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执行蒙特利尔议定书
多边基金执行委员会
第五十四次会议
2008 年 4 月 7 日至 11 日，蒙特利尔

开发计划署 2008 年工作方案

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 2008 年工作方案核准 3,338,230 美元，外加 250,817 美元的机构支助费用。

2. 开发计划署工作方案拟议的活动如下文表 1 所示：

表 1：开发计划署的工作方案

国家	活动/项目	所需数额（美元）	建议数额（美元）
A 节：建议一揽子核准的活动			
A1. 延长体制建设项目			
印度	体制建设（第七阶段）	373,230	373,230
尼日利亚	体制建设（第五阶段）	260,000	260,000
	体制建设项目小计：	633,230	633,230
A2. 最终淘汰管理计划的项目编制：			
巴巴多斯	维修行业最终淘汰管理计划的项目编制	15,000	15,000
	最终淘汰管理计划项目编制小计：	15,000	15,000
B 节：建议个别审议的活动			
B1. 氟氯烃淘汰计划的项目编制：			
安哥拉	氟氯烃淘汰管理计划的项目编制	50,000	-
阿根廷	氟氯烃淘汰管理计划的项目编制	80,000	-
亚美尼亚	氟氯烃淘汰管理计划的项目编制	60,000	-
孟加拉国	氟氯烃淘汰管理计划的项目编制	50,000	-
玻利维亚	氟氯烃淘汰管理计划的项目编制	50,000	-
巴西	氟氯烃淘汰管理计划的项目编制	100,000	-
柬埔寨	氟氯烃淘汰管理计划的项目编制	50,000	-
智利	氟氯烃淘汰管理计划的项目编制	75,000	-
中国	氟氯烃淘汰管理计划的项目编制	200,000	-
哥伦比亚	氟氯烃淘汰管理计划的项目编制	80,000	-
哥斯达黎加	氟氯烃淘汰管理计划的项目编制	50,000	-
科特迪瓦	氟氯烃淘汰管理计划的项目编制	75,000	-
古巴	氟氯烃淘汰管理计划的项目编制	50,000	-
多米尼加共和国	氟氯烃淘汰管理计划的项目编制	50,000	-
萨尔瓦多	氟氯烃淘汰管理计划的项目编制	50,000	-
斐济	氟氯烃淘汰管理计划的项目编制	40,000	-
加蓬	氟氯烃淘汰管理计划的项目编制	50,000	-
冈比亚	氟氯烃淘汰管理计划的项目编制	50,000	-
格鲁吉亚	氟氯烃淘汰管理计划的项目编制	50,000	-
加纳	氟氯烃淘汰管理计划的项目编制	50,000	-

印度	氟氯烃淘汰管理计划的项目编制	100,000	-
印度尼西亚	氟氯烃淘汰管理计划的项目编制	100,000	-
伊朗	氟氯烃淘汰管理计划的项目编制	75,000	-
牙买加	氟氯烃淘汰管理计划的项目编制	50,000	-
吉尔吉斯斯坦	氟氯烃淘汰管理计划的项目编制	60,000	-
黎巴嫩	氟氯烃淘汰管理计划的项目编制	50,000	-
马来西亚	氟氯烃淘汰管理计划的项目编制	100,000	-
墨西哥	氟氯烃淘汰管理计划的项目编制	100,000	-
摩尔多瓦	氟氯烃淘汰管理计划的项目编制	50,000	-
尼泊尔	氟氯烃淘汰管理计划的项目编制	50,000	-
尼日利亚	氟氯烃淘汰管理计划的项目编制	200,000	-
巴拿马	氟氯烃淘汰管理计划的项目编制	50,000	-
巴拉圭	氟氯烃淘汰管理计划的项目编制	50,000	-
秘鲁	氟氯烃淘汰管理计划的项目编制	50,000	-
斯里兰卡	氟氯烃淘汰管理计划的项目编制	50,000	-
特立尼达和多巴哥	氟氯烃淘汰管理计划的项目编制	50,000	-
乌拉圭	氟氯烃淘汰管理计划的项目编制	75,000	-
	氟氯烃淘汰计划项目编制小计：	2,570,000	-
B2. 最终淘汰管理计划的项目编制：			
文莱达鲁萨兰国	维修行业最终淘汰管理计划的项目编制	15,000	*
海地	维修行业最终淘汰管理计划的项目编制	15,000	*
	最终淘汰管理计划项目编制小计：	30,000	
B3. 其他项目：			
摩尔多瓦	对编制计量吸入器过渡战略的技术援助	30,000	*
巴基斯坦	计量吸入器投资项目的项目编制	60,000	*
	其他项目小计：	90,000	
A 节和 B 节小计：		3,338,230	648,230
机构支助费用（7.5%用于项目编制和体制建设以及超过 250,000 美元的其他项目，9%用于其他 250,000 美元以下的项目）：		250,817	48,617
共计：		3,589,047	696,847

* 供个别审议

A 节：建议一揽子核准的活动

A1. 延长体制建设项目：

(a) 印度（第七阶段）： 373,230 美元

(b) 尼日利亚（第五阶段）：260,000 美元

项目说明

3. 开发计划署提交了两份延长体制建设项目的申请。上述国家的体制建设项目说明载于本文件附件一。

基金秘书处的评论和建议

4. 基金秘书处建议按照表 1 所示供资数额一揽子核准印度和尼日利亚延长体制建设的申请。谨建议执行委员会向两国政府表达本文件附件二所载的附加评论。

A2. 最终淘汰管理计划的项目编制

巴巴多斯：维修行业最终淘汰管理计划的项目编制（15,000 美元）

项目说明

5. 开发计划署代表巴巴多斯政府提交了对编制最终淘汰管理计划的供资申请，供执行委员会审议。申请已根据第 45/54 号决定（关于低消费量国家的最终淘汰管理计划）提交。将与环境规划署联合开展项目编制活动。

基金秘书处的评论和建议

6. 秘书处对该项目的评论和建议载于 UNEP/OzL.Pro/ExCom/54/18 号文件，并在环境规划署工作方案修正案中有所讨论。

B 节：建议个别审议的活动

B1. 氟氯烃淘汰计划的项目编制：

	国家	项目	所需数额（美元）
(a)	安哥拉	氟氯烃淘汰管理计划的项目编制	50,000
(b)	阿根廷	氟氯烃淘汰管理计划的项目编制	80,000
(c)	亚美尼亚	氟氯烃淘汰管理计划的项目编制	60,000
(d)	孟加拉国	氟氯烃淘汰管理计划的项目编制	50,000
(e)	玻利维亚	氟氯烃淘汰管理计划的项目编制	50,000
(f)	巴西	氟氯烃淘汰管理计划的项目编制	100,000
(g)	柬埔寨	氟氯烃淘汰管理计划的项目编制	50,000
(h)	智利	氟氯烃淘汰管理计划的项目编制	75,000
(i)	中国	氟氯烃淘汰管理计划的项目编制	200,000
(j)	哥伦比亚	氟氯烃淘汰管理计划的项目编制	80,000

(k)	哥斯达黎加	氟氯烃淘汰管理计划的项目编制	50,000
(l)	科特迪瓦	氟氯烃淘汰管理计划的项目编制	75,000
(m)	古巴	氟氯烃淘汰管理计划的项目编制	50,000
(n)	多米尼克	氟氯烃淘汰管理计划的项目编制	50,000
(o)	萨尔瓦多	氟氯烃淘汰管理计划的项目编制	50,000
(p)	斐济	氟氯烃淘汰管理计划的项目编制	40,000
(q)	加蓬	氟氯烃淘汰管理计划的项目编制	50,000
(r)	冈比亚	氟氯烃淘汰管理计划的项目编制	50,000
(s)	格鲁吉亚	氟氯烃淘汰管理计划的项目编制	50,000
(t)	加纳	氟氯烃淘汰管理计划的项目编制	50,000
(u)	印度	氟氯烃淘汰管理计划的项目编制	100,000
(v)	印度尼西亚	氟氯烃淘汰管理计划的项目编制	100,000
(w)	伊朗	氟氯烃淘汰管理计划的项目编制	75,000
(x)	牙买加	氟氯烃淘汰管理计划的项目编制	50,000
(y)	吉尔吉斯斯坦	氟氯烃淘汰管理计划的项目编制	60,000
(z)	黎巴嫩	氟氯烃淘汰管理计划的项目编制	50,000
(aa)	马来西亚	氟氯烃淘汰管理计划的项目编制	100,000
(bb)	墨西哥	氟氯烃淘汰管理计划的项目编制	100,000
(cc)	摩尔多瓦	氟氯烃淘汰管理计划的项目编制	50,000
(dd)	尼泊尔	氟氯烃淘汰管理计划的项目编制	50,000
(ee)	尼日利亚	氟氯烃淘汰管理计划的项目编制	200,000
(ff)	巴拿马	氟氯烃淘汰管理计划的项目编制	50,000
(gg)	巴拉圭	氟氯烃淘汰管理计划的项目编制	50,000
(hh)	秘鲁	氟氯烃淘汰管理计划的项目编制	50,000
(ii)	斯里兰卡	氟氯烃淘汰管理计划的项目编制	50,000
(jj)	特立尼达和多巴哥	氟氯烃淘汰管理计划的项目编制	50,000
(kk)	乌拉圭	氟氯烃淘汰管理计划的项目编制	75,000

项目说明

7. 开发计划署为 37 个国家氟氯烃淘汰管理计划的编制提交了供资申请。这些申请提交之后在关于氟氯烃的执行委员会第五十三次会议上以及第 53/37 号决定中进行了讨论。开发计划署向秘书处提供了来自上述 37 个国家中 36 个国家的信函，内容是申请由开发计划署为氟氯烃淘汰管理计划的编制提供援助。

基金秘书处的评论

8. 秘书处在审查来自开发计划署的申请时告知该机构，虽然这些项目符合缔约方第十九次会议的决定，但目前不符合供资条件，原因是根据第 53/37 号决定氟氯烃管理计划准则将由执行委员会在本次会议上单独审议。第 53/37 号决定进一步指示，“执行委员会将尽全力在第五十四次会议上核准这些准则。”

9. 在考虑所提交各个项目的成本时，秘书处无法决定申请的供资数额是否充足，因为基本上还不清楚编制氟氯烃淘汰管理计划的任务及其所包含的内容。因此，在没有任何倾向基础的情况下秘书处无法审查这些成本，仅仅是提出开发计划署建议的成本。

10. 秘书处注意到这些国家中有十四个国家提出了与其他执行机构类似的申请。

11. 尽管如此，秘书处还是审查了提出供资申请的国家氟氯烃消费量，并做出以下评论：

(a) 37 个国家中，有 36 个国家报告了 2006 年氟氯烃消费量，有 1 个国家没有数据；

(b) 5 个国家的消费量在 300 ODP 吨以上，1 个国家报告零消费量；以及

(c) 来自国家方案报告的数据还显示 19 个国家有 HCFC-22 和 HCFC-141b 消费量，其余国家只有 HCFC-22 消费量。

基金秘书处的建议

12. 根据上述评论并且在没有关于制订氟氯烃管理计划的明确准则的情况下，秘书处不能建议为开发计划署提交的 37 个国家氟氯烃管理计划的编制供资。

13. 但是，谨建议执行委员会根据列入氟氯烃调查的关于编制氟氯烃淘汰管理计划的准则草案的议程项目 11（第 53/37 (h)号决定）考虑这些申请。

B2. 最终淘汰管理计划的项目编制

海地：维修行业最终淘汰管理计划的项目编制（15,000 美元）

项目说明

14. 开发计划署代表海地政府提交了对编制最终淘汰管理计划的供资申请，供执行委员会审议。申请已根据第 45/54 号决定（关于低消费量国家的最终淘汰管理计划）提交。将这些国家与环境规划署联合开展项目编制活动。

基金秘书处的建议

15. 秘书处对该项目的评论和建议载于 UNEP/OzL.Pro/ExCom/54/18 号文件，并在环境规划署工作方案修正案中有所讨论。

文莱达鲁萨兰国：维修行业最终淘汰管理计划的项目编制（15,000 美元）

项目说明

16. 开发计划署代表文莱达鲁萨兰国提交了对编制最终淘汰管理计划的供资申请，供执行委员会审议。申请已根据第 45/54 号决定（关于低消费量国家的最终淘汰管理计划）提交。该国的项目编制活动将与环境规划署联合开展。

基金秘书处的评论和建议

17. 秘书处对该项目的评论和建议载于 UNEP/OzL.Pro/ExCom/54/18 号文件，并在环境规划署工作方案修正案中有所讨论。

B3. 其他项目：

摩尔多瓦：对编制计量吸入器过渡战略的技术援助（30,000 美元）

背景

18. 执行委员会在第五十一次会议的第 51/34(d) 号决定中特别商定，“依照第 45/54 号决定逐案审议没有计量吸入器生产设施的第 5 条缔约方要求编制过渡到无氟氯化碳计量吸入器的战略的请求，但缔约方必须提出最近三年的下列资料，充分显示和说明需要这一战略。”

(a) 氟氯化碳和无氟氯化碳计量吸入器及干粉吸入器：在缔约方销售的数量，按其活性成分、商标/厂家和来源分列；

(b) 无氟氯化碳计量吸入器及干粉吸入器：缔约方国内核准、批准销售和/或推出的日期

(c) 氟氯化碳和无氟氯化碳计量吸入器及干粉吸入器：估计成本，按活性成分和来源分列。

19. 在第五十二次会议上根据第 45/54 号决定核准了摩尔多瓦的最终淘汰管理计划。在本次会议上提出最终淘汰管理计划时，秘书处注意到为在最终淘汰管理计划中编制过渡到无氟氯化碳计量吸入器的战略而提供的资料没有充分显示需要这一战略。随后秘书处被告知当时没有要求此项目内容，但是开发计划署表示，在最终淘汰管理计划的编制得到供资后，如有必要，将收集有关计量吸入器次行业的额外资料，以便在今后的委员会会议上为过渡战略的编制提出申请。摩尔多瓦根据第 51/34 号决定提交了这一申请。

项目说明

20. 开发计划署代表摩尔多瓦政府为计量吸入器过渡战略的编制提交了申请，以淘汰在计量吸入器消费行业中使用的氟氯化碳。在最终淘汰管理计划期间收集到的数据显示，摩尔多瓦没有生产氟氯化碳计量吸入器。数据还显示氟氯化碳和无氟氯化碳计量吸入器的进口都呈现出增长趋势。可利用的数据表明，2003 年使用中的此类医疗产品有 85,000 个单位，到 2007 年这一数字增加到 140,000 个单位。摩尔多瓦政府及其卫生当局还特别关注计量吸入器次行业，原因是慢性阻塞性肺病和哮喘病的发病率正在上升，因此必须确保计量吸入器的稳定供应以满足这些病人的需要。为编制计量吸入器过渡战略而申请的供资将为氟氯化碳计量吸入器替代品进口制订明确的时间表。同时还需要有促进和支持淘汰这些产品的条例，以及提高医生的认识和患者对氟氯化碳计量吸入器替代品接受程度及监测计量吸入器进口的方案。

21. 根据它们提交的资料和第 51/34 号决定，开发计划署表示，关于摩尔多瓦计量吸入器的供应状况及其无氟氯化碳替代品可简要概况如下（下文表 2）：

(a) 市场上有氟氯化碳计量吸入器、氢氟烷烃计量吸入器和干粉计量吸入器；

(b) 氢氟烷烃计量吸入器在市场上的份额不断扩大，已超过 2006 年市场上全部计量吸入器的 90%，但是在 2007 年又下降至不到 55%；

(c) 2003 年至 2005 年氟氯化碳计量吸入器的进口缓慢下降，到 2006 年其市场份额下滑至 5%。这一巨大的下降是由于难以从位于乌克兰的传统供应商那里获得廉价的氟氯化碳计量吸入器。但是，在 2007 年氟氯化碳计量吸入器的进口又上升至 45%；

