Tartous region. These alternatives are being used in all investment projects for the phase-out of MB in tomato crops, including Syria. Furthermore, as reported in the project, its application is very similar to that of MB, and it is the preferred technology used in the European Union.

11. UNIDO responded to the Secretariat's observations by pointing out that the proposed alternatives have already been tested as effective and suitable for the conditions prevailing in Syria. The project aims to introduce farmers to these technologies rather than to demonstrate their effectiveness. Even though only 10 per cent of the total protected area is treated with MB, the tomato monoculture is practiced by the majority of farmers, who must compete with farmers

in Lebanon and Turkey, where there are large-scale programmes to implement MB alternatives in the horticulture sector. In this context, reliance on a single alternative for production limits access to the different market demands for horticulture products. Finally, despite the longer adaptation time periods and training involved, the necessary raw materials and goods for the proposed additional alternatives are available locally, whereas the alternative chemical fumigants that are currently used must be imported.

Cost-related issues

12. The Secretariat and UNIDO discussed specific issues related to the cost of the project, taking into consideration that of the total 48 ODP tonnes of MB currently used, only 8 ODP tonnes are eligible for funding through the Multilateral Fund. Subsequently, UNIDO adjusted the cost of the project to US \$240,000.

Agreement

13. The Government of Syria submitted a draft revised agreement between the Government and the Executive Committee with the conditions for the complete phase-out of MB in Syria, as annexed to this document.

RECOMMENDATIONS

14. The project is submitted for individual consideration. The Executive Committee might wish to consider:

- (a) Approving the national MB phase-out plan (soil fumigation) for Syria, at the amount of US \$240,000 plus agency support costs of US \$21,600 for UNIDO; and
- (b) Approving the draft revised agreement between the Government of Syria and the Executive Committee for the complete phase-out of MB as contained in Annex I to this document.

**PROJECT COVER SHEET – MULTI-YEAR PROJECTS
SYRIA ARAB REPUBLIC**

PROJECT TITLE**IMPLEMENTING AGENCY**

National CFC phase-out plan	UNIDO
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NATIONAL CO-ORDINATING AGENCY	National Ozone Unit, Ministry of Local Administration and Environment
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LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT**A: ARTICLE-7 DATA (ODP TONNES, 2005, AS OF MAY 2006)**

Annex A Group I, CFC	869.66	Annex C Group I, HCFC	60.2
Annex A Group II, Halon	79	Annex E	100.4

B: COUNTRY PROGRAMME SECTORAL DATA (ODP TONNES, 2005, AS OF MAY 2006)

ODS	Foam	Refrigeration manufacturing	Refrigeration servicing	Solvent	Total
CFC-11	13.00	160.60	5.50	0.00	179.10
CFC-12	0.00	259.40	370.00	0.00	629.40
CFC-113	0.00	0.00	0.00	28.48	28.48
CFC-115	0.00	0.00	32.676	0.00	32.68
Total	13.00	420.00	408.18	28.48	869.66

CFC Consumption remaining eligible for funding (ODP tonnes)	137.10
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CURRENT YEAR BUSINESS PLAN: Funding level: US\$ 430,000 Total phase-out 68.6 ODP tonnes

PROJECT DATA		2005	2006	2007	2008	2009	2010	Total
CFCs (ODP tonnes)	Montreal Protocol limits	1,112.32	1,112.32	333.7	333.7	333.7	0	-
	Annual consumption limit	869.7*	869.7	328.7	207.2	70.0	0	-
	Annual phase-out from ongoing projects	-	441	0	0	0	0	441
	Annual phase-out newly addressed	-	100.0	121.5	137.2	70.0	0.0	428.7
	Annual funded phase-out	-	34.3	34.3	34.3	34.3	0.0	137.1
	Annual unfunded phase-out	-	65.7	87.2	102.9	035.7	0.0	291.6
TOTAL ODS CONSUMPTION TO BE PHASED OUT			541.0	121.5	207.2	0.0	0.0	869.7
Total ODS consumption to be phased-in		0	0	0	0	0	0	0
Project cost (US \$)								
Funding for UNIDO			430,000	0	170,000	154,050	0	754,050
Total project funding			430,000	0	170,000	154,050	0	754,050
Support costs (US \$)							0	
Funding for UNIDO			32,250	0	12,750	11,554	0	56,554
Total support costs			32,250	0	12,750	11,554	0	56,554
TOTAL COST TO MULTILATERAL FUND (US \$)			462,250	0	182,750	165,604	0	810,604
PROJECT COST EFFECTIVENESS (US\$/KG ODP)					5.91			

*Estimate

FUNDING REQUEST:

Approval in principle of total ODS phase-out, total project funding and total costs, and approval of funding for the first tranche (2006) as indicated above.

