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执行蒙特利尔议定书
多边基金执行委员会
第七十三次会议
2014 年 11 月 9 日至 13 日，巴黎

2014 年开发计划署工作方案修正案

基金秘书处的评论和建议

1. 开发计划署请执行委员会为其 2014 年工作方案修正案核准 2,698,007 美元，外加 190,660 美元的机构支助费用，见表 1。工作方案载于本文件后。

表 1：2014 年开发计划署工作方案修正案

国家	活动/项目	申请数额（美元）	建议数额（美元）
A 节：建议一揽子核准的活动			
A1. 体制建设项目延长			
中国	体制建设延长（第十一阶段）	390,000	390,000
黎巴嫩	体制建设延长（第九阶段）	155,090	155,090
尼日利亚	体制建设延长（第八阶段）	260,000	260,000
巴基斯坦	体制建设延长（第八阶段）	224,467	224,467
特立尼达和多巴哥	体制建设延长（第八阶段）	60,000	60,000
委内瑞拉玻里瓦尔共和国	体制建设延长（第十二阶段）	285,480	285,480
	A1 小计	1,375,037	1,375,037
机构支助费用（7%用于体制建设）：		96,253	96,253
	A 共计	1,471,290	1,471,290
A2：项目编制			
亚美尼亚	编制氟氯烃淘汰管理计划（第二阶段）（总括战略）	20,000	20,000
智利	编制氟氯烃淘汰管理投资活动（第二阶段）（泡沫塑料）	100,000	100,000
	编制氟氯烃淘汰管理计划（第二阶段）（总括战略）	50,000	50,000
	A2 小计	170,000	170,000
机构支助费用(7%用于项目编制)：		11,900	11,900
	A2 共计	181,900	181,900
A3：技术援助			
安哥拉	氟氯烃淘汰管理计划第一阶段的核查报告	30,000	30,000
亚美尼亚	氟氯烃淘汰管理计划第一阶段的核查报告	30,000	30,000
摩尔多瓦共和国	氟氯烃淘汰管理计划第一阶段的核查报告	30,000	30,000
	A3 小计	90,000	90,000
机构支助费用(9%用于技术援助)：		8,100	8,100
	A3 共计	98,100	98,100
A 节：建议单独审议的活动			
B1：项目编制			
中国	编制氟氯烃淘汰管理计划（第二阶段）（总括战略）	289,750	*
	编制氟氯烃淘汰投资活动（第二阶段）（工业和商业制冷）	399,000	*
	编制氟氯烃淘汰管理投资活动（第二阶段）（溶剂）	374,220	*
	B1 小计	1,062,970	
机构支助费用 (7%用于项目编制)：		74,408	
	B1 共计	1,137,378	
	总计 (A1、A2、A3 和 B1)：	2,888,688	1,751,290

*供单独审议的项目。

A 节：建议一揽子核准的活动

A1：体制建设

项目说明

2. 开发计划署提交了表 1 所列国家的体制建设项目延长申请。这些项目的说明载于本文件附件一。

秘书处的评论

3. 秘书处审查了开发计划署根据有关资格和供资水平的准则和相关决定代表有关政府提交的六份体制建设项目延长申请。这些申请是按照上一阶段最初的体制建设工作计划、国家方案和第 7 条数据、关于氟氯烃淘汰管理计划执行情况的最新报告、机构的进度报告以及蒙特利尔议定书缔约方会议的任何相关决定交叉审查的。秘书处注意到，这些国家履行了《蒙特利尔议定书》规定的消耗臭氧层物质淘汰目标，并且已提交其 2013 年国家方案执行报告。

秘书处的建议

4. 秘书处建议按照表 1 所列供资数额一揽子核准中国、黎巴嫩、尼日利亚、巴基斯坦、特立尼达和多巴哥以及委内瑞拉玻里瓦尔共和国的体制建设延长申请。谨建议执行委员会向这些国家政府转达本文件附件二所载的评论。

A2：氟氯烃淘汰管理计划/氟氯烃淘汰投资项目（第二阶段）的项目编制

项目说明

5. 开发计划署提交了其作为牵头执行机构亚有关亚美尼亚和智利关于编制氟氯烃淘汰管理计划以及氟氯烃淘汰投资活动第二阶段的申请，见表 1。详情如下：

(a) 关于亚美尼亚，为总括战略申请 30,000 美元（开发计划署 20,000 美元，环境规划署 10,000 美元）；以及

(b) 关于智利，为总括战略申请 70,000 美元（开发计划署 50,000 美元，环境规划署 20,000 美元），为开发计划署泡沫塑料行业申请 100,000 美元。

6. 环境规划署作为合作机构的供资申请载于 UNEP/OzL.Pro/ExCom/73/27 号文件。这些国家申请的供资总额未超出第 71/42 号决定(d)、(f)和(g)项按照其剩余有资格消费的氟氯烃数量设定的限额。

秘书处的评论

7. 秘书处根据第 71/42 号决定所载关于第 5 条国家氟氯烃淘汰管理计划第二阶段供资编制的准则和第 72/18 号决定的其他要求审查了这些申请。还审查了已核准的氟氯烃淘汰管理计划第一阶段和已核准付款的项目的执行进展。

8. 关于亚美尼亚，开发计划署报告称，第二阶段将在 2020 年实现将氟氯烃消费量减少 35%的目标。根据目前掌握的制造业资料，预计第二阶段后不会有更多投资项目需要进行项目编制。秘书处对第一阶段的执行进展表示关切，因为应在第七十二次会议支付的

第三次付款在本次会议上再次被搁置审议。开发计划署解释说因一些沟通问题导致延误；不过这次延误不会影响亚美尼亚履行其在 2015 年前实现减少氟氯烃消费量 10%的目标。

9. 关于智利，开发计划署确认将编制第二阶段以实现在 2020 年减少 35%的目标，并且将把淘汰泡沫塑料行业的 HCFC-141b 作为优先事项（即，38.28 ODP 吨，高于 HCFC-22）。在为第一阶段核准 50,000 美元时，之所以为第二阶段（100,000 美元）泡沫塑料行业寻求的供资略高，是因为申请的资金不足以涵盖企业：聚氨酯行业有 22 个使用 HCFC-141b 的用户，11 个多元醇系统的供应商，说明所申请的供资是合理的。

10. 经讨论后，秘书处认为，亚美尼亚和智利的申请符合第 71/42 号决定的要求，并同意了表 1 所列供资额。

秘书处的建议

11. 基金秘书处建议按照表 1 所列出的供资额一揽子核准开发计划署关于亚美尼亚和智利氟氯烃淘汰管理计划/氟氯烃淘汰投资活动（第二阶段）项目编制的组成部分。

A3：技术援助

项目说明

12. 执行委员会在第 72/22 号决定中**特别**请相关双边和执行机构将亚美尼亚、安哥拉和摩尔多瓦共和国氟氯烃淘汰管理计划第一阶段核查报告的供资（其中开发计划署作为牵头执行机构）纳入其各自的工作方案修正案，以提交第七十三次会议。

秘书处的评论

13. 秘书处注意到，开发计划署为每个国家申请的供资与之前会议上执行委员会为类似核查核准的资金额相一致。秘书处还指出，这些国家的核查报告必须在执行委员会为这些国家的氟氯烃淘汰管理计划寻求今后付款申请的相关会议之前至少 60 天提交。

秘书处的建议

14. 秘书处建议按照表 1 所列出的供资额一揽子核准安哥拉、亚美尼亚和摩尔多瓦共和国的氟氯烃淘汰管理计划第一阶段的核查报告，有一项理解是核查报告应按照有关国家和执行委员会关于减少氟氯烃消费量的协定的第 5(b)段，在执行委员会为这些国家的氟氯烃淘汰管理计划寻求下次供资付款申请的相关会议之前至少 60 天提交。

B 节：建议单独审议的活动

B1：氟氯烃淘汰管理计划/氟氯烃淘汰投资项目（第二阶段）的项目编制

中国：氟氯烃淘汰管理计划的编制（第二阶段）（总括战略）（289,750 美元）

中国：氟氯烃淘汰投资活动的编制（第二阶段）（工业和商业制冷及空调行业）（399,000 美元）

中国：氟氯烃淘汰投资活动的编制（第二阶段）（溶剂行业）（374,220 美元）

项目说明

15. 开发计划署作为牵头执行机构，代表中国政府和其他合作机构、环境规划署、工发组织、世界银行、德国政府和日本政府提交了中国氟氯烃淘汰管理计划第二阶段的项目编制申请，供资总额为 2,639,070 美元，外加机构支助费用。组成部分和所申请的数额见表 2。下表所列的负责的双边/执行机构的各自工作方案修正案介绍了将在不同组成部分/行业的项目编制过程期间开展的活动详情。

表 2：中国氟氯烃淘汰管理计划第二阶段项目编制申请详情

组成部分/行业	费用 (美元)	责任机构	执行委员会文件
总括战略	289,750	开发计划署	73/26
工业和商业制冷	399,000	开发计划署	73/26
溶剂	374,220	开发计划署	73/26
室内空调	385,550	工发组织	73/28
挤塑聚苯乙烯泡沫塑料	308,050	工发组织	73/28
	72,000	德国	73/25
聚氨酯泡沫塑料	412,500	世界银行	73/29
维修业和保障组成部分（398,000 美元）	305,500	环境规划署	73/27
	35,000	日本	73/25
	57,500	德国	73/25
共计	2,639,070		

16. 根据第 71/42 号决定提供了各行业项目编制期间将开展的活动详情。氟氯烃淘汰管理计划第二阶段的编制将关注在 2020 年前实现将氟氯烃消费量减少 35%的目标。关于工业和商业制冷行业，将把优先重点放在冷藏库和冷冻连锁商店应用上，目标是淘汰 601 ODP 吨氟氯烃；关于溶剂行业，重点是清洗精密仪器和光学仪器，以淘汰 133.54 ODP 吨 HCFC-141b。

秘书处的评论

17. 秘书处根据第 71/42 号决定所载关于第 5 条国家氟氯烃淘汰管理计划第二阶段供资编制的准则和第 72/18 号决定的其他要求审查了这些申请。还审查了已核准的氟氯烃淘汰管理计划第一阶段和已核准付款的项目的执行进展。秘书处注意到，在第五十五次会议上，中国在编制氟氯烃淘汰管理计划第一阶段方面共收到了 3,899,569 美元的供资，其中开发计划署收到 1,480,000 美元，用以编制聚苯乙烯、工业和商业制冷行业以及溶剂行业的总括战略和投资项目。

18. 项目编制中包含的活动包括调查、数据收集和分析；审查替代技术和政策框架；有关利益方磋商；以及制定氟氯烃淘汰管理计划。提交的文件中提供了这些活动的详细费用。

19. 针对秘书处的询问，开发计划署就开发计划署将要编制的氟氯烃淘汰管理计划第二阶段的相关活动做了如下解释：

(a) 虽然行业计划调查将研究单个行业的消费情况，不过编制总括战略要收集的数据将对总体趋势进行分析，以编制中国的综合淘汰战略。开发计划署目前无法详细介绍第二阶段需要哪些新的或修正的政策，但在编制期间有必要对政策要求进行评估，以确保在国家一级顺利转让技术、采纳技术和开展能力建设，并成功实施氟氯烃淘汰管理计划。

(b) 关于工业和商业制冷行业，有必要制定新的政策，以支持在次行业一级控制消费，对工业和商业制冷行业替代制冷剂的安全使用进行监管，支持替代品的核证要求和能力发展，并遵守安全规范相关条例。有必要更新该行业的调查，这是因为由于市场、监管和技术原因，过去六年期间这个调查已经发生了变化。工业和商业制冷行业第一阶段的优先重点是整体式空调机、冷风机和仅适用于次行业的连式空调机；因此有必要开展新的调查，以确定从冷藏库进行转换的受益企业和冷冻连锁商店次行业；

(c) 关于溶剂行业，有必要开展新的调查，因为第二阶段将着手清洗精密仪器和光学仪器，而第一阶段的重点是医疗器械、金属和电子清洁。开发计划署还将把示范项目的结果应用到第二阶段中国溶剂行业的替代品上。

秘书处的建议

20. 谨建议执行委员会按照以下方面核准开发计划署关于中国氟氯烃淘汰管理计划/氟氯烃淘汰投资活动（第二阶段）的项目编制申请：总括战略的供资额为 289,750 美元，外加 20,283 美元的机构支助费用；工业和商业制冷行业的供资额为 399,000 美元，外加 27,930 美元的机构支助费用；溶剂行业的供资额为 374,220 美元，外加 26,195 美元的机构支助费用。

Annex I

INSTITUTIONAL STRENGTHENING PROJECT PROPOSALS

China: Renewal of institutional strengthening

Summary of the project and country profile			
Implementing agency:			UNDP
Amounts previously approved for institutional strengthening (US $):			
	Phase I:	Feb-92 & Mar-93	449,997
	Phase II:	Oct-96	300,000
	Phase III:	Nov-98	300,000
	Phase IV:	Dec-00	300,000
	Phase V	Nov-02	390,000
	Phase VI	Dec-04	390,000
	Phase VII	Nov-06	390,000
	Phase VIII	Nov-08	390,000
	Phase IX	Dec-10	390,000
	Phase X:	Dec-12	390,000
		Total:	3,689,997
Amount requested for renewal (phase XI) (US $):			390,000
Amount recommended for approval for phase XI (US $):			390,000
Agency support costs (US $):			27,300
Total cost of institutional strengthening phase XI to the Multilateral Fund (US $):			417,300
Date of approval of country programme:			1993
Date of approval of HCFC phase-out management plan:			2011
Baseline consumption of controlled substances (ODP tonnes):			
(a) Annex A, Group I (CFCs) (average 1995-1997)			57,818.7
(b) Annex A, Group II (halons) (average 1995-1997)			34,186.7
(c) Annex B, Group II (carbon tetrachloride) (average 1998-2000)			49,142.1
(d) Annex B, Group III (methyl chloroform) (average 1998-2000)			721.2
(e) Annex C, Group I (HCFCs) (average 2009-2010)			19,269.0
(f) Annex E (methyl bromide) (average 1995-1998)			1,102.1
Latest reported ODS consumption (2013) (ODP tonnes) as per Article 7:			
(a) Annex A, Group I (CFCs)			-386.60
(b) Annex A, Group II (halons)			-0.40
(c) Annex B, Group II (carbon tetrachloride)			219.70
(d) Annex B, Group III (methyl chloroform)			0.00
(e) Annex C, Group I (HCFCs)			15,757.90
(f) Annex E (methyl bromide)			100.00
		Total:	15,690.60
Year of reported country programme implementation data:			2013
Amount approved for projects (as at May 2014) (US $):			1,048,024,291
Amount disbursed (as at December 2013) (US $):			930,572,430
ODS to be phased out (as at May 2014) (ODP tonnes):			124,534.3
ODS phased out (as at December 2013) (ODP tonnes):			115,283.9

1. Summary of activities and funds approved by the Executive Committee:

Summary of activities	**Funds approved (US $)**
(a) Investment projects:	999,864,880
(b) Institutional strengthening:	3,689,997

(c) Project preparation, technical assistance, training and other non-investment projects:	44,469,414
Total:	1,048,024,291

Progress report

2. The goal of the of the IS project for China is to further enhance the overall programme management capability of the Programme Management Office for ozone layer protection matters (PMO) in the Ministry of Environmental Protection (MEP) with respect to enforcement of ODS policy development, coordination and communications with the stakeholders, preparation for and participation in Meetings of the Parties to the Montreal Protocol and Executive Committee meetings, data reporting, and the supervision of ODS phase-out projects. Specifically the project has addressed: policy formulation and enforcement; strengthening of international communication; strengthening of coordination with related agencies; improving project management; and promoting public awareness. In Phase X, with the financial support of US $390,000 and additional support from implementing agencies and the regional network, 24 members of the PMO have worked to achieve these five objectives. Article 7 and country programme data have been reported to the Ozone Secretariat and the Secretariat of the Multilateral Fund respectively, in an efficient and timely manner. The Government of China and the implementing agency have conducted audits on the PMO with satisfactory outcomes. Cooperation, coordination, the participation of local governments, promotion of public awareness, and support from policy makers have been important for the success of the project.

Plan of action

3. In the next two years, China faces the task of phase-out activities relating to HCFCs, methyl bromide and essential uses of CFCs and CTC. The IS project will continue to further enhance the overall programme management capability of the PMO with a special focus on policy formulation and enforcement. The five objectives, namely (1) improving policy formulation and enforcement, (2) strengthening international communication, (3) strengthening coordination with related agencies and stakeholders, (4) improving data collection and reporting, and (5) improving project management capacity of PMO, will continue to be pursued in phase XI. With the support of US$390,000 from the Multilateral fund, the PMO will continue to practice efficient programme management, awareness raising and data reports, and expand its capabilities to ensure successful phase-out of ODS.