(d) 2003 年至 2006 年氢氟烷烃计量吸入器的进口一直处于增长状态，但在 2007 年突然大量减少；

(e) 虽然市场上有干粉计量吸入器，但其份额可忽略不计。

表 2：计量吸入器的市场份额

市场份额比例/年份	2003 年	2004 年	2005 年	2006 年	2007 年
CFC %	96.5	75.7	64.8	4.7	45.5
HFA%	3.5	24.3	35.2	95.3	54.1
DPI%	0	0	0	0	0.41

22. 此外，开发计划署还提供了一个综合表格，列出了各国进口、销售或分布的氟氯化碳和无氟氯化碳计量吸入器及干粉计量吸入器，按其活性成分、商标/厂家和来源分列。报告还提供了关于氟氯化碳计量吸入器来源的资料，它们大部分来自于俄罗斯和中国，其市场份额细目分类如下：

2007 年氟氯化碳计量吸入器来源国	各种来源的次级市场份额（占全部数量的百分比）
俄罗斯	71.6
中国	20.4
其他国家	8.0
共计	100.0

23. 提交的数据还显示，与其计量吸入器相比氟氯化碳计量吸入器还是较为便宜的，并且还提出了氢氟烷烃计量吸入器或干粉计量吸入器目前无法获得的各种成分。例如，在2007 年氢氟烷烃计量吸入器的价格是氟氯化碳计量吸入器的两倍。但是，报告将此归咎于缺乏有力的价格政策，导致产品依据需求和供给而产生巨大波动。

24. 文件还指出，卫生当局不清楚《蒙特利尔议定书》淘汰计量吸入器中氟氯化碳的要求，而且计量吸入器进口计划常常是依据能够以最低成本提供产品的来源，而不是所使用的推进剂。

基金秘书处的评论

25. 提交了项目编制申请以便使摩尔多瓦向无氟氯化碳计量吸入器的过渡能够顺利进行，从而淘汰计量吸入器行业中的氟氯化碳消费。在审查提交的数据和资料时，秘书处注意到不同的计量吸入器在供应方面有着很大的不同，并且氟氯化碳和氢氟烷烃计量吸入器的进口也表现出巨大的波动。这种情况导致的结果就是可以获得的可负担计量吸入器的问题，它可能会影响到病人的护理。在寻求开发计划署对出现这一问题的原因做出说明是，它解释道，抗哮喘/慢性阻塞性肺病药物的进口不足，因此给病患带来了消极影响，所以必须强化进口制度。

26. 秘书处还注意到，虽然氟氯化碳计量吸入器和其他替代品在价格上有所不同，但在该国单位成本似乎保持在稳定的价格水平上，因为过去三年里特定产品的价格一直没有变化。因此，估计波动仍然仅仅是出现在产品在市场上的可及性方面，而不是出现在对消费者的单位价格方面。

27. 在讨论该国编制过渡战略的计划时，秘书处得知，关于以替代品取代氟氯化碳计量吸入器的国家战略计划考虑以下内容：

(a) 更好地研究和分析当前计量吸入器的市场消费、供应来源和未来趋势；

(b) 分析替代产品及其影响和健康效益；

(c) 与主要进口商和医疗机构的代表合作，组织并采取措施向可负担的替代药物转换，包括进口、替代的时间表以及与供应商和销售商之间的个人和团体协定；

(d) 制订关于进口的多年期计划，并确保向替代品的平稳转换；

(e) 采取广泛、明达和参与性的决策过程；

(f) 通过培训和有目标的认识活动增强信心并确保患者和医生接受替代产品；以及

(g) 与哮喘协会开展扩大而有针对性的工作，并在以家庭为基础的年度财务规划中提供培训，以确保更好地向干粉计量吸入器过渡。

基金秘书处的建议

28. 根据以上评论，谨建议执行委员会考虑核准编制计量吸入器过渡战略的申请，供资数额为 30,000 美元，如上文表 1 所示。还建议委员会确定所提供的资料是否符合第 51/34 号决定的请求。

29. 在批准这一开发计划署项目时还应该注意到，关于计量吸入器行业的淘汰不会获得进一步的供资。

巴基斯坦：计量吸入器投资项目的项目编制（60,000 美元）

背景

30. 执行委员会在第五十一次会议的第 51/34 号决定中特别商定，“可在个案的基础上审议申请编制转换氟氯化碳计量吸入器生产设施的项目的呈件，但有一项谅解，即有关国家应在申请中全面说明需要援助的理由，并作为起码条件应提供下列详细资料：

(a) 国家拥有的氟氯化碳计量吸入器生产设施的名称，建立氟氯化碳生产线的日期和每一生产线的生产能力；

(b) 生产的氟氯化碳计量吸入器的种类，使用的活性成分，年产量（件/年）；

(c) 过去 5 年氟氯化碳计量吸入器的产量增长情况；

(d) 氟氯化碳计量吸入器生产工厂是否考虑氟氯化碳计量吸入器的代用品，这种代用品为何；

(e) 各生产设施淘汰氟氯化碳消费的计划；以及

(f) 不含氟氯化碳的计量吸入器及干粉计量吸入器在缔约方销售的数量，按其活性成分、商标/厂家和来源分别列出。”

项目说明

31. 开发计划署代表巴基斯坦政府提交了淘汰计量吸入器制造行业中使用的氟氯化碳的项目编制申请。

32. 世界银行在第四十一会议上提出了关于巴基斯坦的国家方案增订，其中显示 2002 年该国根据《蒙特利尔议定书》第 7 条报告的全部氟氯化碳消费量为 1,646.7 ODP 吨，包括一家跨国公司（22%的地方所有权）为制造计量吸入器而使用的 69.4 ODP 吨。在该次会议上，巴基斯坦政府提交了三份关于泡沫塑料和制冷行业的项目提案，以淘汰 1,063.6 ODP 吨的各类氟氯化碳（UNEP/OzL.Pro/ExCom/41/51 号文件）。关于巴基斯坦国家方案增订的信函指出，根据第 35/57 号决定，在提交第四十一次会议的三个项目中，剩余氟氯化碳的行业销售符合供资条件。

33. 根据应第 51/34 号决定提交的关于项目编制资金的资料，开发计划署指出，截至 2006 年巴基斯坦政府有三家氟氯化碳计量吸入器制造企业：葛兰素史克巴基斯坦，葛兰素史克的一家地方子公司，创立于 1981 年，有 22%的地方所有权；二家国有企业，Zafra 和 Macter Pharmaceutical。Zafra 从 2005 年开始停止生产，而 Macter 则是在 2006 年刚刚开业。

34. 葛兰素史克巴基斯坦有一条生产线，在 1981 年创立之初其生产能力为每年 48,000 个单位。2006 年，葛兰素史克的氟氯化碳计量吸入器生产为 358 万个单位，全部用于国内消费。公司只生产两种配方，沙丁胺醇和沙丁胺醇/倍氯米松。提案显示，位于美国和联合王国的葛兰素史克研发部正在利用母公司的设施重新制订运用替代品的产品配方。但是，它还提到，地方生产需要有一条全新的生产线来生产无氟氯化碳计量吸入器。

35. 葛兰素史克过去五年的年度生产如下表所示。

年份	单位数量
2002	2,701,518
2003	2,556,277
2004	2,923,177
2005	2,165,912
2006	3,584,611

36. Macter 国际有限公司成立于 2006 年，国有份额占 100%。当前其投入生产的氟氯化碳计量吸入器配方有 10 个。2006 年，它有一条生产线，产量为 170,000 个单位。因为该公司从 2006 年才开始生产，所以无法提供前几年的产量资料。项目数据表明该公司计划向氢氟烷烃替代品转换，并且由于不能进行改装，因此将必须彻底替换现有的生产线。

37. 下表显示出了计量吸入器行业氟氯化碳使用量的趋势。数据仅列示了葛兰素史克的消费量：

年份	CFC-11 的量 （ODP 吨）	CFC-12 的量 （ODP 吨）	CFC 的总使用量

2002	20.4	44.3	64.7
2003	19.3	41.7	61
2004	26.5	59.9	86.4
2005	25.1	56.8	81.9
2006	26.0	58.7	84.7
共计	117.3	261.4	378.7

38. 巴基斯坦主要通过不同的公司进口氟氯化碳和非氟氯化碳计量吸入器。与国产产品相比，进口计量吸入器的价格较为便宜，包括葛兰素史克生产的两种配方。每年巴基斯坦计量吸入器的进口总量超过了 162,000 个单位。下表显示了开发计划署提供的每种活性成分的进口细目：

药品名称	活性成分	生产国	进口国	进口量/年		市场价格	
舒利迭（氢氟烷烃）	沙美特罗/氟替卡松丙酸酯	法国	澳大利亚	50 微克	21,235	50 微克	820 卢比
				125 微克	38,051	125 微克	910 卢比
				250 微克	71,867	250 微克	1,040 卢比
Flixotide（氢氟烷烃）	氟替卡松丙酸酯	法国	澳大利亚	50 微克	5,495	50 微克	280 卢比
				125 微克	6,019	125 微克	340 卢比
				250 微克	6,092	250 微克	650 卢比
Aerolin（氢氟烷烃）	沙丁胺醇	法国	澳大利亚	100 微克	5,049	100 微克	200 卢比
Serevent（氟氯化碳）	沙美特罗	法国	澳大利亚	25 微克	8,843	25 微克	578.45 卢比

- 进口的单位数量与 2004 年、2005 年和 2006 年相同。
- 1 美元=61 巴基斯坦卢比。

秘书处的评论

39. 提交本项目编制申请是为了能够淘汰生产氟氯化碳计量吸入器时使用的 85 ODP 吨氟氯化碳。在审查所提交的仅包括葛兰素史克巴基斯坦公司产量的数据时，秘书处注意到，正如生产的单位总量所示，总体而言，2003-2006 年的产量呈上升趋势。估计 2006 年的产量为 350 万个单位。在答复秘书处关于产量上升原因的询问时，开发计划署表示，巴基斯坦哮喘的发病率上升，可能占总人数（800 万）的 5%。另一个让该国日益担忧的问题是50%的哮喘病患者无力支付治疗费用。

40. 秘书处注意到提案包括一家在 2006 年才开始生产氟氯化碳计量吸入器的公司。显然这家公司并不符合供资条件，因为它是在巴基斯坦根据第 35/37 号决定提交了满足剩余符合供资条件消费量的最后行业计划之后开始生产的。开发计划署答复说，上文所述的氟氯化碳计量吸入器需求是 2006 年建立新计量吸入器生产设施的原因所在。

41. 秘书处还请开发计划署根据第 51/34 号决定提供该国非氟氯化碳计量吸入器进口量的数据。开发计划署提供了一个表格，概述了其呈文中确定的 10 个配方中 4 个配方的进口情况。

42. 在讨论该国的转换计划时，秘书处得知葛兰素史克的研发部正在考虑将计量吸入器配方重新改进为氢氟烷烃，并且有可能在一次较为详细的研究后共同为转换成本筹资。

43. 在审查该国的氟氯化碳消费量数据时，秘书处还注意到，根据第 35/57 号决定，巴基斯坦选择了备选方法 1 作为设定其剩余符合资助条件氟氯化碳消费量的基础。根据在第四十一次会议上所做的这一决定，符合资助条件的消费量为 518 ODP 吨，并且巴基斯坦在提交秘书处的一份正式公文中也对此给予认可。巴基斯坦在其提交第四十一次会议的国家

方案增订（剩余符合资助条件消费量选择的基础）中还表示，有一家公司生产计量吸入器，其氟氯化碳消费量为 69.4 ODP 吨。这家公司是葛兰素史克巴基斯坦公司。

44. 在该次会议上，巴基斯坦得到了对泡沫塑料行业的供资，用以淘汰 106.9 ODP 吨的消费量。它还得到了对制冷剂管理计划和延长体制建设的供资，分别用于淘汰 215 ODP 吨和 18.6 ODP 吨的消费量。第四十二次会议为该国剩余符合资助条件的氟氯化碳消费量提供了资助，用于淘汰商业制冷行业 181.3 ODP 吨的消费量，从而涵盖了剩余的全部 518 ODP 吨消费量。

基金秘书处的建议

45. 根据上述评论，谨建议执行委员会按照上文表 1 所示 60,000 美元的供资数额核准该项目编制申请。此外，还建议委员会确定所提供的信息是否符合第 51/34 号决定的要求。

46. 核准该项目时，应要求开发计划署注意：

(a) 项目编制申请应仅涉及在一致认可剩余符合供资条件的氟氯化碳消费量时确定的公司和消费量，以及本地所有份额的目标；

(b) 根据核准的该行业类似投资项目，在第四十二次会议核准了巴基斯坦最后行业计划之后的任何新计量吸入器产量均不符合供资条件。

附件一

体制建设项目提案

印度：延长体制建设

项目摘要和国家概况	
执行机构：	开发计划署
以前核准的体制建设供资数额（美元）：	
第一阶段：1992 年 10 月	484,690
第二阶段：1996 年 10 月	324,423
第三阶段：1999 年 3 月	324,423
第四阶段：2001 年 7 月	324,423
第五阶段：2003 年 12 月	401,222
第六阶段：2005 年 11 月	401,222
共计	2,260,403
延长所需的数额（第七阶段）（美元）：	373,230
第七阶段建议核准数额（美元）：	373,230
机构支助费用（美元）：	27,992
多边基金体制建设第七阶段总成本（美元）：	401,222
由于体制建设第七阶段同等数量氟氯化碳淘汰成本为 12.1 美元/公斤（ODP 吨）：	
国家方案的核准日期：	1993 年 11 月
国家方案报告的消耗臭氧层物质消费量（1991 年）（ODP 吨）：	13,111.0
最新报告的消耗臭氧层物质消费量（2006 年）（ODP 吨）：	4,687.8
受控物质基准消费量（ODP 吨）：	
(a) 附件 A 第一类物质（各类氟氯化碳）（1995-1997 年平均数）	6,681.0
(b) 附件 A 第二类物质（哈龙）（1995-1997 年平均数）	1,249.4
(c) 附件 B 第二类物质（四氯化碳）（1998-2000 年平均数）	11,505.4
(d) 附件 B 第三类物质（三氯乙酸）（1998-2000 年平均数）	122.20
(e) 附件 E（甲基溴）（1995-1998 年平均数）	0.0
受控物质的最近消费量（2006 年）（ODP 吨）：	
(a) 附件 A 第一类物质（各类氟氯化碳）	3,560.3
(b) 附件 A 第二类物质（哈龙）	0
(c) 附件 B 第二类物质（四氯化碳	1,127.5
(d) 附件 B 第三类物质（三氯乙酸）	0.0
(e) 附件 E（甲基溴）	0.0
(f) 附件 C 第一类物质（氟氯烃）	592.5
核准的项目供资数额（美元）：	222,131,848
支付的数额（截至 2008 年 2 月）（美元）：	179,433,474
将淘汰的消耗臭氧层物质（ODP 吨）：	53,631.0
已淘汰的消耗臭氧层物质（截至 2008 年 2 月）（ODP 吨）：	47,658.4

1. 活动摘要及执行委员会核准的供资数额：

活动摘要		核准的供资数额（美元）
(a)	投资项目：	210,910,876
(b)	体制建设：	2,260,403
(c)	项目编制、技术援助、培训和其他非投资项目：	8,960,569
	共计：	222,131,848