Secretariat's Recommendations	Blanket approval at the costs indicated above
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PROJECT DESCRIPTION

15. On behalf of the Government of Syria, UNIDO has submitted a request for approval in principle of a National CFC Phase-out Plan (NPP), amounting to US \$880,000 plus agency support cost of US \$66,000. The request is accompanied by a draft agreement and a request for approval of the first tranche amounting to US \$505,000 plus agency support cost of US \$37,875.

Background

16. The implementation of the plan will lead to the phase-out of the remaining consumption of Annex A, Group I substances (CFCs). The major part of the CFC consumption exists in the refrigeration servicing sector, though the consumption was reduced through implementation of the previously approved refrigeration management plan. With a series of activities proposed in the NPP, the use of CFCs in the refrigeration servicing sector will be gradually reduced and Syria will achieve the 85% reduction target in 2007 and zero consumption by 2010.

17. The breakdown of remaining CFC consumption in Syria in the year 2004 is presented in the following table:

ODS	Foam	Refrigeration Manufacturing	Refrigeration Servicing	Solvent	Aerosol	Total
CFC-11	72.05	150	5.5	0	13.00	240.55
CFC-12	0	270.47	375	0	8.00	653.47
CFC-113	0	0	0	40.2	0	40.20
CFC-115	0	1.20	2.28	0	0	3.48
Total	72.05	421.67	382.78	40.2	21.00	937.70

18. The programme to achieve phase-out in the halon sector is under implementation with assistance from the Multilateral Fund. There is no consumption of CTC and TCA (Annex B, Group II and III). The national methyl bromide phase-out plan (soil fumigation) is also submitted for consideration at the 49th meeting of the Executive Committee addressing the remaining consumption of methyl bromide in the country. The historical record of CFC consumption in Syria is presented in the following table.

Year		1997	1998	1999	2000	2001	2002	2003	2004	Base line
Annex Group I	A, CFCs	2,031.70	1,245.60	1,280.70	1,174.66	1,392.16	1,201.58	1,124.58	928.27	2,224.65
Annex Group II	A, Halon	423.00	409.50	412.60	405.50	400.80	389.00	366.20	215.6	416.87
Annex Group II	B, CTC	0	0	0	0	0	0	0	0	
Annex Group III	B, TCA	0	0	0	0	0	0	0	0	0
Annex Group I	E, Methyl bromide	240.00	72.00	89.67	112.50	165.30	153.00	129.00	133	188.55

19. Syria's baseline average consumption of Annex A, Group I substances for the period from 1995 to 1997 amounts to 2,224.65 ODS tonnes. The country has always been in compliance with the Montreal Protocol's control measures in respect of CFC consumption. In accordance with decision 35/57, taken at the 35th Meeting of the Executive Committee, the Government of Syria accepted 845.2 ODP tonnes as the starting point to determine the remaining CFC consumption eligible for funding. Since then, a number of phase-out projects have been approved for Syria. Currently, the maximum CFC consumption eligible for funding for Syria stands at 137.1 ODP tonnes.

20. In 2004, CFC consumption remained in the aerosol, foam and refrigeration servicing and manufacturing sectors. In addition, there was CFC-113 consumption in the solvent sector. Due to the completion of a number of investment projects, CFC consumption in the aerosol and foam sectors was phased out in 2005. CFC consumption in the refrigeration-manufacturing sector represented 422 ODP tonnes in 2004. On-going projects with the impact of 308 ODP tonnes are expected to be completed by 2006 in the refrigeration manufacturing sector. Thereby the majority of the CFC consumption in this sector will be phased-out this year. The remaining CFC consumption in the sector will be phased out through implementation of the proposed technical assistance component in the present NPP.

Refrigeration servicing sub-sector

21. The refrigeration servicing sub-sector remains the most significant CFC-consuming sub-sector. The survey and analysis performed for the NPP preparation concluded that approximately 302.5 tonnes of CFCs were used in servicing domestic and commercial refrigeration equipment and mobile air-conditioning (MAC) systems, including industrial process cooling and large-scale chillers, with the following breakdown:

Sub-sector	Total Consumption 2004
Commercial refrigeration	22.5
Domestic refrigeration	180.0
Industrial refrigeration	40.0
MAC	78.0
Total Refrigeration Servicing Sector	302.5

22. In the domestic refrigeration sub-sector, it is estimated that in 2004 there were around 4 million CFC-based domestic refrigerators and freezers in operation. It is assumed that about 15% of the total number of appliances would undergo an annual repair requiring a charge of 0.3 kg of refrigerant per repair. The demand for servicing is calculated to be 180 ODP tonnes of CFC-12 in this sub-sector.