Lebanon: Renewal of institutional strengthening

Summary of the project and country profile			
Implementing agency:			UNDP
Amounts previously approved for institutional strengthening (US $):			
	Phase I:	May-96	179,000
	Phase II:	Jul-00	119,300
	Phase III:	Jul-02	155,090
	Phase IV:	Dec-04	155,090
	Phase V	Nov-06	155,090
	Phase VI	Nov-08	155,090
	Phase VII	Dec-10	155,090
	Phase VIII:	Dec-12	155,090
		Total:	1,228,840
Amount requested for renewal (phase IX) (US $):			155,090
Amount recommended for approval for phase IX (US $):			155,090
Agency support costs (US $):			10,856
Total cost of institutional strengthening phase IX to the Multilateral Fund (US $):			165,946

Date of approval of country programme:	1996
Date of approval of HCFC phase-out management plan:	2011
Baseline consumption of controlled substances (ODP tonnes):	
(a) Annex A, Group I (CFCs) (average 1995-1997)	725.5
(b) Annex A, Group II (halons) (average 1995-1997)	0.0
(c) Annex B, Group II (carbon tetrachloride) (average 1998-2000)	0.0
(d) Annex B, Group III (methyl chloroform) (average 1998-2000)	0.0
(e) Annex C, Group I (HCFCs) (average 2009-2010)	73.5
(f) Annex E (methyl bromide) (average 1995-1998)	236.4
Latest reported ODS consumption (2013) (ODP tonnes) as per Article 7:	
(a) Annex A, Group I (CFCs)	0.00
(b) Annex A, Group II (halons)	0.00
(c) Annex B, Group II (carbon tetrachloride)	0.00
(d) Annex B, Group III (methyl chloroform)	0.00
(e) Annex C, Group I (HCFCs)	72.61
(f) Annex E (methyl bromide)	0.00
Total:	72.61
Year of reported country programme implementation data:	2013
Amount approved for projects (as at May 2014) (US $):	16,004,396
Amount disbursed (as at December 2013) (US $):	14,986,008
ODS to be phased out (as at May 2014) (ODP tonnes):	1,680.6
ODS phased out (as at December 2013) (ODP tonnes):	1,629.6

4. Summary of activities and funds approved by the Executive Committee:

Summary of activities	**Funds approved (US $)**
(a) Investment projects:	12,722,977
(b) Institutional strengthening:	1,228,840
(c) Project preparation, technical assistance, training and other non-investment projects:	2,052,579
Total:	16,004,396

Progress report

5. The IS project for Lebanon achieved the expected results due to cooperation between the industrial sector, government and non-governmental authorities, the private sector and the public. The IS project has assisted Lebanon in complying with its commitments to join the global effort for the protection of the ozone layer. Lebanon is classified by the Ozone Secretariat as being in full compliance with its Montreal Protocol obligations including the 2013 freeze in HCFC consumption due to the effective ODS control measures put in place in the country, the timely conversion of the industrial sectors financed by the Multilateral Fund, and the commitment of the NOU and the government in regard to the Montreal Protocol. With respect to investment activities to achieve ODS phase-out through the conversion of industrial facilities to non-ODS technologies, the NOU has been monitoring HCFC phase-out in the foam and air-conditioning sectors in the context of stage I of the HPMP, which has been implemented in a timely manner.

Plan of action

6. The overall objective of the phase IX of the IS project is to meet the obligations of the Montreal Protocol and its amendments. Several specific objectives to planning and coordination including: implementation of stage I of the HPMP; compliance with the 10 per cent reduction in the baseline consumption of HCFCs by 2015; initiating stage II of HPMP activities in early 2016; capacity building

and technical assistance activities in the HPMP addressing the industrial sector; planning and implementing national public awareness and outreach strategies; enforcement legislation and ODS licensing system regulations through the close cooperation with the related governmental institutions; and setting up of the appropriate guidelines for close monitoring and evaluation of ODSs phase-out projets.

Nigeria: Renewal of institutional strengthening

Summary of the project and country profile			
Implementing agency:			UNDP
Amounts previously approved for institutional strengthening (US $):			
	Phase I:	Mar-93	300,000
	Phase II:	Jul-01	200,000
	Phase III:	Jul-03	260,000
	Phase IV:	Apr-06	260,000
	Phase V:	Apr-08	260,000
	Phase VI:	Dec-10	260,000
	Phase VII:	Dec-12	260,000
		Total:	1,800,000
Amount requested for renewal (phase VIII) (US $):			260,000
Amount recommended for approval for phase VIII (US $):			260,000
Agency support costs (US $):			18,200
Total cost of institutional strengthening phase VIII to the Multilateral Fund (US $):			278,200
Date of approval of country programme:			1997
Date of approval of HCFC phase-out management plan:			2010
Baseline consumption of controlled substances (ODP tonnes):			
(a) Annex A, Group I (CFCs) (average 1995-1997)			3,650.0
(b) Annex A, Group II (halons) (average 1995-1997)			285.3
(c) Annex B, Group II (carbon tetrachloride) (average 1998-2000)			152.8
(d) Annex B, Group III (methyl chloroform) (average 1998-2000)			32.9
(e) Annex C, Group I (HCFCs) (average 2009-2010)			398.2
(f) Annex E (methyl bromide) (average 1995-1998)			2.9
Latest reported ODS consumption (2013) (ODP tonnes) as per Article 7:			
(a) Annex A, Group I (CFCs)			0.00
(b) Annex A, Group II (halons)			0.00
(c) Annex B, Group II (carbon tetrachloride)			0.00
(d) Annex B, Group III (methyl chloroform)			0.00
(e) Annex C, Group I (HCFCs)			334.46
(f) Annex E (methyl bromide)			0.00
		Total:	334.46
Year of reported country programme implementation data:			2013
Amount approved for projects (as at May 2014) (US $):			38,651,833
Amount disbursed (as at December 2013) (US $):			33,576,928
ODS to be phased out (as at May 2014) (ODP tonnes):			6,074.4
ODS phased out (as at December 2013) (ODP tonnes):			6,068.7

7. Summary of activities and funds approved by the Executive Committee:

Summary of activities		**Funds approved (US $)**
(a)	Investment projects:	32,516,811
(b)	Institutional strengthening:	1,800,000
(c)	Project preparation, technical assistance, training and other non-investment projects:	4,335,022
	Total:	38,651,833

Progress report

8. Phase VII of the IS project for Nigeria report covered activities that were undertaken from December 2012 to September 2014. The IS project allowed for continuation of the successful implementation of ODS phase-out activities in Nigeria. The implementation of Stage I of the HPMP activities continued with the achievement of the freeze in HCFC consumption in 2013 and the achievement of a fully operational quota system for HCFCs. Other traditional operations such as data reporting, participation in regional and international meetings, consultative work with domestic stakeholders and awareness raising were undertaken successfully. The national ozone unit continued to monitor to ensure that the phase-out of first generation ODS was maintained, and ensured that Nigeria proactively implemented its HCFC phase-out programme, in line with its international obligations.

Plan of action

9. The next phase of the IS project for Nigeria aims to consolidate and sustain the phase-out of ODSs already achieved, and effectively implement of the first phase of the HPMP to achieve the mandatory 10 per cent reduction in HCFC consumption reduction by 2015. Activities linked to stage II of the HPMP will be prepared, and implementation should start during the phase VIII of the IS project.

Pakistan: Renewal of institutional strengthening

Summary of the project and country profile			
Implementing agency:			UNDP
Amounts previously approved for institutional strengthening (US $):			
	Phase I:	Sept-94	259,000
	Phase II:	Dec-01	172,666
	Phase III:	Dec-03	224,467
	Phase IV:	Mar. & Nov-07	224,467
	Phase V:	Apr-09	224,467
	Phase VI:	Dec-10	224,467
	Phase VII:	Dec-12	224,467
		Total:	1,554,001
Amount requested for renewal (phase VIII) (US $):			224,467
Amount recommended for approval for phase VIII (US $):			224,467
Agency support costs (US $):			15,713
Total cost of institutional strengthening phase VIII to the Multilateral Fund (US $):			240,180
Date of approval of country programme:			1996
Date of approval of HCFC phase-out management plan:			2010
Baseline consumption of controlled substances (ODP tonnes):			
(a) Annex A, Group I (CFCs) (average 1995-1997)			1,679.4
(b) Annex A, Group II (halons) (average 1995-1997)			14.2
(c) Annex B, Group II (carbon tetrachloride) (average 1998-2000)			412.9
(d) Annex B, Group III (methyl chloroform) (average 1998-2000)			2.3
(e) Annex C, Group I (HCFCs) (average 2009-2010)			247.4
(f) Annex E (methyl bromide) (average 1995-1998)			14.0
Latest reported ODS consumption (2013) (ODP tonnes) as per Article 7:			
(a) Annex A, Group I (CFCs)			0.00
(b) Annex A, Group II (halons)			0.00
(c) Annex B, Group II (carbon tetrachloride)			0.00
(d) Annex B, Group III (methyl chloroform)			0.00
(e) Annex C, Group I (HCFCs)			247.02

(f) Annex E (methyl bromide)	0.00
Total:	247.02
Year of reported country programme implementation data:	2013
Amount approved for projects (as at May 2014) (US $):	28,235,034
Amount disbursed (as at December 2013) (US $):	24,558,307
ODS to be phased out (as at May 2014) (ODP tonnes):	2,526.0
ODS phased out (as at December 2013) (ODP tonnes):	2,464.2

10. Summary of activities and funds approved by the Executive Committee:

Summary of activities	**Funds approved (US $)**
(a) Investment projects:	23,517,233
(b) Institutional strengthening:	1,554,001
(c) Project preparation, technical assistance, training and other non-investment projects:	3,163,800
Total:	28,235,034

Progress report

11. During phase VII of the IS project, the project to phase out CFCs in metered-dose inhalers (MDIs) was successfully completed in 2013 and the company is currently selling CFC free MDIs, resulting in no CFC consumption by Pakistan since 2013. The HPMP approved at the 62nd meeting (December 2010) has been successfully implemented and five foam manufacturing industry were assisted to phase out HCFC-141b. Through the effective import quota for 2013 and 2014, Pakistan successfully achieved the freeze in HCFC consumption in 2013 and is on track to achieve the 10 per cent reduction ahead of the Montreal Protocol deadline. A series of workshops on HCFC phase-out and alternatives technology were organized with all the key stakeholders including industrialists, government ministries, divisions, educational institutions and general public. These workshops and consultations have greatly helped the Climate Change Division (CCD) and Ozone Cell (NOU) to formulate effective policy and regulations on the HCFC phase-out. The CCD has the authority to develop ODS phase-out activities in coordination with Ozone Cell. The IS project has been instrumental in providing policy level support to implement the ODS phase-out strategy and in enabling the government to meet its commitments under the Montreal Protocol.

Plan of action

12. Phase VIII of the IS project will focus on carrying out the activities in stage II of the HPMP covering HCFC phase-out in a number of the sectors, subject to approval, including polyurethane rigid foam, refrigeration, insulation, thermoware. There are 21 companies identified for technology conversion in stage II of the HPMP, and it is planned to encourage them to switch to natural refrigerants. Systematic and intensive efforts will be required in this area, which will be critical to achieving the future HCFC phase-out targets. In addition to implementation of the HPMP, training of Customs officers will continue to be held in all the major cities (Karachi, Lahore and Islamabad) to curb the illegal trade in ODS. Trainings of servicing technicians will also be carried out to safeguard the environment from ODS emissions. Servicing technicians will be encouraged to adopt good practices while changing or filling refrigerants. Workshops for industrialists, importers and general public will be held to raise the awareness regarding HCFC phase-out and its climate benefit. Close coordination with the college/university environmental sciences departments and all relevant stakeholders will be maintained to sensitize youth and students to the issue of ozone layer protection and its linkage to climate change. Lastly, a comprehensive monitoring plan on ODS phase-out activities will be implemented in collaboration with all relevant stakeholders.

Trinidad and Tobago: Renewal of institutional strengthening

Summary of the project and country profile		
Implementing agency:		UNDP
Amounts previously approved for institutional strengthening (US $):		
	Phase I: Oct-96	66,000
	Phase II: Dec-00	44,000
	Phase III: Nov-02	57,200
	Phase IV: Dec-04	60,000
	Phase V Nov-06	60,000
	Phase VI: Nov-09 & Dec-10	60,000
	Phase VII: Dec-12	60,000
	Total:	407,200
Amount requested for renewal (phase VIII) (US $):		60,000
Amount recommended for approval for phase VIII (US $):		60,000
Agency support costs (US $):		4,200
Total cost of institutional strengthening phase VIII to the Multilateral Fund (US $):		64,200
Date of approval of country programme:		1996
Date of approval of HCFC phase-out management plan:		2011
Baseline consumption of controlled substances (ODP tonnes):		
(a) Annex A, Group I (CFCs) (average 1995-1997)		120.0
(b) Annex A, Group II (halons) (average 1995-1997)		46.6
(c) Annex B, Group II (carbon tetrachloride) (average 1998-2000)		0.0
(d) Annex B, Group III (methyl chloroform) (average 1998-2000)		0.7
(e) Annex C, Group I (HCFCs) (average 2009-2010)		46.0
(f) Annex E (methyl bromide) (average 1995-1998)		1.7
Latest reported ODS consumption (2013) (ODP tonnes) as per Article 7:		
(a) Annex A, Group I (CFCs)		0.00
(b) Annex A, Group II (halons)		0.00
(c) Annex B, Group II (carbon tetrachloride)		0.00
(d) Annex B, Group III (methyl chloroform)		0.00
(e) Annex C, Group I (HCFCs)		39.50
(f) Annex E (methyl bromide)		0.00
	Total:	39.50
Year of reported country programme implementation data:		2013
Amount approved for projects (as at May 2014) (US $):		2,718,864
Amount disbursed (as at December 2013) (US $):		1,668,010
ODS to be phased out (as at May 2014) (ODP tonnes):		130.5
ODS phased out (as at December 2013) (ODP tonnes):		113.5

13. Summary of activities and funds approved by the Executive Committee:

Summary of activities		**Funds approved (US $)**
(a)	Investment projects:	1,139,470
(b)	Institutional strengthening:	407,200
(c)	Project preparation, technical assistance, training and other non-investment projects:	1,172,194
	Total:	2,718,864

Progress report

14. The seventh phase of the IS project in Trinidad and Tobago focused on the development and implementation of the proper framework to meet the freeze in HCFC consumption in 2013 in a timely manner according to the HPMP schedule, so as to minimize the impacts on the private sector. These objectives were achieved by managing HCFC imports, refresher courses for custom officials, improved communication between the Ministry of Trade, the NOU and customs, and the implementation and maintenance of a reliable database of import and export data. Consultations and coordination with other national agencies and stakeholders was achieved through continued engagement with the air-conditioning association. The use of low-GWP HCFC alternatives was reinforced. Public awareness was raised through the use of printed information for Ozone Day and HCFC Seminars, and the establishment of an interactive display at the National Science Centre to celebrate the anniversary of the Montreal Protocol. Trinidad and Tobago has also actively participated in regional and international meetings, including network meetings, Executive Committee meetings and Montreal Protocol meetings. Trinidad and Tobago has complied fully with its ODS consumption and reporting obligations.

Plan of action

15. Phase VIII of the IS project for Trinidad and Tobago will continue to enforce the ODS legislation framework and regulation to control and monitor HCFCs consumption through the quota and licensing system in order to achieve the 10 per cent reduction in HCFC consumption by 2015. New workshops are expected to be undertaken to improve the monitoring of trade in ODS, including sensitive areas such as HCFCs and HFCs commercial blends consumption. The NOU will continue to monitor and strengthen the communication system between the Ministry of Trade, Customs and itself, and will continue to work on the identification of gaps and possible upgrades of the present system to ensure that Trinidad and Tobago is able to deter illegal trade in ODS. Further consultations and coordination with other national agencies and stakeholders will continue through seminars, lectures and technical workshops. Supervision to ensure the timely implementation of HCFC phase-out activities and the reduction in HCFC consumption will be continuously monitored and the use of low-GWP HCFC alternatives will be promoted. Multilateral Fund financed projects and increased awareness and information exchange will continue to be supported by the IS activities in the polyurethane foam and refrigeration and air-conditioning sectors. Trinidad and Tobago plans to attend and actively participate in all regional and sub-regional meetings to ensure regional coordination, and participate in all Montreal Protocol meetings.

Venezuela (Bolivarian Republic of): Renewal of institutional strengthening

Summary of the project and country profile		
Implementing agency:		UNDP
Amounts previously approved for institutional strengthening (US $):		
Phase I:	Mar-93	329,192
Phase II:	Jul-95 & May-96	109,800
Phase III:	Oct-96	219,600
Phase IV:	Jul-98	219,600
Phase V:	Jul-00	219,600
Phase VI:	Jul-02	285,480
Phase VII:	Jul-04	285,480
Phase VIII:	Jul-06	285,480
Phase IX:	Nov-08	285,480
Phase X:	Dec-10	285,480
Phase XI:	Dec-12	285,480
	Total:	2,810,672
Amount requested for renewal (phase XII) (US $):		285,480

Amount recommended for approval for phase XII (US $):	285,480
Agency support costs (US $):	19,984
Total cost of institutional strengthening phase XII to the Multilateral Fund (US $):	305,464
Date of approval of country programme:	1995
Date of approval of HCFC phase-out management plan:	2011
Baseline consumption of controlled substances (ODP tonnes):	
(a) Annex A, Group I (CFCs) (average 1995-1997)	3,322.4
(b) Annex A, Group II (halons) (average 1995-1997)	0.0
(c) Annex B, Group II (carbon tetrachloride) (average 1998-2000)	1,107.2
(d) Annex B, Group III (methyl chloroform) (average 1998-2000)	4.7
(e) Annex C, Group I (HCFCs) (average 2009-2010)	207.0
(f) Annex E (methyl bromide) (average 1995-1998)	10.3
Latest reported ODS consumption (2012) (ODP tonnes) as per Article 7:	
(a) Annex A, Group I (CFCs)	0.00
(b) Annex A, Group II (halons)	0.00
(c) Annex B, Group II (carbon tetrachloride)	0.00
(d) Annex B, Group III (methyl chloroform)	0.00
(e) Annex C, Group I (HCFCs)	246.14
(f) Annex E (methyl bromide)	0.00
Total:	246.14
Year of reported country programme implementation data:	2013
Amount approved for projects (as at May 2014) (US $):	47,414,189
Amount disbursed (as at December 2013) (US $):	46,672,965
ODS to be phased out (as at May 2014) (ODP tonnes):	2,445.9
ODS phased out (as at December 2013) (ODP tonnes):	2,390.0

16. Summary of activities and funds approved by the Executive Committee:

Summary of activities	**Funds approved (US $)**
(a) Investment projects:	38,994,948
(b) Institutional strengthening:	2,810,672
(c) Project preparation, technical assistance, training and other non-investment projects:	5,608,569
Total:	47,414,189

Progress report

17. The Bolivarian Republic of Venezuela was able to comply with the first HCFC control measure, and freeze its HCFC consumption at the baseline level in 2013. The country has implemented adequate measures to control HCFC consumption and has worked with national stakeholders to implement activities and control measures to fulfil its HCFC reduction commitments. Training and certification of refrigeration technicians continued to be a key element of the country's strategy to phase out HCFC and to promote the adoption low-GWP alternatives. The awareness campaign has continued and has involved children and young people from national schools with the aim of increasing their knowledge about the ozone layer and the country's actions taken to protect it.