进度报告

2. 体制建设项目第六阶段期间，印度继续做出巨大努力，通过与执行机构、各行业及其他相关政府部门紧密协调，监督并管理其生产量和消费量淘汰活动，从而确保遵守《蒙特利尔议定书》的各项义务和淘汰成果的可持续性。国家臭氧机构认真监督其有效管制消耗臭氧层物质供应量和消费量的进出口许可证制度。国家臭氧机构广泛参与执行委员会、关于消耗臭氧层物质的蒙特利尔议定书不限名额工作组和《关于消耗臭氧层物质的蒙特利尔议定书》缔约方的各届会议和联合区域网络会议，并为此做出了巨大贡献。作为不遵守情事程序所设履约委员会的成员，印度还参与了在 2007 年举行的两次会议。国家臭氧机构还开展了广泛的公共宣传和信息传播活动，以便使用者和利益攸关方获得关于臭氧层保护的信息以及相关的非消耗臭氧层物质技术，从而能顺利执行淘汰方案。国家机构还通过在其他国家针对臭氧干事举行培训，分享了其关于体制建设项目管理的经验。2006 年和 2007 年，为伊朗和不丹的臭氧干事提供了培训。最为显著的是，在协助成功举办于 2006 年 11 月和 12 月在新德里举行的《关于消耗臭氧层物质的蒙特利尔议定书》缔约方大会第十八次会议和执行委员会第五十次会议，国家臭氧机构做出了各种努力，从而推动了会议的顺利召开。

行动计划

3. 体制建设项目第七阶段的目标是继续有效管理、监督并执行消耗臭氧层物质活动，以便遵守《蒙特利尔议定书》规定的到 2010 年实现全部淘汰的义务，并确保淘汰成果的可持续性。在体制建设项目即将到来的这一阶段，印度将需要通过编制、核可并制定其计量吸入器过渡战略并投资计量吸入器制造行业淘汰氟氯化碳的行动来解决计量吸入器问题。它将继续执行《消耗臭氧层物质（管理和控制）规则、惯例和政策培训战略》。国家臭氧机构还将通过编制《战略和淘汰管理计划》并建立示范项目来增强其在解决加速淘汰氟氯烃化合物生产量和消费量方面的能力。它将增强其在管制和监督消耗臭氧层物质活动方面的作用，并增加公共宣传活动，从而能够顺利实现在 2010 年底全部淘汰各类氟氯化碳，并保持这一成果。

尼日利亚：延长体制建设

项目和国家概况	
执行机构：	开发计划署
以前核准的体制建设供资数额（美元）：	
第一阶段：1993 年 3 月	339,000
第二阶段：2001 年 7 月	226,000
第三阶段：2003 年 7 月	279,500
第四阶段：2006 年 4 月	279,500
共计	1,124,000
延长所需数额（第五阶段）（美元）：	260,000
第五阶段建议核准数额（美元）：	260,000
机构支助费用（美元）：	19,500
多边基金体制建设第五阶段总成本（美元）：	279,500
由于体制建设第五阶段同等数量氟氯化碳淘汰成本为 12.1 美元/公斤（ODP 吨）：	暂缺
国家方案核准日期：	1997 年 7 月
国家方案报告的消耗臭氧层物质消费量（1996 年）（ODP 吨）：	1,684.8
最近报告的消耗臭氧层物质消费量（2006 年）（ODP 吨）：	454.0
受控物质基准消费量（ODP 吨）：	
(a) 附件 A 第一类物质（各类氟氯化碳）（1995-1997 年平均数）	3,650.0
(b) 附件 A 第二类物质（哈龙）（1995-1997 年平均数）	285.3
(c) 附件 B 第二类物质（四氯化碳）（1998-2000 年平均数）	152.8
(d) 附件 B 第三类物质（三氯乙酸）（1998-2000 年平均数）	32.9
(e) 附件 E（甲基溴）（1995-1998 年平均数）	2.8
受控物质的最近消费量（2006 年）（ODP 吨）：	
(a) 附件 A 第一类物质（各类氟氯化碳）	454.0
(b) 附件 A 第二类物质（哈龙）	0.0
(c) 附件 B 第二类物质（四氯化碳）	0.0
(d) 附件 B 第三类物质（三氯乙酸）	0.0
(e) 附件 E（甲基溴）	0.0
(f) 附件 C 第一类物质（氟氯烃）	35.8
核准的项目供资数额（美元）：	32,400,328
支付的数额（截至 2008 年 2 月）（美元）：	25,129,238
将淘汰的消耗臭氧层物质（ODP 吨）：	4,430.0
已淘汰的消耗臭氧层物质（截至 2008 年 2 月）（ODP 吨）：	3,834.0

4. 活动摘要及执行委员会核准的供资数额：

活动摘要		核准的供资数额（美元）
(a)	投资项目：	29,220,739
(b)	体制建设：	1,124,000
(c)	项目编制、技术援助、培训和其他非投资项目：	2,055,589
	共计：	32,400,328

进度报告

5. 在体制建设项目第四阶段，尼日利亚国家臭氧机构继续履行其向秘书处和多边基金秘书处汇报的义务，并开展了各种公共宣传活动，如：编制并散发诸如信息小册子、传单、抓绒衣、T 恤、太阳帽和衬衫之类的公共宣传材料；举办针对媒体工作者的讲习班和“国家宣传和推广讲习班”；每年庆祝“国际保护臭氧层日”；制定各项学校臭氧宣传推广方案；在全国范围内播放电视广告和定期的广播短诗和节目；建立网站。为增强消耗臭氧层物质进/出口管制机制并防止消耗臭氧层物质和使用消耗臭氧层物质设备的非法贸易，国家臭氧机构与联邦司法部的官员举办了一次法律务虚会，重新起草消耗臭氧层物质立法草案，并在拉各斯、哈科特港和卡诺针对海关和尼日利亚食品药品管理局、国家标准局和消费者保护理事会的其他相关执法人员进行了地区培训，并取得了巨大成功。最后，它在现行的各类氟氯化碳方案（OPIAMU 作为其执行工具）和溶剂、哈龙和甲基溴项目中继续发挥着协调作用。

行动计划

6. 体制建设项目第五阶段的目标是继续开展进度报告中介绍的各项活动，有效管理、监督并执行消耗臭氧层物质活动，从而确保淘汰成果的可持续性。在体制建设项目即将到来的下个阶段，尼日利亚将增强其能力，促进地方机构工作在管制和监督消耗臭氧层物质活动方面的作用，并增加公共宣传活动，从而在 2010 年底全部淘汰各类氟氯化碳，并保持这一成果。此外，在此期间还将制定关于计量吸入器和氟氯烃的新方案。

附件二

执行委员会对提交第五十四次会议的延长体制建设项目的看法

印度

1. 执行秘书已审查了印度请求延长体制建设项目的资料，并赞赏地注意到印度已采取重要举措，执行其关于消耗臭氧层物质生产量和消费量的行业和国家氟氯化碳消费量淘汰计划，以便实现 2007 年的履约阶段性目标，并在随后的 2010 年实现全部淘汰。在其呈文中，印度报告了诸多成功的淘汰活动，其中包括根据行业计划及时监督并协调其淘汰活动；严格监督管制消耗臭氧层物质供应量和消费量的进出口许可证制度；开展公共宣传运动和讨论会，并提供关于相关替代品技术的援助和信息，以便落实臭氧层保护活动。执行委员会还注意到，印度将增强其监督和管制消耗臭氧层物质的能力，以便在实现 2010 年底全部淘汰目标后确保成果的可持续性。执行委员会希望，印度能成功落实已取得显著成效的规划活动，保持并依靠其目前的氟氯化碳削减量来实现遵循《蒙特利尔议定书》削减时间表的目标，并且加倍努力筹备加速淘汰氟氯烃活动。[进一步的评论有待 UNEP/OzL.Pro/ExCom/54/34 号文件中执行委员会对 2006 年印度消费量问题讨论的结果。]

尼日利亚

2. 执行委员会审查了尼日利亚请求延长体制建设项目的最终报告，并赞赏地注意到尼日利亚国家臭氧机构在执行第四阶段期间取得的成就。执行委员会还特别注意到了尼日利亚在以下方面取得的进展，即削减其氟氯化碳消费量、提前履行 2007 年《蒙特利尔议定书》管制措施，并注意到四氯化碳/甲基氯仿、哈龙和甲基溴的消费量均为零。它还注意到尼日利亚已签署了《北京修正案》，并继续执行其主要消费消耗臭氧层物质行业的淘汰项目。执行委员会鼓励尼日利亚政府尽早执行其消耗臭氧层物质立法，以便加强其国家的消耗臭氧层物质管制措施，并确保遵循《蒙特利尔议定书》的各项要求。执行委员会希望能够成功实现为即将到来的下一个体制建设项目阶段制定的各项目标，并希望尼日利亚政府及时履行《蒙特利尔议定书》为其规定的各项义务。

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EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL
(54th Meeting, 7 – 11 April 2008, Montreal)

2008 WORK PROGRAMME

OF THE

UNITED NATIONS DEVELOPMENT PROGRAMME

Request for Project Preparation and Non-Investment Projects at the 54th Executive Committee Meeting

February 2008

Revised March 6 2008

2008 UNDP WORK PROGRAMME

54th Executive Committee Meeting (7-11 April 2008, Montreal)

This Work Programme document contains all non-investment and project preparation programmes that are being requested at the 54th Meeting of the Executive Committee. These requests amount to US$ 3,338,230 plus US$ 250,817 of support cost, as elaborated upon below.

1. Institutional Strengthening Renewal Requests.

The following Institutional Strengthening Renewal Requests are being submitted at the 54th meeting of the Executive Committee:

Nr	COUNTRY	TITLE	ODP	BUDGET	SUPPORT COST	TOTAL
1	India	Institutional Strengthening Phase VII	30.8	373,230	27,992	401,222
2	Nigeria	Institutional Strengthening Phase V	21.5	260,000	19,500	279,500
Sub Total Institutional Strengthening Projects			52.3	633,230	47,492	680,722

Documents for the IS Renewal Request of India and Nigeria were submitted separately by UNDP.

2. Requests for Project Preparation Funds in the Refrigeration Servicing Sector.

Nr	COUNTRY	TITLE	BUDGET	SUPPORT COST	TOTAL	REMARKS
1	Barbados	PRP for TPMP in the Servicing Sector	15,000	1,125	16,125	With UNEP
2	Brunei Darussalam	PRP for TPMP in the Servicing Sector	15,000	1,125	16,125	With UNEP
3	Haiti	PRP for TPMP in the Servicing Sector	15,000	1,125	16,125	With UNEP
Subtotal PRP-Proposals (Servicing Sector)			45,000	3,375	48,375	

The requests for Barbados, Brunei Darussalem and Haiti would be to prepare a TPMP, which would be jointly carried out with UNEP. As usual, UNEP's PRP-funds would be applied to the local component needed to prepare the TPMP, while UNDP's funds would mostly be applied for the international consultant.

3. Requests for Activities in the MDI Sector.

Nr	COUNTRY	TITLE	BUDGET	SUPPORT COST	TOTAL	REMARKS
Preparatory Funds						
1	Pakistan	PRP for MDI Investment Project	60,000	4,500	64,500	See Annex II
MDI Transition Strategies						
2	Moldova	MDI Transition Strategy	30,000	2,700	32,700	See Annex III
Subtotal Activities in the MDI Sector			90,000	7,200	97,200	

Project preparation request for Pakistan is related to the development of investment projects for Metered Doses Inhalers (MDIs). Funds would be used for international consultants, national consultants, stakeholders' workshops and sundries. Annex I presents the information related to Pakistan according to the Executive Committee Decision 51/34 c).

The MDI Transition Strategy for Moldova is being submitted as part of the Work Programme. Information as per decision 51/34 d) is presented in Annex II.

4. Requests for Activities related to HCFCs

4.1 Project Preparation Funds related to HCFCs

Important decisions on HCFCs were taken by the Meeting of the Parties at its 19th meeting in September 2007, and as a result the 53rd meeting of the Executive Committee took decision 53/37 related to HCFCs which requests the MLF Secretariat to prepare guidelines for "HCFC phase-out management plans incorporating HCFC surveys, taking into consideration comments and views relating to such guidelines expressed by Executive Committee members at the 53rd Meeting and the submissions to the 54th Meeting, and that the Executive Committee would do its utmost to approve the guidelines at its 54th Meeting". At the time of writing this Work Programme, these guidelines are currently being reviewed by the implementing agencies. As far as the overarching strategy for "full phaseout", it is UNDP's views that it is too early to establish and therefore the HCFC Management Plans should be prepared following a staged approached which will focus on the 2013 and 2015 targets now, followed by a review process to look into longer-term actions required, at a later stage.

UNDP has thus included three types of HCFC-related activities in its business plan:

- requests for project preparation (2008) – all included in current work programme
- demonstration projects (2008) – some included in current work programme, others to be submitted later in 2008.
- follow-up investment programmes (2009-2015) – not part of a work programme as these are investment proposals.

Further to written requests received from the countries concerned, UNDP is submitting to the 54th meeting of the Executive Committee, 37 project preparation activities to assist countries to prepare their HCFC Management Plans focusing first on helping countries to reach the 2013 freeze and the 2015 10%- reduction control measures for HCFCs. While conducting such project preparation activities, UNDP will fully take into account the new HCFC guidelines which will be considered at the 54th meeting of the Executive Committee.

The 12 surveys finalized were very helpful to those 12 countries and they are ready to start immediately the work needed to finalize the required action plan to meet the tight reduction schedule until 2015. Others will have to move fast to be able to meet agreed targets. For the twelve countries which already received funding to conduct a survey, the requested PRP funds were proportionally decreased.
In the following table, the budget for each activity would approximately be broken down as follows:
40% -- International consultants
30% -- National consultants and/or local subcontracts
20% -- Stakeholder workshops
10% -- Sundries

Category	Country	Chemical	Title	Budget	Support	Total	Remark
HCFCs	Angola	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	
HCFCs	Argentina	HCFC	PRP to prepare Phaseout Management Plan	80,000	6,000	86,000	
HCFCs	Armenia	HCFC	PRP to prepare Phaseout Management Plan	60,000	4,500	64,500	
HCFCs	Bangladesh	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	
HCFCs	Bolivia	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	With GTZ
HCFCs	Brazil	HCFC	PRP to prepare Phaseout Management Plan	100,000	7,500	107,500	With GTZ
HCFCs	Cambodia	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	With UNEP
HCFCs	Chile	HCFC	PRP to prepare Phaseout Management Plan	75,000	5,625	80,625	
HCFCs	China	HCFC	PRP to prepare Phaseout Management Plan	200,000	15,000	215,000	Solvents / Ref Manuf
HCFCs	Colombia	HCFC	PRP to prepare Phaseout Management Plan	80,000	6,000	86,000	
HCFCs	Costa Rica	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	
HCFCs	Cote d'Ivoire	HCFC	PRP to prepare Phaseout Management Plan	75,000	5,625	80,625	
HCFCs	Cuba	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	
HCFCs	Dominican Rep	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	
HCFCs	El Salvador	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	
HCFCs	Fiji	HCFC	PRP to prepare Phaseout Management Plan	40,000	3,000	43,000	
HCFCs	Gabon	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	With UNEP
HCFCs	Gambia	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	
HCFCs	Georgia	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	
HCFCs	Ghana	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	
HCFCs	India	HCFC	PRP to prepare Phaseout Management Plan	100,000	7,500	107,500	
HCFCs	Indonesia	HCFC	PRP to prepare Phaseout Management Plan	100,000	7,500	107,500	
HCFCs	Iran	HCFC	PRP to prepare Phaseout Management Plan	75,000	5,625	80,625	
HCFCs	Jamaica	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	
HCFCs	Kyrgyzstan	HCFC	PRP to prepare Phaseout Management Plan	60,000	4,500	64,500	
HCFCs	Lebanon	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	
HCFCs	Malaysia	HCFC	PRP to prepare Phaseout Management Plan	100,000	7,500	107,500	
HCFCs	Mexico	HCFC	PRP to prepare Phaseout Management Plan	100,000	7,500	107,500	
HCFCs	Moldova	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	
HCFCs	Nepal	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	With UNEP
HCFCs	Nigeria	HCFC	PRP to prepare Phaseout Management Plan	200,000	15,000	215,000	
HCFCs	Panama	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	
HCFCs	Paraguay	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	
HCFCs	Peru	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	
HCFCs	Sri Lanka	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	With UNEP
HCFCs	Trinidad & Tob	HCFC	PRP to prepare Phaseout Management Plan	50,000	3,750	53,750	
HCFCs	Uruguay	HCFC	PRP to prepare Phaseout Management Plan	75,000	5,625	80,625	
37				2,570,000	192,750	2,762,750	

ANNEX I

JUSTIFICATION FOR PROJECT PREPARATION FOR THE DEVELOPMENT OF AN MDI TRANSITION STRATEGY AND CONVERSION PROJECT FOR THE METERED DOSE INHALER MANUFACTURING SECTOR IN PAKISTAN

1.0 Background

The manufacture of CFC MDIs in Pakistan was started in 1981 by GSK Pakistan, a subsidiary of GSK. Since that time, there have been two additional manufacturing plants established. The first is Zafa (Chemie) Pharmaceutical which stopped production in 2005 and the second is Macter Pharmaceutical which commenced production in 2006.