23. In the commercial refrigeration servicing sub-sector, CFCs are used as refrigerants in display cabinets, food storage equipment, refrigerated transport (containers) and commercial cold storage facilities. Commercial refrigeration is crucial to Syria, since it is primarily used for food storage and transportation. It is estimated that there is a total of 300,000 commercial refrigeration units in operation. About 10 percent of the total number of units is being serviced each year with

an average charge of 0.75 kg of CFC-12 per service resulting in the total consumption of 22.5 ODP tonnes annually.

24. In industrial refrigeration, including chillers, large refrigeration units are used for cooling in industrial processes and for air-conditioning in larger buildings, such as hospitals, hotels, commercial centres and public buildings. Most units are between 25 and 50 years old and a substantial portion of them is expected to be working beyond 2010. Maintenance is generally poor and, due to frequent and significant leaks, these units are a major source of CFC demand for servicing in this sub-sector. The survey identified around 200 CFC-based chillers in operation in Syria, with overall annual consumption of 40 tonnes.

25. In the mobile air-conditioning (MAC) sector, there were 600,000 registered vehicles in Syria in 2004. It is estimated that about a half of the total number is equipped with CFC-12 - based air-conditioning systems. Based on the average charge for a passenger car of 1.3 kg, the annual CFC-12 consumption is calculated to be 78 ODP tonnes.

26. The survey has identified 18 small-scale commercial refrigeration manufacturers (SME) currently in operation throughout Syria. These companies are involved both in manufacturing a range of equipment, including water coolers, freezers, display cases, as well as in maintenance and servicing operations. Most of the SMEs identified in the survey are equipped with low-end technology. Their access to modern technology is limited, and the total CFC consumption is estimated to be 114 ODP tonnes.

Price of refrigerants

27. The data on current indicative prices of CFC refrigerants has been collected in the course of the survey. Prices for CFCs and alternatives in Syria are as follows: CFC-11 US \$5.5/kg, CFC-12 US 5.15/kg and HFC-134a US \$8.09/kg.

Refrigeration servicing workshops

28. There are about 1,400 refrigeration servicing workshops in Syria, and a total of 450 workshops were identified in six larger cities. It is estimated that in total about 7,000 service technicians are in the refrigeration servicing industry, and about 50 per cent of these are characterized as skilled technicians and the rest as semi-skilled ones. A typical servicing workshop is small, usually with 1 to 3 technicians, with at least one having some formal training. Some industrial refrigeration manufacturing companies are running large workshops with staff of 10-20 persons that service various types of refrigeration equipment. Many operators have little technical training and learned their skills through practical experience. Generally, current maintenance practice for domestic and commercial refrigeration equipment is poor, resulting in the release of significant quantities of CFCs directly into the atmosphere. As part of the planned training activities under the NPP, at least 2,000 technicians will require appropriate training in good practices in refrigeration.

Technical institutions and training centres

29. A survey was conducted covering technical colleges, vocational secondary schools and training centres, both public and private, aiming to identify those that could include courses in refrigeration and air conditioning in their syllabus. Six technical institutes in major cities in

Syria were identified as having the capability to participate in the training activities for refrigeration technicians under the NPP. These institutes currently carry out courses in refrigeration and air-conditioning, and have laboratory facilities and teaching staff. All of them are interested in participating in the supplementary national training programme for the NPP. However, at present there is a lack of sufficient equipment at many of the institutes, so limiting their capability to provide proper basic practical training.

Ongoing activities under the refrigerant management plan (RMP)

30. Several technical assistance projects and project components under the refrigerant management plan (RMP) were approved to assist Syria towards phasing out CFCs in the refrigeration servicing sector, with the total funding amounting to US \$1,071,546. Activities associated with training of customs officers, training of refrigeration technicians and a recovery/recycling component are still on-going. The NPP reports that through the RMP activities 120 ODP tonnes were phased out.

31. The implementation of the RMP resulted in the development and introduction of legislative measures, including the establishment of a licensing system. Under the training component, seven training centres have been established, 20 professional trainers were certified, 42 training workshops were organized with participation of over 1,000 refrigeration service technicians. The implementation of the training programme for customs officers resulted in the training of 64 officers. The refrigerant recovery and recycling scheme has been established in 6 major cities in Syria under the refrigerant recovery and recycling component. Recovery/recycling and servicing equipment has been delivered to 370 refrigeration servicing workshops.

