



联合国



环境规划署

Distr.  
LIMITED

UNEP/OzL.Pro/ExCom/44/50  
2 November 2004

CHINESE  
ORIGINAL: ENGLISH

执行蒙特利尔议定书  
多边基金执行委员会  
第四十四次会议  
2004年11月29日至12月3日，布拉格

### 项目提案：尼日利亚

本文件包括基金秘书处就以下项目提案做出的评论和建议：

#### 淘汰

- 淘汰氟氯化碳国家计划（第三期）：2005年度工作方案 开发计划署

## 项目评估表——多年期项目

国家：尼日利亚

## 项目名称

淘汰氟氯化碳国家计划（第三期）：2005  
年度工作方案

## 双边/执行机构

开发计划署—牵头执行机构  
工发组织—合作执行机构  
日本政府—合作机构

## 次级项目名称

(a) 泡沫塑料业淘汰计划  
(b) 制冷维修业包括管理的淘汰计划  
(c) 制冷制造业淘汰计划  
(d) 气雾剂制造业淘汰计划  
(e) 全国宣传、教育和交流运动开发计划署  
开发计划署  
工发组织  
工发组织  
日本政府

## 国家协调机构：

国家臭氧办公室，联邦环境部

## 最新报告的项目所涉消耗臭氧层物质的消费数据

A: 第七条数据 ( ODP 吨, 2003 年, 截至 2004 年 9 月 )

附件 A 第一类物质 (各类氟氯化碳)	2,662.40
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B: 国家方案行业数据 ( ODP 吨, 2003 年, 截至 2004 年 6 月 1 日 )

消耗臭氧层物质	泡沫塑料	制冷	气雾剂	消耗臭氧层物质	溶剂	反应剂	熏蒸剂
CFC-11	1,825.70						
CFC-12		772.70	58.0				
CFC-114		3.0					
CFC-115		3.0					

## 符合供资条件的剩余氟氯化碳消费量(ODP 吨)

无

本年业务计划：供资合计 2,261,000 美元；淘汰合计 407 ODP 吨。

项目数据		2004	2005	2006	2007	2008	2009	2010	合计
各类氟氯化碳 (ODP 吨)	蒙特利尔议定书限额	3,650	1,825	1,825	547.5	547.5	547.5	0	不适用
	年度消费限额	3,137	1,725	1,016	508	286	86	0	不适用
	进行中的项目的年度淘汰量	561	0	0	0	0	0	0	
	新解决的年度淘汰量	845	688	492	200	200	65	0	
	无资助情况下年度淘汰量	0	0	16.5	0	0	0	0	
	IS 和双边的淘汰量	5.7	21.5	0	21.5	0	21.5	0	
总共将淘汰的消耗臭氧层物质消费		1,412	710	508	222	200	86	0	
总共将淘汰的消耗臭氧层物质(各类氟氯化碳)									
原申请项目费用 (美元)									
最后项目费用 (美元):									
	牵头机构开发计划署资金	2,077,141	797,122	489,181	385,000	341,200	113,000	0	
	工发组织资金	0	0	0	0	0	0	0	
	日本政府资金	0	0	0	0	0	0	0	
项目供资合计		2,077,141	797,122	489,181	385,000	341,200	113,000	0	
最终支助费用 (美元)									
	牵头机构开发计划署支助费用	183,863	69,261	42,146	32,770	28,228	8,290	0	
	工发组织支助费用	0	0	0	0	0	0	0	
	日本政府支助费用	0	0	0	0	0	0	0	
支助费用合计		183,863	69,261	42,146	32,770	28,228	8,290	0	
向多边基金申请的费用合计 (美元)		2,261,004	866,383	531,327	417,770	369,428	121,290	0	
最终项目成本效益值 (美元/公斤)									5.27

供资申请：核准如上所示第三期 ( 2004 年 ) 供资。

秘书处建议

供个别审议

## 项目说明

1. 《尼日利亚政府与执行委员会之间关于氟氯化碳国家计划的协定》以 2009 年 12 月 31 日前彻底淘汰气雾剂、泡沫塑料和制冷制造及维修业中的氟氯化碳为目标。协定原则上得到了批准，合计供资额（包括支助费用在内）为 14,325,167 美元，该款项将分 8 期划拨。开发计划署作为牵头执行机构，负责泡沫塑料制造和制冷维修业中的执行活动以及对计划的全面管理。工发组织负责气雾剂和制冷制造业。日本政府将协助开展全国宣传、教育和交流活动。以下列出根据协定核准的供资、拨付时间表以及年度氟氯化碳消费和淘汰目标的细目分类。

