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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Fifty-fourth Meeting
Montreal, 7-11 April 2008

2008 WORK PROGRAMME OF UNDP

COMMENTS AND RECOMMENDATION OF THE FUND SECRETARIAT

1. UNDP is requesting approval from the Executive Committee for US $3,338,230 for its 2008 Work Programme, plus agency support costs of US $250,817.

2. The activities proposed in UNDP's Work Programme are presented in Table 1 below:

Table 1: UNDP's Work Programme

Country	Activity/Project	Amount Requested (US $)	Amount Recommended (US $)
SECTION A: ACTIVITIES RECOMMENDED FOR BLANKET APPROVAL			
A1. Renewal of institutional strengthening projects:			
India	Institutional strengthening (Phase VII)	373,230	373,230
Nigeria	Institutional Strengthening (Phase V)	260,000	260,000
	Subtotal for institutional strengthening projects::	633,230	633,230
A2. Project preparation for TPMP:			
Barbados	Project preparation for TPMP in the servicing sector	15,000	15,000
	Subtotal for project preparation for TPMP:	15,000	15,000
SECTION B: ACTIVITIES RECOMMENDED FOR INDIVIDUAL CONSIDERATION			
B1. Project preparation for HCFC phase-out plans:			
Angola	Project preparation for HCFC phase-out management plan	50,000	-
Argentina	Project preparation for HCFC phase-out management plan	80,000	-
Armenia	Project preparation for HCFC phase-out management plan	60,000	-
Bangladesh	Project preparation for HCFC phase-out management plan	50,000	-
Bolivia	Project preparation for HCFC phase-out management plan	50,000	-
Brazil	Project preparation for HCFC phase-out management plan	100,000	-
Cambodia	Project preparation for HCFC phase-out management plan	50,000	-
Chile	Project preparation for HCFC phase-out management plan	75,000	-
China	Project preparation for HCFC phase-out management plan	200,000	-
Colombia	Project preparation for HCFC phase-out management plan	80,000	-
Costa Rica	Project preparation for HCFC phase-out management plan	50,000	-
Cote d'Ivoire	Project preparation for HCFC phase-out management plan	75,000	-
Cuba	Project preparation for HCFC phase-out management plan	50,000	-
Dominican Republic	Project preparation for HCFC phase-out management plan	50,000	-
El Salvador	Project preparation for HCFC phase-out management plan	50,000	-
Fiji	Project preparation for HCFC phase-out management plan	40,000	-
Gabon	Project preparation for HCFC phase-out management plan	50,000	-
Gambia	Project preparation for HCFC phase-out management plan	50,000	-
Georgia	Project preparation for HCFC phase-out management plan	50,000	-
Ghana	Project preparation for HCFC phase-out management plan	50,000	-
India	Project preparation for HCFC phase-out management plan	100,000	-
Indonesia	Project preparation for HCFC phase-out management plan	100,000	-
Iran	Project preparation for HCFC phase-out management plan	75,000	-
Jamaica	Project preparation for HCFC phase-out management plan	50,000	-
Kyrgyzstan	Project preparation for HCFC phase-out management plan	60,000	-
Lebanon	Project preparation for HCFC phase-out management plan	50,000	-
Malaysia	Project preparation for HCFC phase-out management plan	100,000	-
Mexico	Project preparation for HCFC phase-out management plan	100,000	-
Moldova	Project preparation for HCFC phase-out management plan	50,000	-
Nepal	Project preparation for HCFC phase-out management plan	50,000	-
Nigeria	Project preparation for HCFC phase-out management plan	200,000	-

Panama	Project preparation for HCFC phase-out management plan	50,000	-
Paraguay	Project preparation for HCFC phase-out management plan	50,000	-
Peru	Project preparation for HCFC phase-out management plan	50,000	-
Sri Lanka	Project preparation for HCFC phase-out management plan	50,000	-
Trinidad & Tobago	Project preparation for HCFC phase-out management plan	50,000	-
Uruguay	Project preparation for HCFC phase-out management plan	75,000	-
	Subtotal for project preparation for HCFC phase-out plans:	2,570,000	-
B2. Project preparation for TPMPs:			
Brunei Darussalam	Project preparation for TPMP in the Servicing Sector	15,000	*
Haiti	Project preparation for TPMP in the servicing sector	15,000	*
	Subtotal for project preparation for TPMPs:	30,000	
B3. Other projects:			
Moldova	Technical assistance to prepare an MDI transition strategy	30,000	*
Pakistan	Project preparation for MDI investment project	60,000	*
	Subtotal for other projects:	90,000	
Subtotal for sections A and B:		3,338,230	648,230
Agency support costs (7.5 per cent for project preparation and institutional strengthening, and for other activities over US $250,000, and 9 per cent for other activities under US $250,000):		250,817	48,617
Total:		3,589,047	696,847