2.0 Consumption of CFCs in MDIs in Pakistan and Usage Patterns

There are currently two locally based manufacturers of MDI in Pakistan, GSK Pakistan Limited which has a 25% local shareholding and Macter Pharmaceutical which has 100% local ownership. The MDI products produced in Pakistan are CFC based and currently, there is no local capacity or capability to produce non-CFC based MDIs in the country.

The Consumption of CFC in the MDI manufacturing Sector in Pakistan in the year 2006 was approximately 84.734 MT of CFC 12 and 11 accounting for a local production of 3.58 million units which is an increase of over 1 Million units from the previous year. The data for the last five years is presented below:

Year	Number of Units	Quantity of R11 (kg)	Quantity of R12 (kg)
2002	2 701 518	20 380	44 265
2003	2 556 277	19 230	41 770
2004	2 923 177	26 505	59 982
2005	2 165 912	25 137	56 778
2006	3 584 611	26 028	58 706

The majority of the units are consumed locally with a small percentage being exported to other Article 5 countries in the Asia.

According to the Asthma Insights and Reality Survey done in Pakistan in 2005, it is estimated that about 5% of the Pakistani population have asthma. Based on the current population, this would mean that there is an estimated 8 million people suffering from asthma in Pakistan. Complete details of the data from this study are presented as the appendix 1.

Based on the local manufacturing capacity, only a percentage of the population can be

supplied with MDIs. However, as the use of the drugs become more widespread in the rural areas of Pakistan and as a result of greater awareness among the population of the ease of use of asthma and COPD drugs in the MDI form, the demand for the MDIs will increase. As a result of this, it is expected that local manufacturing of MDIs will significantly increase in order to meet the growing demand. In view of the present manufacturing capability, this will mean an increase in the demand for pharma grade CFCs. While there is importation of the MDI drugs using CFC and HFA, the cost of the imported drugs are higher (with the exception of drugs imported from China which are also CFC and will therefore be ultimately unavailable) than the locally produced drugs making their affordability and ultimate off-take into the market lower than locally produced MDIs and restricted to higher income groups. This higher cost of imported drugs coupled with the market demand may explain the establishment of a new CFC MDI manufacturer – Macter. For formulations not produced in Pakistan, these will be continued to be imported, but in the absence of the guidance of a transition strategy along with a conversion project that will help to create conditions to establish such bans and change the direction that the market is taking, it will be difficult to prevent the introduction of other CFC MDI formulations since the technology is readily available.

3.0 Situation that will arise in 2007 and beyond

Pakistan had opted for a sector by sector and individual project approach to manage its phase out of Ozone Depleting Substances and as such there are no current agreements with the Executive Committee for additional phase out targets over and above those already required by the Montreal Protocol. For purposes of calculating the baseline for which Pakistan is eligible to receive funding as per decision 35/57, Pakistan opted for Option 1. A more thorough analysis of the eligible consumption is presented later in this paper.

Due to the project by project approach that Pakistan adopted, the use of CFC in the MDI sector, which was minor compared to the overall consumption, was not dealt with since the focus had been on the, foam manufacturing, solvents and RAC/MAC sectors where the majority of consumption of CFC occurred. In the current context, however, in percentage terms, the situation has changed and is poised to result in higher percentage of CFC consumption in MDIs due to the declining consumption in the non-MDI sectors and the stable and upward trending consumption in the MDI sector.

Pakistan has managed its phase out of CFCs through the reduction of demand through the implementation of some 39 Investment and Technical Assistance Projects and through a quota system under their import/export regulatory regime. This has resulted in Pakistan being well below the 50% target in 2006.

While the compliance situation has been well managed in Pakistan, it is expected that the upward trend in consumption of CFC in MDI coupled with the 85% reduction target in 2007 that compliance will become an issue for Pakistan. In 2007, Pakistan will be allowed a maximum consumption of CFC of 251.91 tonnes so that the consumption of CFC in the MDI sector will represent a significant (33%) portion of the total consumption while in 2010 and beyond the MDI sector, if not converted will continue to require at least the

current consumption of CFC in order to meet the health needs of the local population and keep the product prices affordable.

4.0 Industry yet to phaseout CFC MDI manufacturing and needing support

The manufacturing industry is expecting support from Government on conversion to alternatives to CFC based MDIs. There is, thus, an urgent need to implement a project that will provide assistance to facilitate the conversion to an alternative and at the same time to achieve reduction in CFC consumption so that Pakistan remains in compliance with the Montreal Protocol.

5.0 Support for pharma distribution system in managing transition – awareness and regulatory interventions

As seen in other countries, distribution system for MDIs needs to be supported for handling phaseout. This would involve efforts in close cooperation with opinion makers including medical practitioners, industry and regulatory agencies. The transition has to be cost effective so that there is no undue burden on the local consumers. This would need:

1. Awareness and education of key stakeholders in prescribing new products
2. Public awareness programs on Government support for this conversion
3. Regulations for monitoring production of and phasing out CFC MDIs

5.0 Remaining Eligible Consumption

As per decision 35/57, Article 5 countries had to choose one of two options for calculation of remaining eligible consumption. Option 1 proposed that countries use the baseline set out in the Montreal Protocol (average consumption for the years 1995 – 1997) while Option 2 proposed that countries use the consumption reported in either of the years 1999 or 2000. Pakistan opted for Option 1 which meant it had an eligible baseline consumption of 1679.40 ODP tonnes (Annex A substances only). To date Pakistan has had over 30 approved phase out projects amounting to an overall reduction of 1430.28 ODP tonnes on completion of these projects. This leaves 249.12 tonnes remaining to be phased out that are not covered by any current project. Of this the MDI conversion project will phase out approximately 85 ODP tonnes of consumption, which is within the eligible consumption for Pakistan.

	ODP Tonnes
Annex A ODP to be phased out – Option 1 as per decision 35/57	1679.40
Total Annex A ODP being phased out by completed and ongoing projects	1430.28
Remaining Eligible Consumption	249.12
Consumption in the MDI Sector	84.73

6.0 Justification

Pakistan presents an interesting situation in terms of the development of an MDI conversion project given two major factors. The first is that the majority of drugs are produced by a subsidiary of a multinational drug company and the second is the manner in which projects have been developed in Pakistan to address the consumption of CFCs.

Examining the first issue, that of the production by a multinational it is important to consider first that there is a minority local ownership and second without assistance to convert the multinational will in all likelihood cease operations in Pakistan, but this not prevent a local or other enterprise continuing to use the fixed manufacturing assets to produce MDIs since there is clearly a local demand for these drugs. The issue of the assets of GSK Pakistan at some point becoming locally owned is valid since the current costs of HFA versions of the drugs available in the market is high compared to the CFC versions which has resulted in the introduction of a new company producing CFC versions of these drugs at a markedly lower cost. In this regard to prevent the continued introduction of new drugs in the CFC format, it is important to convert the existing plants.

It is recognized that the MLF rules prevent conversion of Multinational companies. In light of this, it is proposed that the project could be developed such that the incremental costs for conversion be apportioned based on the local ownership for the fixed costs of the equipment and IOC while the multinational be responsible for Development of the alternatives.

On the second issue of project development in Pakistan, Pakistan has deviated from the norm of development of National Phase out plans and has pursued a sectoral and individual approach to phasing out consumption of CFC. Since in Pakistan the majority of consumption has been in the manufacturing sectors particularly in Foams and RAC the focus has been on these sectors and the identification of manufacturing of MDI was not discovered until recently. While the approach adopted by Pakistan has worked in keeping them in compliance with the Montreal Protocol targets, the issue of compliance becomes important as the requirements to cut consumption of CFC become greater and greater and since the consumption in the MDI sector, wherein the usage has been increasing, has not been addressed.

The Government of Pakistan is committed to meeting its obligations under the Montreal Protocol; however it is even more so committed to meeting the health needs of its population through availability of affordable solutions. As such there is an urgent need to address the consumption of CFC in the MDI manufacturing sector in Pakistan. At present the local production is supplied almost totally to the local market which is bolstered by imports from other countries. The locally produced products and the imported products still fall short of the amount necessary to supply the affected population of Pakistan and as such it is expected that as demand increases the local production will be increased in order to meet the demand. This will necessitate an increase in the consumption of CFC, which in 2007 will already be 33% of the total allowed for Pakistan. Even if we assume a "non-intervention" scenario, at the current level of consumption in 2010, Pakistan will be in

danger of non-compliance. This, as one can see, is an extremely optimistic situation and the consumption is bound to grow in the near future.

It is a certainty that demand for MDI will continue to increase since worldwide these drugs have increased in popularity due to their ease of use. In Pakistan the capacity to produce MDIs locally is important in keeping the price at a level which is affordable to its growing population. While there are currently cheaper drugs being produced by China that are available in the Pakistani market, it is expected that these drugs will soon be unavailable as China pursues its own phase out of CFC in MDI manufacturing. If nothing is done to assist the local manufacturers of MDI in Pakistan the consumption of CFC will increase with the increase in demand and more importantly when the supply of CFC ceases the population of Pakistan will be put at risk since the affordability of alternatives, as already seen by the prices of these imported HFA's, will be outside of the reach of the consumers of these drugs.

Given the above, the fact that it is imperative that a locally produced range of MDI products be available to Pakistan due to the economic considerations of supplying these drugs to low income users and the spirit of the Protocol which necessitates ODS phaseout at minimum cost the consumers in Article 5 countries, it is necessary that the local manufacturing be assisted for conversion to be able to continue to meet the demands for MDIs and to reduce and eventually eliminate Pakistan's dependence of CFCs in MDI manufacturing .

GOVERNMENT SURVEY

1	Agency/Government Ministry or Department responsible for drug registration and sale of drugs in Your Country. Please provide contact person, and email addresses	Ministry of Health (MoH), Government of Pakistan, Islamabad Secretary Registration Board - Dr. Farnaz Malik Secretary of Health – Mr. Khushnood Leghari Phone: 051-9202566 Fax: 051-9205481	
2	Is there a Pharmaceutical Association in Your Country? If Yes please provide contact persons and contact information	a) Pharma Bureau of Information and Statistics Executive Director: Mr. Riaz Hussain Address: Chamber of Commerce Building, Talpur Road, P.O. Box No. 4833, Karachi 74000 Telephone: 021-2410814-15 Email: riazhussain@oicci.org b) Pakistan Pharmaceutical Manufacturers Association – Contact: Anwar Ahmed, Secretary Address: 130-131, Hotel Metropole Karachi. Phone: 92-21-521-1773, 566-2350 Fax: 92-21-567-5608 Email: ppma@cyber.net.pk	
3	Is there a Medical Practitioners' Association in Your Country? If Yes, please provide contact persons and contact information	Pakistan Medical Association PMA House, Garden Road, Karachi, Phone: 021-2251159	
4	How many people in Your Country Suffer from diseases requiring the use of MDI? Please indicate the year this data was collected.	Condition	Number of Persons (if data is available separated into age group and sex this would be preferable)
		Asthma	Please Review Appendix 1
		Allergic Respiratory Disease	
		COPD	
5	Are MDIs (CFC and non-CFC) or DPIs imported from other countries? If yes please provide details on drug imported, country of production, country of import, quantities imported per year and market price of these drugs.	Please Review Appendix 2	
6	Please indicate the market prices of all inhaled drug therapy for treatment of asthma, allergic respiratory disease and COPD. Please provide details on the brand	Please Review Appendix 3	

<table>
<tr><td></td><td>name of the drugs, active ingredient and place of manufacture.</td><td colspan="4"></td></tr>
<tr><td>7</td><td>What is the procedure for new drug registration in your country?</td><td colspan="4">Registration Procedure for New Drug:
• Application on prescribed form to Secretary Registration Board, MoH, Islamabad
• Complete clinical and technical data
• Prescribing information
• Global registration status/Evidence of EU/UK/FDA approval
• Source country certificate of pharmaceutical product (for imported products only)
• Pricing data/costing data (costing data for local products only)
• Complete detail of technical staff and facility
• Packaging material/finished packs</td></tr>
<tr><td>8</td><td>Please indicate the price of Pharmaceutical Grade CFC and Pharmaceutical Grade HFA in your Country.</td><td colspan="4">The price of Pharmaceutical Grade CFC and Pharmaceutical Grade HFA:

CFC P-11: Rs. 638/kg
CFC P-12: Rs. 731/kg

HFA: Rs. 695/kg</td></tr>
<tr><td rowspan="6">9</td><td rowspan="6">Number of units of CFC MDI produced/year and consumption of CFC 11 and 12.</td><td>Year</td><td>Number of Units</td><td>Quantity of R11 (kg)</td><td>Quantity of R12 (kg)</td></tr>
<tr><td>2002</td><td>2 701 518</td><td>20 380</td><td>44 265</td></tr>
<tr><td>2003</td><td>2 556 277</td><td>19 230</td><td>41 770</td></tr>
<tr><td>2004</td><td>2 923 177</td><td>26 505</td><td>59 982</td></tr>
<tr><td>2005</td><td>2 165 912</td><td>25 137</td><td>56 778</td></tr>
<tr><td>2006</td><td>3 584 611</td><td>26 028</td><td>58 706</td></tr>
</table>

APPENDIX 1

The no. of people suffering from diseases requiring the use of MDI:

According to the Asthma Insights and Reality Survey done in Pakistan in 2005, it is estimated that about 5% of the Pakistani population have asthma. Based on the current population, we have around 8 million people suffering from asthma.

According to an informal COPD survey done by GSK on a limited number of doctors, it was suggested that 5-7% of Pakistan's population suffered from COPD; this means that around 8 million people suffer from COPD in Pakistan.