表 1 – 根据协定核准的供资、拨付时间表和年度氟氯化碳消费和淘汰目标

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	合计	
蒙特利尔议定书消费限额 (ODP 吨)	3,650	3,650	3,650	3,650	3,650	1,825	1,825	547.5	547.5	547.5	0	不适用	
报告/期望的消费(ODP 吨)	4094.8*	4,115.5	3,686.2	-	-	-	-	-	-	-	-	-	
最大允许消费量合计 (ODP 吨)	-	-	-	3,352.7	3,137.0	1,725.4	1,015.9	507.6	286.1	86.1	0	-	
目前项目的减少 (ODP 吨)	171.3	429.3	333.5	194.2	560.7	0.0	0.0	0.0	0.0	0.0	0	1,689	
根据计划的新的减少 (ODP 吨)	0.0	0.0	0.0	0.0	845.3	688.0	491.8	200.0	200.0	64.6	0	2,489.7	
不合格消耗臭氧层物质减少 (ODP 吨)	0.0	0.0	0.0	0.0	0.0	0.0	16.5	0.0	0.0	0.0	0	16.5	
I.S. 部分每公斤 12.1 美元 (ODP 吨) 以及日本双边的减少	0.0	0.0	0.0	21.5	5.7	21.5	0.0	21.5	0.0	21.5	0	91.7	
年度减少合计	171.3	429.3	333.5	215.7	1,411.6	709.5	508.3	221.5	200.0	86.1	0	4,286.8	
适用情况下的美元年度供资分期付款	开发计划署同意的供资	-	-	5,013,929	2,976,827	2,077,141	797,122	489,181	385,000	341,200	113,000	0	12,193,400
	开发计划署支助费用	-	-	449,318	264,834	183,863	69,261	42,146	32,770	28,228	8,290	0	1,078,710
	工发组织的同意供资	-	-	682,386	255,000	-	-	-	-	-	-	0	937,386
	工发组织支助费用	-	-	82,521	33,150	-	-	-	-	-	-	0	115,671
	同意供资合计	-	-	5,696,315	3,231,827	2,077,141	797,122	489,181	385,000	341,200	113,000	0	13,130,786
	机构支助费用合计	-	-	531,839	297,984	183,863	69,261	42,146	32,770	28,228	8,290	0	1,194,381
	向多边基金申请的费用合计	-	-	6,228,154	3,529,811	2,261,004	866,383	531,327	417,770	369,428	121,290	0	14,325,167

2. 执行委员会第三十八次会议核准了 2002 年（用于 2003 年活动）的供资，执行委员会第四十一次会议核准了 2003 年（用于 2004 年活动）的供资。

3. 2003 年最大允许消费量为 3,352.7 ODP 吨。
4. 开发计划署作为牵头执行机构，代表尼日利亚政府提交了有关 2003-2004 年执行活动的进度报告以及 2005 年工作计划，并于该工作计划中申请向第三期供资 2,077,141 美元。
5. 根据进度报告，泡沫塑料和制冷制造业中所有在淘汰氟氯化碳国家计划被批准前已为开发计划署和工发组织核准并正在开展的项目除一个外均已于 2004 年完成。该例外项目企业已经宣布破产，并且所有设备（包括因该项目而提供的设备）已被银行查封。项目事务厅正与政府合作解决该问题。由于该公司目前不生产，因此该企业无氟氯化碳消费。完成现有项目所导致的氟氯化碳淘汰量 2003 年为 576.5 ODP 吨，2004 年为 140.8 ODP 吨。
6. 在气雾剂制造业中，工发组织依照计划签署了为碳氢化合物气雾剂推进剂在两个企业中的使用提供设备和管理的合同。承包商最初的现场参观于 2004 年 7 月进行。预计 2005 年将淘汰 58 ODP 吨氟氯化碳。
7. 在制冷制造业中，依照计划，所有准备工作已于 2003 年完成。主要生产设备已送达项目现场并处于试运转之中。预计将于 2004 年年底之前淘汰 34.65 ODP 吨。
8. 由于项目事务厅机构费高出预期以及尼日利亚选举所带来的困难，开发计划署在泡沫塑料和制冷维修业的活动执行被推迟。供资第一期的项目文件于 2003 年 8 月签署。泡沫塑料企业培训讲习班计划于本年稍后时间进行。设备有望于 2005 年 6 月之前到位。由于无需做更多样机研究，接下来的各期将大大加快执行速度。
9. 培训设备及回收/再循环设备的设备规格将于 2004 年 10 月中旬之前确定。对培训员进行制冷剂良好管理做法的培训有望于 2005 年年中完成。此后几年将在全国进行技术员培训。回收和再循环设备将于三年内配送并安装。在第一批设备被配送并投入使用后，将在采购剩余设备之前对回收和再循环的影响加以评估。
10. 依照立法和海关培训部分的规定，拟定了一项全面的消耗臭氧层物质进口/出口许可证条例草案。涉及主要利益方的讲习班于 2004 年 8 月举办。目前正在拟定最终草案，之后将提交政府批准。开发计划署已经致函联邦环境部，请求紧急关注此事。目前正紧锣密鼓地开展后续行动。海关官员的培训计划于 2005 年开始。
11. 据估计，2004 年现有项目和新项目氟氯化碳预期的淘汰量为 340.75 ODP 吨。根据进度报告，对于进口商和出口商向政府提供进口/出口数据，目前还没有约束性的要求。因此，制定核查消费限额的独立审计方法经过证明是困难的。一旦颁布立法，就可能有用来核查每年数据的方法。在此期间，建议确定一些独立审计员并与他们讨论该问题。立法定案并实施之前，开发计划署建议制定一个示范性审计程序，以了解这个程序是否可用来进行正当的消费核查。

## 2005 年度履约方案

12. 2005 年度履约方案包括开发计划署准备在泡沫塑料和制冷维修业开展的规划活动。对于工发组织在气雾剂和制冷制造业开展新的活动未作设想。根据协定中包括的允许限额，2004 年估计的 3,137 ODP 吨氟氯化碳消费量有望于 2005 年减少 1,411.6 ODP 吨，降至 1,725.4 ODP 吨。建议的活动包括举办行业讲习班、采购设备、在泡沫塑料行业开展培训和培训制冷维修技师，以及在泡沫塑料制造业开展宣传活动。2005 年，政府一级的政策制定活动将涉及以下内容：