Plan of action

18. The main objective of the IS project for the next phase in relation to the country's compliance with the Montreal Protocol are: monitoring CFC elimination and the freeze of HCFCs at the baseline for compliance; achieving the 10 per cent reduction target for HCFC consumption by 2015; supporting the adoption of good refrigeration practices and low-GWP alternatives in the refrigeration and

air-conditioning sector; continuing to implement the awareness campaign to promote the protection of the ozone layer. During the next phase, the government, through Fondoin (Fundación Fondo Venezolano de Reconversión Industrial y Tecnológica), will prepare the strategy for stage II of the HPMP and will continue to strengthen and ensure the sustainability of the activities implemented through stage I of the HPMP.

附件二

执行委员会对延长提交给第七十三次会议的体制建设项目表达的看法

中国

1. 执行委员会审查了为中国第十一阶段体制建设项目延长申请而提交的报告，并赞赏地注意到，除核准的必要用途数量外（用于计量吸入器的氟氯化碳、四氯化碳和甲基溴），中国成功地持续完全淘汰各类氟氯化碳。此外，执行委员会还赞赏地注意到中氟氯烃淘汰方面的进展。委员会注意到，中国正在实施关于控制和监测消耗臭氧层物质使用的政策和条例，并在项目实施方面加强了与各机构之间以及与行业协会的协调。在体制建设项目第 十一阶段，中国将继续强化其国家管理能力，以有效地执行和监测促进实现消耗臭氧层物质淘汰目标的各项活动，从而实现《蒙特利尔议定书》2015 年氟氯烃淘汰目标。中国将继续加强旨在实现和保持消耗臭氧层物质淘汰的各项政策和条例，并进一步提高认识，确保各利益攸关方致力于主要涉及氟氯烃的消耗臭氧层物质淘汰活动，以及确保对实施该国氟氯烃淘汰管理计划第二阶段活动的供资，以实现 2020 年目标。执行委员会表示，希望在今后两年，中国继续利用其在消耗臭氧层物质淘汰活动中取得的成果，特别是实现遵守《蒙特利尔议定书》即将采取的氟氯烃控制措施。

黎巴嫩

2. 执行委员会审查了为黎巴嫩第九阶段体制建设项目延长申请而提交的报告，并赞赏地注意到，黎巴嫩成功地持续消耗臭氧层物质淘汰活动，并且实现了完全淘汰除氟氯烃以外的消耗臭氧层物质。特别是，委员会注意到，黎巴嫩的国家臭氧机构在实现其消耗臭氧层物质淘汰目标方面，与工业部门、政府和非政府组织以及公众有着非常密切的合作，这也将有助于该国实现 2015 年氟氯烃消费量削减 10%。此外，执行委员会注意到黎巴嫩为执行该国氟氯烃淘汰管理计划而利用其利益攸关方网络和知识的努力。委员会希望，在今后两年，黎巴嫩能继续利用在实现氟氯烃淘汰管理目标方面取得的进展和经验，并继续加强其国家能力，强化消耗臭氧层物质控制措施，以保持消耗臭氧层物质淘汰，以及实现遵守 2015 年氟氯烃控制措施。

尼日利亚

3. 执行委员会审查了尼日利亚体制建设项目延长申请中的信息。执行委员会赞赏地注意到尼日利亚在执行体制建设项目第八阶段期间取得的成果，特别是氟氯烃配额制度的有效运行，以及按照其在《蒙特利尔议定书》下所做的承诺，实现了氟氯烃消费量冻结在 2013 年基准水平。执行委员会鼓励尼日利亚继续加强配额制度的执行，力争有效完成该国氟氯烃淘汰鼓励计划第一阶段，从而到 2015 年实现氟氯烃消费量削减 10%。

巴基斯坦

4. 执行审查了为巴基斯坦第八阶段体制建设项目延长申请而提交的报告，并赞赏地注意到，2013 年以后巴基斯坦已成功淘汰了用于制造计量吸入器的各类氟氯化碳。委员会进一步赞赏地注意到，通过实施氟氯烃进口配额，以及与海关、主要政府机构和行业的有

效协调，巴基斯坦已经实现了氟氯烃消费量冻结在 2013 年履约的基准水平，并且正在实现 2014 年氟氯烃消费量削减 10%的目标，领先于商定的《蒙特利尔议定书》时间表。执行委员会赞赏巴基斯坦持续完全淘汰大部分消耗臭氧层物质，以及有计划地实现淘汰氟氯烃。执行委员会希望今后两年，巴基斯坦继续增强实施其国家方案的国家能力，以便持续淘汰消耗臭氧层物质和氟氯烃，从而实现其对《蒙特利尔议定书》的承诺。执行委员会还希望巴基斯坦继续利用其在氟氯化碳淘汰方面的经验，并顺利履行今后的氟氯烃控制措施。

特立尼达和多巴哥

5. 执行委员会审查了为特立尼达和多巴哥第八阶段体制建设项目延长申请而提交的报告，并赞赏地注意到，特立尼达和多巴哥成功地持续了消耗臭氧层物质淘汰活动，并且根据《蒙特利尔议定书》，实现了在 2013 年冻结氟氯烃消费量。特别是，特立尼达和多巴哥国家臭氧机构已同私营部门和民间社会开展了密切协调工作，以便于把氟氯烃淘汰计划对社会经济的不利影响降至最低，方法有推广针对海关官员的进修课程，实施并维护可靠的进出口数据库，以及宣传氟氯烃的低全球变暖潜能值替代物，包括在国家科学中心设立互动式臭氧显示屏，以庆祝《蒙特利尔议定书》周年纪念。此外，特立尼达和多巴哥还积极参与了包括臭氧干事区域网络会议在内的所有区域和次区域会议，执行委员会会议，以及《蒙特利尔议定书》会议。执行委员会表示，希望在今后两年，特立尼达和多巴哥利用在持续淘汰消耗臭氧层物质方面取得的进展，以及完善消耗臭氧层物质立法框架和规定，以期实现旨在减少氟氯烃消费量的 2015 年控制措施。

委内瑞拉玻利瓦尔共和国

6. 执行委员会审查了为委内瑞拉玻利瓦尔共和国体制建设项目延长申请而提交的报告，并赞赏地注意到，该国正在采取必要措施，以便持续淘汰氟氯化碳，并且履行与氟氯烃有关的《蒙特利尔议定书》控制措施。执行委员会称赞委内瑞拉玻利瓦尔共和国政府执行氟氯烃配额制度。执行委员会赞赏政府为在国内行业中推广氟氯烃的低全球变暖潜能值替代物所做的工作，以及为协调政府和私营实体行动，以协助该国实现履行《蒙特利尔议定书》控制措施而付出的努力。此外，执行委员会还对公众对于氟氯烃淘汰的认识水平感到高兴。执行委员会表示，希望委内瑞拉玻利瓦尔共和国继续实施其计划中的尚未进行完的活动，并且保持和利用其在减少消耗臭氧层物质消费量方面的现有状态。

United Nations Development Programme
Montreal Protocol Unit / Chemicals

Empowered lives.
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73rd Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol

(9-13 November 2014)

UNDP
2014 WORK PROGRAMME AMENDMENT

16 September 2014

2014 WORK PROGRAMME AMENDMENT

I. EXECUTIVE SUMMARY

The present document constitutes UNDP's 2014 Work Programme Amendment and is being submitted for consideration of the ExCom at its 73rd Meeting. The list of submissions for all funding requests including investment projects that will be submitted by UNDP to the 73rd ExCom Meeting in Annex 1 to this document, is provided for information. Project documentation such as MYA tranches, HCFC investment and demonstration projects and other individual/investment proposals, are not submitted as part of this document and are submitted separately as per normal practice. Only the following (non-investment) submissions are part of the main body of this document.

II. FUNDING REQUESTS PART OF THE WORK PROGRAMME AMENDMENT

Institutional Strengthening Extensions

Requests for funding of extensions of institutional strengthening projects included in this document for submission at the 73rd ExCom Meeting are tabulated below. The documents for terminal reports and requests for extension of IS funding are being submitted separately.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
China	INS	Institutional Strengthening Renewal (Phase XI)	24	390,000	27,300	417,300
Lebanon	INS	Institutional Strengthening Renewal (Phase IX)	24	155,090	10,856	165,946
Nigeria	INS	Institutional Strengthening Renewal (Phase VIII)	24	260,000	18,200	278,200
Pakistan	INS	Institutional Strengthening Renewal (Phase VIII)	24	224,467	15,713	240,180
Trinidad & Tobago	INS	Institutional Strengthening Renewal (Phase VIII)	24	60,000	4,200	64,200
Venezuela	INS	Institutional Strengthening Renewal (Phase XII)	24	285,480	19,984	305,464
Total (6 requests)				**1,375,037**	**96,253**	**1,471,290**

Preparation funding requests

UNDP is submitting 5 funding requests for the preparation of stage II of HPMPs to 73rd ExCom meeting. The table below provides summary information of all PRPs being submitted by UNDP. The Annex 2 contains all PRP submissions.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Armenia (lead)	PRP	Stage II HPMP Preparation (overarching strategy)	24	20,000	1,400	21,400
Chile (lead)	PRP	Stage II HPMP Preparation (foam sector)	24	100,000	7,000	107,000
Chile (lead)	PRP	Stage II HPMP Preparation (overarching strategy)	24	50,000	3,500	53,500
China (lead)	PRP	Stage II HPMP Preparation (overarching strategy)	24	289,750	20,283	310,033

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
China (lead)	PRP	Stage II HPMP Preparation (industrial and commercial refrigeration)	24	399,000	27,930	426,930
China (lead)	PRP	Stage II HPMP Preparation (solvents)	24	374,220	26,195	400,415
Total (6 requests)				**1,232,970**	**86,308**	**1,319,278**

Other requests for non-investment projects

Pursuant to the ExCom decision 72/22, as part of the Work Programme Amendment, UNDP is submitting to 73rd ExCom meeting the requests for funding for verification reports for stage I of HPMPs for Angola, Armenia, and Moldova.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Angola	TAS	Verification report for stage I of HPMP	15	30,000	2,700	32,700
Armenia	TAS	Verification report for stage I of HPMP	15	30,000	2,700	32,700
Moldova	TAS	Verification report for stage I of HPMP	15	30,000	2,700	32,700
Total (3 requests)				**90,000**	**8,100**	**98,100**

III. SUMMARY OF FUNDING REQUESTS (WORK PROGRAMME)

The table below summarizes the funding requests for non-investment activities and proposals, as part of UNDP's Work Programme for 2014, submitted to the 73rd ExCom Meeting:

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Angola	TAS	Verification report for stage I of HPMP	15	30,000	2,700	32,700
Armenia	TAS	Verification report for stage I of HPMP	15	30,000	2,700	32,700
Armenia	PRP	Stage II HPMP Preparation (refrigeration servicing)	24	20,000	1,400	21,400
Chile	PRP	Stage II HPMP Preparation (foam sector)	24	100,000	7,000	107,000
Chile	PRP	Stage II HPMP Preparation (refrigeration servicing)	24	50,000	3,500	53,500
China	INS	Institutional Strengthening Renewal (Phase XI)	24	390,000	27,300	417,300
China	PRP	Stage II HPMP Preparation (overarching strategy)	24	289,750	20,283	310,033
China	PRP	Stage II HPMP Preparation (industrial and commercial refrigeration)	24	399,000	27,930	426,930
China	PRP	Stage II HPMP Preparation (solvents)	24	374,220	26,195	400,415
Lebanon	INS	Institutional Strengthening Renewal (Phase IX)	24	155,090	10,856	165,946
Moldova	TAS	Verification report for stage I of HPMP	15	30,000	2,700	32,700
Nigeria	INS	Institutional Strengthening Renewal (Phase VIII)	24	260,000	18,200	278,200
Pakistan	INS	Institutional Strengthening Renewal (Phase VIII)	24	224,467	15,713	240,180
Trinidad & Tobago	INS	Institutional Strengthening Renewal (Phase VIII)	24	60,000	4,200	64,200
Venezuela	INS	Institutional Strengthening Renewal (Phase XII)	24	285,480	19,984	305,464
Total (15 requests)				**2,698,007**	**190,660**	**2,888,667**

ANNEX 1

List of all UNDP submissions for funding to the 73rd ExCom Meeting

No	Country	Type	Description	Funding Request for the 73nd ExCom (US$)		
				Amount	Agency Fee	Total
1	Angola	TAS	Verification report for stage I of HPMP	30,000	2,700	32,700
2	Armenia	PHA	Stage I HPMP - 3rd tranche	31,515	2,364	33,879
3	Armenia	TAS	Verification report for stage I of HPMP	30,000	2,700	32,700
4	Armenia	PRP	Stage II HPMP Preparation (refrigeration servicing)	20,000	1,400	21,400
5	Brazil	PHA	Stage I HPMP - 3rd tranche	3,000,000	225,000	3,225,000
6	Chile	PHA	Stage I HPMP - 3rd tranche	295,744	22,181	317,925
7	Chile	PRP	Stage II HPMP Preparation (foam sector)	100,000	7,000	107,000
8	Chile	PRP	Stage II HPMP Preparation (overarching strategy)	70,000	4,900	74,900
9	China	PHA	Stage I Investment proj./Sector Plans (ICR Sector Plan)	11,075,000	775,250	11,850,250
10	China	INS	Institutional Strengthening Renewal (Phase XI)	390,000	27,300	417,300
11	China	PRP	Stage II HPMP Preparation (overarching strategy)	289,750	20,283	310,033
12	China	PRP	Stage II HPMP Preparation (industrial and commercial refrigeration)	399,000	27,930	426,930
13	China	PRP	Stage II HPMP Preparation (solvents)	374,220	26,195	400,415
14	Cuba	PHA	Stage I HPMP - balance of the 2nd tranche	162,473	12,185	174,658
15	Fiji	PHA	Stage I HPMP - 2nd tranche	47,900	4,311	52,211
16	Haiti	PHA	Stage I HPMP - 2nd tranche	97,119	8,741	105,860
17	Lebanon	INS	Institutional Strengthening Renewal (Phase IX)	155,090	10,856	165,946
18	Moldova	TAS	Verification report for stage I of HPMP	30,000	2,700	32,700
19	Nigeria	PHA	Stage I HPMP - 4th tranche	503,829	37,787	541,616
20	Nigeria	INS	Institutional Strengthening Renewal (Phase VIII)	260,000	18,200	278,200
21	Pakistan	INS	Institutional Strengthening Renewal (Phase VIII)	224,467	15,713	240,180
22	Panama	PHA	Stage I HPMP - 3rd tranche	31,865	2,390	34,255
23	Trinidad & Tobago	INS	Institutional Strengthening Renewal (Phase VIII)	60,000	4,200	64,200
24	Uruguay	PHA	Stage I HPMP - 4th tranche	20,000	1,500	21,500
25	Venezuela	INS	Institutional Strengthening Renewal (Phase XII)	285,480	19,984	305,464
Total (25 requests)				**17,983,452**	**1,283,769**	**19,267,221**

Notes:

1. All amounts in US dollars
2. Special reports due (delays, balances, status reports, etc.) will be submitted separately as well as other projects not part of the WP and listed above.

ANNEX 2

Funding requests for the preparation of stage II of HPMPs for the following countries:

Armenia
Chile
China

ARMENIA

PREPARATION OF HCFC PHASE-OUT MANAGEMENT PLAN (HPMP) - Second (2nd) Stage – For compliance with 2020 targets

PROPOSED INSTITUTIONAL ARRANGEMENTS AND BUDGETS

PREPARED BY

National Ozone Unit - Armenia
United Nations Development Programme (UNDP)
United Nations Environment Programme (UNEP)

September 2014

PREPARATION OF HPMP-Stage II

Proposed Institutional Arrangements and Budget

1. INTRODUCTION

This document describes the proposed institutional arrangements and budgets for preparation of HPMP-Stage II for Armenia, which has assigned to UNDP, as a lead, and UNEP, as a cooperating implementing agency, the responsibility of preparing the related documentation. Such arrangements would need:

a) To reflect national context and priorities, national policies and country-drivenness and consequently would need the agreement of the Ministry of Nature Protection of the Government of Armenia (MNP) and the National Ozone Unit (NOU) to the proposals contained herein;

b) To facilitate seamless application of the proposed arrangements to the next implementation stage of the HPMP to follow, once it is approved – HPMP-Stage II (2015-2020);

c) To draw upon the lessons learnt from functioning of institutional arrangements and operational mechanisms employed in the implementation of HPMP-Stage I and to the extent possible ensure coordinated implementation existing MLF-funded initiatives;

d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations.

2. BACKGROUND

The XIXth Meeting of the Parties to the Montreal Protocol in September 2007, through its Decision XIX/6, adopted an accelerated phase-out schedule for HCFCs. The first control is the freeze on production and consumption of HCFCs would be from 01 January 2013, at the Baseline Levels (average of 2009 and 2010). The second control step is the reduction of 10% from the Baseline Levels in 2015. The decision also directed the Executive Committee (ExCom) of the Multilateral Fund to assist the Parties in preparation of HCFC phase-out Management Plans.