IMS (an international consulting and data services company that supplies the global pharmaceutical industry with sales data and consulting services) provides the following 12 month Data for the number of patients diagnosed with diseases that require the use of MDI in Pakistan:

a) As per IMS QTR 2, 2007, the numbers of patients diagnosed with asthma in the last 12 months, requiring the use of MDI are as follows:

		No. of Patients	% of Patients
ASTHMA		11,466,302	100.0000
MALE		6,526,857	57.1860
	40 TO 54 YEARS	1,537,992	13.2057
	30 TO 39 YEARS	1,090,961	10.2966
	20 TO 29 YEARS	789,381	7.2084
	55 TO 64 YEARS	686,819	5.7478
	5 TO 11 YEARS	662,529	5.3017
	1 TO 4 YEARS	646,331	5.2911
	MORE THAN 64 YR	604,949	5.5573
	12 TO 19 YEARS	456,251	4.1804
	LESS THAN 1 YR.	60,112	0.3971
FEMALE		4,943,603	42.8140
	40 TO 54 YEARS	1,224,329	10.3700
	30 TO 39 YEARS	965,788	7.9892
	20 TO 29 YEARS	775,630	6.9564
	55 TO 64 YEARS	587,482	5.5908
	12 TO 19 YEARS	446,920	3.7327
	5 TO 11 YEARS	365,382	3.0200
	1 TO 4 YEARS	273,419	2.3469
	MORE THAN 64 YR	238,762	2.2358
	LESS THAN 1 YR.	65,892	0.5722

b) As per IMS QTR 2, 2007, the numbers of patients diagnosed under COPD in the last 12 months, requiring the use of MDI are as follows:

		No. of Patients	% of Patients
COPD		13,210,757	100.0000
BRONCHITIS NOT SPECIFIED (AC/CHR)		6,059,979	45.8715
MALE		3,693,852	27.9609
	30 TO 39 YEARS	673,581	5.0987
	1 TO 4 YEARS	667,137	5.0500
	20 TO 29 YEARS	573,762	4.3431
	40 TO 54 YEARS	569,790	4.3131
	5 TO 11 YEARS	373,607	2.8281
	12 TO 19 YEARS	329,589	2.4949
	55 TO 64 YEARS	227,179	1.7197
	LESS THAN 1 YR.	171,105	1.2952
	MORE THAN 64 YR	108,101	0.8183
FEMALE		2,387,677	18.0737
	20 TO 29 YEARS	452,142	3.4225
	30 TO 39 YEARS	449,631	3.4035
	1 TO 4 YEARS	341,051	2.5816
	5 TO 11 YEARS	333,826	2.5269
	40 TO 54 YEARS	306,162	2.3175
	12 TO 19 YEARS	223,017	1.6881
	55 TO 64 YEARS	115,551	0.8747
	LESS THAN 1 YR.	93,588	0.7084
	MORE THAN 64 YR	72,710	0.5504
ACUTE BRONCHITIS		4,847,833	36.6961
MALE		2,990,529	22.6371
	30 TO 39 YEARS	552,849	4.1848
	20 TO 29 YEARS	471,585	3.5697
	40 TO 54 YEARS	469,810	3.5563
	5 TO 11 YEARS	398,027	3.0129
	1 TO 4 YEARS	373,962	2.8307
	12 TO 19 YEARS	350,217	2.6510
	LESS THAN 1 YR.	150,733	1.1410
	55 TO 64 YEARS	129,022	0.9766
	MORE THAN 64 YR	107,783	0.8159
FEMALE		1,879,893	14.2300
	20 TO 29 YEARS	410,650	3.1085
	30 TO 39 YEARS	323,889	2.4517
	12 TO 19 YEARS	274,025	2.0743
	1 TO 4 YEARS	260,317	1.9705
	5 TO 11 YEARS	208,620	1.5792
	40 TO 54 YEARS	201,982	1.5289
	MORE THAN 64 YR	71,690	0.5427
	55 TO 64 YEARS	67,041	0.5075
	LESS THAN 1 YR.	61,679	0.4669
CHRONIC BRONCHITIS		1,882,110	14.2468
MALE		1,424,022	10.7793
	40 TO 54 YEARS	495,135	3.7480

	30 TO 39 YEARS	267,449	2.0245
	55 TO 64 YEARS	230,560	1.7452
	MORE THAN 64 YR	193,652	1.4659
	20 TO 29 YEARS	128,497	0.9727
	1 TO 4 YEARS	47,600	0.3603
	12 TO 19 YEARS	37,427	0.2833
	LESS THAN 1 YR.	14,874	0.1126
	5 TO 11 YEARS	8,828	0.0668
FEMALE	FEMALE	462,653	3.5021
	40 TO 54 YEARS	140,083	1.0604
	30 TO 39 YEARS	108,627	0.8223
	20 TO 29 YEARS	58,977	0.4464
	55 TO 64 YEARS	56,276	0.4260
	MORE THAN 64 YR	31,849	0.2411
	12 TO 19 YEARS	24,217	0.1833
	1 TO 4 YEARS	16,344	0.1237
	5 TO 11 YEARS	16,117	0.1220
	LESS THAN 1 YR.	10,163	0.0769
BRONCHIECTASIS		386,942	2.9290
MALE		290,469	2.1987
	55 TO 64 YEARS	123,901	0.9379
	40 TO 54 YEARS	65,665	0.4971
	MORE THAN 64 YR	43,128	0.3265
	30 TO 39 YEARS	31,508	0.2385
	20 TO 29 YEARS	10,483	0.0794
	LESS THAN 1 YR.	8,044	0.0609
	5 TO 11 YEARS	4,875	0.0369
	12 TO 19 YEARS	2,867	0.0217
	1 TO 4 YEARS	0	0.0000
FEMALE		96,473	0.7303
	40 TO 54 YEARS	20,161	0.1526
	20 TO 29 YEARS	19,938	0.1509
	30 TO 39 YEARS	11,079	0.0839
	12 TO 19 YEARS	10,615	0.0804
	55 TO 64 YEARS	10,356	0.0784
	MORE THAN 64 YR	10,240	0.0775
	5 TO 11 YEARS	7,805	0.0591
	1 TO 4 YEARS	6,279	0.0475
	LESS THAN 1 YR.	0	0.0000
EMPHYSEMA		29,996	0.2271
MALE		29,996	0.2271
	MORE THAN 64 YR	20,375	0.1542
	30 TO 39 YEARS	4,375	0.0331
	40 TO 54 YEARS	4,158	0.0315
	55 TO 64 YEARS	1,088	0.0082

c) As per IMS QTR 2, 2007, the numbers of patients diagnosed under other respiratory diseases in the last 12 months, requiring the use of MDI are as follows:

		No. of Patients	% of Patients
Other Respiratory Diseases		86,502,485	100.0000
COUGH		38,391,600	44.3821
MALE		22,945,061	26.5253
	20 TO 29 YEARS	4,092,646	4.7312
	1 TO 4 YEARS	3,972,426	4.5923
	5 TO 11 YEARS	3,446,561	3.9843
	40 TO 54 YEARS	3,336,355	3.8569
	30 TO 39 YEARS	3,059,298	3.5367
	12 TO 19 YEARS	2,704,892	3.1270
	55 TO 64 YEARS	932,591	1.0781
	LESS THAN 1 YR.	819,936	0.9479
	MORE THAN 64 YR	674,350	0.7796
FEMALE		15,613,050	18.0493
	20 TO 29 YEARS	3,130,011	3.6184
	1 TO 4 YEARS	2,682,503	3.1011
	30 TO 39 YEARS	2,465,592	2.8503
	5 TO 11 YEARS	2,243,757	2.5939
	12 TO 19 YEARS	1,974,554	2.2827
	40 TO 54 YEARS	1,746,497	2.0190
	55 TO 64 YEARS	566,875	0.6553
	LESS THAN 1 YR.	529,857	0.6125
	MORE THAN 64 YR	292,793	0.3385
OTHER RESPIRATORY DISEASES		17,064,885	19.7276
MALE		10,149,344	11.7330
	1 TO 4 YEARS	2,114,072	2.4439
	5 TO 11 YEARS	1,641,104	1.8972
	20 TO 29 YEARS	1,623,797	1.8772
	40 TO 54 YEARS	1,276,022	1.4751
	30 TO 39 YEARS	1,248,529	1.4433
	12 TO 19 YEARS	1,023,935	1.1837
	MORE THAN 64 YR	460,925	0.5328
	LESS THAN 1 YR.	423,296	0.4893
	55 TO 64 YEARS	406,478	0.4699
FEMALE		6,980,485	8.0697
	1 TO 4 YEARS	1,466,077	1.6948
	20 TO 29 YEARS	1,249,734	1.4447
	30 TO 39 YEARS	1,115,680	1.2898
	5 TO 11 YEARS	1,037,911	1.1999
	40 TO 54 YEARS	660,170	0.7632
	12 TO 19 YEARS	660,059	0.7631
	LESS THAN 1 YR.	343,399	0.3970
	MORE THAN 64 YR	248,552	0.2873

	55 TO 64 YEARS	228,482	0.2641
ACUTE PHARYNGITIS		13,343,351	15.4254
MALE		7,751,044	8.9605
	20 TO 29 YEARS	1,995,069	2.3064
	12 TO 19 YEARS	1,616,259	1.8685
	30 TO 39 YEARS	1,218,114	1.4082
	5 TO 11 YEARS	1,171,504	1.3543
	40 TO 54 YEARS	745,816	0.8622
	1 TO 4 YEARS	716,976	0.8289
	55 TO 64 YEARS	157,774	0.1824
	LESS THAN 1 YR.	108,154	0.1250
	MORE THAN 64 YR	63,341	0.0732
FEMALE		5,656,679	6.5393
	20 TO 29 YEARS	1,666,178	1.9262
	12 TO 19 YEARS	1,329,970	1.5375
	30 TO 39 YEARS	853,628	0.9868
	5 TO 11 YEARS	702,260	0.8118
	1 TO 4 YEARS	463,727	0.5361
	40 TO 54 YEARS	461,546	0.5336
	55 TO 64 YEARS	103,918	0.1201
	LESS THAN 1 YR.	48,526	0.0561
	MORE THAN 64 YR	31,379	0.0363
ACUTE UPPER RESPIRATORY TRACT INFECTION		12,643,349	14.6162
MALE		7,658,287	8.8533
	1 TO 4 YEARS	2,075,378	2.3992
	5 TO 11 YEARS	1,496,366	1.7299
	20 TO 29 YEARS	1,120,535	1.2954
	12 TO 19 YEARS	891,923	1.0311
	30 TO 39 YEARS	803,446	0.9288
	40 TO 54 YEARS	652,923	0.7548
	LESS THAN 1 YR.	412,533	0.4769
	55 TO 64 YEARS	141,320	0.1634
	MORE THAN 64 YR	63,863	0.0738
FEMALE		5,002,423	5.7830
	1 TO 4 YEARS	1,264,825	1.4622
	5 TO 11 YEARS	917,223	1.0603
	20 TO 29 YEARS	900,208	1.0407
	12 TO 19 YEARS	586,669	0.6782
	30 TO 39 YEARS	575,997	0.6659
	LESS THAN 1 YR.	337,394	0.3900
	40 TO 54 YEARS	317,684	0.3673
	55 TO 64 YEARS	92,913	0.1074
	MORE THAN 64 YR	13,921	0.0161

ABNORMALITY IN BREATHING		5,446,057	6.2958
MALE		3,128,116	3.6162
	40 TO 54 YEARS	673,990	0.7792
	1 TO 4 YEARS	545,346	0.6304
	5 TO 11 YEARS	315,245	0.3644
	20 TO 29 YEARS	311,122	0.3597
	LESS THAN 1 YR.	305,414	0.3531
	30 TO 39 YEARS	282,658	0.3268
	MORE THAN 64 YR	251,109	0.2903
	12 TO 19 YEARS	234,800	0.2714
	55 TO 64 YEARS	212,742	0.2459
FEMALE		2,320,481	2.6826
	1 TO 4 YEARS	419,400	0.4848
	40 TO 54 YEARS	405,314	0.4686
	20 TO 29 YEARS	400,932	0.4635
	30 TO 39 YEARS	292,310	0.3379
	12 TO 19 YEARS	222,428	0.2571
	55 TO 64 YEARS	188,069	0.2174
	5 TO 11 YEARS	147,149	0.1701
	MORE THAN 64 YR	131,824	0.1524
	LESS THAN 1 YR.	113,054	0.1307
PNEUMONIA ORGISM UNSPECIFIED		4,549,042	5.2589
MALE		2,880,278	3.3297
	1 TO 4 YEARS	929,688	1.0748
	LESS THAN 1 YR.	473,312	0.5472
	20 TO 29 YEARS	347,547	0.4018
	40 TO 54 YEARS	296,677	0.3430
	5 TO 11 YEARS	286,298	0.3310
	30 TO 39 YEARS	257,270	0.2974
	12 TO 19 YEARS	127,477	0.1474
	55 TO 64 YEARS	98,830	0.1143
	MORE THAN 64 YR	70,801	0.0818
FEMALE		1,678,927	1.9409
	1 TO 4 YEARS	626,411	0.7242
	LESS THAN 1 YR.	245,566	0.2839
	5 TO 11 YEARS	236,304	0.2732
	40 TO 54 YEARS	137,246	0.1587
	20 TO 29 YEARS	129,357	0.1495
	30 TO 39 YEARS	125,377	0.1449
	12 TO 19 YEARS	82,622	0.0955
	55 TO 64 YEARS	59,688	0.0690
	MORE THAN 64 YR	36,356	0.0420

OBSTRUCTIVE PULMONARY DISORDER		2,697,597	3.1185
MALE		2,048,435	2.3681
	40 TO 54 YEARS	735,072	0.8498
	55 TO 64 YEARS	574,969	0.6647
	MORE THAN 64 YR	446,961	0.5167
	30 TO 39 YEARS	196,401	0.2270
	20 TO 29 YEARS	75,787	0.0876
	12 TO 19 YEARS	13,359	0.0154
	1 TO 4 YEARS	4,453	0.0051
	5 TO 11 YEARS	1,433	0.0017
	LESS THAN 1 YR.	0	0.0000
FEMALE		649,161	0.7505
	40 TO 54 YEARS	205,132	0.2371
	55 TO 64 YEARS	129,806	0.1501
	30 TO 39 YEARS	128,830	0.1489
	MORE THAN 64 YR	105,286	0.1217
	20 TO 29 YEARS	61,516	0.0711
	12 TO 19 YEARS	9,692	0.0112
	5 TO 11 YEARS	4,453	0.0051
	1 TO 4 YEARS	4,446	0.0051
DISEASE OF NOSE AND SINUS		2,412,214	2.7886
MALE		1,622,998	1.8762
	20 TO 29 YEARS	542,814	0.6275
	12 TO 19 YEARS	331,664	0.3834
	30 TO 39 YEARS	323,399	0.3739
	40 TO 54 YEARS	141,315	0.1634
	5 TO 11 YEARS	114,320	0.1322
	1 TO 4 YEARS	74,673	0.0863
	LESS THAN 1 YR.	54,061	0.0625
	55 TO 64 YEARS	27,387	0.0317
	MORE THAN 64 YR	13,366	0.0155
FEMALE		796,838	0.9212
	20 TO 29 YEARS	238,385	0.2756
	12 TO 19 YEARS	153,911	0.1779
	30 TO 39 YEARS	105,895	0.1224
	40 TO 54 YEARS	90,986	0.1052
	5 TO 11 YEARS	71,988	0.0832
	LESS THAN 1 YR.	60,080	0.0695
	1 TO 4 YEARS	49,067	0.0567
	55 TO 64 YEARS	20,523	0.0237
	MORE THAN 64 YR	6,004	0.0069