- (a) 禁止使用消耗臭氧层物质的新装置和新设备；
- (b) 实行进口关税减让和税收鼓励措施，促进使用替代品和替代技术以及回收和再循环设备；
- (c) 建立消耗臭氧层物质进口商目录；
- (d) 执行消耗臭氧层物质进口配额制度；
- (e) 对技师颁发证书和/或确定认可有资格颁发证书的专业协会的条件。

## 申请的预算

13. 2005 年度履约方案包括用于执行建议活动的 2005 年预算，预算额为 2,077,141 美元，外加开发计划署支助费用 183,863 美元。

## 秘书处的评论和建议

### 评论

14. 根据第七条提交的 2,662.4 ODP 吨氟氯化碳消费数据已经作为 2003 年数据报告臭氧秘书处。根据协定，2003 年氟氯化碳最大允许消费总量为 3,352.7 ODP 吨。根据报告的数据来看，协定中规定的消费限额已经实现。

15. 为执行建议的活动申请的供资额为 2,077,141 美元，开发计划署支助费用为 183,863 美元，这与协定中所载的 2005 年供资分期付款是吻合的。

16. 在审查进度报告过程中，秘书处曾提请开发计划署注意在该国建立独立审计氟氯化碳淘汰和消费制度的要求。秘书处指出，在审议拨付尼日利亚第二期款项时，执行委员会第四十一次会议曾要求开发计划署在 2004 年度履约方案中做出规定，以制定出进行独立审计的方法，用于根据有关淘汰氟氯化碳国家计划协定的要求核查 2003 年及以后年度的消费限额。（第 41/57 号决定）

17. 以上第 10 段中说明了对氟氯化碳消费数据进行独立审计的现状。此外，开发计划署还阐明，立法目前尚处于起草阶段，开发计划署正与环境部一道加紧努力，以加速通过建

立进口配额制度的必要条例。在立法出台之前，开发计划署一直在负责制定涉及到在海关办公室的协助下确定的进口商的核查程序。开发计划署启动了选拔独立官员的程序。

18. 从 2004 年进度报告看来，执行委员会和尼日利亚政府之间的协定中关于对已确定的目标进行核查的条件并未得到充分遵守。此外，第 41/57 号决定的要求似乎也未得到满足。

19. 在审查 2005 年度工作方案过程中，秘书处注意到，绩效指标，比如上年（2004 年）消费量以及反映 2004 年和 2005 年消费差异的减少目标，与协定中反映的目标完全相同。根据协定，2004 年的消费限额是 3,137 ODP 吨。应该指出的是，报告的 2003 年实际消费量比列入协定中的 2003 年最大允许限额少 689.6 ODP 吨。据估计，2004 年实现的减少量约为 340 ODP 吨。看起来 2004 年的消费量有望比协定反映的 2004 年允许限额约少 800 ODP 吨。

20. 同样，2005 年工作方案中包括的减少目标等同于协定中包括的 2004 年度减少量 1,411.6 ODP 吨。然而，由于 2004 年预期的消费量将远远低于协定反映的值，所以这一目标不可能通过 2004 年已经开展和将要开展的活动加以实现。

21. 秘书处建议开发计划署对 2005 年工作方案进行必要调整。开发计划署已经根据 2003 年氟氯化碳实际消费量和估计 2004 年的消费量对 2005 年的工作方案作了修订。对减少目标也相应地做了调整。2005 年氟氯化碳消费目标与协定保持一致。

## 建议

22. 谨提议执行委员会考虑根据以上提供的信息核准 2005 年度工作方案和申请的供资。

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**PROJECT COVER SHEET – MULTI-YEAR PROJECTS**  
**COUNTRY: NIGERIA**

**PROJECT TITLE**

National CFC Phaseout Plan in Nigeria

**BILATERAL/IMPLEMENTING AGENCY**

UNDP – Lead Implementing Agency  
 UNIDO – Cooperating Implementing Agency  
 Government of Japan – Cooperating Agency

**SUB-PROJECT TITLES**

- (a) Foam Sector Phase Out Plan
- (b) Refrigeration Servicing Sector Phaseout Plan including Management
- (c) Refrigeration Manufacturing Sector Phaseout Plan
- (d) Aerosol Manufacturing sector Phaseout Plan
- (e) National information, education and communication campaign

UNDP  
 UNDP  
 UNIDO  
 UNIDO  
 Government of Japan

**NATIONAL CO-ORDINATING AGENCY:** National Ozone Office, Federal Ministry of Environment

**LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT**

**A: ARTICLE-7 DATA (ODP TONNES, 2003, AS OF SEP 2004)**

Annex A Group 1 Substances (CFCs)	2,662.40		
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**B: COUNTRY PROGRAMME SECTORAL DATA (ODP TONNES, 2003, AS OF 1 JUNE 2004)**

ODS	Foam	Ref.	Aerosol	ODS	Solvents	Process agent	Fumigant
CFC-11	1,825.70						
CFC-12		772.70	58.0				
CFC-114		3.0					
CFC-115		3.0					