General strategy for the reduction of CFC consumption

32. The objective of the Plan is to supplement ongoing activities to achieve the forthcoming 2007 control targets and full and final phase-out of all CFCs in Syria by 2010. In this respect, the refrigeration servicing sub-sector is recognized as the most important one that has to be addressed as a matter of priority. The phase-out in the refrigeration servicing sector will be achieved through the enhancement of ongoing activities under the RMP and introduction of enforceable regulation by:

- (a) Adoption of refrigerant management legislation;
- (b) Improvements in certification and licensing systems for service technicians and refrigeration servicing companies;
- (c) Introduction of mandatory requirements for good refrigeration servicing practices;
- (d) Provision of servicing tools and equipment to selected servicing workshops;
- (e) Upgrading of the recovery and recycling scheme through provision of additional recovery/recycling/reclamation equipment, as well as necessary instruments to monitor the quality of the recovered and reclaimed refrigerant;
- (f) Establishing additional training centres and providing sufficient equipment for training and certification needs;

- (g) Additional training of customs officers.

33. The phase-out of residual consumption by any remaining small users in foam, aerosol and refrigeration manufacturing sectors as well as CFC-113 users in the solvent sector will be achieved under the NPP as part of the proposed technical assistance programme.

34. The CFC phase-out in the chiller sector in Syria will be achieved with support through the regional chiller demonstration project approved at the 47th Executive Committee meeting for UNIDO.

Project management

35. Overall management of the plan will be carried out by the Government of Syria with the assistance of UNIDO. The Ozone Unit will be responsible for monitoring the implementation of the phase-out plan, for tracking the promulgation and enforcement of policy and legislation, and will assist UNIDO with the preparation of annual implementation plans and progress reports to the Executive Committee. The implementation of the phase-out plan will need to be closely aligned and coordinated with the various policy, regulatory, fiscal, awareness-raising and capacity-building measures taken by the Government of Syria, to ensure that implementation is consistent with the Government's priorities.

Incremental costs

36. The incremental costs comprise the cost for upgrading the national refrigerant recovery and recycling scheme, supplementary training programme, technical assistance component and project management fees and agency support costs. The total requested grant amounts to US \$946,000 including agency support costs of US \$66,000, to be disbursed in three funding tranches in the years 2006, 2007 and 2008 to make the most effective use of allocated funds.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

37. The Secretariat reviewed the proposal in light of the 2005 CFC consumption data submitted to the Secretariat as part of Syria's country programme implementation report, and taking into account records on implemented and on-going projects in Syria available to the Secretariat. Several issues were identified associated with the presentation of information on CFC-12 and CFC-11 consumption in aerosol, foam, refrigeration manufacturing and refrigeration servicing sectors.

38. The discrepancies in reporting CFC consumption data in the NPP for different applications in the refrigeration servicing sub-sector have also been identified. The Secretariat requested clarifications on the operation of the ODS import and licensing system and verification of the reported data through checking the import licences issued to major importers.

39. The proposed budget envisages acquiring 300 refrigerant recovery machines for domestic, commercial and industrial servicing workshops, 30 recovery and recycling machines for MAC servicing shops, and equipment for four reclamation centres. The NPP stipulates that

the operation of the recovery and recycling scheme will be sustainable once it operates on a commercial basis. Under the RMP approved for Syria, 40 recovery and recycling machines and 330 recovery units have been delivered to the country. The NPP does not provide sufficient information on how effectively this equipment was used in the country and whether it was a commercially viable operation. In this respect the Secretariat referred to Decision 41/100 of the Executive Committee which provides guidance to Article 5 countries and implementing agencies in developing appropriate programmes in the refrigeration servicing sector. Clarifications were sought on measures to be taken to implement the Executive Committee's guidance to make recovery and recycling operations sustainable in Syria.

40. The Secretariat reviewed the draft agreement with the proposed reduction schedule and the 2005-2006 annual implementation programme. The Secretariat noted that neither the country programme report nor the NPP project proposal make any reference to consumption for MDI manufacturing and proposed to delete the reference to MDI in the draft agreement. The Secretariat also proposed several other modifications to the agreement.

41. The Secretariat requested written confirmation of Syria's endorsement of the National CFC phase-out plan and to the modifications being proposed in the project cover sheet.

42. The Secretariat communicated all the above comments to UNIDO. UNIDO modified the relevant sections of the NPP and the Agreement, and provided necessary clarifications, and UNIDO submitted the revised version of the national ODS phase-out plan to the Secretariat accordingly.