ALLERGIC RHINITIS		2,407,342	2.7830
MALE		1,289,276	1.4904
	20 TO 29 YEARS	369,020	0.4266
	30 TO 39 YEARS	255,159	0.2950
	12 TO 19 YEARS	207,717	0.2401
	40 TO 54 YEARS	165,471	0.1913
	5 TO 11 YEARS	118,086	0.1365
	1 TO 4 YEARS	96,423	0.1115
	55 TO 64 YEARS	42,746	0.0494
	LESS THAN 1 YR.	24,103	0.0279
	MORE THAN 64 YR	10,552	0.0122
FEMALE		1,118,066	1.2925
	20 TO 29 YEARS	373,814	0.4321
	30 TO 39 YEARS	274,253	0.3170
	12 TO 19 YEARS	210,827	0.2437
	40 TO 54 YEARS	103,132	0.1192
	1 TO 4 YEARS	61,724	0.0714
	5 TO 11 YEARS	44,511	0.0515
	55 TO 64 YEARS	25,131	0.0291
	MORE THAN 64 YR	12,625	0.0146
	LESS THAN 1 YR.	12,048	0.0139
PULMONARY OEDEMA		1,555,085	1.7977
MALE		936,413	1.0825
	1 TO 4 YEARS	292,109	0.3377
	40 TO 54 YEARS	129,357	0.1495
	5 TO 11 YEARS	120,988	0.1399
	LESS THAN 1 YR.	93,228	0.1078
	30 TO 39 YEARS	79,871	0.0923
	55 TO 64 YEARS	71,709	0.0829
	20 TO 29 YEARS	61,151	0.0707
	12 TO 19 YEARS	53,695	0.0621
	MORE THAN 64 YR	34,304	0.0397
FEMALE		618,673	0.7152
	1 TO 4 YEARS	155,798	0.1801
	LESS THAN 1 YR.	93,053	0.1076
	5 TO 11 YEARS	90,357	0.1045
	30 TO 39 YEARS	85,424	0.0988
	40 TO 54 YEARS	68,582	0.0793
	20 TO 29 YEARS	56,952	0.0658
	MORE THAN 64 YR	30,379	0.0351
	12 TO 19 YEARS	27,748	0.0321
	55 TO 64 YEARS	10,380	0.0120

LOW RESPIRATORY TRACT INFECTION		1,512,985	1.7491
MALE		997,182	1.1528
	40 TO 54 YEARS	199,555	0.2307
	20 TO 29 YEARS	189,074	0.2186
	1 TO 4 YEARS	132,908	0.1536
	30 TO 39 YEARS	118,768	0.1373
	5 TO 11 YEARS	116,243	0.1344
	12 TO 19 YEARS	85,306	0.0986
	MORE THAN 64 YR	62,660	0.0724
	LESS THAN 1 YR.	50,114	0.0579
	55 TO 64 YEARS	42,553	0.0492
FEMALE		515,803	0.5963
	30 TO 39 YEARS	115,770	0.1338
	20 TO 29 YEARS	108,166	0.1250
	1 TO 4 YEARS	85,769	0.0992
	12 TO 19 YEARS	68,161	0.0788
	40 TO 54 YEARS	46,716	0.0540
	5 TO 11 YEARS	44,694	0.0517
	55 TO 64 YEARS	24,206	0.0280
	MORE THAN 64 YR	17,836	0.0206
	LESS THAN 1 YR.	4,486	0.0052
ACUTE BRONCHIOLITIS		677,609	0.7833
MALE		388,440	0.4491
	LESS THAN 1 YR.	159,013	0.1838
	1 TO 4 YEARS	150,509	0.1740
	40 TO 54 YEARS	24,780	0.0286
	20 TO 29 YEARS	21,567	0.0249
	5 TO 11 YEARS	19,872	0.0230
	30 TO 39 YEARS	8,288	0.0096
	12 TO 19 YEARS	4,410	0.0051
	MORE THAN 64 YR	0	0.0000
FEMALE		289,169	0.3343
	LESS THAN 1 YR.	141,563	0.1637
	5 TO 11 YEARS	65,308	0.0755
	1 TO 4 YEARS	56,503	0.0653
	40 TO 54 YEARS	12,879	0.0149
	30 TO 39 YEARS	4,410	0.0051
	12 TO 19 YEARS	4,347	0.0050
	20 TO 29 YEARS	4,158	0.0048

STATUS ASTHMATICUS		141,485	0.1636
FEMALE		76,241	0.0881
	20 TO 29 YEARS	43,860	0.0507
	40 TO 54 YEARS	16,135	0.0187
	5 TO 11 YEARS	11,276	0.0130
	1 TO 4 YEARS	2,448	0.0028
	30 TO 39 YEARS	1,433	0.0017
	55 TO 64 YEARS	1,088	0.0013
MALE		65,244	0.0754
	20 TO 29 YEARS	13,256	0.0153
	12 TO 19 YEARS	10,871	0.0126
	1 TO 4 YEARS	10,180	0.0118
	30 TO 39 YEARS	9,152	0.0106
	55 TO 64 YEARS	8,723	0.0101
	40 TO 54 YEARS	8,186	0.0095
	5 TO 11 YEARS	4,875	0.0056
PULMONARY DISORDER		98,528	0.1139
FEMALE		78,841	0.0911
	40 TO 54 YEARS	32,656	0.0378
	55 TO 64 YEARS	18,380	0.0212
	MORE THAN 64 YR	14,650	0.0169
	30 TO 39 YEARS	13,156	0.0152
	20 TO 29 YEARS	0	0.0000
MALE		19,687	0.0228
	40 TO 54 YEARS	13,210	0.0153
	MORE THAN 64 YR	5,043	0.0058
	20 TO 29 YEARS	1,433	0.0017

APPENDIX 2

Drugs Produced in Pakistan and imported versions containing the same active ingredient

Active Ingredient	*Company*	*Country of Manufacture*	*Product*	*Propellant*	*Price (Rs)*
Beclomethasone Dipropionate	GETZ	China	Bekson	CFC	135.00
	Macter	Pakistan	Macticort 50mcg	CFC	145.00
	CHIEISI	Italy	Clenil Pulvinal - 100	HFA	250.00
	Macter	Pakistan	Macticort 250 Mg	CFC	272.00
	CHIEISI	Italy	Clenil A	HFA	294.00
	CHIEISI	Italy	Clenil Pulvinal - 200	HFA	350.00
	CHIEISI	Italy	Clenil Forte Jet	HFA	408.73
	CHIEISI	Italy	Clenil Pulvinal - 400	HFA	529.00
Ipratropium Bromide	GETZ	China	Optra	CFC	165.00
	Macter	Pakistan	Trupium 40 Mcg	CFC	185.00
	CHIEISI	Italy	Atem	HFA	218.50
Salbutamol	Macter	Pakistan	Inspiral 100 Mcg	CFC	60.00
	GETZ	China	Salbo	CFC	64.89
	GSK Pakistan	Pakistan	Ventolin	CFC	72.03
	PHARMATEC	Germany	Venex	HFA	84.24
	CHIEISI	Italy	Butovent	HFA	84.74
	GSK	France	Aerolin	HFA	200.00
Salbutamol + Beclomethasone Dipropionate	GETZ	China	Xaltide	CFC	150.00
	Macter	Pakistan	Salnon Inhaler	CFC	195.00
	GSK Pakistan	Pakistan	Ventide	CFC	230.40
	CHIEISI	Italy	Clenil Composit-A	HFA	336.96
	CHIEISI	Italy	Clenil Compositum	HFA	371.57
Salmeterol	Macter	Pakistan	Salmetide 25 Mcg	CFC	460.00
	GSK	France	Serevent	HFA	578.45
Salmetrol Xinafoate + Fluticasone Propionate	Macter	Pakistan	Salmicort 25/50mg	CFC	697.00
	Macter	Pakistan	Salmicort 25/125mg	CFC	773.00
	Macter	Pakistan	Salmicort 25/250mg	CFC	884.00
	GSK	France	Seretide - 50	HFA	820.00
	GSK	France	Seretide – 125	HFA	910.00
	GSK	France	Seretide - 250	HFA	1040.00
Triamcinolone Acetonite	Macter	Pakistan	Inbalon 200 Mcg		315.00

Drugs Imported into Pakistan for which there is no local production

	Company	Country	Product	Propellant	Price (Rs)
Budesonide	BARRETT HODGSON	UK	Pulmicort - 50	HFA	271.13
	BARRETT HODGSON	UK	Pulmicort - 200	HFA	304.30
Fluticasone Propionate	GSK	France	Flixotide – 50	HFA	280.00
	GSK	France	Flixotide – 125	HFA	400.00
	GSK	France	Flixotide – 250	HFA	650.00
Terbutalin Sulphate	BARRETT HODGSON	UK	Bricanyl	HFA	201.93

Other imports

Name of Drug	Active Ingredient	Country of production	Country of import	Quantities imported/year (*)		Market Price	
SERETIDE (HFA)	SALMETROL/ FLUTICASONE PROPIONATE	FRANCE	AUSTRALIA	50 mcg	21,235	50 mcg	Rs. 820
				125 mcg	38,051	125 mcg	Rs. 910
				250 mcg	71,867	250 mcg	Rs. 1040
FLIXOTIDE (HFA)	FLUTICASONE PROPIONATE	FRANCE	AUSTRALIA	50 mcg	5,495	50 mcg	Rs. 280
				125 mcg	6,019	125 mcg	Rs. 340
				250 mcg	6,092	250 mcg	Rs. 650
AEROLIN (HFA)	SALBUTAMOL	FRANCE	AUSTRALIA	100 mcg	5,049	100 mcg	Rs. 200
SEREVENT (CFC)	SALMETEROL	FRANCE	AUSTRALIA	25 mcg	8,843	25 mcg	Rs.578.45

* the number of units imported have been the same for the years 2004, 2005, 2006.

Source: GSK

INDUSTRY SURVEY

The Government of Pakistan is a Party to the Montreal Protocol on Substances that deplete the Ozone Layer. The Montreal Protocol aims to completely phase out the production and use of CFC by the year 2010. As a Party to the Montreal Protocol, Pakistan is required to phase out the use of CFC in its manufacturing of MDI as well as prepare for the eventual phase out of supply of the CFCs required to manufacture these CFC MDIs. In this regard the Government of Pakistan is planning to apply for Project Preparation Funds from the Multilateral Fund for the implementation of the Montreal Protocol to develop a transition strategy to phase out the use of CFC MDI including an industry conversion project to convert the production of CFC based MDI to manufacturing non-CFC dependent MDIs. The Government of Pakistan has requested the United Nations Development Program (UNDP) and the United Nations Environment Program (UNEP) to assist in the preparation of this project.

The final project will aim to assist the Government of Pakistan to smoothly transition from the use of CFC MDI to non-CFC alternatives.

In order to develop these projects industry specific data is required. UNDP and UNEP therefore request the following information to assist in the preparation of this project. Please indicate what information is confidential.

Part 1: Company and Contact Information

1	Name of Company	GlaxoSmithKline
2	Address of company	GlaxoSmithKline Pakistan Limited 35 – Dockyard Road, West Wharf, Karachi – 74000
3	CEO/Chairman (name and contact information including email address)	Salman M Burney GlaxoSmithKline Pakistan Limited 35 – Dockyard Road, West Wharf, Karachi – 74000 Tel: 9221- 2310470, e.mail: salman.m.burney@gsk.com
4	Contact Person for this project (name and contact information, including email address)	Haji Muhammad Hanif , Head of Proucrement / Dr. Builquis Yasmeen, Operations Head - Haji.m.hanif@gsk.com / bilquis.d.yasmeen@gsk.com
5	Percentage of Local Shareholding	*21.22%*
6	Percentage of Foreign Shareholding (Please specific	*78.78%*

	which countries the shareholders are from and the percentage attributed to each country)	
7	Number of Employees in MDI Plant	15
8	Year MDI Plant Established	1981

Part 2: Product and Manufacturing Information:

9	Initial number of units of CFC MDI produced/year and consumption of CFC 11 and 12 including losses/year (please specify the loss percentage for both CFC 11 and CFC 12)	Initially 48,000 units / year
10	Current number of units of CFC MDI produced/year and consumption of CFC 11 and 12 including losses/year (please specify the loss percentage for both CFC 11 and CFC 12)	Year ---- Packs ----- P11 ---- P12 2004 ---- 2,923,177 ---- 26,505 ---- 59,982 2005 ---- 4,165,912 ---- 25,137 ---- 56,778 2006 ---- 3,414,611 ---- 25,428 ---- 57,206
11	Total number of CFC MDI formulations currently in production	Two

12	Active ingredient (and quantity) and Product name of all current CFC MDI formulation in production	Product	Active Ingredient	Wgt of total product (mg)	Wgt of Active ingredient (mg)	Wgt of Propellant (mg)
		1. Ventolin	Salbutamol	20300	25	20275
		2. Ventide	Salbutamol & Beclomethasone	20300	25 & 13	20262

13	Total number of non CFC MDI formulations currently in production per year and the projected production up to 2010 (including DPIs) Please Provide data on any historical production of CFC MDI Alternatives.	Non		
14	Does your company have the facility for long term stockpiling of CFC and CFC MDI? If so please provide details on length of storage time, storage capacity and conditions required to maintain stockpiles in good condition.	NO		
15	If non CFC MDI formulations are produced please state how many units are in production, and if they are HFA Formulations how much HFA is consumed per thousand units	N/A		
16	Active ingredient, product name and mode of application (DPI, HFA MDI, etc) of non CFC formulations in production	Product	Active Ingredient	Mode of Application
		N/A	N/A	N/A
17	Are there any licensing, technical assistance or technology transfer agreements or ongoing negotiations relating to MDI? If yes, please provide details.	NO		
18	Please specify how many production lines are used for	CFC Production Line		Non-CFC production line

	producing CFC MDI and non-CFC MDI.	One	Non
19	Source of R11 (country, grade and company), if more than one source please list all and quantity imported from each for each year since importation first began)	Approved sources Italy, Ausimont Mexico, Honeywell Spain, Arkema Material is imported by local quota holder M/s. Kaghan Trading Company & purchased by GSK locally.	
20	Source of R12 (country, grade and company), if more than one source please list all and quantity imported from each for each year since importation first began)	Approved sources Italy, Ausimont Mexico, Honeywell Spain, Arkema Material is imported by local quota holder M/s. Kaghan Trading Company & purchased by GSK locally.	
21	Are MDI's exported by your company? If yes please give details on where they are exported, quantities exported and type of drug exported.	No	
22	Please provide details on the price of inhaled drug therapy produced by your company for the treatment of asthma, allergic respiratory disease and COPD. Please provide a breakdown by drug, and brand name.	Ventolin (salbutamol) – Retail Price – Rs. 84.74 Trade Price – Rs 72.03 Ventide (salbutamol / beclomethasone) – Retail Price – Rs. 230.40 Trade Price – Rs. 195.84	
23	Please indicate, for each CFC MDI being produced, the preferred type of alternative that your company is considering, eg. HFA or DPI	Product	Type of Alternative
		Ventolin MDI CFC	HFA MDI
24	For conversion of each production line which of the two options is best for your facility, a) Retrofitting of existing line, or b) Complete replacement? If complete replacement is identified as the best option, please provide a justification.	The current line can not be modified as the manufacturing and filling operations are totally different for both CFC and Non CFC MDIs. However the same packaging line can be used for Non CFC MDIs.	

25. For each production line (both CFC and Non-CFC), please complete the following table. Please copy and fill out table for each production line.

Line number 1, drug/product produced – Ventolin / Ventide Inhalers with CFC:						
Equipment, e.g. CFC Pumps, Product Filler, etc.	Make/Model	Serial Number	Year of Manufacture	Cost of Equipment (USD)	Useful Lifetime of Equipment	Number of Years in Use
P 11 Supply Pump	SS Pumps Ltd.	388757	2003			4 Years
P12 Transferring Pump	Graco Pumps Ltd.					
Heat Exchangers	Locally Manufacture					
Mfg Vessel 100Ltr	Locally Manufacture		2002			
Mfg Vessel 30Ltr						
Suspension Recirculation Pump	SS Pumps Ltd. East Bourne, England	26946				
Pamasol Micromat Filling Machine	Micromat / 2015		1999 (since it is in Pakistan)			
Session Tester	Session England	219621/ 8/ 1	2002 (since it is in Pakistan)			

26. For Each product produced please provide list of components and ingredients and cost of each component and ingredient in US dollars. Please include costs for components used for HFA inhalers and DPI if applicable.