**CFC consumption remaining eligible for funding (ODP tonnes)** 2,662.40

**CURRENT YEAR BUSINESS PLAN: Total funding US \$ million: total phase-out ODP tonnes.**

PROJECT DATA		2004	2005	2006	2007	2008	2009	2010	Total
CFCs (ODP tonnes)	Montreal Protocol limits	3,650	1,825	1,825	547.5	547.5	547.5	0	n.a.
	Annual consumption limit	3,137	1,725	1,016	508	286	86	0	n.a.
	Annual phase-out from ongoing projects	561	0	0	0	0	0	0	
	Annual phase-out newly addressed	845	688	492	200	200	65	0	
	Annual unfunded phase-out	0	0	16.5	0	0	0	0	
Phase out from IS and bilateral		5.7	21.5	0	21.5	0	21.5	0	
<b>TOTAL ODS CONSUMPTION TO BE PHASED OUT</b>		1,412	710	508	222	200	86	0	
Total ODS consumption to be phased-in (HCFCs)									
Project cost as originally submitted (US \$)									
<b>Final Project costs (US \$):</b>									
Funding for lead agency UNDP		2,077,141	797,122	489,181	385,000	341,200	113,000	0	
Funding for UNIDO		0	0	0	0	0	0	0	
Funding for Govt. of Japan		0	0	0	0	0	0	0	
<b>Total project funding</b>		2,077,141	797,122	489,181	385,000	341,200	113,000	0	
<b>Final Support costs (US \$)</b>									
Support cost for lead agency UNDP		183,863	69,261	42,146	32,770	28,228	8,290	0	
Support cost for UNIDO		0	0	0	0	0	0	0	
Support cost for Govt of Japan		0	0	0	0	0	0	0	
<b>Total support costs</b>		183,863	69,261	42,146	32,770	28,228	8,290	0	
<b>TOTAL COST TO MULTILATERAL FUND (US \$)</b>		2,261,004	866,383	531,327	417,770	369,428	121,290	0	
Final project cost effectiveness (US \$/kg)									5.27

**FUNDING REQUEST: Approval of funding for 3RD tranche (2004) as indicated above.**





# **NIGERIA**

## **National CFC Phase-Out Plan**

**Report on 2003/2004 Implementation  
2005 Annual Implementation Programme and  
Request for Release of the Third Funding Tranche**

**Prepared Jointly By:  
UNDP (Lead Agency)  
UNIDO (Cooperating Agency)**

# NIGERIA NATIONAL CFC PHASE-OUT PLAN

## Report on 2003/2004 Implementation

### 1. Background

The Agreement for the National CFC Phase-Out Plan for Nigeria between the Government of Nigeria and the Executive Committee of the Multilateral Fund (UNEP/OzL.Pro/ExCom/38/70/Rev.1 Annex XII) covers the total phase out of CFCs in the Aerosol, Foam and Refrigeration Manufacturing and Servicing sectors by December 31, 2009. The maximum allowable consumption in 2003 was 3,352.7 ODP tonnes. The agreement was approved for a total funding level (including support cost) of \$14,325,167 to be released in 8 tranches.

UNDP as the lead agency would be responsible for the Foam manufacturing and refrigeration servicing sector as well as the management. UNIDO would be responsible for the Aerosol and Refrigeration manufacturing sectors. Government of Japan would assist in the National information, education and communication campaign. It should be noted that the funding from Government of Japan has been converted to notional ODP tonnes reduced using the \$12.1/kg formula as is the case with the Institutional strengthening projects.

The breakdown of the approved funding, disbursement schedule and annual CFC consumption and phase-out targets, as per the Agreement is shown below.

**Table 1 - Approved Funding, Disbursement Schedule and Annual CFC Consumption and Phase-out Targets, as per the Agreement**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	TOTAL	
<b>Montreal Protocol consumption limits (ODP tonnes)</b>	3,650	3,650	3,650	3,650	3,650	1,825	1,825	547.5	547.5	547.5	0	n/a	
Reported/Expected Consumption ODP tonnes	4094.8*	4,115.5	3,686.2	-	-	-	-	-	-	-	-	-	
<b>Maximum allowable total consumption (ODP tonnes)</b>	-	-	-	3,352.7	3,137.0	1,725.4	1,015.9	507.6	286.1	86.1	0	-	
Reduction from ongoing projects (ODP tonnes)	171.3	429.3	333.5	194.2	560.7	0.0	0.0	0.0	0.0	0.0	0	1689	
New reduction under plan (ODP tonnes)	0.0	0.0	0.0	0.0	845.3	688.0	491.8	200.0	200.0	64.6	0	2,489.7	
Ineligible ODS reduction (ODP tonnes)	0.0	0.0	0.0	0.0	0.0	0.0	16.5	0.0	0.0	0.0	0	16.5	
Reduction for I.S. component @ \$12.1 per kg (ODP tonnes) and Japan bilateral	0.0	0.0	0.0	21.5	5.7	21.5	0.0	21.5	0.0	21.5	0	91.7	
<b>Total annual reduction</b>	171.3	429.3	333.5	215.7	1,411.6	709.5	508.3	221.5	200.0	86.1	0	4,286.8	
Annual funding instalments where applicable in \$	UNDP agreed funding	-	-	5,013,929	2,976,827	2,077,141	797,122	489,181	385,000	341,200	113,000	0	12,193,400
	UNDP support costs	-	-	449,318	264,834	183,863	69,261	42,146	32,770	28,228	8,290	0	1,078,710
	UNIDO agreed funding	-	-	682,386	255,000	-	-	-	-	-	-	0	937,386
	UNIDO support cost	-	-	82,521	33,150	-	-	-	-	-	-	0	115,671
	<b>Total agreed funding</b>	-	-	5,696,315	3,231,827	2,077,141	797,122	489,181	385,000	341,200	113,000	0	13,130,786
	<b>Total agency support cost</b>	-	-	531,839	297,984	183,863	69,261	42,146	32,770	28,228	8,290	0	1,194,381
	<b>Total cost to MLF</b>	-	-	6,228,154	3,529,811	2,261,004	866,383	531,327	417,770	369,428	121,290	0	14,325,167

The funding for 2002 (for 2003 activities) was approved at the 38<sup>th</sup> ExCom and the funding for 2003 (for 2004 activities) was approved at the 41<sup>st</sup> ExCom.