43. The Secretariat noted that the sector phase-out plan in the refrigeration manufacturing sector in Syria had been approved at the 38th Meeting for UNDP and UNIDO. The Government of Syria committed to phase out 312 ODP tonnes through the implementation of the sector plan. The Government agreed that no additional resources would be requested from the Multilateral Fund or bilateral agencies for activities in the refrigeration manufacturing sector. The Executive Committee agreed to provide flexibility in using the agreed funds. Therefore, the Secretariat advised that activities associated with the refrigeration manufacturing sector included in the NPP are not eligible for funding. Any remaining consumption in the sector should be addressed using the flexibility provided to the Government by the Executive Committee.

44. The total incremental costs have been agreed between the Secretariat and UNIDO amounting to US \$754,050 plus agency support cost of US \$56,554 with the following breakdown:

Budget item	US \$
Technical assistance in remaining industry sectors	685,500
Refrigeration servicing sector component: (training, servicing equipment)	
Upgrading refrigerant recovery and recycling scheme	
Project monitoring and management	68,550
Total project cost	754,050
Agency support cost	56,554
Total agreed grant	810,604

32. Consistent with other national phase-out plans approved by the Executive Committee so far, the cost of the investment component has been calculated on the basis of the residual eligible

CFC consumption in Syria and the cost-effectiveness of US \$5.00/kg. The cost of the project monitoring and management component has been determined as 10% of the investment component. The agency support cost is 7.5% of the total project cost.

RECOMMENDATION

34. The Executive Committee may wish to:

- (a) Approve, in principle, the national CFC phase-out plan for Syria at the amount of US \$754,050 plus agency support costs of US \$56,554 for UNIDO;
- (b) Approve the draft agreement between the Government of Syria and the Executive Committee for the implementation of the national CFC phase-out plan as contained in Annex II to this document; and
- (c) Approve the 2006-2007 annual implementation programme and associated first tranche of the plan at the funding levels shown in the table below:

Project Title	Project Funding (US\$)	Support Cost (US\$)	Implementing Agency
National CFC phase-out plan (first tranche)	430,000	32,250	UNIDO

Annex I

AGREED CONDITIONS FOR THE PHASE-OUT OF METHYL BROMIDE IN THE SYRIAN ARAB REPUBLIC (DRAFT)

1. The Executive Committee:
 - (a) At its 34th Meeting, approved US \$1,084,139 as the total funds available to achieve the complete phase-out of methyl bromide used in grain storage(105 ODP tonnes), on the understanding that the remaining consumption of controlled uses of methyl bromide eligible for funding would be 8 ODP tonnes; and
 - (b) At its 49th meeting, approved an additional US \$240,000 as the total funds available to achieve the complete phase-out of methyl bromide used in soil fumigation (48 ODP tonnes, of which 40 ODP tonnes will be phased out with financial assistance from outside the Multilateral Fund).
2. As reported to the Ozone Secretariat, and consistent with information in the project document presented to the Executive Committee, the methyl bromide baseline for the Syrian Arab Republic has been established at 188.55 ODP tonnes. The Syrian Arab Republic has also reported MB consumption of 113.58 ODP tonnes for 2004, excluding quarantine and pre-shipment applications. Accordingly, the Syrian Arab Republic is in compliance with the 2005 Montreal Protocol 20 per cent reduction.
3. Reductions in accordance with the terms of the above-mentioned projects and other commitments presented in the project documents will ensure that the Syrian Arab Republic meets the reduction schedule presented below. In this regard, the Syrian Arab Republic will reduce the national consumption of controlled uses of methyl bromide to no more than the following levels of consumption in the years listed below:

Year	Maximum level of methyl bromide consumption (ODP tonnes)		
	Grain fumigation	Soil fumigation	Maximum level
2001	105.0		105.0
2002	100.8		100.8
2003	99.0		99.0
2004	65.7		65.7
2005	43.4		43.4
2006	18.0	48.0*	66.0
2007	6.0	39.0	45.0
2008	0.0	27.0	27.0
2009		0.0	0.0

* Including 40 ODP tonnes to be phased out by the Government with financial assistance from outside the Multilateral Fund.

4. Upon successful completion of the projects, the Syrian Arab Republic commits to permanently sustaining the consumption levels indicated in the table above through import restrictions and other policies it may deem necessary. UNIDO shall report to the Executive Committee on the progress achieved in meeting the reductions required by the projects.