Drug/Product	Component	Country/Company of Supply	Number of units used per year		Cost per 1000 units (USD)	Type of Inhaler
	e.g. Canister, Valves					
Ventolin	SALBUTAMOL MICRONIS	India, Neuland	89,821	GM	500/kg	
	ISOPROPYL ALCOHOL B	Taiwan, Leesham	35,770	LT	1750/ Tn	
	TRICHLOROFLUOROMETH	Mexico, Honeywell	24,148	KG	9.43/Kg	
	OLEIC ACID PRIOLENE	England, Uniqema	8,982	GM	3580/Kg	
	DICHLORODIFLOUROMET	Spain. Arkema	55,040	KG	10.65/kg	
	AL CAN BCTD/VNTD/VN	England, Presspart	3,440,805	EA	81.93/ 000	

	VALVE VENTOLIN INH	France, Valois	3,416,689	EA	254.75/ 000	
	C/BOX ZANTAC /DICOF	Pakistan/ Uni-pack	12,441	EA	122/ 000	
	ACTUATOR/D CAPS VEN	Spain, Nemo	3,404,631	EA	80/ 000	
	CRT VENTOLIN INHALE	Pakistan, Pakistan Packagaes	3,452,482	EA	9.42/ 000	
	D/C VENTOLIN INHALE	Pakistan, Prince Art	3,410,660	EA	5.2/ 000	
	C/BOX INHALERS PRIN	Pakistan, Omega Printing	34,106	EA	251/ 000	
	O/L VENTOLIN INH 20	Pakistan, Superfine	33,804	EA	3.25/ 000	
	STICKER TEMPER EVID	Phillipines/ Topbest	3,962	EA	8.33/ 000	
	LBL VENTOLIN INHALE	Pakistan/ Akmal Print House	3,452,482	EA	1.15/ 000	
Ventide	SALBUTAMOL MICRONIS	India, Neuland	0	GM	500/kg	
	BECLOMETHASONE DIPR	Italy, Sicor	0	GM	10500/ Kg	
	ISOPROPYL ALCOHOL B	Taiwan, Leesham	0	LT	1750/ Tn	
	TRICHLOROFLUOROMETH	Mexico, Honeywell	0	KG	9430/ Tn	
	OLEIC ACID PRIOLENE	England, Uniqema	0	GM	3580/Kg	
	DICHLORODIFLOUROMET	Spain. Arkema	0	KG	10650/ Tn	
	AL CAN BCTD/VNTD/VN	England, Presspart	0	EA	81.93/ 000	
	VALVE BK 356 VNTD/V	England, Bespak	0	EA	390/ 000	
	C/BOX ZANTAC /DICOF	Pakistan/ Uni-pack	0	EA	122/ 000	
	LBL VENTIDE INHALER	Pakistan/ Akmal Print House	0	EA	1.15/ 000	
	CRT VENTIDE INHALER	Pakistan, Pakistan Packagaes	0	EA	9.42/ 000	
	D/C VENTIDE INHALER	Pakistan, Prince Art	0	EA	5.2/ 000	
	C/BOX INHALERS PRIN	Pakistan, Omega Printing	0	EA	251/ 000	
	STICKER TEMPER EVID	Phillipines/ Topbest	0	EA	8.33/ 000	
	O/L VENTIDE INH 200	Pakistan, Superfine	0	EA	3.25/ 000	
	ACTUATOR/D CAPS VEN	Spain, Nemo	0	EA	80/ 000	

27. Does your company have the technical capacity to re-formulate your CFC MDIs to alternatives? If so please specify the facilities and technical expertise available. If not please specify what would be required in terms of facilities and technical expertise for re-formulating these products.

- Reformulation of CFC MDIs being done by the GSK R&D and these have been done in UK/US within the facilities and expertise available there.

- For local manufacturing we need the complete manufacturing and filling line to cater non-CFC MDIs

28. For Each CFC MDI that your company wishes to convert to an alternative product, please estimate the costs that would be required in re-formulation of the product.

This cost can be provided once the project is approved for changeover.

29. Production Data for CFC MDI. Please fill out the following table in the Excel File provided

Year	Packs	P11	P12
2004	2,923,177	26,505	59,982
2005	2,165,912	25,137	56,778
2006	3,414,611	25,428	57,206

Instructions: For Consumption of R11 and R12 the figure in the table should be the amount consumed per 1000 units. The figure should include the losses. Please specify the loss percentage for both R11 and R12. For the year data, start labeling the first year in the table as the year in which MDI was first produced and fill out up till 2006. The second section requires you to estimate the production of CFC MDI in the years 2007 – 2010. If there are provisions that will allow your company to produce CFC MDI post 2010, please state what they are and the estimated quantities that will be produced.

CFC MDIs required from 2007 - 2010

Year	Ventolin	Ventide
2007	4 Million	0.5 Million
2008	4 Million	0.5 Million
2009	4 Million	0.5 Million
2010	4 Million	0.5 Million

INDUSTRY SURVEY

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The final project will aim to assist the Government of Pakistan to smoothly transition from the use of CFC MDI to non-CFC alternatives.

In order to develop these projects industry specific data is required. UNDP and UNEP therefore request the following information to assist in the preparation of this project. Please indicate what information is confidential.

Part 1: Company and Contact Information

1	Name of Company	Macter International (Pvt) Limited
2	Address of company	F-216, S.I.T.E., Karachi-75700, Pakistan
3	CEO/Chairman (name and contact information including email address)	Mr. Misbah Uddin Khan, President Ph: 0092 21 257 5039 & 259 1000 Fx: 0092 21 256 4236 & 256 5854 Email: info@macter.com
4	Contact Person for this project (name and contact information, including email address)	Dr. S. A. Zaidi, Director Technical Operation (DTO) Ph: 0092 21 257 5040 Fx: 0092 21 257 0048 Email: salman.ahmed@macter.com
5	Percentage of Local Shareholding	100%
6	Percentage of Foreign Shareholding (Please specific	

	which countries the shareholders are from and the percentage attributed to each country)	N I L
7	Number of Employees in MDI Plant	28 Nos
8	Year MDI Plant Established	2006

Part 2: Product and Manufacturing Information:

9	Initial number of units of CFC MDI produced/year and consumption of CFC 11 and 12 including losses/year (please specify the loss percentage for both CFC 11 and CFC 12)	170,000 P11 - 600 kg P12 - 1500 kg
10	Current number of units of CFC MDI produced/year and consumption of CFC 11 and 12 including losses/year (please specify the loss percentage for both CFC 11 and CFC 12)	170,000 P11 - 600 kg P12 - 1500 kg
11	Total number of CFC MDI formulations currently in production	10 (Ten)

12	Active ingredient (and quantity) and Product name of all current CFC MDI formulation in production	Product	Active Ingredient	Wgt of total product (mg)	Wgt of Active ingredient (mg)	Wgt of Propellant (mg)
		Salnon Inhaler	Salbutamol Beclomethasone Dipropionate	29,000 mg/can	24.46 mg/can 13.23 mg/can	P11 5700 mg/can P12 14600 mg/can
		Macticort 250 mg	Becomethasone Dipropionate	29,000 mg/can	60 mg/can	P11 5700 mg/can P12 14600

						mg/can
		Salmicort 25/50mg	Salmitrol (as Xinoforate) Fluticasone propionate	19,000 mg/can	5.24 mg/can 7.2 mg/can	P11 4000 mg/can P12 9000 mg/can
		Salmicort 25/125mg	Salmitrol (as Xinoforate) Fluticasone propionate	19,000 mg/can	5.24 mg/can 18 mg/can	P11 4000 mg/can P12 9500 mg/can
		Salmicort 25/250mg	Salmitrol (as Xinoforate) Fluticasone propionate	19,000 mg/can	5.24 mg/can 36 mg/can	P11 4000 mg/can P12 95000 mg/can
		Macticort 50mcg	Beclomethasone dipro pionate	29,000 mg/can	0.012 mg/can	P11 5700 mg/can P12 14600 mg/can
		Inspiral 100 mcg	Salbutamol	29,000 mg/can	24.46 mg/can	P11 5700 mg/can P12 14600 mg/can
		Trupium 40 mcg	Ipratorpium Bromide	29,000 mg/can	12.23 mg/can	P11 5700 mg/can P12 14600 mg/can
		Salmetide 25 mcg	Salmeterol (as xinoforate)	19,000 mg/can	5.24 mg/can	P11 4000 mg/can P12 9000 mg/can
		Inbalon 200 mcg	Triamcinolone Acetonite	34,800 mg/can	4.50 mg/can	P11 5900 mg/can P12 1500 mg/can

13	Total number of non CFC MDI formulations currently in production per year and the projected production up to 2010 (including DPIs) Please Provide data on any historical production of CFC MDI Alternatives.	N O N E		
14	Does your company have the facility for long term stockpiling of CFC and CFC MDI? If so please provide details on length of storage time, storage capacity and conditions required to maintain stockpiles in good condition.	Can store for 1(one) year. One to three Lac units can be store. Conditions maintained are Temperature Less than 25 C, Humidity Less than 50%.		
15	If non CFC MDI formulations are produced please state how many units are in production, and if they are HFA Formulations how much HFA is consumed per thousand units	_____		
16	Active ingredient, product name and mode of application (DPI, HFA MDI, etc) of non CFC formulations in production	Product	Active Ingredient	Mode of Application
		---	---	---
17	Are there any licensing, technical assistance or technology transfer agreements or ongoing negotiations relating to MDI? If yes, please provide details.	_____		
18	Please specify how many production lines are used for producing CFC MDI and non-CFC MDI.	CFC Production Line	Non-CFC production line	
		ONE	---	
19	Source of R11 (country, grade and company), if more than one source please list all and quantity imported from each for each year since importation first began)	EU Source		

20	Source of R12 (country, grade and company), if more than one source please list all and quantity imported from each for each year since importation first began)	EU Source
21	Are MDI's exported by your company? If yes please give details on where they are exported, quantities exported and type of drug exported.	N / A
22	Please provide details on the price of inhaled drug therapy produced by your company for the treatment of asthma, allergic respiratory disease and COPD. Please provide a breakdown by drug, and brand name.	- Macticort 250 mcg Inhaler 272.00 - Inspirol 100 mcg Inhaler 60.00 - Trupium 40 mcg Inhaler 185.00 - Salmicort 25/50 mcg Inhaler 697.00 - Salmicort 25/125 mcg Inhaler 773.00 - Salmicort 25/250 mcg Inhaler 884.00 - Salnon 100/150 mcg Inhaler 195.00 - Salmetide 25 mcg Inhaler 460.00 - Macticort 50 mcg Inhaler 145.00 - Inbalon 200 mcg Inhaler 315.00
23	Please indicate, for each CFC MDI being produced, the preferred type of alternative that your company is considering, e.g. HFA or DPI	Product: H F A — Type of Alternative:
24	For conversion of each production line which of the two options is best for your facility, a) Retrofitting of existing line, or b) Complete replacement? If complete replacement is identified as the best option, please provide a justification.	Complete replacement, as the plant is not compatible with non CFC application

25. For each production line (both CFC and Non-CFC), please complete the following table. Please copy and fill out table for each production line.

Line number, drug/product produced:						
Equipment, e.g. CFC Pumps,	Make/Model	Serial Number	Year of Manufacture	Cost of Equipment (USD)	Useful Lifetime of Equipment	Number of Years in Use

Product Filler, etc.						
Manufacturing Vessel	Bionaz, France 6093/2	-	1998	-	Yes	One
Filling Gassing Machine	Minicentomat P2043/Pamasol Switzerland		1998	-	Yes	One
Can Unscrambler	Minicentomet-1 NEM (New England Machinery), UK.	(12015)	1998	-	Yes	One
Valve Vabriator	SRC – N400–2R RNA (Rhein-Nadel Automation) Germany		1998	-	Yes	One
Check Weigher	KW 627A Anritsu – Japan		1998	-	Yes	One

26. For Each product produced please provide list of components and ingredients and cost of each component and ingredient in US dollars. Please include costs for components used for HFA inhalers and DPI if applicable.

Drug/Product	Component	Country/Company of Supply	Number of units used per year	Cost per 1000 units (USD)	Type of Inhaler
	e.g. Canister, Valves				
Salnon Inhaler	1.28 1.51	Bespak Europe Ltd., U.K.	170,000	1280 1510	C F C
Macticort Inhaler	1.28 1.51	,,	170,000	1280 1510	
Salmicort Inhaler	1.27 26.41	,,	170,000	1270 26410	
Inspiral Inhaler	1.28 1.51	,,	170,000	1280 1510	
Trupium Inhaler	1.28 1.51	,,	170,000	1280 1510	

27. Does your company have the technical capacity to re-formulate your CFC MDIs to alternatives? If so please specify the facilities and technical expertise available. If not please specify what would be required in terms of facilities and technical expertise for re-formulating these products.

Training is required to handle the reformulation products

28. For Each CFC MDI that your company wishes to convert to an alternative product, please estimate the costs that would be required in re-formulation of the product.

29. Production Data for CFC MDI. Please fill out the following table in the Excel File provided

Instructions: For Consumption of R11 and R12 the figure in the table should be the amount consumed per 1000 units. The figure should include the losses. Please specify the loss percentage for both R11 and R12. For the year data, start labeling the first year in the table as the year in which MDI was first produced and fill out up till 2006. The second section requires you to estimate the production of CFC MDI in the years 2007 – 2010. If there are provisions that will allow your company to produce CFC MDI post 2010, please state what they are and the estimated quantities that will be produced.

MDI Produced	P11 Used/Consumed	P12 Used/Consumed	P11 Loss	P12 Loss
170,000	600 Kg	1500 Kg	60 Kg	60 Kg
Used for cleaning	Used for cleaning			
			and washing of machine.	and washing of machine.

ANNEX II
MDI TRANSITION STRATEGY MOLDOVA
PROJECT COVER SHEET

COUNTRY: MOLDOVA	IMPLEMENTING AGENCY: UNDP
PROJECT NAME	MDI Transition Strategy
PROJECT IN CURRENT BUSINESS PLAN	YES
SECTOR COVERED	MDI
PROJECT IMPACT	0.0 ODP tons
PROJECT DURATION	18 months
TOTAL PROJECT COST	US$ 30,000
LOCAL OWNERSHIP	100 %
EXPORT COMPONENT	N/A
REQUESTED GRANT	US$ 30,000
COST-EFFECTIVENESS	Not Applicable – TAS
AGENCY SUPPORT COSTS	2,250
STATUS OF COUNTERPART FUNDING	N/A
NAT. COORDINATING AGENCY	National Ozone Office under the Ministry of Ecology and Natural Resources
PROJECT MONITORING MILESTONES INCLUDED	Included in Document
BENEFICIARY ENTERPRISE	Not Applicable

PROJECT SUMMARY

Through this Technical Assistance approved by the Multilateral Fund for the Implementation of the Montreal Protocol, UNDP aims to assist the Government of Moldova to implement a project in MDI sector in order to develop a sound MDI transition strategy.

Submission background

While developed as a part of the TPMP project document for Moldova, MDI component was not submitted for the consideration at the 52nd meeting of the Executive Committee and in line with the Executive Committee preparatory document UNEP/OzL.Pro/ExCom/52/42, paragraph 13, considering the TPMP project proposal for Moldova:

"Secretariat also noted that the information provided for the development of a transition strategy to non-CFC MDIs included in the TPMP project did not fully demonstrate the need for such a strategy. At its 51st Meeting the Executive Committee decided that requests for transition strategies should be fully demonstrated and documented through the submission of detailed information for the previous three years on CFC and non-CFC MDIs and dry-powder inhalers (decision 51/34). The Secretariat was subsequently informed that this project component will not be requested at this time. With the remaining funding available from the preparation of the TPMP project, UNDP will gather additional information on the MDI sub-sector, and submit a request for the preparation of the transition strategy to a future meeting of the Committee if necessary".