The 54th Meeting of ExCom in April 2008, through Decision 54/39, adopted guidelines for preparation of HCFC phase-out management plans. These guidelines provided indicative outline and contents of the HCFC phase-out management plans, which are essentially based on earlier guidelines developed and followed for the Terminal Phase-out Management Plan (TPMP) (RMPs/TPMPs/SPPs/NPPs). The decision featured the following key elements:

a) Adoption of a staged approach to implementation of the HCFC phase-out management plans within the context of an overall national strategy. The first stage would focus on compliance with the 2013 freeze and 2015 reduction targets. The second stage would focus on HCFC phase-out in compliance with the future reduction control targets;

b) Commitments to achieving the 2013 (freeze at the 2009/2010 baseline level) and 2015 (10% reduction) control milestones through performance-based agreements;

c) In countries where there are multiple implementing agencies, a lead agency should be designated to coordinate the overall development of the HCFC phase-out management plans.

Acting through UNDP as HPMP formulation agency, Armenia approached the MLF and the Executive Committee for a preparatory funding of US$ 85,000 and at the 55th meeting of ExCom in July 2008 this request was approved.

While initial HPMP-Stage I formulation works were ongoing in that time, the 60th ExCom in April 2010 reviewed and approved HCFC phase-out funding criteria (decision 60/44). Less than a year after, at the 62nd ExCom meeting in December 2010, the HPMP-Stage I for Armenia was approved for implementation.

At the coming 73rd meeting of ExCom, Armenia expects that its last tranche of HPMP-Stage I will receive approval, and that the national level activities to finalize implementation of this initial stage will be completed during 2014 to prepare the country to meet 2015 reporting obligations – 10% reduction in HCFC consumption from baseline situation.

With respect to preparation for HPMP-Stage II, the 71st ExCom agreed to related funding guidelines for Article 5 countries (decision 71/42). The current request has been prepared based on recommendations contained in this guidance document.

3. PROGRESS IN HPMP-STAGE I IMPLEMENTATION

(a) *A description of the current progress in implementation of the overall stage I of the HPMP to demonstrate that substantial progress had been made, supported with both quantitative and qualitative data (two to three paragraphs)*

The HPMP document, with a specific Stage I covering the programme period of 2010-2015, was approved at the 62nd ExCom meeting in December 2010 in Montreal, Canada and contains an overall country's strategy for meeting the required HCFC phase-out schedule through to 2030 when substantive HCFC use in Article 5 countries is expected to be reduced. This involves two HP<P implementation stages corresponding to (1) 2010-2015 and (2) 2015-2030 respectively.

In HPMP Stage-I (2010-2015), a menu of regulatory and administrative control measures were outlined including imposition of mandatory quotas on the import of HCFCs set at the consumption freeze (average of 2009/10) level in 2013 and a follow-up 10% reduction in 2015, as well as other control measures related to controlling import of HCFCs.

Proposed non-investment activities have supported a range of actions related to enhancing Customs control practices and, most critically, the availability and capacities of refrigeration servicing technicians, through initial trainings, and strengthening of coordination and reporting. Finally, two specific investment projects were proposed. One supports the conversion of the country's only consumer in the manufacturing sector to non-ODS/low GWP alternatives, an action that has been important in preparing the country to meet its 2013 obligations, while the second project initiated the first steps to equip qualified technicians/principal repair workshops with tools to ensure better quality equipment maintenance and help reduce HCFC use during such servicing practices. Launching such technology

conversion project in the manufacturing sector, in Stage I, and doing this in association with the initiation of training and capacity building in the servicing sector has been seen as essentially important to the country's prospects of meeting HCFC phase-out obligations during 2013/2015 milestone reporting period.

The overall incremental cost approved for the implementation of HPMP Stage-I is US$ 633,353. Details of this funding are summarized as follows:

	IA	Project	TOTAL	Tranche 1
1&2. Non-investment Components	UNEP	Legal and Regulatory Action	10,000	10,000
	UNEP	Import and Application Control Capacity	14,000	9,000
	UNEP	Refrigeration Servicing Human Resource and Institutional Capacity	10,000	10,000
	UNEP	Monitoring	5,000	2,515
3. Investment Components	UNDP	SAGA - Manufacturing Sector Phase Out	534,353	247,479
	UNDP	Initial development of the Refrigerant Management System	60,000	18,182

Total

	TOTAL
Sub-total UNEP	39,000
Sub-total UNDP (lead)	594,353
Support Cost UNEP	5,070
Support Cost UNDP (lead)	44,577
Grand Total UNEP	44,070
Grand Total UNDP (lead)	638,930
	683,000

It should complementary be noted that the country had opted to receive institutional strengthening (IS) assistance outside of this HPMP, as was the case in the past, the IS programme is implemented by UNIDO.

At the 62nd ExCom meeting, Armenia obtained financial support from the Multilateral Fund to cover implementation of Stage 1 of the HPMP in the amount of US$ 297,176 representing Tranche 1. UNDP, as a lead implementing agency, received US$ 265,661 for implementation of the investment projects, and UNEP, as a cooperating agency, received US$ 31,515 for the non-investment activities.

Upon submission of a request for follow-on tranche, the second tranche of financing for US$297,177 which was mainly associated with completion of the investment component for refrigeration manufacturing component (US$ 286,874) and some additional support in the servicing sector (US$ 10,303) was approved at the 66th ExCom meeting in April 2012.

Based on the scheduled submission of the last tranche of HPMP-Stage I in 2014, Armenia has made preparation of a progress report and request for the last tranche to the 73rd ExCom meeting.

Among main achievements under Tranche 1 of HPMP-Stage I are the following important elements:

Phase-out activities in the manufacturing sector – SAGA (UNDP)

Technology equipment, after assembly and shipment, was supplied to SAGA (in crates at the facility) in November 2013 but due to in-house financial constraints, SAGA was unable to perform all required

local works, which was a necessary pre-condition for the technology installation by the supplier. The installation of equipment was then postponed to the second half of 2014, and NOU/UNDP has had several consultations with the company to enable the original agreement to stay in effect in order to respect the HPMP objectives. A final visit by the international expert is expected at the same time, and will be related to oversight on equipment installation by the suppler, monitoring of local works done, and production and safety trials with new ODS-free/low GWP technologies at SAGA manufacturing facility.

Initial development of Refrigerant Management System (UNDP)

In 2012, NOU/UNDP Armenia announced tender for procurement of service tools for local companies. Among two local and one international applicants, TST STAG (Spain) was selected a winner. Following this, in October 2012, twenty nine (29) sets of tools were delivered to Yerevan. Twenty five (25) sets were distributed to service companies, and the remaining 4 sets were handed over to the Refrigeration Association of Armenia. The work in this sub-component was supported by a national expert.

Non-investment Activities (UNEP)

Legislative framework

Terms of references were compiled and two legal consultants hired to propose new draft HCFC-related legislation to the Ministry. The following legislative acts have been drafted and proposed to the Ministry:

- On November 3, 2011 Armenia amended the Government Resolution N 327-N dated March 15, 2007 on the list of controlled ozone-depleting substances (ODS) and related import quotas and added import quotas for HCFCs until 2020. During 2013/2014, HCFC imports were allowed up to 137.4 MT and from 2015 up-to 90% of this amount. The Amendment N 1554-N dated November 3, 2011 was then translated into English and made available at the website of the National Ozone Unit of Armenia (www.armozone.am).

- Additionally it was planned to amend HCFC freeze level from the baseline of 137.4 MT to 126.705 MT to bring it in line with the base level set by the Ozone Secretariat which excluded the import of HCFC 141b based poliols reported by the country. The amendment was drafted and later on adopted on 7 June 2013. Currently the import quotas cover 2013-2040 commitment period.

- The Government Resolution on Monitoring and Control of Imported HCFC-based Equipment and Products was drafted and submitted to the Ministry.

- The Government Resolution on Introducing of ban on the import and or use of HCFC-141b contained in the pre-blended polyol systems was drafted but its adoption will be possible only after the technological conversion at SAGA foam enterprise is completed (expected end of 2014).

- Apart from the planned regulatory acts a new Government Resolution on Banning Import of New and Second-hand CFC-based Equipment was drafted, circulated and submitted to the Government.

- An analytical survey on existing national standards, certification and technological regulations on educating the refrigeration technicians and conducting construction works to allow further planning of training and certification scheme was conducted.

- The Legislation Manual "Guide on ODS Import/Export National Procedures" was developed and uploaded to the NOU Armenia website in April 2012 – www.armozone.am. The Manual was also publicized in February 2013 during the roundtable for HCFC importers.

- In January 2012 and 2013 the Annual NOU meetings took place to discuss the achievements of 2011, 2012 and the work plan for 2013. HPMP implementation was among the main issues discussed during the meeting, priority given to the legislation component.

Trainings/capacity building in the refrigeration sector

A consultant was hired to update the training material for refrigeration technicians with a decision taken to translate UNEP's Training Manual (E-book) into Armenian and combine it with the previously used manual prepared originally in 2006. The manual was prepared and uploaded onto the main NOU's website - www.armozone.am.

For the trainings, during stakeholder consultations it was initially decided to conduct one training session for forty (40) participants by the end of 2012/early 2013 due to limited financial resources. The training sessions were planned to match the equipment supply by UNDP, and the initial training for twenty three (23) technicians was held in October 2012. The second session took place on 11 June 2013 for nineteen (19) technicians.

Overall forty two (42) refrigeration technicians were trained on good practices in the refrigeration sector. The training was organized at premises of the Yerevan State University of Architecture and Construction.

The main subjects which have been covered at the workshops are listed below:

- global ODS/HCFC phase-out processes and initiatives and current situation in Armenia: accelerated HCFC phase-out schedule;
- next generation refrigerants: natural refrigerants;
- methodologies of ODS/HCFC recovery/re-use, description of recovery machines and other necessary tools and equipment in support of HCFC re-use and leakage minimization;
- main principles of appliance/equipment retrofit;
- presentation of the ECACool website (a regional CAP supported clearinghouse on news/best practices/alternative refrigerants from the region and globally) and recent and updated publications on RAC; and
- practical demonstrations of the equipment's operation and use.

Customs training

The agreement has been reached with the Customs Service at the Stakeholders Consultation meeting (it was organized on 8 November 2011) to ensure required procedures for training, and the Customs Service was requested to provide inputs for the methodology on training activities.

A complementary agreement has also been reached on using the e-learning module on Montreal Protocol of WCO in addition to the Customs Officers traditional face-to-face training. WCO E-learning focal point in Armenia emphasized at the meeting that no e-learning modules were applied before due to the absence of Armenian or Russian versions. Since the Customs Training Center was undergoing reconstruction at that moment, it was decided to resume discussions over the training schedules in the second quarter of 2012.

The start in developing sustainable training capacities was planned in 2011 with target for implementation in 2012; however, due to the reconstruction works at the main training center the initiative had to be postponed to June 2013.

A TOR was drafted and a consultant was hired to update training materials. The manual "Preventing the Illegal Trade in HCFCs" was translated into Armenian and uploaded to the website www.armozone.am. The main goal of the training programme was to improve the professional skills of Customs staff in physical checking of imported chemicals and products, and verification of supplied documents/applications. Customs department such as the Access Control, Anti-smuggling and Verification, Customs Tariffs and Clearing, Duties Regulation and Registration Divisions took part in trainings.

The main subjects which were covered at the workshops are listed below:

- international agreements related to protecting the ozone layer and the situation in Armenia;
- current national legislation/rules on controlling ODS;
- illegal trade in ODS and common smuggling techniques;
- risk assessment and documents quality checks for import applications; and
- refrigerant identification (by using multi-gas identifiers).

The first training of twenty two (22) officers took place in June and the second one covering eighteen (18) officers in July 2013. In total, NOU has trained forty (40) staff using "Customs Control of Transboundary Movement of Ozone Depleting Substances" courses under the Tranche 1 of HPMP-Stage I.

After extended consultations, the Customs Administration agreed to include the training course on Preventing the Illegal Trade in ODS into the prime training curriculum adopted by Customs in terms of upgrade. The course will regularly take place once per month starting end 2013.

Monitoring of activities

A monitoring officer was hired to follow the timely implementation of HPMP's non-investment component and review its effectiveness. Quarterly meetings with NOU members were taking place to follow progress, and identify implementation barriers if any. HPMP-Stage I's Tranche 1 (UNEP) implementation has been monitored by the First Deputy Minister of Environment of Armenia.

During implementation of Stage I of the HPMP, NOU has disbursed approximately US$ 594,353 as of 2014 data. This represents 91% delivery to-date.

For more details on the progress achieved under Tranches 1 and 2 of HPMP-Stage I, please refer to a separately submitted Progress Report and Request for the Last Tranche.

(b) For the overarching strategy (one page, plus a table):

(i) A brief overview of the current HCFC consumption by substance and distribution by sector/subsector, with a short analysis and explanation of the consumption trend (i.e. increasing or decreasing). The remaining consumption eligible for funding should also be provided (this information is available from Appendix 2-A: The Targets, and Funding, of the Agreement between the Executive Committee and the country when their stage I HPMP was approved);

Armenia has provided Article 7 reports to the Ozone Secretariat and the summary of that information is provided below in ODP tons:

Chemical	2008	2009	2010	2011	2012	2013	Baseline
CFCs	13.6	18.1	0.0	0.0	0.0		196.5
Halons	0.0	0.0	0.0	0.0	0.0		0.0
HCFCs	4.8	6.8	7.1	7.5	5.67		7.0
Methyl Bromide	0.0	0.0	0.0	0.0	0.0		0.0

Based on Country Programme and Article 7 Data, the consumption levels for 2011 and 2012 are indicated in the tables below.

2011

Substance	Foam	Refrigeration		Total	Import
		Manufacture	Servicing		
HCFC-22		30	106.4	136.4	136.4
HCFC-141b in imported Pre-blended Polyol	20.3			20.3	20.3
				156.7	156.7

2012

Substance	Foam	Refrigeration		Total	Import
		Manufacture	Servicing		
HCFC-22		22	72	94	103
HCFC-141b in imported Pre-blended Polyol	22			22	22
				116	125

Based on this information, it can be assumed that the HCFC import has been demonstrating a slow downward trend on a yearly basis.

Remaining eligible HCFC-22 consumption is found in the servicing sector, and is contained imported appliances/refrigerated packages.

(ii) A description of the information that needs to be gathered and updated, as well as an explanation of why this had not been undertaken during the preparation of stage I; and

HCFC data collection and verification will follow those survey procedures developed and applied in the preparation of HPMP Stage-I, and will be directed to updating information in the field by deployment of a local expert team on in-country travel to principal territorial administrative units (regions), and main cities.

Direct discussions will be held with HCFC/HCFC equipment importers and distribution centers (companies), and assessments will be made on the future needs in HCFCs in servicing equipment fleet that has been already imported and installed in the country.

Appropriate consultations in the industry/private/public sectors will be arranged in regions on the Stage-II preparatory processes, expected information inputs, timeframes proposed for finalization of formulation works and future design of the Government's backed interventions on the national level to prepare the country to meet 2020 HCFC phase-out obligations.

NOU will make sure that stakeholders are well informed on future legislative measures that may cover selective bans on import of HCFC-based equipment and appliances.

(iii) An indication of the activities that need to be undertaken for PRP. Each activity (e.g., surveys, consultation meetings) has to be described briefly, taking into account what had been completed in stage I, and why a new or similar activity is required to develop the strategy for stage II. The costs for undertaking such activities should also be provided in a table;

As mentioned in the HPMP overarching strategy/Stage I document, it was recognized at the outset that a strictly "top down" approach of relying on reported import data may have limitations. As in any country, the accuracy and comprehensiveness of this type of data will be a function of the capacity of the responsible institutions to identify imported HCFCs and potentially HCFC containing equipment/products through the licensing system, Customs data, and its level of physical enforcement. It will also be a function of the degree to which importers, distributors and end users of such equipment voluntarily comply with reporting and control measures and what economic and structural factors may exist to discourage such compliance.

In view of the above limitations, a more comprehensive "bottom up" approach to estimating HCFC consumption was adopted during preparation of HPMP-Stage I. It relied on direct survey and supplemented by the use of statistically based data to estimate the bank of HCFC containing equipment in service. The survey based methodology involved data collected directly at the enterprise level, including import/distribution enterprises, end users of HCFCs and HCFC containing equipment, and refrigeration servicing organizations, along with statistical data related to the amount of HCFC containing equipment in the country.

This approach was facilitated by the extensive network of contacts maintained by the NOU generally

and particularly in the refrigeration sector, including involvement of the developing refrigeration association. Additional contacts among end-users generally were obtained through relevant national and local government agencies, as was the statistical data related to estimated total inventory of operating HCFC containing equipment.

In the current proposed work to formulate HPMP-Stage II, the NOU with support from UNDP and UNEP will follow the same format of work and update required baseline information, backed by the outreach to the HCFC importers and end-users in commercial sector as well as industry (agriculture, product supply chain), and identify the priority next steps to be taken to meet 2020/35% HCFC reduction step. Approaches to implement this phase-out will be designed in discussions with stakeholders and presented in a format for HPMP-Stage II acceptable for the review by the MLF and ExCom.

The following presents the joint budget for UNDP and UNEP:

Implementing agency	Budget in US$
UNDP (lead)	20,000
UNEP (cooperating)	10,000

And, activities planned by each implementing agency are described in detail below:

1. HPMP-Stage II formulation and proposal for investment components formulation (UNDP)

UNDP will provide support to overall coordination HPMP-Stage II preparation activities and interact with partner UNEP agency during data collection and HPMP formulation.