5. Disbursement of the funding approved for UNIDO will be in accordance with the following schedule, and with the understanding that a subsequent year's funding will not be disbursed until the Executive Committee has favourably reviewed the prior year's progress report:

Year	Level of funding (US \$)		
	Grain fumigation	Soil fumigation	Total
2001	300,000		300,000
2003	351,725		351,725
2005	432,414		432,414
2006		240,000*	240,000

(*) UNIDO will disburse US \$100,000 in 2006 and US \$140,000 in 2007, on the understanding that the Executive Committee has favorably reviewed the prior year's progress report.

6. The Government of Syria will have flexibility in implementing the project components it considers important to meet its phase-out commitments. UNIDO agrees to manage the funding for the projects in a manner designed to ensure that the agreed specific annual reductions are met.

7. These agreed conditions between the Government of the Syrian Arab Republic and the Executive Committee have taken into account the already approved methyl bromide phase-out project in grain storage and, therefore, supersede the agreements approved at the 34th Meeting of the Executive Committee.

Annex II**DRAFT AGREEMENT BETWEEN SYRIAN ARAB REPUBLIC AND THE
EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR
THE PHASE-OUT OF OZONE DEPLETING SUBSTANCES**

1. This Agreement represents the understanding of Syrian Arab Republic (the “Country”) and the Executive Committee with respect to the complete phase-out of controlled use of the ozone depleting substances set out in Appendix 1-A (“The Substances”) before 2010 in compliance with Protocol schedules.
2. The Country agrees to phase out the controlled use of the Substances in accordance with the annual phase-out targets set out in Appendix 2-A (“The Targets and Funding”) and this Agreement. The annual phase-out targets will, at a minimum, correspond to the reduction schedules mandated by the Montreal Protocol. The Country accepts that, by its acceptance of this Agreement and performance by the Executive Committee of its funding obligations described in paragraph 3, it is precluded from applying for or receiving further funding from the Multilateral Fund in respect to the Substances.
3. Subject to compliance with the following paragraphs by the Country with its obligations set out in this Agreement, the Executive Committee agrees in principle to provide the funding set out in row 9 of Appendix 2-A (“The Targets and Funding”) to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A (“Funding Approval Schedule”).
4. The Country will meet the consumption limits for each Substance as indicated in Appendix 2-A. It will also accept independent verification by the relevant Implementing Agency of achievement of these consumption limits as described in paragraph 9 of this Agreement.
5. The Executive Committee will not provide the Funding in accordance with the Funding Approval Schedule unless the Country satisfies the following conditions at least 30 days prior to the applicable Executive Committee meeting set out in the Funding Approval Schedule:
 - (a) That the Country has met the Target for the applicable year;
 - (b) That the meeting of the Target has been independently verified as described in paragraph 9; and
 - (c) That the Country has substantially completed all actions set out in the last Annual Implementation Programme;
 - (d) That the Country has submitted and received endorsement from the Executive Committee for an annual implementation programme in the form of Appendix 4-A (“Format for Annual Implementation Programmes”) in respect of the year for which funding is being requested.
6. The Country will ensure that it conducts accurate monitoring of its activities under this Agreement. The institutions set out in Appendix 5-A (“Monitoring Institution and Roles”) will monitor and report on that monitoring in accordance with the roles and responsibilities set out in

Appendix 5-A. This monitoring will also be subject to independent verification as described in paragraph 9.

7. While the funding was determined on the basis of estimates of the needs of the country to carry out its obligations under this agreement, the Executive Committee agrees that the country may have the flexibility to reallocate the approved funds, or part of the funds, according to the evolving circumstances to achieve the goals prescribed under this agreement. Reallocations categorized as major changes must be documented in advance in the next annual implementation programme and endorsed by the Executive Committee as described in sub-paragraph 5(d). Reallocations not categorized as major changes may be incorporated in the approved annual implementation programme, under implementation at the time, and reported to the Executive Committee in the report on implementation of the annual programme.

8. Specific attention will be paid to the execution of the activities in the refrigeration servicing sub-sector:

- (a) The Country would use the flexibility available under this Agreement to address specific needs that might arise during project implementation;
- (b) The recovery and recycling programme for the refrigeration-servicing sector will be implemented in stages so that remaining resources can be diverted to other phase-out activities, such as additional training or procurement of service tools in cases where the proposed results are not achieved, and will be closely monitored in accordance with Appendix 5-A of this Agreement.