## 2. Compliance Analysis

Table 2 summarises the phase out or expected phase out in 2004 by UNIDO and UNDP as well as Government of Japan project being implemented by UNDP.

**Table 2 - 2004 Expected Phase Out**

UNIDO		UNDP		Total
Ongoing	New	Ongoing	New	
38.4	34.65	97.7	150.0	340.75

From the Table 1 above, it can be noted that the maximum allowable consumption for 2003 is 3,352.7 ODP tonnes and for 2004, the maximum allowable consumption is 3,137.0 ODP Tonnes. Thus Nigeria's reported data for 2003 of 2662.40 ODP tonnes ensures that it is in compliance with the Plan and should be in compliance for 2004 also.

For 2005 there is a possibility of exceeding the maximum allowable consumption of 1,725.4 ODP Tonnes if the foam projects being executed by UNDP under the Plan get delayed too much. UNDP is taking all the possible steps to speed up the activity and is already doing long range planning to smooth any possible bottlenecks that may occur. Meanwhile, during validation visits, UNDP experts did provide actively formulation support and were able to reduce at least 150 ODP Tonnes CFC-11 through reformulation. UNDP is currently following up on this reformulation program to assure that the reductions achieved through formulation change are sustainable.

## 3. Status of Ongoing Projects

### 3.1 Refrigeration Manufacturing Sector UNIDO

All ongoing projects of UNIDO in the refrigeration manufacturing sector which were approved prior to the phase out plan have been completed by 2004.

**Table 3 – 2003 and 2004 Phase Outs from UNIDO Projects**

Inventory Number	Project Title	Phase Out (ODP T)
<b>Completed in 2003</b>		
NIR/REF/26/INV/44	Replacement of CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane in the manufacture of domestic refrigeration appliances at Kolinton Technical Industries	39.5
NIR/REF/28/INV/48	Replacement of refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with HCFC-141b in the manufacture of domestic refrigeration at Soesons Ltd.	16.1
NIR/REF/28/INV/51	Replacement of refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with HCFC-141b in the manufacture of domestic refrigeration at Onward Electrical Industry Ltd.	10.7
NIR/REF/28/INV/52	Replacement of refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with HCFC-141b in the manufacture of domestic refrigeration at United Technologies Ltd.	9.6
<b>Total phased out in 2003</b>		<b>75.9</b>
<b>Completed in 2004</b>		
NIR/REF/26/INV/30	Replacement of refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane in the manufacture of domestic refrigeration appliances at A.G. Leventis	19.1
NIR/REF/35/INV/97	Replacement of refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with HCFC-141b in the manufacture of commercial refrigeration equipment at Polade	8.3
NIR/REF/35/INV/98	Replacement of refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with HCFC-141b in the manufacture of domestic and commercial refrigeration equipment at Ristian	11.0
<b>Total phased out in 2004</b>		<b>38.4</b>

### 3.2 Foam Sector UNDP

All ongoing UNDP projects in the foam sector which were approved prior to the phase out plan will be completed in 2004, except one where the enterprise has declared bankruptcy and all equipment (including equipment supplied under the project) have been seized by the bank. UNOPS is working with the Government to resolve the issue. As the company is currently not producing, there is technically no ODS use.