* For individual consideration

SECTION A: ACTIVITIES RECOMMENDED FOR BLANKET APPROVAL

A1. Renewal of institutional strengthening projects:

(a) India (Phase VII): US $373,230
(b) Nigeria (Phase V): US $260,000

Project descriptions

3. UNDP submitted two requests for the renewal of institutional strengthening projects. The descriptions of the institutional strengthening projects for the above countries are presented in Annex I to this document.

Fund Secretariat's comments and recommendations

4. The Fund Secretariat recommends blanket approval of the renewal of institutional strengthening projects for India and Nigeria at the level of funding shown in Table 1. The Executive Committee may also wish to express additional comments to the Governments concerned as set out in Annex II to this document.

A2. Project preparation for TPMP

Barbados: Project preparation for TPMP in the servicing sector (US$15,000)

Project description

5. On behalf of the Government of Barbados, UNDP has submitted for consideration by the Executive Committee a request for funding for the preparation of a terminal phase-out management plan (TPMP). The request has been submitted in accordance with decision 45/54

(on TPMPs for LVC countries). Project preparation activities will be carried out jointly with UNEP.

Fund Secretariat's comments and recommendation

6. The Secretariat's comments and recommendations for this project are contained in UNEP/OzL.Pro/ExCom/54/18 and discussed under the UNEP Work Programme Amendment.

SECTION B: ACTIVITIES RECOMMENDED FOR INDIVIDUAL CONSIDERATION

B1. Project preparation for HCFC phase-out plans:

	Country	Project	Amount requested (US $)
(a)	Angola	Project preparation for HCFC Phase-out Management Plan	50,000
(b)	Argentina	Project preparation for HCFC Phase-out Management Plan	80,000
(c)	Armenia	Project preparation for HCFC Phase-out Management Plan	60,000
(d)	Bangladesh	Project preparation for HCFC Phase-out Management Plan	50,000
(e)	Bolivia	Project preparation for HCFC Phase-out Management Plan	50,000
(f)	Brazil	Project preparation for HCFC Phase-out Management Plan	100,000
(g)	Cambodia	Project preparation for HCFC Phase-out Management Plan	50,000
(h)	Chile	Project preparation for HCFC Phase-out Management Plan	75,000
(i)	China	Project preparation for HCFC Phase-out Management Plan	200,000
(j)	Colombia	Project preparation for HCFC Phase-out Management Plan	80,000
(k)	Costa Rica	Project preparation for HCFC Phase-out Management Plan	50,000
(l)	Cote d'Ivoire	Project preparation for HCFC Phase-out Management Plan	75,000
(m)	Cuba	Project preparation for HCFC Phase-out Management Plan	50,000
(n)	Dominican Rep	Project preparation for HCFC Phase-out Management Plan	50,000
(o)	El Salvador	Project preparation for HCFC Phase-out Management Plan	50,000
(p)	Fiji	Project preparation for HCFC Phase-out Management Plan	40,000
(q)	Gabon	Project preparation for HCFC Phase-out Management Plan	50,000
(r)	Gambia	Project preparation for HCFC Phase-out Management Plan	50,000
(s)	Georgia	Project preparation for HCFC Phase-out Management Plan	50,000
(t)	Ghana	Project preparation for HCFC Phase-out Management Plan	50,000
(u)	India	Project preparation for HCFC Phase-out Management Plan	100,000
(v)	Indonesia	Project preparation for HCFC Phase-out Management Plan	100,000
(w)	Iran	Project preparation for HCFC Phase-out Management Plan	75,000
(x)	Jamaica	Project preparation for HCFC Phase-out Management Plan	50,000
(y)	Kyrgyzstan	Project preparation for HCFC Phase-out Management Plan	60,000
(z)	Lebanon	Project preparation for HCFC Phase-out Management Plan	50,000
(aa)	Malaysia	Project preparation for HCFC Phase-out Management Plan	100,000
(bb)	Mexico	Project preparation for HCFC Phase-out Management Plan	100,000
(cc)	Moldova	Project preparation for HCFC Phase-out Management Plan	50,000
(dd)	Nepal	Project preparation for HCFC Phase-out Management Plan	50,000
(ee)	Nigeria	Project preparation for HCFC Phase-out Management Plan	200,000
(ff)	Panama	Project preparation for HCFC Phase-out Management Plan	50,000
(gg)	Paraguay	Project preparation for HCFC Phase-out Management Plan	50,000
(hh)	Peru	Project preparation for HCFC Phase-out Management Plan	50,000
(ii)	Sri Lanka	Project preparation for HCFC Phase-out Management Plan	50,000
(jj)	Trinidad & Tobago	Project preparation for HCFC Phase-out Management Plan	50,000
(kk)	Uruguay	Project preparation for HCFC Phase-out Management Plan	75,000