9. The Country agrees to assume overall responsibility for the management and implementation of this Agreement and of all activities undertaken by it or on its behalf to fulfil the obligations under this Agreement. UNIDO has agreed to be the lead implementing agency (“Lead IA”) in respect of the Country’s activities under this Agreement. The Lead IA will be responsible for carrying out the activities listed in Appendix 6-A including but not limited to independent verification in collaboration with NOU as per Guideline for the verification of national consumption targets of multi-year agreements. The country also agrees to periodic evaluations, which will be carried out under the monitoring and evaluation work programmes of the Multilateral Fund. The Executive Committee agrees, in principle, to provide the Lead IA with the fees set out in row 10 and 12 of Appendix 2-A.

10. Should the Country, for any reason, not meet the Targets for the elimination of the Substances set out in Appendix 1-A or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding Approval Schedule. In the discretion of the Executive Committee, funding will be reinstated according to a revised Funding Approval Schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all of its obligations that were due to be met prior to receipt of the next instalment of Funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amounts set out in Appendix 7-A in respect of each ODP tonne of the amount exceeding the Maximum Allowable Total Consumption of CFCs limit (Appendix 2-A) in any one year.

11. The funding components of this Agreement will not be modified on the basis of any future Executive Committee decision that may affect the funding of any other consumption sector projects or any other related activities in the Country.

12. The Country will comply with any reasonable request of the Executive Committee and the Lead IA to facilitate implementation of this Agreement. In particular, it will provide the Lead IA with access to information necessary to verify compliance with this Agreement.

13. All of the agreements set out in this Agreement are undertaken solely within the context of the Montreal Protocol and as specified in this Agreement. All terms used in this Agreement have the meaning ascribed to them in the Protocol unless otherwise defined herein.

APPENDIX 1-A THE SUBSTANCES

The ozone-depleting substances to be phased out under the Agreement are as follows.

Annex A:	Group I	CFC-11, CFC-12, CFC-113 CFC-114 and CFC-115
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Appendix 2-A THE TARGETS, AND FUNDING

	2005	2006	2007	2008	2009	2010	Total
Montreal Protocol Reduction Schedule (ODP tonnes)	1,112.32	1,112.32	333.7	333.7	333.7	0	-
1. Max allowable total consumption of CFCs (ODP tonnes)	869.7*	869.7	328.7	207.2	70.0	0.0	1,475.4
2. Reduction from on-going projects (ODP tonnes)	-	441	0	0	0	0	441
3. New reduction under plan (ODP tonnes)	-	100.0	121.5	207.2	70.0	0.0	
4. Unfunded reductions (ODP tonnes)	-	65.7	87.2	102.9	35.7	0.0	291.6
5. Funded reductions (ODP tonnes)	-	34.3	34.3	34.3	34.3	0.0	137.1
6. Total annual reduction (ODP tonnes)		541.0	121.5	137.2	70.0	0.0	869.7
7. Lead IA agreed funding (US \$)	-	430,000	0	170,000	154,050	0	754,050
8. Lead IA support costs (US \$)	-	32,250	0	12,750	11,554	0	56,554

APPENDIX 3-A FUNDING APPROVAL SCHEDULE

1. Funding will be considered for approval at the second meeting of the year.

APPENDIX 4-A FORMAT FOR ANNUAL IMPLEMENTATION PROGRAMMES

This format is proposed for use by the Article 5 country to prepare the annual implementation programme for the implementation of performance-based ODS phase-out plans; however, it should be modified to suit the specific needs of each plan.

1.	Data	
	Country	
	Year of plan	
	# of years completed	
	# of years remaining under the plan	
	Target ODS consumption of the preceding year	
	Target ODS consumption of the year of plan	
	Level of funding requested	
	Lead implementing agency	
	Co-operating agency/ies	

2. Targets

Target:				
Indicators		Preceding Year	Year of Plan	Reduction
Supply of ODS	Import			
	Production*			
	Total (1)			
Demand of ODS	Manufacturing			
	Servicing			
	Stockpiling			
	Total (2)			

* For ODS-producing countries

3. **Industry Action**

Sector	Consumption Preceding Year (1)	Consumption Year of Plan (2)	Reduction within Year of Plan (1)-(2)	Number of Projects Completed	Number of Servicing Related Activities	ODS Phase-Out (in ODP tonnes)
Manufacturing						
Aerosol						
Foam						
Refrigeration						
Solvents						
Other						
Total						
Servicing						
Refrigeration						
Total						
GRAND TOTAL						

4. **Technical Assistance**

Proposed Activity: _____

Objective: _____

Target Group: _____

Impact: _____

5. **Government Action**

Policy/Activity Planned	Schedule of Implementation
Type of Policy Control on ODS Import: servicing, etc.	
Public Awareness	
Others	

6. Annual Budget

Activity	Planned Expenditures (US \$)
TOTAL	

7. Administrative Fees**APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES**

1. The National Ozone Unit monitors the consumption data of all ODS. Inspections at converted companies are foreseen to ensure permanent phase out of CFCs after project completion. The licensing system will be a tool to monitor and ensure compliance of control measures.