**Table 4 – 2003 and 2004 Phase Outs from UNDP Projects Approved before Plan**

Inventory Number	Project Title	Phase Out (ODP T)
<b>Completed in 2003</b>		
NIR/FOA/23/INV/25	Conversion to CFC-free technology in the manufacture of flexible polyurethane foam at Safa Foam Products (Nig) Ltd.	24.4
NIR/FOA/26/INV/31	Phase-out of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Orbit Foam Ltd.	25.1
NIR/FOA/26/INV/42	Phase-out of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Yinka-Oba Foam Nig. Ltd.	30.0
NIR/FOA/28/INV/46	Phase-out of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam (slabstock) at United Foam Products Nig. Ltd.	25.0
NIR/FOA/29/INV/55	Phase-out of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Rubez (Nig.) Ltd. (Current Foam)	21.9
NIR/FOA/34/INV/85	Phasing out of CFC-11 in the manufacture of flexible slabstock foam by conversion to methylene chloride at Gasfa Industries Nig., Ltd. (Meka Foam)	40.5
NIR/FOA/35/INV/94	Phasing out of CFC-11 in the manufacture of flexible slabstock foam by conversion to methylene chloride at Bamako Industrial, Ltd.	24.0
NIR/FOA/35/INV/95	Phasing out of CFC-11 in the manufacture of rigid polyurethane foam by conversion to a combination of water and HCFC-141b based systems at Agric Services (Nig.), Ltd.	43.7
NIR/FOA/35/INV/96	Conversion from CFC-11 to methylene chloride (MC) technology in the manufacture of flexible polyurethane at ten box-foam enterprises in Lagos area	199.2
NIR/FOA/32/INV/74	Phasing out of CFC-11 in the manufacture of flexible slabstock foam at Mac-Vico (Nig.) Limited by conversion to methylene chloride (GOJ Bilateral executed by UNDP)	28.4
NIR/FOA/32/INV/75	Phasing out of CFC-11 in the manufacture of flexible slabstock foam at Martchem Industries Limited (at 2 plants) by conversion to methylene chloride (GOJ Bilateral executed by UNDP)	38.4
<b>Total phased out in 2003</b>		<b>500.6</b>
<b>Completed or to be completed in 2004 (all technically completed)</b>		
NIR/FOA/26/INV/32	Phase-out of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Olufoam and Plastic Industries Ltd.	21.0
NIR/FOA/26/INV/35	Phase-out of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Confidence Products and Services Ltd.	27.3
NIR/FOA/34/INV/89	Phasing out of CFC-11 in the manufacture of flexible slabstock foam by conversion to methylene chloride at Harmony Foam Nigeria Ltd.	22.3
NIR/FOA/32/INV/73	Phasing out of CFC-11 in the manufacture of flexible slabstock foam at Eastern Wrought Iron Limited by conversion to methylene chloride	27.1
<b>Total phase out in 2004</b>		<b>97.7</b>
<b>Unable to formally Complete</b>		
NIR/FOA/34/INV/91	Phasing out of CFC-11 in the manufacture of rigid polyurethane foam by conversion to a combination of water and HCFC-141b based systems at Global Plastic Industries, Ltd.	(4.7)

## **4. Status of UNIDO Components of Plan**

### **4.1 *Aerosol Manufacturing Sector***

- This activity was taken up in 2004 after the second tranche of funds was approved.
- The contract for provision of equipment and engineering for the use of HAP has been signed for two enterprises.
- Initial site visit of the contractor was conducted in July 2004.
- It is expected that 58 ODP tonnes of CFC will be phased out in 2005.

### **4.2 *Refrigeration Manufacturing Sector***

- The workshop for redesign of the refrigeration cycles was completed and the study tour to IKK 2003 show by representatives of enterprises was successfully conducted in 2003.
- The specification of necessary production facility and equipment for alternative refrigerant and the foam blowing agent was determined followed by bidding of the equipment.
- Major production facility and equipment have been delivered to the project sites and is being commissioned.
- It is expected that the ODS impact of the project, 34.65 ODP tonnes will be phased out by the end of 2004.

## **5. Status of UNDP Components of Plan**

UNDP received the first tranche of funding in January 2003. In view of the reduced support cost, UNDP was unable to carry out implementation with UNOPS. Instead, the 'Direct Execution' modality was selected. UNDP's internal procedures were completed by May 2003. However, Nigeria went through elections in May 2003 and it was late July 2003 when the new Minister for Environment took office. The project document for the first tranche was signed in August 2003.

The second tranche of funds was requested and approved at the 41<sup>st</sup> Executive Committee meeting. The funds were received by UNDP in January 2004. The project document for the second tranche has been prepared, DEX approval obtained and submitted to the Government for signature.

### **5.1 *Management and Expert Support***

- A Regional Project Coordinator has been based in Abuja, Nigeria from November 2003
- A National Coordinator has been recruited since January 2004 and manages the Ozone Programme Implementation and Management Unit (OPIAMU).
- An international expert for the foam sector has been contracted.
- An international expert for the Refrigeration service sector has been contracted.

### **5.2 *Foam Sector***

- Invitations for Expression of Interest by equipment suppliers were posted on the websites of UN Development Business and IAPSO. Responses to the first posting in April 2003 were not received due to miscommunication with UNDP Nigeria. Reposted in February 2004.
- Short list of vendors based on the evaluation of Expressions of Interest and roster of existing suppliers prepared.
- Equipment specifications for the box foam subproject and two rigid foam subprojects were finalised January 2004.
- Government of Nigeria required that 20%-25% of the box foam equipment should be locally manufactured.
- In view of this requirement, and since the budget allows only very elementary equipment which is not available in standard, proven format, it was decided to procure prototypes from three

suppliers. The equipment, with the local content, would be evaluated and validated before bulk supply began.