On the national level, UNDP will help with recruitment of local expertise to enable local travel, stakeholder consultation on HCFC data collection and validation, assessment of HCFC consumption scenarios and development of draft action plan. Priority activities for investment components to meet next HCFC reduction milestone in 2020 will be presented to key stakeholders, consulted on and included in the action plan of HPMP-Stage II document.

The budget of US$ 20,000 will cover national experts, local travel (DSA, tickets) and costs of national workshops in partnership with UNEP.

UNDP Budget Lines	**US$**
National experts	7,000
Local travel (for experts, NOU staff)	5,000
Stakeholder workshops (co-shared with UNEP: total for workshops US$ 10,000)	5,000
Printing/operational expense/translation	3,000
Sub-total	**20,000**

2. Non-investment component proposal (UNEP)

UNEP will support information collection and analysis for the non-investment components, and cover the policy and legislation aspects and capacity building activities in HCFC import/export monitoring function and the servicing sector for technicians.

The specific details of plan of action for phase-out would be set-out in the HPMP Stage II strategy and implementation plan document which will be developed by UNDP/UNEP for submission to the MLF Secretariat.

A summary table containing the activities that are proposed by UNEP be undertaken as a part of HPMP non-investment components preparation along with costs for the same is given below:

Activities	Details	Value in USD
National Consultants	Local expertise will be recruited to enable the following field work: - Consideration of the need for additional legislative measures (selective equipment bans, etc) to support the continued HCFC phase-out process - Consideration of the need for additional actions for introduction of low GWP alternatives to HCFCs into the country in terms of safety/application standards, training, economic incentives; - Consideration of the need for additional training of customs officials and service technicians - Consideration of relevant Customs & ODS legislation in the Customs Union and evaluation of potential needs of the country in monitoring legal and preventing illegal ODS trade - Support consultations with national stakeholders including servicing sector for development of implementation plan for non-investment component. - Prepare and finalize UNEP non-investment component for Armenia, Rep Stage-II HPMP, primarily covering policy, training and capacity building needs of the country.	5,000
Stakeholder workshop	- Consultative stakeholder workshop (inclusive DSA for participants, travel, printing, venue, operational expenses) to present and to obtain the endorsement of the strategy of UNEP non-investment component for Armenia Stage-II HPMP. This will be held in an integrated manner with the workshop held under UNDP component (as a lead agency) during the Stage-II preparation phase	5,000
Total (UNEP component)		**10,000**

4. ROLES AND RESPONSIBILITIES OF STAKEHOLDERS

This section outlines the roles and responsibilities of respective stakeholders in the implementation of activities involved in the preparation of the HPMP.

3.1 Ministry of Nature Protection (MNP)

The MNP is the designated ministry responsible for the Montreal Protocol in Armenia and operates through several departments, institutions and organizations. The key responsibilities of MNP in context of the Montreal Protocol are as below:

- Developing basic national principles on global issues; administering international cooperation and exchanges; participating in and coordinating important international activities; administering foreign economic cooperation; coordinating and implementing relevant overseas funded projects; handling international affairs; and responsible for liaison with international development as well as environmental organizations;
- Acting as focal point of managing, organizing and coordinating implementation activities;
- Formulating general and specific policies, laws and regulations, and administrative rules and regulations and organizing their implementation;
- Organizing research and development, and technical demonstration projects;
- Administering information/management systems, labeling and certification programmes
- Responsible for monitoring, statistics and information; formulating monitoring systems and norms; guiding and coordinating promotion, education, and publishing work; and promoting the participation of the public and NGOs

3.2 National Ozone Unit (NOU)

The NOU's operations are associated with and carried out under MNP overall mandate. It carries out all tasks mentioned in the previous section when they relate specifically to the Montreal Protocol. The NOU thus functions as the country's focal point for the coordination of the ODS phase-out projects.

3.3 Implementing Agencies for HPMP Preparation

UNDP has been designated as the lead Implementing Agency and UNEP as the cooperating Implementing Agency for the preparation of the HPMP (Stage-II) for Armenia. The draft HPMP will be prepared following the guidelines approved by ExCom in related decisions and this will be done in close cooperation with MNP. UNDP will submit the HPMP document to ExCom upon endorsement of the final draft HPMP by Government. The role of UNDP/UNEP, respectful of assigned mandates, sectors of work and types of future assistance, during the preparation of HPMP (Stage-II) would be as follows:

With respect to MNP/NOU

- Support MNP/NOU in ensuring an effective and smooth process in preparation of the HPMP;
- Support MNP/NOU in review and endorsement process on the draft HPMP, for timely finalization and submission to the ExCom;
- Provide assistance with policy, management and technical support to MNP/NOU when required.

With respect to Industries/commercial sectors

- Assist MNP/NOU in the process of consultations with industries, commercial sectors and other relevant stakeholders on the technical and logistical aspects of the preparation of the sectoral and integrated HPMP;

- ❖ Assist MNP/NOU in discussions with industries, commercial sectors and relevant stakeholders on identification and selection of alternative technologies and technology transfer.

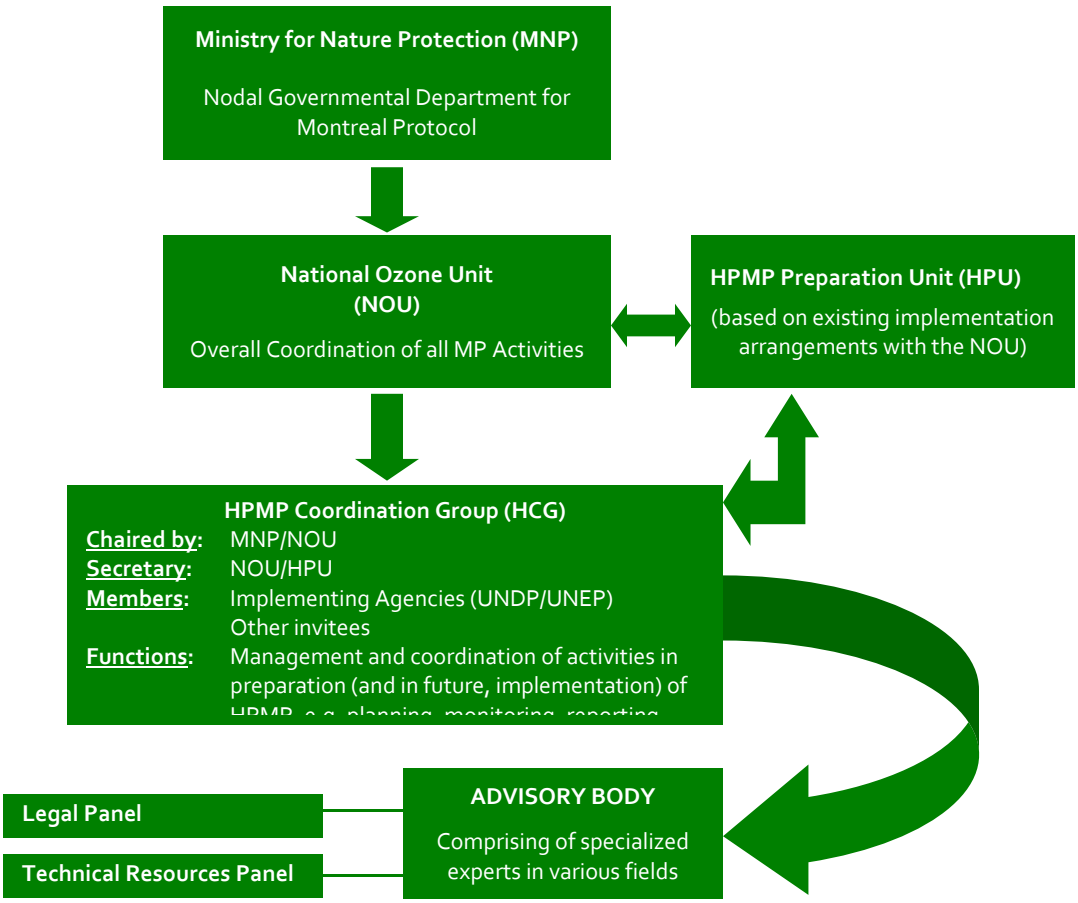
With respect to MLF Secretariat and ExCom

- ❖ Undertake consultations and clarifications with MLF Secretariat on HPMP guidelines and HPMP preparation process to facilitate effective preparation;
- ❖ Assist MNP/NOU in responding to comments on HPMP from MLF/ExCom.

4. PROPOSED INSTITUTIONAL FRAMEWORK

It is proposed to establish the following institutional framework for preparation of the HPMP, which can be subsequently adapted for implementation of the HPMP.

Figure-1: Proposed Institutional Framework



a) HPMP Preparation Unit (HPU)

The NOU is an existing infrastructure for day-to-day physical implementation of activities associated with the Montreal Protocol programmes.

The implementation structure for preparation of HPMP-Stage II will be linked to a direct supervision of the National Ozone Officer of NOU assisted by required national experts/ administrative staff. This structure (HPU) would have the following key responsibilities:

- ❖ Operational responsibility for implementation of activities under the HPMP-Stage II preparation with the assistance of the implementing agencies (work plans, etc);
- ❖ Act as a focal point for prospective recipient enterprises in various HCFC-consuming sectors;
- ❖ Manage enterprise participation and enterprise-level HCFC phase-out/conversion activities (during implementation).

b) HPMP Coordination Group (HCG)

The HPMP Coordination Group will serve as an overall coordination body for activities related to the preparation and implementation of the HCFC phase-out management plan.

Members

- ❖ Representatives from MNP/NOU, the National Committee on Ozone Depleting Substances (NCODS) and the Implementing Agencies (UNDP/UNEP) as core members;
- ❖ Representatives from the Technical Resources Panel and other advisory panels (see below) as invitees when required
- ❖ MNP/NOU representative acts as Chair
- ❖ The HPU representative acts as Secretary

Functions

- ❖ Overall coordination of implementation in collaboration with MNP/NOU
- ❖ Periodic review and monitoring/evaluation of progress of implementation
- ❖ Any corrective interventions as required
- ❖ Technical and policy advice to MNP/NOU on HCFCs as necessary

It is expected that the HCG would meet at least twice a year for review and coordination of HPMP preparation and future implementation activities.

c) Advisory Body

The HCG, in consultation with the MNP/NOU, will establish an advisory body to provide specialized technical and other advice for implementation of various activities under the HPMP. The advisory body could cover technical, financial, legal and other aspects, pertaining to the preparation and implementation of the HCFC phase-out management plan. At a minimum, it is considered necessary to establish a technical body proposed to be named as the Technical Resources Panel (TRP) for providing technical advice upon request, to the HCG on technologies related to HCFCs and HCFC alternatives.

5. HPMP PREPARATION

The preparation of the national HPMP would involve the following broad activities:

- Initial consultation meetings for stakeholders
- Constituting the national team
- Information dissemination and industry interaction
- Data Collection
- Data Analysis
- Draft document preparation
- Stakeholder interactions/consultations
- Finalization of the HPMP-Stage II proposal

5.1 Initiation Meetings of/for Stakeholders/Industry

The initial meeting(s) of/for stakeholder consultation would mark the commencement of activities involved in the preparation of the HPMP-Stage II.

The expected outcomes of these meetings would be to finalize the roles and responsibilities of the various stakeholders/industry, development and finalization of the terms of reference for activities and personnel, finalization of work plans for various activities and development of formats and templates for data collection and reporting.

5.2 Constituting the National Team

This would include recruitment and/or nomination of national personnel and experts for fulfilling various positions as envisaged in the proposed institutional framework. Existing arrangements of NOU coordinating/managing/supervising such work will employed by both UNDP and UNEP as implementing agencies.

NOU will decide on the needed national expertise support.

5.3 Information Dissemination and Industry Interaction

The following sub-activities are envisaged:

- Preparation of information materials on HCFC phase-out
- Industry interaction workshops for various sectors (preferably by region to improve outreach)
- Consultations on existing HCFC alternatives and GWP implications: experience from global technology forums will be shared (MLF pilot technology projects, CCAC, TEAP, CAP Network meetings etc)
- Preparation of documentation/reports on findings

5.4 Data Collection

Data collection on industry profiles, baselines, consumption, etc. will be collected for various HCFC-consuming sectors, through nationally sub-contracted experts.

This would include the use of previously developed questionnaires and formats for reporting the information and data collected.

The data collected would be cross-checked and verified through NOU and Refrigeration Association in terms of legal eligibility as per local regulations.

5.5 Data Analysis

The data analysis would include but not necessarily be limited to classification of data based on present and historical HCFC consumption by enterprise, sector, sub-sector and application, list of HCFC users segregated by sector/sub-sector, data on first and second conversions by sector/sub-sector, historical (production where applicable) consumption and export data by sector/sub-sector, projected growth trends beyond 2013 and until 2020, and required reductions in HCFC consumption for meeting the 2020 reduction, by sector/sub-sector.

5.6 Preparation of draft proposal

Based on the data collected, sector-wise draft proposals for would be prepared in collaboration with MNP/NOU.

The draft HPMP-Stage II proposal will be prepared, based on data collected and stakeholder consultations, focusing on compliance with the 2020 reductions with respect to the established baseline (average of 2009 and 2010) level.

The draft HPMP-Stage II proposal would be discussed by the HCG and the final draft would be forwarded to MNP/NOU for further comments from national stakeholders.

5.7 Stakeholder Consultations

The draft HPMP (Second Stage) document will be circulated by MNP/NOU among the various national stakeholders for comments.

In addition, a national stakeholder consultation workshop will be arranged with participation from key national stakeholders, implementing agencies, national and international experts, key representatives of the national scientific and technical institutions and industry representatives. The comments and recommendations of the stakeholders shall be collected and collated by NOU and forwarded to the HCG.

In the view of global discussions on HCFC-free/low GWP alternatives and in light of ongoing consultations of Montreal Protocol Parties on HFCs, MNP/NOU will schedule national level discussions in this respect with appointed focal points for UNFCCC/Kyoto protocol, NAMAs, GEF, and CCAC for purposes of assessing opportunities for complementary programmes from GEF/bilateral resources in the servicing sector

5.8 Finalization of the HPMP Proposal (Second stage)

The HCG will discuss the comments received from national stakeholders and the Implementing Agencies will finalize the HPMP (Stage-II) proposal in consultation with MNP/NOU, after incorporating comments and recommendations of the national stakeholders. The finalized proposal will be sent to government for endorsement and thereafter submitted to MLF by UNDP/UNEP.

6. TIME FRAME/MONITORING MILESTONES FOR HPMP PREPARATION

The approval of HPMP-Stage II preparation funding is expected at the 73rd Executive Committee meeting in November 2014. In order to complete the project formulation works, NOC estimates that 12 months will be required to have HPMP-Stage II document drafted and prepared for submission to the MLF.

MILESTONE/TIME FRAME (In months)	M1/3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Start-up of project activities	X									
Initiation meetings of/for stakeholders	X	X								
Constituting the national team	X	X								
Information dissemination/industry interaction			X	X						
Data collection			X	X	X	X				
Data analysis					X	X	X			
Preparation of draft proposal							X	X	X	
Stakeholder consultations									X	X
Finalization and submission									X	X

7. PROPOSED BUDGETS

The proposed budget and breakdown for HPMP preparation is attached as Annex-1 to this document.

ANNEX 1

Proposed Budget for HPMP-Stage II Preparation

Activity	Proposed Budget (US$)
UNDP/UNEP	
Initiation meetings of/for stakeholder consultation (Stakeholder/Industry Workshop)	
Meeting arrangements including venue, etc (sub-contract):	2,000
Documentation/poster and information materials (sub-contract):	500
Local travel and expenses for key stakeholders (airfare, DSA, TA):	2,500
Sub-total:	**5,000**
National Team (Personnel and Operational Costs)	
HPMP Preparation Unit	
National experts: legislation, Customs, servicing and equipment assembly sectors (12 months)	12,000
Local travel for data collection/validation	5,000
Printing reporting/other documentation for NOU/working groups	1,000
Translation	2,000
Sub-total:	**20,000**
Draft Proposal, Stakeholder consultations and Finalization (Stakeholder/ Industry Workshop)	
Meeting arrangements including venue, etc (sub-contract):	2,000
Documentation/poster and information materials (sub-contract):	500
Local travel and expenses for key stakeholders (airfare, DSA, TA):	2,500
Sub-total:	**5,000**
GRAND TOTAL	**30,000**

PREPARATION OF STAGE II FOR THE HCFCs PHASE OUT MANAGEMENT PLAN - HPMP CHILE, September 15th, 2014.

1. BACKGROUND

The HCFC Phase out Management Plan for Chile was approved at the 63rd Meeting of the Executive Committee of the Multilateral Fund, held in Montreal, Canada in April 2011. The total approved amount was US$ 1,786,455, where US$ 1,497,966 was assigned to UNDP as lead implementing agency and US$ 288,489 to UNEP, as cooperating implementing agency.

All funds were approved in principle by the MLF Executive Committee to assist Chile in complying with the 2013 and 2015 control measures for HCFCs under the Montreal Protocol, subject to the provisions of the performance-based agreement between the MLF Executive Committee and Chile (see approved document), comprising of annual/biennial HCFC consumption and phase-out targets.

UNDP is the lead agency for the implementation of the HPMP Phase I, focused at this phase on supporting activities to the refrigeration sector (servicing), which include training, technician's certification, and demonstrative conversions, between others, and monitoring activities. While UNEP is the cooperating agency focused on strengthening the legal and institutional framework for HCFCs and pure substances, blends components and those contained in products and equipment.

The first tranche of phase I (US$ 618,783) was reported on 2013 and the second tranche (US$ 577,484), is being requested to 73rd ExCom meeting (November 2014).

It is expected to request the HPMP Stage I fourth tranche report and fifth tranche request on the last meeting of 2015 and 2016 respectively. As September 2014, Chile has spent and committed 47 % of its HPMP approved funds (first, second and third tranche).