Therefore, following the Executive Committee decisions 45/54, 51/34 and 52/42 (TPMP for Moldova), the current project document was specifically developed to provide as much of the required information as possible to demonstrate the need for the MDI transition strategy in Moldova. The MDI transition strategy for Moldova is also prepared taking into account the MTOC Assessment Report 2006 (published in March 2007) which emphasizes the following:

"There is an urgent need for all Article 5(1) countries that have not already done so to develop effective national transition strategies in accordance with Decision XII/2. MTOC strongly recommends that these activities be made a priority to ensure a smooth transition to CFC-free alternatives by about 2010. Countries will need to set an end-date for transition that accounts for the Montreal Protocol phase-out schedule."

The following reasons to have the MDI transition strategy were considered during the compilation of the required information:

- Ensure orderly transition to new products and most importantly ensure that the patients will have available equally effective alternative products at a reasonable cost (compared to CFC MDI products) and on time to guarantee that when the CFC MDI supply stops alternatives are sustainably available, registered and approved by the local regulatory entity. This includes possible contingency plans in case that registration and approval is a long process and there is a risk of a shortage of alternative products by the time CFC MDIs are out o the market.

- Facilitate the transition to new products by providing training and targeted awareness activities to ensure acceptance of the alternative products (in some cases they will be HFA MDI and in others DPI) by the patients and by the doctors

- Update the legislation to ensure that when the transition takes place no CFC MDI products will be imported and sold.

Part I. Situation analysis

1. Asthma statistics and economic situation:

In general, the trends of both CFC and non-CFC MDIs imports are increasing over time. The available data indicates that 85,000 units of such medical products were in use in 2003 and this number increased up to 140,000 units in 2007.

The evolution of asthma and chronic obstructive pulmonary diseases (COPD) in the country, including tuberculoses, has had an increase due to economic crisis, insufficient financing of the health system and luck of medicines.

Number of patients with asthma and COPD:

While there is no statistics that is separately provided for COPD in the Republic of Moldova, since it forms a part of general reporting on all types of bronchitis and pulmonary emphysema, the number of patients suffering from asthma is steadily growing over years. Compared to the base 2003, this number increased by 8% in 2007.

Years	**Number of patients with asthma**
2003	6,940
2004	7,186
2005	7,371
2006	7,501
2007	7,525

Conclusions:

- number of asthma cases in steadily growing, and the data for COPD is not separately available and needs to be further analyzed
- the country's economic situation continues to deteriorate
- the medical care system is not sufficiently financially supported.

2. National legislation:

The Republic of Moldova does not produce ODS and ODS-containing products in MDI sector.

The national legislation that controls the activities in the sector does not specifically

regulate import/export of CFC MDIs products. There is only one Regulation that controls the imports of medical products (including CFC-MDIs) in the Republic of Moldova - the Law on Pharmaceutical Activity # 1456 - XII, which was adopted in May 25, 1993. The regulation is outdated and considers CFC MDIs during imports in bulk with other medicines/medical products.

Conclusions:

- Specific regulations which would control the use of CFC MDI are lacking

2. Supply of anti-asthma/COPD inhalers and other medical products:

Aerosol products containing CFCs for MDI applications are still being imported into the country. Although some companies have already started the substitution of some CFC-based MDIs independently, the country feels that there should be a coordination strategy for the gradual and informed phase-out of imported CFCs-based MDIs from the country market, including the appropriate supporting measures.

The situation with the supply of MDIs and their non-CFC equivalents in Moldova in brief can be described by the following factors:

- CFC MDIs, HFA MDIs and DPIs are present on the market;
- Growing number of HFA MDIs is being supplied on the market, exceeding 90% of the market share in 2006, but at the same time not exceeding 55% share in 2007;
- CFC MDIs imports through 2003-2005 were slowly decreasing with a slump down to 5% of the market in 2006. However, the imports reached more than 45% in 2007;
- HFA MDIs imports were increasing from 2003 till 2006 with a sharp decrease in 2007;
- DPIs take negligible market share.

Market share %/years	**2003**	**2004**	**2005**	**2006**	**2007**
CFC %	96.5	75.7	64.8	4.7	45.5
HFA%	3.5	24.3	35.2	95.3	54.1
DPI%	0	0	0	0	0.41

The 2006 sharp slump in the imports of MDIs were dictated by difficulties in getting access to inexpensive CFC MDIs from the traditional supplier located in Ukraine. The acute need to substitute usual CFC MDIs was compensated by sharply increased imports from a single source. However, in 2006 that adaptive action in fact meant the resultant increase in the medicine costs of around 30% up in unit prices with adverse effects on the purchasing power of the target population.

An economically wise import planning can be observed the following year with inexpensive CFC-based MDIs gaining more and more importance. The two sources of inexpensive MDIs are Russia (70%) and China (20%) with these two sources being new to Moldova.

Country of CFC MDI origin in 2007	Sub-market shares for various sources (% of total)
Russia	71.6
China	20.4
Others	8.0
Total	**100.0**

Conclusions:

- Imports of CFC and HFA MDIs are prone to significant fluctuations, as a result, the availability of affordable MDI is subject to abrupt fluctuations in quantity and price,
- The planning of anti-asthma/COPD medicines imports is weak, and it economically impacted the population in 2006.
- No control over the quality and price of imported MDIs is performed, thus, leading to excessive costs, and resultant limited access to affordable MDIs and health effects for the MDI end-users (patients).
- Two inexpensive sources of CFC MDI were discovered as a supply diversification option, namely Russia and China, with Russia accounting for around 70% of sub-market share for CFC-MDIs; however there is still no plan to ensure a smooth transition to alternative products.

3. Price dynamics for anti-asthma medical products:

On average, the price for CFC MDIs is less expensive. For instance, in 2007, the mean price for HFA MDIs was recognizably more than double that of CFC-MDIs. This was a determining factor behind increasing demand for CFC MDIs and thus, more imports of the latter category of medical products.

If one to compare the lowest reported prices per unit between the most demanded CFC and HFA MDIs, it is possible to notice a minimum 33% price difference between the products supplied from Russia (CFC) and Poland (HFC). If a future consideration is given to the newly discovered source from China (50% the costs of the cheapest HFC MDI in 2007), the imports from China may increase.

Overall, only 2 items in the list of HFA-based MDIs out of 7 product brands are imported at prices from around 33% to 110% higher than the cheapest CFC MDIs. For CFC MDIs, 5 items out of 8 products listed are cheaper than the two cheapest HFA-MDI brands mentioned above.

Conclusions:

- Average mean prices for CFC MDIs at least 50% cheaper if compared with those for HFA MDIs
- CFC-based MDIs products, while in their majority cheaper than HFA MDIs, has a greater variety, thus, providing more flexible choices in terms of future imports planning
- When importing from China, despite import distances, considerable savings can be expected which is an important factor for unstable economy

4. Institutional capacity to control the transition:

The health authorities experienced problems during the compilation of the MDI consumption data, and multiple consultations from NOO-Moldova were required in order to manage the process in a coordinated manner.

Institutional capabilities to proactively and knowledgably plan the imports of CFC and non-CFC MDIs for anti-asthma/COPD treatment in order to ensure more stable imports from predictable sources is lacking. A multi-year planning with a due consideration given to current developments on the market may not be considered as an established practice.

When making a decision on selecting the MDI supply sources, due to bad economic conditions, it is traditional to consider cheaper sources, thus, adjusting the supplies to both the demand and current purchasing power.

Conclusions:

- the health authorities are not aware of the implications of the Montreal Protocol on the world production of CFC MDIs
- the imports planning is sensitive to cheaper MDIs sources
- Taking into account future closure of more CFC MDI lines, need of some producers to evacuate stocks and possible lack of CFC pharmaceutical grade, more distortions in the market (in quantities, price and quality) are expected.

Part II. MDI transition strategy

The national strategy on replacement of CFC-based MDI with alternatives should include the following:

- Better study and analysis of current MDI market consumption, supply sources and future trends;
- Analysis of alternative products and their effects and health benefits;
- Cooperation with the main importers and representatives of medical establishments towards organization and taking measures to shifting to affordable alternative medications, including timeframes for the import substitution and individual and group agreements with suppliers and distributors;
- Development of a multi-year national planning on imports and ensuring a smooth shift towards alternatives;
- Adopting a wide, informed and participatory decision-making process;
- Through training and targeted awareness activities, to increase confidence and ensure acceptance of the alternative products by the patients and by the doctors
- Extended and targeted work with asthma associations and delivering of trainings in yearly family-based financial planning to ensure better transition to HFC MDIs

Actions could include adjustments made to the legal framework, such as a modification of CFC Import Licensing System to include import of MDI and controlling MDI supplies under humanitarian aid.

Budget for actions:

Table: Planned expenditures

Description	**US$**
National Consultant in MDIs	8,000
Technical assistance	8,000
Promotion, printing	4,000
Workshops	8,000
Sub-Total	**28,000**
Contingency	2,000
Total	**30,000**

Monitoring Milestones

TASK	MONTH
(a) Project document submitted	1
(b) Project document signature	3
(c) Contracts Awarded	7
(d) Begin importers consultations efforts	9
(e) Training/Seminars	9
(f) Strategy developed	12
(g) HOP signature	18

Annex. Imports of CFC, non-CFC MDIs and DPIs to Moldova (units). Costs to patient and total costs are provided for 2007 (US$)

Nr. d/o	Product	Active Ingredient	Brand/Manufacturer/ Country	Technology (CFC - MDI/HFA-MDI/DPI	Import per year MDI					Price to patient in 2007, US$	Sub-total expenditures in 2007, US$
					2003	2004	2005	2006	2007		
1	Astmopent aerosol 0,75 mcg/doze -20 ml	Orciprenaline sulphate	Glaxo Smith Kline Pharmaceuticals SA, Poland	CFC-MDI	-	800	1031	-	0	7.1	0.00
2	Becloforte aerosol 250 mcg/doze-200 doze 15 ml	Beclomethasone dipropionate	Glaxo Wellcome Operations, UK	CFC-MDI	9790	1653	2200	100	1480	8.4	12432.00
3	Berovent-MF aerosol 200 mcg/doze-300 doze	Fenoterol hydrobromide	Mikrofarm, Ukraine	CFC-MDI	440	320	540	-	0	2.6	0.00
4	Cameton aerosol 30 g	Chlorbutanolhydrate	Microfarm, Ukraine	CFC-MDI	64709	22020	7200	-	0	2	0.00
5	Cameton aerosol 30 g	Chlorbutanolhydrate	Moschimfarm-preparatî, Russia	CFC-MDI	3200	5568	-	-	35704	2.1	74978.40
6	Cromal-5 aerosol 5 mg/doze-112 doze	Sodium cromoglycate	Cipla Ltd, India	CFC-MDI	-	-	2000	-	0	28.6	0.00
7	Inflacort inhaler 50 mcg/doze 200 doze	Budesonide	Bilim Pharmaceuticals, Turkey	CFC-MDI	-	-	700	700	0	14	0.00
8	Inflacort inhaler 200 mcg/doze 200 doze	Budesonide	Bilim Pharmaceuticals, Turkey	CFC-MDI	-	-	700	500	110	30.2	3322.00
9	Salbutamol-MF aerosol 100 mcg/doze 200 doze	Salbutamol sulphate	Mikrofarm, Ukraine	CFC-MDI	3918	6720	11000	2000	0	2.3	0.00
10	Serevent aerosol 25 mcg/doze-60 doze	Salmeterol xinafoate	Laboratoires Glaxo Wellcome, France	CFC-MDI	41	530	7735	2050	0	21	0.00
11	Salbutamol susp. for inhalat. 100 mcg/doze-90 doze	Salbutamol sulphate	"Altaivitaminî" SAI, Russia	CFC-MDI	-	-	-	-	1568	2.1	3292.80

Nr. d/o	Product	Active Ingredient	Brand/Manufacturer/ Country	Technology (CFC - MDI/HFA-MDI/DPI	Import per year MDI					Price to patient in 2007, US$	Sub-total expenditures in 2007, US$
					2003	2004	2005	2006	2007		
12	Salbutamol susp. for inhalat. presurizate 100 mcg/doze 12 ml	Salbutamol sulphate	"Moshimfarmpreparatî" în numele N. A. Semaşco, Russia	CFC-MDI	-	-	-	-	9906	2.3	22783.80
13	Salbutamol susp. for inhalat. presurizate 100 mcg/doze-200 doze	Salbutamol sulphate	Shandong Jewim Pharmaceutical Co, Ltd, China	CFC-MDI	-	-	-	-	13000	1.6	20800.00
14	Beclomethason susp. for inhalat. presurizate 50 mcg/doze-200 doze	Beclometazon	Shandong Jewim Pharmaceutical Co, Ltd, China	CFC-MDI	-	-	-	-	700	3.5	2450.00
15	Beclomethason susp. for inhalat. presurizate 250 mcg/doză-200 doze	Beclometazon dipropionate	Shandong Jewim Pharmaceutical Co, Ltd, China	CFC-MDI	-	-	-	-	1200	7.4	8880.00
	Total				82098	37611	33106	5350	63668		148939.00
16	Salbutamol susp. for inhala.t presurizate 100 mcg/doză-200 doze	Salbutamol sulphate	Glaxo SmithKline Pharmaceuticals, Poland	Non CFC (HFA 134a)	-	-	-	87200	60640	3.1	187984.00
17	Berotec N sol. for inhalat. presurizate 100 mcg/doze 200 doze	Fenoterol hydrobromide	Boehringer Ingelheim International GmbH (producător Boehringer Ingelheim Pharma GmbH&Co.KG), Germany	Non CFC (HFA 134a)	3014	6548	4320	3524	4363	9.2	40139.60
18	Flixotide 125 mcg/ 120 doze evohaler	Fluticasone propionate	Glaxo Smith Kline Pharmaceuticals SA, Poland	Non CFC (HFA 134a)	-	282	3170	2650	1370	30.3	41511.00
19	Flixotide 50 mcg/ 120 doze evohaler	Fluticasone propionate	Glaxo Smith Kline Pharmaceuticals SA, Poland	Non CFC (HFA 134a)	-	500	1630	1690	1160	47	54520.00

Nr. d/o	Product	Active Ingredient	Brand/Manufacturer/ Country	Technology (CFC - MDI/HFA-MDI/DPI	Import per year MDI					Price to patient in 2007, US$	Sub-total expenditures in 2007, US$
					2003	2004	2005	2006	2007		
20	Flixotide 50 mcg/ 250 doze evohaler	Fluticasone propionate	Glaxo Smith Kline Pharmaceuticals SA, Poland	Non CFC (HFA 134a)	-	250	950	1330	2170	15.2	32984.00
21	Ventolin CFC free 100 mcg/doză 200 doze	Salbutamol sulphate	Glaxo SmithKline Pharmaceuticals SA (Glaxo Wellcome Group), Poland	Non CFC (HFA 134a)	-	4500	7923	12206	5448	3.5	19068.00
22	Berodual N sol. for inhalat. presurizate 200 doze 10 ml	Ipratropium bromide;	Boehringer Ingelheim International GmbH (producător Boehringer Ingelheim Pharma GmbH&Co.KG), Germany	Non CFC (HFA 134a)	-	-	-	200	500	9.2	4600.00
	Total				3014	12080	17993	108800	75651		380806.60
23	Seretide Discus pulb. For inhalat. 50/100 mcg-60 doze	Salmeterol xinafoate; Fluticasone propionate	Glaxo Operations UK Limited, UK	DPI	-	-	-	-	330	56.6	18678.00
24	Seretide Discus pulb. for inhalat. 50/250 mcg-60 doze	Salmeterol xinafoate; Fluticasone propionate	Glaxo Operations UK Limited, UK	DPI	-	-	-	-	210	71.7	15057.00
25	Seretide Discus pulb. for inhalat. 50/500 mcg-60 doze	Salmeterol xinafoate; Fluticasone propionte	Glaxo Operations UK Limited, UK	DPI	-	-	-	-	30	101.8	3054.00
	Total				0	0	0	0	570		36789.00