- In view of the large quantity of box foam equipment required in a short time, it was decided to simultaneously procure from three equipment manufacturers.
- Invitations to Bid (ITB) were issued for the first tranche of equipment and bids received from 5 suppliers for the box foam equipment in April 2004.
- The Bid Analysis was completed in May 2004 after obtaining several clarifications from the bidders.
- Negotiations on technical issues were held in Lagos in June 2004 with the three lowest bidders and the BAR was finalised.
- One bidder advised that they already had 20%-25% local component on equipment earlier supplied against UNDP projects. The expert verified and confirmed this.
- The Technical Review Committee comprising Government of Nigeria, Federal Ministry of Environment (FMEnv), OPIAMU representative and UNDP-MPU representative reviewed the final Bid Analysis Report and recommended that orders be placed on the three suppliers with quantities based on an optimized delivery schedule. The committee also confirmed that the requirement for prototype be waived for the supplier with proven local content.
- The Contracts, Assets and Procurement Committee (CAP) of the UNDP Country Office convened in September 2004 and approved the recommendations of the expert and the Technical Review Committee. The documents have now been forwarded to UNDP New York for the final approval, which is expected by end October/early November.
- Purchase Orders are expected to be sent out within 2 weeks of receipt of approval from UNDP New York.
- Delivery of equipment will begin within 10 weeks thereafter.
- As soon as approval is received from New York, vendors will be asked to confirm that additional quantities of equipment for the second tranche can be supplied at the same price. If there is agreement, the process to increase the quantities will be started.
- ITBs for auxiliary equipment for the boxfoam units (safety related), as well as for the two rigid foam projects were sent out and bids received in May 2004.
- The BARs for these were finalised and were sent to the CAP of UNDP CO along with the boxfoam equipment documents.
- Purchase Orders are expected to be sent out within 2 weeks of receipt of approval from UNDP New York.
- Training workshop for the boxfoam enterprises in the first tranche to provide technical information and assistance are planned to be conducted later this year. The equipment is expected to be in place by June 2005. Next tranches will be implemented much faster as no further prototyping is required and the results from the current BAR—if accepted—can be applied.

### **5.3 Refrigeration Service Sector**

- Equipment specifications for the training equipment and second tranche recovery/recycling equipment will be finalised by mid October 2004.
- ITBs will be sent out immediately thereafter and bids received by mid November 2004.
- Bid Analysis, Technical Review and UNDP CO CAP review expected to be completed by end December, followed by request for approval from UNDP New York.
- Orders will be placed early 2005.
- Training of Trainers in Good Refrigerant Management Practices is expected to be completed by mid 2005.
- This will be followed by Training of Technicians across the country over the next several years.
- Recovery and Recycling equipment are to be phased in over a period of 3 years. After the first lot of equipment are distributed and put in use, the impact of recovery and recycling will be evaluated before procuring the rest of the equipment.

#### 5.4 *Legislation and Customs Training*

- A draft comprehensive import export licensing regulation for ODS was prepared.
- Stakeholders' workshops were held in August 2004.
- The final draft is under preparation before submission to the Government for approval.
- Training of Customs will start in 2005.

UNDP has sent a letter to the Federal Ministry of Environment requesting urgent attention to the matter and close follow up is being maintained.

#### 6. **Methodology for Audit**

Currently there is no binding requirement for importers and exporters to provide import/export data to the Government. Thus developing a methodology for independent audit to verify consumption limits is proving to be difficult. Once the legislation is in place, it will be possible to have a methodology to verify the data for each year.

In the meanwhile, some independent auditors are being identified and it is proposed to discuss the issue with them. Pending the finalisation and implementation of the legislation, UNDP proposes to suggest development of a sample audit procedure to understand whether such a procedure can come up with justifiable consumption verification.

#### 7. **Comment**

UNDP's change to a new accounting system, UNDP Country Office moving from Lagos to Abuja, first time involvement in procurement of high value technical equipment and ensuring due process is followed led to several procedural delays. However, with the experience gained from the foam equipment procurement exercise, it is felt that subsequent procurement requirements will move much faster.

#### 8. **2005 Annual Implementation Programme and Release of 2004 Funding Tranche**

The 2005 Annual Implementation Programme is attached in Annex 1, with a request to the ExCom for release of the third (2204) funding tranche, as below:

**Table 5 – Funding Request for 2004 to be Implemented in 2005**

<b>Sector</b>	<b>Agency</b>	<b>Tranche Amount (US\$)</b>	<b>Agency Fees (US\$)</b>	<b>Total (US\$)</b>
Foam	UNDP	1,500,000	133,800	1,633,800
Refrigeration Servicing	UNDP	577,141	50,063	627,204
		2,077,141	183,863	2,261,004

Release of this funding will enable completing procurement of all foam manufacturing equipment and ensure expected phase out for 2005 and 2006. The foam sector phase out will make compliance in future years much easier.

**NIGERIA**  
**NATIONAL CFC PHASE OUT PLAN**  
**2005 Annual Implementation Programme**

**1. Data**

Country		Nigeria
Year of plan		2004 (2005 implementation)
# of years completed		2 (2002, 2003)
# of years remaining under the plan		6 (2004-2009)
Target ODS consumption of the preceding year		3,137 t (2004)
Target ODS consumption of the year of plan		1,725.4 t (2005)
Level of funding requested		US\$ 2,077,141
Lead implementing agency		UNDP
Co-operating agency		UNIDO

**2. Targets**

Indicators		Preceding Year (2004)	Year of Plan (2005)	Reduction
Supply of ODS	Import	3,137.0 ODP t	1,725.4 ODP t	215.7 ODP t
	Production	n/a	n/a	n/a
	<b>Total (1)</b>	<b>3,137.0 ODP t</b>	<b>1,725.4 ODP t</b>	<b>1,411.6 ODP t</b>
Demand of ODS	Manufacturing	2,322.4 ODP t	1,060.8 ODP t	1,261.6 ODP t
	Servicing	814.6 ODP t	664.6 ODP t	150.0 ODP t
	Stock piling	n/a	n/a	n/a
	<b>Total (2)</b>	<b>3,137.0 ODP t</b>	<b>1,725.4 ODP t</b>	<b>1,411.6 ODP t</b>