2. HPMP STAGE I IMPLEMENTATION PROGRESS

Chile's National Ozone Unit (Unidad Ozono in Spanish) is part of the Office of Climate Change within the Ministry of Environment of Chile and has been in charge of implementing all the HPMP's activities in the country, as well as the project in a coordinated and participative way with all stakeholders, including governmental institutions, private sector and NGOs.

HPMP Stage I activities have been aimed to strength the legal framework for control HCFCs and to phase out the consumption of HCFCs in the refrigeration service subsector.

Regarding the strengthening of the legal framework, the activities have been focused on preparation of norms to establish a quota system to control HCFCs imports, which is in place and working properly, meeting with stakeholders and governmental control entities to disseminate these new control measures and secure its proper implementation while increasing the awareness in the public and private sectors,

In the refrigeration sector, Chile's NOU has been working in the following activities:

Training in good refrigeration practices (GRP) and certification of technicians.

- An international consultant elaborates a GRP manual and made a train-the-trainers course on HCFC alternatives with very low GWP and energy efficiency (March 2014). The manual's final version is under revision of the NOU.
- The Chilean Chamber of R&AC received financial support to design and to implement the certification process. The Chamber has received the formal recognition as Labour Skills Evaluation Centre ("Centro Evaluador de Competencias Laborales" CECCL), on 2013. Since that, they hired a coordinator for the Centre and an evaluator of labour skills, and began the implementation of the evaluation procedures according to each labour profile. Up to date there are 63 technicians certified within the Metropolitan Region and a second agreement to continue the financial support is under elaboration.

Technical assistance to the refrigeration and air conditioning sector.

- Several meetings were held with supermarkets, who are working with the international consultant to design their conversion projects.
- An international expert was hired for a consultancy in HCFCs alternatives in supermarkets, with focus on no or low GWP and high energy efficiency alternatives. The expert made a seminar in Chile (November 2013; 24 participants), which was attended by the 4 main country's supermarket chains (Cencosud, SMU, Tottus, Walmart), 2 small supermarkets and designers, and visited each supermarket to know their facilities and to begin individual project's designing process. Currently, the supermarkets are designing their plans with technical assistance of the international expert.
- The NOU hired 2 consultants to elaborate a procedure to assign subsidies for supermarkets conversion. The bidding process proposal was delivered on July 2013 and currently is under revision the Legal Division of the Ministry of Environment and UNDP.
- Under the "Expo Frio Calor", organized by the Chilean Chamber of Refrigeration and Air Conditioning, the NOU made a seminar on HCFC-22 alternatives. Three international companies (Honeywell, Arkema, Dupont) accepted the invitation and made lectures about their alternatives.
- During this period 8 training courses were made for 175 technicians, in 5 regions of the country (Biobio, Metropolitana, Antofagasta, and Libertador Bernardo O'Higgins). Four more courses will be made at the end of August and early September 2014, for technicians of 3 regions (Metropolitan, Biobio and Valparaiso), estimating 110 attendants. Also at the beginning of 2014, two training courses for teachers were made in Santiago.
- A training course on "Refrigeration systems with hydrocarbons" was made on early July 2014 with an international expert. The matters treated included HC use in R&AC, safety concerns and manage of HC, between others. The participants belong to 8 R&AC companies (10 participants), 3 educational centres (4 participants) and the Chilean Chamber of R&AC (1 participant).
- Also the NOU is participating in the ChileValora Committee to validate the educational plans for 4 labour profiles (installer and maintainer of commercial refrigeration systems; installer and maintainer of industrial refrigeration systems; installer and maintainer of commercial AC systems; installer and maintainer of industrial CA systems).

Regeneration programme.

- A consultant company was hired and nowadays has delivered 4 of 5 reports. The consultancy had some difficulties due to the lack of information about regeneration equipment available in the market. Due to this issue, the NOU requested a re-organization of the consultant's team and the contact of foreign companies to focus the labour (Polar Technology-Puerto Rico; Giacomino Company-Argentina). Also both companies were invited to a seminar under the fair "Expo Frio Calor" (May 15th, 2014), to make a lecture on their work and to have meetings with the local consultants. Up today, the consultancy has delivered the following information: available technologies, description of different business models for the pilot centre, characterization of refrigerants market in the country, framework of the whole regeneration programme, and draft bidding bases.

  After that, the NOU requested technical support from the Economy Department of the Ministry of Environment and UNDP, in order to improve the proposal. From the first consultant's reports, the NOU

have information on requirements of a pilot regeneration centre, and the estimated implementation and operation costs. It is expected that consultants will deliver the final report at the end of September 2014, containing the bidding process contents proposal.

Elimination of HCFC-141b in flushing activities.

- This project continued being widely discussed with the implementing agency and the Advisory Committee on Refrigeration, because there are not specific alternatives for flushing available in the country. Several options were discussed and the NOU decided to make a seminar under the fair "Expo Frio Calor", inviting international companies (Honeywell, Arkema, Dupont) and local experts (Mr. Klaus P. Schmid, Mr. German Fuentes), who presented their alternatives to HCFC-141b. The seminar was made on May 14th 2014 and attended about 87 people. The NOU is seeking to standardize the cleaning procedure in order to warranty the optimum system operation. In this regard, due to the lack of a national or international standard, a Guideline on ODS alternatives in flushing will be developed.

3. HCFC CONSUMPTION AND REMAINING ELIGIBLE CONSUMPTION

Imports of HCFC increased from 2009 to 2011 and decreased on 2012 and 2013; HCFC imports are dominated mainly by HCFC-22 (average 63% of imports) and then by HCFC-141b (average of 36% of imports). On 2012 and 2013, HCFC-22 imports decreased (61.4% to 60.8%) and those of HCFC-141b increased (36.6% to 38.5%). 2013 ODS consumption (75.88 ODP tonnes) is under the Montreal Protocol limit for the country (freezing; 87.5 ODP tonnes) and also below the country's own limit established by Decree 75/2012 (84.5 ODP tonnes), which demonstrates Chile's commitment with this international instrument.

The following table shows those data for HCFC as pure substances and those included in blends, without HCFC-141b included in pre-blended polyols:

Table 1. HCFC imports 2009 – 2013.

HCFC	ODP	2009		2010		2011		2012		2013	
		MT	ODP Ton	MT	ODP Ton	MT	ODP Ton	MT	ODP Ton	MT	ODP Ton
HCFC-22	0,055	925.76	50.92	797,79	43,88	1.049,12 [2]	57,70	864,99	47,57	606,96	33,38
HCFC-123	0,02	0.37	0.01	2,45	0,05	2,53	0,05	6,05	0,12	1,54	0,03
HCFC-124	0,022	0.53	0.01	0,65	0,01	0,41	0,01	0,31	0,01	0,07	0,00
HCFC-141b	0,11	219.68	24.16	496,60	54,63	459,84	50,58	514,73	56,62	383,66	42,20
HCFC-142b	0,065	8.88	0.58	13,32	0,87	8,85	0,58	15,72	1,02	2,86	0,19
HCFC-225 [1]	0,029	0.00	0.00	8,40	0,24	4,50	0,13	6,30	0,18	2,70	0,08
Total		1,155.22	75.68	1.319,20	99,68	1.525,25	109,05	1.408,10	105,53	997,79	75,88

[1] HCFC-225 refers to the blend "Asahikin AK-225R", which contains HCFC-225ca (CAS 422-56-0; 39.6%-49.5%), HCFC-225cb (CAS 507-55-1; 49.5%-59.4%) and various solvents (<1%). The ODP was calculated according to the average percentage content of each isomer (average ODP value of 0.029) which is used in these figures.

[2] HCFC-22 imports amount is modified by an import of 440 kilos that Tesla S.A. made on November 2011. The company regularized its formal inscription in the Customs Service Registry on July 17th 2012. This updated information was send to the NOU on August 13th 2014.

Exports in the same period (2009-2013) are detailed in the table below:

Table 2. HCFC exports 2009 – 2013.

HCFC	ODP	2009	2010	2011	2012	2013

		MT	ODP Ton	MT	ODP Ton	MT	ODP Ton	MT	ODP Ton	MT	ODP Ton
HCFC-22	0.055	5.11	0.28	0.07	0.00	3.40	0.19	0.12	0.01	0.00	0.00
HCFC-123	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HCFC-124	0.022	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HCFC-141b	0.11	0.00	0.00	2.00	0.22	0.14	0.01	0.00	0.00	0.00	0.00
HCFC-142b	0.065	2.87	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HCFC-225	0.029	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		8.12	0.47	2.07	0.22	3.54	0.20	0.12	0.01	0.00	0.00

Chile does not produce HCFCs. In this sense, the national consumption is based on imports and exports. The table N° 3 below demonstrates the official data reported. As mentioned before, a quota system for HCFCs is in place since January 1st 2013.

Table 3. ODS consumption, 2009-2013

HCFC	ODP	2009		2010		2011		2012		2013	
MT	ODP Ton	MT	ODP Ton	MT	ODP Ton	MT	ODP Ton	MT	ODP Ton	MT	ODP Ton
HCFC-22	0,055	920,65	50,64	797,72	43,87	1.045,72	57,51	864,87	47,57	606,96	33,38
HCFC-123	0,02	0,37	0,01	2,45	0,05	2,53	0,05	6,05	0,12	1,54	0,03
HCFC-124	0,022	0,39	0,01	0,65	0,01	0,41	0,01	0,31	0,01	0,07	0,00
HCFC-141b	0,11	219,68	24,16	494,60	54,41	459,70	50,57	514,73	56,62	383,66	42,20
HCFC-142b	0,065	6,01	0,39	13,32	0,87	8,85	0,58	15,72	1,02	2,86	0,19
HCFC-225	0,029	0,00	0,00	8,40	0,24	4,50	0,13	6,30	0,18	2,70	0,08
Total		1.147,10	75,21	1.317,13	99,45	1.521,71	108,85	1.407,98	105,52	997,79	75,88

HCFCs were used mainly for servicing and production of polyurethane foams. In less quantity, they are used as solvents for equipment cleaning. The following tables 5 and 6 show the percentage distribution uses of HCFC in metric tonnes and ODP tonnes respectively according to HPMP figures. The NOU has not received information on market changes that could lead to differences within this distribution.

Table 4. Uses distribution (% metric tonnes; HPMP)

HCFC	PU foams	Pre-blended polyols export	R&AC	Solvents	Total
HCFC-22	2.00		63.92		65.92
HCFC-123			0.22		0.22
HCFC-124			0.03		0.03
HCFC-141b	21.85	7.20	1.95		31.00
HCFC-142b			2.14		2.14
HCFC-225				0.69	0.69
Total	23.85	7.20	68.25	0.69	100.00

Table 5. Uses distribution (% ODP; HPMP)

HCFC	PU foams	Pre-blended polyols exports	R&AC	Solvents	Total
HCFC-22	1.53		48.84		50.37
HCFC-123			0.06		0.06
HCFC-124			0.01		0.01
HCFC-141b	33.39	11.01	2.98		47.39
HCFC-142b			1.93		1.93
HCFC-225				0.24	0.24
Total	34.92	11.01	53.83	0.24	100.00

According to statistics provided by the National Customs Service, pre-blended polyols containing HCFC-141b are imported by two companies (Austral Chemicals Chile S.A. and BASF Chile S.A.), from Argentina (46.5%), Republic of Korea (42.1%) and Singapore (11.4%). The table figures are shown below in MT and ODP tonnes, for 2009-2013, with a high increasing in 2013 in metric tonnes, which is explained by the increasing use of foam in the construction sector.

Table 6. Imports of HCFC-141b contained in pre-blended polyols, 2009-2013.

Company	2009		2010		2011		2012		2013	
	MT	ODP Ton	MT	ODP Ton	MT	ODP Ton	MT	ODP Ton	MT	ODP Ton
Austral Chemical Chile S.A.	18.78	2.07	27.71	3.05	41.39	4.55	57.71	6.35	127.55	14.03
Basf Chile S.A.	7.64	0.84	36.04	3.96	36.71	4.04	41.21	4.53	174.30	19.17
Dow Química Chilena S.A.			0.08							
Total	26.41	2.91	63.83	7.01	78.10	8.59	98.92	10.88	301.85	33.20

One single company (Orica Chemicals) exports pre-blended polyols with HCFC-141b to the following countries listed in decreasing order: Peru, Ecuador, Brazil, Argentina, Paraguay, Colombia, Uruguay, Bolivia, Dominican Republic and Venezuela. The Table 7 shows the 2013 exports of HCFC-141b contained in those blends, in metric tonnes and ODP tonnes.

Table 7. Exports of HCFC-141b contained in pre-blended polyols, on 2013.

Destination country	**%**	**MT of HCFC-141b**	**ODP Tonnes**
Argentina	13.03	10.07	1.11
Bolivia	2.34	1.81	0.20
Brasil	17.66	13.64	1.50
Colombia	3.19	2.46	0.27
Ecuador	20.68	15.98	1.76
Mexico	0.00	0.00	0.00
Paraguay	6.62	5.11	0.56
Peru	30.46	23.53	2.59
Dominican Republic	1.66	1.28	0.14

Uruguay	3.12	2.41	0.26
Venezuela	1.24	0.95	0.11
Total	100.00	77.25	8.50

As it was mentioned above, the new regulation on HCFC (Supreme Decree N° 75/2012), considers the HCFC-141b contained in formulated and pre-blended polyols, as "HCFC blends" and thereby need a maximum import volume assignation (i.e. quota) to be imported and is part of the global national quota for HCFCs.

4. STAGE II PROJECT PREPARATION ACTIVITIES

a. Overarching strategy preparation

Chile is characterized by being a democratic society where national issues are discussed amply with those parties involved, so NOU is looking to work together with the different stakeholders for the preparation and implementation of Stage II of its HPMP. Also, the country intends to address those sectors that were not covered on the Stage I, mainly the polyurethane foam (panels and spray) sector which depends on fully formulated polyols.
The activities of the Stage II project preparation can be divided in: a) Launch of Stage II preparation, b) survey for updating the national profile of HCFC consumption, c) Assessment of current situation and stakeholders´ needs, d) Definition of priorities and objectives, e) Presentation of Stage II of HPMP strategy to stakeholders, and f) Preparation of the final document; In table 3 a brief description and cost of these activities are presented.

Table 8. Activities to be undertaken during Stage II preparation.

No.	Activity	Cost (US$)
1	Workshop with stakeholders to present the progress in the implementation of stage I of the HPMP and the action plan to ensure an appropriate Stage II preparation.	3,000
2	Conduct a survey to update the HCFCs use in Chile	25,000
	Review of official data on HCFCs imports by substance and by sector.	5,000
	Meetings with HCFC and alternative substances importers to understand the logistic of the current product chain, to identify possible barriers for the introduction of replacement options and to update the list of distributors, suppliers and large end-users.	2,000
	Visits to main end-users by sector to collect information on specific applications and build the baseline on related equipment (capacity, procurement date, etc.), on HCFCs consumption and on expectations about HCFCs replacement (new alternatives, time-line, etc.).	15,000
	Preparation of the document related to the market survey update.	3,000
3	Assessment of current situation and needs of stakeholders	20,000
	Assessment of current situation and definition of required improvement for the projects implemented in the first stage of the HPMP for servicing subsector (training and certification of refrigeration and air conditioning technicians, technical assistance for the refrigeration and air conditioning maintenance and technical assistance for end users).	15,000
	Workshop with the governmental stakeholders (Customs Service, Ministry of Health, Ministry of Environment, Ministry of Economy, etc.), private sector (industries, importers, etc.) and NGOs to discuss the results of the activities implemented to control ODS trade and prevent illegal commerce.	3,000
	Awareness raising and information dissemination.	2,000
4	Priorities and objectives definition	10,000

No.	Activity	Cost (US$)
	Definition of the country strategy for the second stage of the HPMP, including the definition of non-investment projects to be implemented to ensure the reduction on HCFCs consumption in the RAC sector. Conduct the required meetings with RAC equipment suppliers and main installing and charging enterprises.	8,000
	Conduct the final meeting with stakeholders from the governmental, private and educational sectors to prepare the non-investment project for technical assistance to enhance the control of ODS trade that will support the HCFCs phase out.	2,000
5	Presentation of the HPMP Stage II strategy to stakeholders	4,000
	Final workshops with stakeholders to present and discuss the proposed country strategy.	2,000
	Awareness raising and information dissemination.	2,000
6	Preparation of the final document (second stage of HPMP)	8,000
TOTAL		70,000

b. Investment component: Foam sector

Chile has an only system house which produces PUR foams and fully formulated polyols with HCFC-141b. Also, the national consumption of fully formulated polyols, with HCFC-141b as blowing agent, for several polyurethane foam applications, such as appliances, panels and spray has been increasing during the last years. During the HPMP stage I preparation some companies were identified but there were several small companies that were not identified nor visited; main companies are shown in table 4 below.

The HCFC-141b in foams market research study started with the identification of main importers, who were interviewed to identify end-users. The following table summarizes imports for each company.

Table 9: HCFC-141b Imports (MT).

Company Name	2004	2005	2006	2007	2008
Orica Chemicals	128.3	69.8	160.0	285.0	293.8
Oxiquim	22.8	98.4	40.0	100.0	80.0
Adiquim				2.8	
Mathiessen			6.5		
FH Engel				1.6	8.1
Brenntag	65.3	65.3	16.3		
Metecno	37.6	41.0	35.1		10.0
Indura					1.1
Productos Químicos Eduardo Latorre y Cía. Ltda.				0.7	10.7
Santiago Productos Químicos Ltda.				0.5	1.4
Unión Química E.I.R.L.					8.6
Total	254.1	274.5	258.0	390.6	413.7

Source: Import statistics from the National Customs Service.