2. The Government has offered and intends to offer continuity of activities and endorsement for the projects through the institutional support over the next years. This will guarantee the success of any activity approved for Syria.

3. After the establishment of the countrywide scheme of refrigerant recovery and recycling, the monitoring activity will be initiated to determine whether the project is successfully implemented and the target CFC phase out is achieved.

4. Monitoring activity will be done by:

- (1) Establishing a system to ensure that every recycling and reclamation centre and substantive size service workshop is encouraged or obliged to report data and give information to the recovery and recycling scheme. This may be enabled through forms to be filled by recycling centres and service workshops.
- (2) Setting up adequate office facilities including a computer system to collect and analyse the data.
- (3) Regular communication with the regional environmental and industry departments, customs offices, education and training institutions and industry associations.
- (4) Occasional visits to service workshops, recycling and reclamation centres.

5. Following information will have to be supplied by the recycling and reclamation centres and substantive size service workshops.

CFC quantity

- Number of appliances subjected to refrigerant recovery and type (commercial, MAC, domestic etc.) of these appliances at every service workshop;
- Amount of recovered CFC refrigerants at every workshop;
- Amount of recovered CFC refrigerants sent to the recycling centres at every workshop;
- Amount of recovered CFC refrigerants stored at every workshop;
- Amount of recovered CFC refrigerants received from service workshops at every recycling centre;
- Amount of recycled/reclaimed CFC refrigerants at recycling/reclaim centres;
- Amount of recycled/reclaimed CFC refrigerants returned (sold) to workshops;
- Amount of recycled/reclaimed CFC refrigerants used in workshops and its application;
- Amount of virgin refrigerant by type consumed in workshops and its application;
- Amount of CFC refrigerants, which can not be recycled and are subject to further treatment (e.g., sent to reclaiming plants, or decomposition plants abroad);
- Other data relevant for monitoring the scheme (amount of imported CFC refrigerants etc.).

Cost information

- Cost of recovery at every service workshop and parties who bear the cost;
 - Cost of recycling at every recycling centre and parties who bear the cost;
 - Price of recycled CFC refrigerants;
 - Cost of reclaiming at every reclamation centre and parties who bear the cost;
 - Price of reclaimed CFC refrigerants;
 - Other financial information relevant to monitoring the recovery recycling and reclamation scheme.
6. Data and information collected will be analysed to check the adequate operations of the scheme.
 7. In the manufacturing sector the implementation process and the achievement of the phase out will be monitored through site visits at enterprise level.
 8. UNIDO will perform regular monitoring, verification and auditing of the implementation of the National Phase-out Plan in line with the established procedures of both the Multilateral Fund and UNIDO.

APPENDIX 6-A ROLE OF THE LEAD IMPLEMENTING AGENCY

1. The Lead IA will be responsible for a range of activities specified in the project document as follows:
 - (a) Ensuring performance and financial verification in accordance with this Agreement and with its specific internal procedures and requirements as set out in the Country's phase-out plan;

- (b) Providing verification to the Executive Committee that the Targets have been met and associated annual activities have been completed as indicated in the annual implementation programme;
- (c) Assisting the Country in preparation of the Annual Implementation Programme;
- (d) Ensuring that achievements in previous Annual Implementation Programmes are reflected in future Annual Implementation Programmes;
- (e) Reporting on the implementation of the Annual Implementation Programme of the preceding year and preparing an Annual Implementation Programme for the year for submission to the Executive Committee;
- (f) Ensuring that technical reviews undertaken by the Lead IA are carried out by appropriate technical experts;
- (g) Carrying out required supervision missions;
- (h) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Annual Implementation Programme and accurate data reporting;
- (i) Providing verification to the Executive Committee that consumption of the Substances has been eliminated in accordance with the Target;
- (j) Ensuring that disbursements are made to the Country in a timely and effective manner; and
- (k) Providing assistance with policy, management and technical support when required.

APPENDIX 7-A REDUCTIONS IN FUNDING FOR FAILURE TO COMPLY

14. In accordance with paragraph 10 of the Agreement, the amount of funding provided may be reduced by US \$11,000 per ODP tonne of reductions in consumption not achieved in the year.