**3. Industry Action**

Sector	Consumption Preceding Year (2004)	Consumption Year of Plan (2005)	Reduction within Year of Plan (2005)-(2004)	Number of Projects to be Completed	Number of Servicing Related Activities	ODS Phase-out (ODP t)
<b>Manufacturing</b>						
Aerosol	58.0	58.0	0	0		0
Foam	2,195.4	813.1	1,382.3	*		1,382.3
Refrigeration	69.0	45.4	23.6	*		23.6
<b>Total</b>	<b>2,322.4</b>	<b>916.5</b>	<b>1,405.9</b>	<b>*</b>		<b>1,405.9</b>
<b>Servicing</b>						
Refrigeration	814.6	814.6	0			0
<b>Total</b>	814.6	814.6	0			0
<b>GRAND TOTAL</b>	<b>3,137.0</b>	<b>1,731.1</b>	<b>1,405.9<sup>++</sup></b>			<b>1,405.9</b>

Note: \* Includes ongoing and umbrella projects

++ Does not include reduction due to IS at \$12.1/kg



## 4. Technical Assistance

### 4.1 FOAM MANUFACTURING

**Proposed Activity:** Awareness Campaign

Objective: Ensure that every ODS user in the foam sector is aware of the phase-out obligation in this sector and the possibility to participate in the program.  
Continuing activity

Target Group: Foam sector

Impact: No ODP impact.

**Proposed Activity:** Implementation Work Plans

Objective: Plan the implementation of the 2<sup>nd</sup> and 3<sup>rd</sup> phase in all details/prepare specifications

Target Group: Eligible phase 3 recipients

Impact: No ODP impact

**Proposed Activity:** International procurement

Objective: Conduct invitation to bid/select bidder (if needed), place purchase order(s)

Target Group: Equipment manufacturers

Impact: No ODP impact.

**Proposed Activity:** Implementation Workshops

Objective: To confirm (i) the conversion plan, (ii) to present bidding results, (iii) to document commitment and (iv) to collect any missing baseline information

Target Group: Eligible phase 3 recipients

Impact: No ODP impact.

**Proposed Activity:** Training, Technical Support

Objective: Introduce CFC-free formulations

Target Group: Eligible phase-3 recipients

Impact: Phaseout of 291.8 t CFCs/y at baseline conditions

### 4.2 REFRIGERATION SERVICING

**Proposed Activity:** Training of Technicians in Good Refrigerant Management Practices

Objective: To train technicians.

Continuing activity

Target Group: R&AC Technicians

Impact: 1500 – 1800 R&AC technicians trained. No ODP impact.

**Proposed Activity:** R & R equipment ordered

Objective: Equip service companies with R&R equipment.

To be implemented.

Target Group: R&AC service companies

Impact: Equipment distributed. No ODP impact

#### 4. Government Action

The Control Measures listed below are under consideration. Some will definitely be implemented; the others have to be evaluated carefully before a final decision is taken.

Policy/Activity Planned	Schedule of Implementation
Control Measures under consideration are:	
<ul style="list-style-type: none"> <li>• Ban on new installations and equipment using ODS.</li> <li>• Provide import concessions and tax incentives to promote use of substitutes and alternative technologies, as well as for Recovery and Recycling equipment.</li> <li>• Establish an inventory of importers of ODS.</li> <li>• Implementation of an ODS import quota system.</li> <li>• Certification of technicians/practitioners and/or establishing conditions for recognition of Associations, which can provide certification and enforce conditions.</li> </ul>	<ul style="list-style-type: none"> <li>• 2005</li> <li>• 2005</li> <li>• 2005</li> <li>• 2005</li> <li>• 2005</li> </ul>

#### 5. Budget for 2004 to be implemented in 2005

Activity	Planned Expenditures (US \$)
<b>Foam Manufacturing Sector</b>	
Equipment	1,470,000
Management Activities	30,000
<b>FUNDING REQUIRED – FOAM MANUFACTURING SECTOR</b>	<b>1,500,000</b>
<b>Refrigeration Servicing Sector</b>	
<b>Training in Good Refrigerant Management Practices-Training of Technicians</b>	
National Consultant	\$22,500
Travel, DSA & Communications for Cons.	\$10,500
<b>Train the Technicians</b>	
Awareness	\$20,000
Material	\$7,200
Organisation	\$72,000
Remuneration to Trainers	\$72,000
<b>Total for Training of Technicians</b>	<b>\$204,200</b>
<b>Recovery &amp; Recycling</b>	
R&R Equipment	\$236,313
MAC Equipment	\$56,628
National Consultant	\$22,500
Travel, DSA & Communications for Cons.	\$10,500
<b>Total for R&amp;R &amp; Equipment</b>	<b>\$325,941</b>
<b>Implementation &amp; Management</b>	
Steering Committee	\$5,000
IMU Staffing	\$35,000
Communication	\$2,000
Travel & DSA	\$5,000
<b>Total for Implementation Management</b>	<b>\$47,000</b>
<b>FUNDING REQUIRED – REFRIGERATION SERVICING SECTOR</b>	<b>\$577,141</b>
<b>TOTAL FUNDING REQUIRED IN 2004 FOR 2005 ACTIVITIES</b>	<b>\$2,077,141</b>

#### 6. Administrative Fees for 2004 program to be implemented in 2005

Agency	Amount
UNDP – Foam Manufacturing Sector	\$133,800
UNDP – Refrigeration Servicing Sector	\$50,063
<b>TOTAL</b>	<b>\$183,863</b>