In relation to the country of origin, the leading provider of HCFC-141b is China, with 85% (equivalent to 351 MT) of imports of this substance in 2008. The following figure shows the flow chart of the HCFC-141b, from import, to the end user.

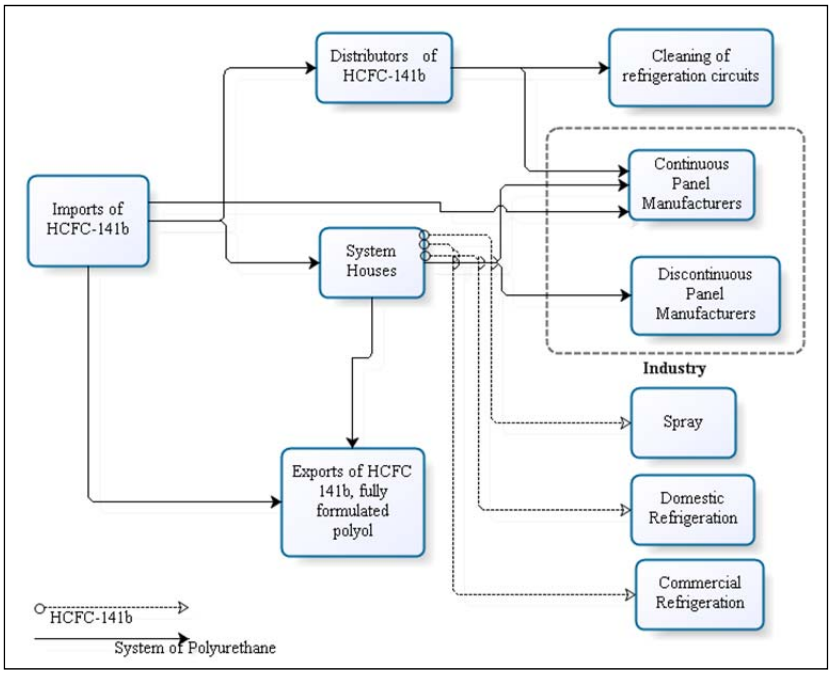


Figure 4: Flow chart for imported pure HCFC-141b in Chile.

The diagram begins with the entry of HCFC-141b to the country as a pure substance through an importation, after which it is distributed in three different ways:

- Direct importation by manufacturers of continuous panels
- Distributors that sell it directly to refrigeration manufacturers, to be used during the cleaning of refrigeration circuits.
- Importation by Systems Houses, which use HCFC-141b as a blowing agent in the elaboration of fully formulated polyol.

This substance can be imported and exported as part of the fully formulated polyol contained in HCFC-141 as a blowing agent among other additives, such as catalysts and surfactants analyzed in the Systems Houses

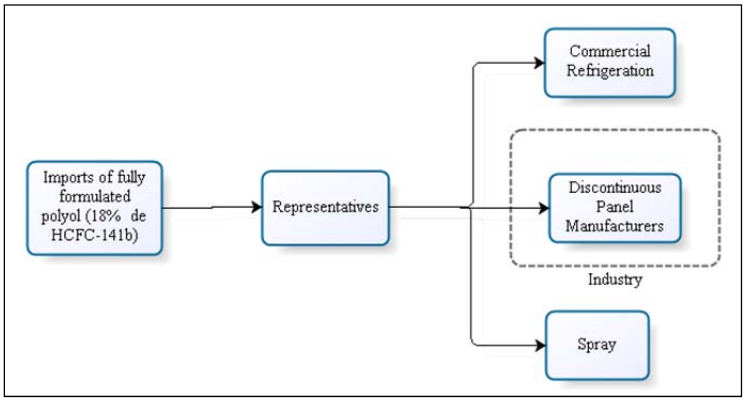


Figure 5: Flow chart for fully formulated polyol in Chile.

Rigid Polyurethane Foam

HCFC-141b is mainly used as a blowing agent in the elaboration of rigid polyurethane foam. Two companies used HCFC-22 with this purpose during 2008. The first one uses it pure, mixing it previously with the polyol before injection whilst the second one applies a blend of HCFC-22 and HCFC-141b in equal parts.

Depending of its application as a thermal insulating material, rigid polyurethane foam can be classified into the following subsectors:

- Domestic Refrigeration: refrigerators.
- Commercial Refrigeration: injection moulding such as bottle cabinets, cooled display cases.
- Industrial Refrigeration:

- Continuous panels: in refrigeration (installation of cold rooms and refrigeration units) and construction (warehouses, sheds for the poultry industry).
- Discontinuous panels: in refrigeration (installation of cold rooms and refrigeration units) and construction (warehouses, sheds for the poultry industry).
- Spray Foam: construction, tank insulation, refrigerated transport, etc.

The following table summarizes the main companies of each sector with their respective estimated consumptions up to 2008 and their eligibility for MP investment projects.

Table 10: Main PUR foam manufacturers.

Subsector / Company		2008 HCFCs consumption (MT)		2008 ODP Tons	Percentage of capital from Article 5 Party
		HCFC-141b	HCFC-22		
Refrigeration					
Domestic Refrigeration					
1	Sindelen	3.2	3.2	0.52	100%
	Domestic Ref. Subtotal	3.2	3.2	0.52	
Commercial Refrigeration					
2	Mimet (cycle/isopentane)	0.0	0	0.0	100%
	Commercial Ref. Subtotal	0.0	0	0.0	
	Refrigeration Subtotal	3.2	3	0.5	
Thermal Insulation Panels					
	Continuous Panels				
1	Metecno	86.6	0	9.53	0%
2	Instapanel	0.0	22	1.21	100%
Continuous Panel Subtotal		86,6	22	10.74	
	Discontinuous Panels				
3	Polchile	7.4	0	0.81	100%
4	Superfrigo	12.2	0	1.34	100%
5	Refricentro	9.4	0	1.03	100%
6	Hunter Douglas	8.4	0	0.92	5%
7	Multipanel	13.7	0	1.46	100%
8	Danica	30.6	0	3.41	30%
9	Inema	18.6	0	2.05	100%
10	Aislaciones Térmicas	6.9	0	0.75	100%
11	Otros	4,8	0	0.52	100%
Discontinuous Panels Subtotal		111.9	0	12.31	

Subsector / Company		2008 HCFCs consumption (MT)		2008 ODP Tons	Percentage of capital from Article 5 Party
		HCFC-141b	HCFC-22		
Foams Subtotal		198.4	25.2	23.05	
Foam Spray Applicators					
1	Construcciones Arrayán Cía. Ltda.	90 MT (group)		9.9	100%
2	Fidel Valenzuela Lavín				
3	Ingepur Ingeniería E.I.R.L.				
4	Muñoz Puga y Cía. Ltda.				
5	Purteck S.A.				
6	Impermeabilizaciones Roofing Ltda.				
7	Víctor Alonso Himmers Acosta				
8	Soldaduras Edith Paz Cía. Ltda.				
9	Astilleros Arica S.A.				
10	Hernán Rogelio Reyes González				
11	Inversiones e Inmobiliaria Klubi Ltda.				
12	José Ricardo Cabezas Villagrán				
Spray Subtotal		90.0		9.90	
Cleaning of refrigeration circuits		26.0	0	2.86	
Total ODP Tonnes				36.33	

System Houses.

These are companies that develop polyurethane systems, depending on the requirements of each customer. In Chile, two system houses were identified. The main one had a national market share of nearly 80% in 2008 and was importing close to 730 tons of polyol for the formulation and 293 tons of HCFC-141b.

The second company represented the other 20% of the market and during 2008, imported about 211 tons of polyol of which 50% or so came from China.

Additionally, the market is supplied by direct importation of fully formulated polyol, which is described below.

Fully Formulated Polyol Importers.

Some companies directly import the polyol with a blowing agent incorporated in its formulation. During 2008, approximately 51 metric tons (MT)[1] of fully formulated polyol were imported and distributed among several users of the national market.

The following table presents imports of HCFC-141b contained within fully formulated polyol.

Table 11: Imports of HCFC-141b contained within fully formulated polyol (MT).

	2004	**2005**	**2006**	**2007**	**2008**
Amount of HCFC-141b contained In fully formulated polyol	52.3	37.6	15.7	22.5	15.9

Source: Foam market study, based on information of the National Customs Service

[1] Source: National Customs Service.

Regarding exports of fully formulated polyol with HCFC-141b, the Orica Chemicals system house exported, during 2008, close to 620 metric tons, which contained in their formulation 112 MT of HCFC-141b. The destinations of these exports were: Argentina, Ecuador, Peru, Panama, Dominican Republic and Venezuela.

In the following table, a list of activities to be carried out is presented.

Table 12. Investment component activities and costs.

No.	Activity	Cost (US$)
1	**General assessment of current situation**	**18,000**
	Assessment of current situation, review of fully formulated polyols imports, meeting with stakeholders to discuss sector perspectives.	*8,000*
	Workshop on alternative technologies available in Chile.	*5,000*
	Awareness raising and information dissemination.	*5,000*
2	**Individual and group projects preparation**	**72,000**
	Meeting with system houses and distributors.	*2,000*
	Visits to beneficiary production facilities to evaluate the current state and needs of their processes and base line equipment.	*35,000*
	Discussion with beneficiary companies of best available technology for their applications.	
	Preparation of project documents.	*25,000*
	Presentation and discussion with beneficiary companies of project document draft.	*10,000*
3	**Presentation of sector strategy and work plan.**	**10,000**
	Final workshops with stakeholders to present and discuss the proposed country strategy.	*5,000*
	Awareness raising and information dissemination.	*5,000*
TOTAL		**100,000**

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PEOPLE'S REPUBLIC OF CHINA
PREPARATION OF OVERARCHING HCFC PHASE-OUT MANAGEMENT PLAN
(STAGE II – For compliance with 2020 target)

1. Background

In July 2008, the 55th meeting of the Executive Committee (ExCom) approved 9 HPMP preparation projects of China including 6 consumption sector preparation projects, a production sector preparation projects, an overarching HPMP strategy and an enabling program. In 2011, the Executive Committee approved, in principle, stage I of the HCFC phase-out management plan of 6 consumption sectors for China including a national coordination project and an enabling program for the period 2011 to 2015 in the amount of US $270 million. In April 2013, the 69th ExCom meeting approved the HCFC Phase-out Production Sector Management Plan (HPPMP) with a total of US $95 million for the HPPMP in China (stage I) to meet the freeze and 10 per cent reduction of China's Montreal Protocol HCFC baseline.

The 64th ExCom meeting approved the national coordination project of USD 360,000 with UNDP as the leading implementing agency. The activities of the national coordination project mainly include national stakeholder coordination as well as review, coordination, monitoring and reporting. Through these activities, the national coordination project aims to assist the Government of China to meet the 2013 and 2015 control measures of the Montreal Protocol for HCFCs for both the production and consumption sector.

Based on the experience accumulated during implementation of stage I HPMP, it is very important to continue to develop an overarching strategy of HPMP for stage II (2015-2020) to enable China to meet the 2020 control measures of the Montreal Protocol for HCFCs for both the production and consumption sector. Preparation of the overarching strategy for HPMP stage II will involve data analysis, alternative technology evaluation, policy and regulation framework review, stakeholder consultation, preparation of proposal etc., which is expected to take a period of 12 month. The proposed budget for the preparation project is USD 289,750.

2. Background and coverage

2.1 HCFC production and consumption profile

The production and consumption of HCFCs in China involves 7 sectors: HCFC production sector, Polyurethane Foam sector, Extruded Polystyrene Foam sector, Room Air Conditioning sector, Industrial and Commercial Refrigeration and Air Conditioning sector, Solvent sector and Servicing sector. With the development of national economy, the HCFCs production and consumption of China keep growing. According to the Agreement between China and the ExCom for the production and consumption sector, the baseline of the production and consumption sectors is respectively 29,122 ODP tons and 18,865.44 ODP tons.

The overall production and consumption of HCFCs has grown in China during the period 2009-2012, with an annual average growth rate of about 7% and 4% respectively. Particularly, the production and

consumption of HCFC-22 has increased about 22% and 13% during the period 2009-2012, and those of HCFC-141b has increased about 27% and 24%, during the same period.

2.2 Policies and regulations

A number of national regulations have been enacted in the past years. So far more than 100 policies and regulations on ozone layer protection and ODS phase-out have been formulated and issued in almost every relevant areas to regulate ODS activities. As soon as the accelerated HCFC phase-out schedule was agreed, China upgraded related policies to control production and consumption of HCFCs. In 2008 and 2009, two important Circulars were issued by the Ministry of Environmental Protection to curb the increase of production and consumption of HCFCs. Later on, the Regulation on Management of Ozone Depleting Substances was approved by the State Council in 2010 which marks a milestone of ODS legislative efforts in China.

In August 2013, MEP issued a "Circular on the Management of HCFC Production, Sales and Consumption", which establishes a quota management system for production and consumption of HCFCs in China. All the production enterprises should apply for a quota for HCFC production and production enterprises should not produce beyond the amount specified in its quota. Enterprises whose annual consumption of HCFC is more than 100MT should also apply for a quota. Additionally, the revised version of the “Circular on the Management of the Import and Export of ODS” came into force on 1st March 2014.

2.3 Implementation of HPMP stage I and lessons learned

According to the Agreement between the ExCom and China for the production and consumption sectors, the national level of HCFCs consumption shall be limited to 18,865 ODP tons in 2013 and 16,979 ODP tons in 2015 and the national level of HCFC production shall be limited to 29,122 ODP tons in 2013 and 26,210 ODP tons in 2015.

The Government of China has worked closely with Industrial Associations to encourage enterprises to participate in the conversion. The PMO reviewed the eligibilities of the enterprises and carried out site visit and verification of HCFCs consumption. By August 2014, PMO has signed contracts with 101 enterprises for conversion projects. A preliminary data suggested that about 34,648 metric tons of HCFCs will be phased out through implementation of these conversion projects and many enterprises selected zero ODP and low GWP alternatives to replace HCFCs which will be in line with the overall strategy of China HPMP and will result in the maximum environmental benefits. MEP issued quotas to all the production enterprises and a number of large consumption enterprises to control the overall production and consumption in 2013 and 2014. Since 2011, MEP/FECO held coordination meetings annually to review the progress in implementation of sector plans and strengthen coordination and management at the national level. So far, the first three tranches of the consumption sector and the first two tranches of the production sector have been approved and released by the ExCom.

China is faced with unprecedented challenges on phasing out large quantities of HCFCs in a relatively very short period of time. The overarching HPMP and the national coordination project played a very important role in the implementation of HPMPs stage I. Effective and efficient coordination and management at the national level ensures smooth implementation of sector plans, which should continue to be carried out in subsequent stages.

2.4 Proposed activities of HPMP stage II preparation

As per the HCFCs accelerated phase-out schedule, HPMP Stage II shall phase out at least 25% of the baseline for HCFC production and consumption in addition to what is achieved in Stage I. The HCFC

production and consumption of China shall not exceed 18,929 ODP tons and 12,262 ODP tons in 2020.

2.4.1 Data update and analysis

It is necessary to analyze historical data on HCFC production, consumption, import and export at the national level, as well as consumption data at the sector level, in particular the data from 2011 to 2013. Based on the implementation of the HPMP stage I, information on different sectors such as industry profiles, HCFC production and consumption trend, distribution by sector/subsector etc. shall be updated. With the above information and data collected, obstacles or challenges faced by China at stage II shall be further analyzed.

2.4.2 Policy and regulation framework review

Based on implementation of stage I HPMP, ODS national management mechanism as well as existing policies and regulations shall be reviewed, and detailed rules on the Regulation on ODS Management shall be developed. New policies and regulation should be proposed based on the requirement for achievement of compliance targets at stage II. For example, coordinating with relevant domestic authorities to make research on policy measures including industry policy adjustment, government procurement, and green product certification to encourage application and dissemination of low-GWP alternatives.

2.4.3 Alternative technology evaluation

Application of the alternative technologies of stage I shall be reviewed. Development of alternative technologies of home and abroad shall be updated and analyzed, and establish alternative technology roadmap for HPMP stage II.

2.4.4 Stakeholder coordination

As an integral part of China's overarching HPMP for compliance with 2020 target, China will need to develop 7 sector level HPMPs stage II covering PU foam, XPS foam, RAC, ICR, solvent, refrigeration servicing and production sectors. Development of these sector plans will require effective and efficient coordination at the national level to enable China to meet the 2020 target. To formulate HCFC phase-out strategy for stage II, stakeholder workshops will be held with participants from international implementing agencies, bilateral countries, industrial associations, research institutes and universities, and experts etc. Coordination mechanism of stage I shall be analyzed and reviewed. Relationship among sectors shall be further discussed and strategy for stage II HPMP should be formulated.

2.4.5 Preparation of HPMP stage II

Based on data collected and analyzed, as well as consultation with stakeholders, the overarching HPMP stage II will be prepared. The sector level HPMPs will be incorporated into the overarching HPMP to ensure compliance at the national level. Based on an analysis on status quo of HCFC production and consumption, the overarching HPMP stage II will include policy measures, phase-out strategy, alternative selection and funding requirement etc. The draft overarching HPMP stage II will be circulated by MEP/FECO among international agencies and national stakeholders for comments. The overarching HPMP stage II will be revised based on the comments collected and the final version will be submitted to the ExCom meeting.

3. Timelines for preparation

The timeline for preparation of the overarching HPMP stage II is as following:

	Q1	Q2	Q3	Q4
Inception meeting	X			
Field survey planning				
Data collection		X	X	
Data analysis		X	X	
Project preparation			X	
Stakeholder consultations			X	
Project document finalization				X

The HPMP Stage-II overarching strategy document is expected to be finalized by end of 2015 and will be submitted to the 76th Meeting of the Executive Committee.

4. Project costs and break-down

The project preparation costs for sector projects can be given in the table below.

Component	Particulars	Cost in USD
Workshops/meetings	Inception/ stakeholder consultations on technology issues/finalisation	40,000
Project development including data collection and analysis	Field survey for data update and analysis, technology options assessment including technical support, project development and implementation plan development including support during stakeholder consultations	234,750
Management, communications and miscellaneous	Travel for FECO staff for preparation, communication, printing including outreach and other miscellaneous costs	15,000
	Grand total	**289,750**

PEOPLE'S REPUBLIC OF CHINA
PREPARATION OF INDUSTRIAL AND COMMERCIAL REFRIGERATION SECTOR PLAN
(STAGE II – For compliance with 2020 target)

1. Background

At the 19th Meetings of the Parties of the Montreal Protocol held in September 2007, it was agreed that the HCFC phase out will be accelerated. According to the new schedule, China will have to freeze the production and consumption of HCFCs at the average level of 2009 - 2010 (baseline) by 2013, and to realize 10%, 35%, 67.5% reductions in 2015, 2020 and 2025, respectively, and achieve complete phase-out of HCFCs by 2030 with a 2.5% remaining allowed production and consumption of HCFCs to meet the residual demand in the servicing sector during the period of 2030-2040.

In cooperation with UNDP, China prepared the stage I (2011-2015) Sector Plan for Phase out of HCFCs in the Industrial and Commercial Refrigeration Sector. The stage I HPMP in ICR sector was approved at the 64th ExCom meeting with funding of US$61million. The objective of the stage I HPMP is to ensure that the HCFC consumption in the ICR sector is frozen on an average level of 2009-2010(baseline) by 2013 and reduce 10% from baseline by 2015. To realize these targets, the sector plan covers production line conversion, policy-making and technical assistance activities. Based on data surveys and industry development assumptions, around 8,450 MT of HCFC consumptions, equivalent to 465 ODP tons will be phased out in the ICR sector by 2015.

Upon achieving the first stage target, the HCFC phase-out programs in China will not stop. The industries will move on to the next goal of reducing 35% by 2020. The stage II HPMP will be prepared to address the targets and activities from 2015 to 2020. A preparation project is proposed to help the ICR sector preparing for the HPMP. This document presents the intended coverage, time-lines and costs for the preparation of Stage II HPMP in ICR sector.

2. Sector background and coverage

2.1 Sector background

The industrial and commercial refrigeration and air-conditioning sector develops quickly in China. By 2013, the total industrial output of ICR sector values about 560 billion Yuan. The ICR sector is well diversified by many types of products in different applications. It is estimated that there are more than 1,000 manufacturing enterprises in this sector and most of them SMEs.

The ICR sector is experiencing a fast growth due to the increased market demand. The production increased by more than 10% each year from 2008. The average HCFCs consumption in this sector in 2009-2010 is about 43,900MT. In 2011, the consumption reached 47,515MT.

After the stage I HPMP was approved in July, 2011, HCFC phase out were proceeded with approaches including production line conversion, conversion of compressor production, technology assistance activities, and Quota management and information dissemination. With the implementation of the

HPMP and enforcement of policies, the increasing trend of HCFC consumption in ICR sector was restrained. In 2012, the consumption has decreased slightly to 46,842 MT.

2.2 Challenges facing the phase-out

The HCFC consumption in the ICR sector has been properly controlled by carrying out of conversion projects, collaborating with policy measures as well as technical assistance activities. It is foreseeable that the 10% reduction will be realized in 2015. But as conversion continues, challenges become even greater. Firstly, it is difficult to motivate the SMEs to involve in conversion. In stage I, 80% of the conversion took place in large companies. These companies have strong R&D capability and diversified products with multiple production lines. Conversion to them is much easier in terms of technology innovation and it has little impact to the companies' business. But for SMEs, most of them supply a single type of refrigeration equipment for a specific application. The market for their products is very small and numbers of supplier is limited. These companies do not have their own R&D. It is difficult for them to look for appropriate alternative technologies. They always have the fear that the uncertainty of conversion will drive them out of the market. Secondly, policy obstacles to new alternatives need to be solved. Great importance has been attached to standards revision and establishment in stage I. But the flammability of some alternative refrigerants has attracted much attention. The standard revision involves many government authorities. A lot of collaboration and explanation are needed, particularly for equipment with large refrigerant consumption which need safety matters addressed. Last but not the least, there are still problems with alternative technologies. Government and industries are becoming more cautious to HFC refrigerants such as R410a and R134a due to their high GWP value and the fate of being abandoned someday. Tremendous researches and experiments will have to be done to break through the traditional technical difficulties of natural refrigerants. One also needs to examine the cost increase while adopting low-GWP technologies to ensure cost-competitiveness of the products.

2.3 Target of Stage II HPMP in ICR sector

As per the accelerated HCFC phase out schedule, stage II HPMP will address at least 25% of the baseline consumption in addition to the amount phased out in stage I. For ICR sector, it means no less than 601 ODP tons shall be phased out by 2020.

2.4 Preparation of Stage II HPMP

In order to develop the stage II HPMP for the ICR sector, the preparation project will cover data survey and data analysis, review of technologies, policy framework, stakeholders consultation, cost calculation and formulation of the HPMP.

1. Surveys to the industry

Based on data and information collected in stage I, a complementary data survey in stage II will pay more attention to sub-sectors such as freezers and cold chain. Survey will be carried out to 80-100 enterprises. The survey will be conducted through field visit and questionnaires. The field survey will cover at least 30 enterprises, in depth, to understand: 1) HCFC consumption in the past three years; 2) main products and production growth in the past three years; 3) alternative technologies they are willing to use in future.

2. Data analysis

The collected data will be analyzed. Data analysis will focus on 1) HCFC consumption trend; 2) consumption distribution in different sub-sectors; 3) location and geographic distribution of enterprises; 4) numbers of enterprises in the sector and in each sub-sectors; 5) numbers of production lines in the sector and in each sub-sector.

3. Review of alternative technologies

The technologies used in stage I conversion will be summarized and reviewed. A review report shall be produced to reflect 1) technology selection in stage I; 2) technology application in different products; 3) problems and challenges in using the alternative technology.

Based on the review report, workshops will be organized to evaluate different alternative technologies and recommend technology options for Stage II.

4. Policy framework

The existing national and local policies will be reviewed. New policies and regulations required for facilitating HCFC phase-out in ICR sector will be proposed.

5. Stakeholders meetings

Stake holders meetings will be convened along with the preparation progress to review and discuss: 1) Data collected and data analysis. 2) Technology review and technology selection for stage II; 3) phase out strategy for stage II; 4) Project implementation modality 5) Cost calculation for stage II phase out activities.

6. Cost calculation and formulation of HPMP

The cost for stage II phase out will be calculated based on phase out strategy. Cost calculation will take into account different alternative technologies and scales of enterprises. The stage II HPMP will be formulated based on the cost calculation.

3. Timelines for preparation

The preparation of the ICR HPMP (stage II) will be completed in 12 months. The HPMP is planned to be drafted in December, 2015 and send for consideration to the 76th ExCom meeting in 2016.

	Q1	**Q2**	**Q3**	**Q4**
Inception meeting	X			
Field survey planning	X	X		
Data collection		X	X	
Data analysis			X	
Project preparation				X
Stakeholder consultations	X	X	X	X
Project document finalization				X

4. Project costs and break-down

The following table summarises the total costs for preparation of ICR sector plan for completing the above mentioned tasks.

Component	Particulars	Cost in USD
Workshops/ meetings	Inception/ stakeholder consultations on technology issues/finalization	50,000
Project development, data collection and analysis	Field survey for data collection, data analysis, technology options assessment including technical support, project development and implementation plan development including support during stakeholder consultations	309,000
Management, communications and miscellaneous	Travel for FECO staff for preparation, communication, printing including outreach and other miscellaneous costs	40,000
	Grand total	**399,000**

PEOPLE'S REPUBLIC OF CHINA
PREPARATION OF SOLVENT SECTOR PLAN
(STAGE II – For compliance with 2020 target)

1. Background

At the 19th Meetings of the Parties held in September 2007, the Parties agreed to accelerate the HCFC phase-out schedule. As an Article 5 country, China was required to freeze the production and consumption of HCFCs at the average level of 2009 - 2010 (baseline) by 2013, to realize 10%, 35%, 67.5% reductions in 2015, 2020 and 2025, respectively, and achieve complete phase-out of HCFCs by 2030 with a 2.5% remaining allowed production and consumption of HCFCs to meet the residual demand in the servicing sector during the period of 2030 – 2040.

In cooperation with UNDP, the Implementing Agency of the Multilateral Fund for the Implementation of the Montreal Protocol, the Sector Plan for Phase out of HCFCs in the Solvent Sector in China (Stage I) was submitted to the 64th ExCom meeting for approval, and the ExCom approved at the 65th ExCom meeting a funding of US$5,000,000 in May 2011 to implement HPMP Stage I in the solvent sector. The objective of the HPMP in Solvent Sector Stage I (2011-2015) was to ensure the HCFC consumption in the solvent sector is frozen on an average level of 2009-2010 by 2013 and realizes 7.9% reduction from the freeze level by 2015. To realize these targets, the sector plan covers production line conversion and technical assistance activities. According to the sector plan, around 627.27 MT of HCFCs, equivalent to 69 ODP tonnes, will be phased out by the year 2015.

In Stage II (2015-2020), to continue the phase-out of HCFCs and achieve the 2020 target of phasing out 35% of HCFC consumption from the baseline level, the HPMP (stage II) of the solvent sector is to be prepared, and will continue to organize the investment activities, policy development, and technical assistance (TA) activities. This document presents the intended coverage, time-lines and costs for the preparation of Stage II.

2. Sector background and coverage

2.1 Sector Background

A large number of (more than 400) Chinese enterprises in the solvent sector consume HCFCs. They include medical devices, electronics, metal, precision instrument and other sub-sectors and are widely located in 21 provinces/municipalities in China. However, the consumption amount is relatively concentrated - mainly in Jiangxi, Jiangsu, Zhejiang, Shanghai, Guangdong and Sichuan provinces, etc. Different enterprises have significantly different consumption scale; generally speaking, these enterprises' consumption scale is small. Due to limitations on the technical feasibility, financial obstacles and poor management capacity in small-and-medium sized enterprises as well as safety concerns, the solvent sector is facing great challenges to phase-out HCFCs. Since approval of the Stage I Solvent Sector Plan, China has initiated various activities to ensure the smooth implementation of the sector plan. With regard to policy actions, in order to duly achieve the freeze target in 2013 and 7.9% reduction in 2015, China has already issued the ODS regulations, strict control of HCFC production facilities and new establishment of facilities using HCFCs, and introduced the quota management in the solvent sector.

As a result of conversion activities carried out under the sector plan, collaborating with policy measures as well as series of TA activities, China has realized the freeze target for 2013, and the solvent sector also properly tracks its commitments set out in the sector plan. In the solvent sector in China, taking into consideration the feasibility of current alternative technologies as well as the factors of zero ODP, low-GWP, etc., most enterprises so far selected KC-6 and HC as the alternative solutions to replace HCFCs. However, due to various applications and sub-sectors in the solvent sector, taking into account, among others, the scale of enterprise, the cost-effectiveness and product performance with alternative technologies, there may be some other alternatives to be considered by the industry in China for their ODS solvent phase out.

2.2 Implementation progress of HPMP (stage I) and challenge existed

According to the HPMP (stage I), solvent sector plan to phase out 69 ODP tonnes of HCFCs (approximately 627.27 MT, including 27.82MT to be phased out by demo project). By August 2014, 9 conversion contracts were signed, phasing out 610.292 MT of HCFCs. In order to support and push forward HCFCs phase-out activities in the solvent sector, FECO/MEP, with the cooperation and assistance of the Implementing Agency, also carried out a series of TA activities, including training workshops, work meetings, baseline verifications, etc. With regard to TA activities, FECO will continue to provide solvent enterprises with training and technical assistance. Due to the adoption of KC-6, HC and isopropanol as solvent by most beneficiaries, a handbook for safe practice with HC as solvent in the solvent sector is planned to be developed, with the intent of providing solvent enterprises with guidance on the use of HCFC alternatives.

In Stage I, most solvent enterprises in China lack information on options and applications of alternative technologies. Therefore, it is urgent to provide them with sufficient support and technical assistance in the course of HCFCs phase-out. Secondly, cooperation with related industrial associations, local EPBs, academic institutes and enterprises is significantly important to ensure the smooth implementation of the solvent sector plan. Additionally, the publicity to HCFCs phase-out strategy and the development of alternative technologies should be further enhanced among solvent enterprises, local EPBs and other stakeholders.

Given higher living standards and much more attention paid to public health, industry growth in medical devices, electronics and metal sub-sectors is seeing rapid increase. Some products need precision cleaning – in such product uses, HC solvent couldn't meet the requirements. If such enterprises phase out HCFC, they have to choose fluorinated solvent. As of date, these solvents are the most expensive alternatives at almost 10-15 times the price of HCFC-141b. Cost effectiveness of alternatives to HCFCs is key to assist this sector in systematic and seamless phase-out.

2.3 Preparation of the stage II of HPMP

As per the HCFCs accelerated phase-out schedule, Stage II of HPMP for the solvent sector will phase out at least 27.1% of the baseline consumption in addition to what is to be achieved in Stage I. This translates to at least 1,214 MT of HCFC-141b reduction (i.e., 35% of the baseline level in the sector). In order to properly develop the HPMP (stage II) for the solvent sector, the preparation project will include, among others, information collection, policy review, field survey, data and technology analysis, cost calculation, exploration of project implementation modalities and formulation of HPMP. The details are listed below:

A. Collection of general information

- Background information of the solvent sector will be collected and updated through consultation with industrial associations, solvent enterprises, and other related stakeholders.
- A brief review of activities will be undertaken in the solvent sector, focusing on lessons learned and how these could be used for future HCFCs phase-out.
- Consultation meetings at sub-sector and sectoral levels will be organized accordingly.

B. Development of questionnaire

- Questionnaire for data collection will be updated on the basis of the data collection exercise carried out during the preparation of Stage I of HPMP in the solvent sector. Working meetings will be organized with industrial associations, such as Industry Cleaning Association of China, solvent enterprises and experts to finalize the questionnaire.
- Consultation meetings with all relevant stakeholders will be organized to ensure common understanding of the data collection and the information required by the questionnaire.
- Training will be planned and provided to the staff participating in the data survey.

C. Policy review

- Existing national and local policies and regulations will be reviewed.
- New policies and regulatory framework for HCFCs phase-out in the solvent sector might be proposed.

D. Data collection and analysis

- Questionnaire will be distributed to around 150 enterprises.
- Field visits to a representative sample of 20 solvent enterprises will be organized. The field survey will be jointly carried out by the PMO/MEP, industrial associations, local EPBs and external experts, with a view to the eligibility of the enterprises, the information on HCFC-141b consumption, production lines, applications, technical preference for replacing HCFC-141b, and any difficulties or challenges to be faced by enterprises in future conversions.
- Upon the data collected, the consumption of HCFC-141b in solvent sector will be updated and analyzed, especially on the sub-sector basis and regional basis, and the situation of different solvents used in the solvent sector will be concluded.

E. Review and evaluate of substitute technologies

- Review and evaluation of alternative technologies used in the 9 phase-out project enterprises will be undertaken.
- Research on development of both domestic and overseas alternative technologies in solvent sector will be conducted. Updated information of alternative technologies to HCFC-141b in various sub-sectors will be collected and evaluated.
- Consultation meetings will be held to update and evaluate new alternative technologies.

F. Cost calculation

- Updated information of the cost for different alternative technologies will be shared with the relevant stakeholders.

- Cost calculation modality will be established, taking into account different scales of enterprises, especially the small and medium enterprises in the solvent sector.

G. Review of project implementation modality

- Project implementation modalities will be proposed. In the Stage I of HPMP in solvent sector, most beneficiaries are large or medium size enterprises. Given the fact that there are a large number of small and medium enterprises in the sector, in Stage II, it is expected that more of those enterprises will be involved in phase-out activities. Therefore, in order to identify implementation modalities fit to this situation, in addition to the single enterprise project, some other project implementation modalities may be taken into consideration.
- According to the findings of data analysis, taking into account the feasibility of alternatives, conversion costs, enforcement of local regulations, the possibility of "city-wide projects" might be discussed in future HCFCs phase-out. Some cities where a lot of medium and small sized solvent enterprises are locates and the local governments are capable and expressed their willingness to accelerate HCFCs phase-out, may be considered to develop city-wide projects, with the intent of undertaking accelerated phase-out of all the ODS solvents in those particular cities.

H. Formulation of the HPMP(stage II)

- Stakeholders meetings will be organized to review the draft of the sector plan, including proposed HCFCs phase-out strategy, technology options, proposed policy framework, cost calculation, proposed implementation modalities, and so on.
- The Stage II of HPMP for solvent sector will be revised based on the feedback from afore-mentioned meetings, and will be concluded for submission to the 76th ExCom Meeting.

3. Timelines for preparation

Overall time plan for implementation of the project during the 12 months is given in the table below:

	Q1	**Q2**	**Q3**	**Q4**
Inception meeting	X			
Field survey planning	X	X		
Data collection	X	X		
Data analysis		X	X	
Project preparation		X	X	X
Stakeholder consultations		X	X	X
Project document finalization				X

4. Project costs and break-down

The project preparation costs for sector project can be given in the table below.

Component	Particulars	Cost in USD
Workshops / meetings	Inception/ industry consultations on technology issues / finalization	30,000
Data collection and analysis	Field survey for data collection, data analysis, technology options assessment including technical support, project development and implementation plan development including support during stakeholder consultations	290,200
Management, communications and miscellaneous	Travel for FECO staff for preparation, communication, printing including outreach and other miscellaneous costs	54,020
	Grand total	**374,220**