Project description

7. UNDP submitted requests for funds for the preparation of HCFC phase out management plans for 37 countries. These requests are being submitted following a discussion at the 53rd Meeting of the Executive Committee on HCFC issues, and decision 53/37. UNDP has provided the Secretariat with letters from 36 of the 37 countries listed above requesting assistance for the preparation of HCFC phase-out management plans be carried out by UNDP.

Fund Secretariat's comments

8. In reviewing the requests received from UNDP, the Secretariat informed the agency that these projects, while consistent with the decision of the 19th Meeting of the Parties, are currently not eligible for funding as guidelines for HCFC management plans following decision 53/37 will be considered only by the Executive Committee at this meeting. Decision 53/37 further directs that, "the Executive Committee would do its utmost to approve the guidelines at its 54th Meeting".

9. In looking at the costs of each project as submitted, the Secretariat is unable to determine whether the levels requested are sufficient because the tasks for the preparation of the HCFC phase-out management plans and what these will contain is still largely unknown. The Secretariat is therefore unable to review these costs without any current basis and is presenting these only as proposed by UNDP.

10. The Secretariat noted that fourteen of these countries have similar requests with other implementing agencies.

11. Notwithstanding the above, the Secretariat reviewed data for HCFC consumption in the countries where funding is requested, and has the following comments:

(a) Out of the 37 countries, 36 have reported 2006 HCFC consumption, and one does not have data;

(b) Five countries have a consumption of more than 300 ODP tonnes, while one country has reported zero consumption; and

(c) Data from country programme reports also show that 19 countries have both HCFC-22 and HCFC-141b consumption, while the rest only have HCFC-22.

Fund Secretariat's recommendation

12. Based on the above comments and in the absence of clear guidelines on the development of HCFC management plans, the Secretariat is unable to recommend the requests for funding for the preparation of such plans for the 37 countries as submitted by UNDP.

13. The Executive Committee may however wish to consider these requests in the light of the discussions on agenda item 11 on Draft guidelines for the preparation of HCFC phase-out management plans incorporating HCFC surveys (decision 53/37 (h)).

B2. Project preparation for TPMPs

Haiti: Project preparation for TPMP in the servicing sector (US$15,000)

Project description

14. On behalf of the Government of Haiti, UNDP has submitted for consideration by the Executive Committee a request for funding for the preparation of a terminal phase-out management plan (TPMPs). The request has been submitted in accordance with decision 45/54 (on TPMP for LVC countries). Project preparation activities in these countries will be carried out jointly with UNEP.

Fund Secretariat's comments recommendation

15. The Secretariat's comments and recommendations for this project are contained in UNEP/OzL.Pro/ExCom/54/18 and discussed under the UNEP Work Programme Amendment.

Brunei Darussalam: Project preparation for TPMP in the servicing sector (US $15,000)

Project description

16. On behalf of the Government of Brunei Darussalam, UNDP has submitted for consideration by the Executive Committee a request for funding for the preparation of a terminal phase-out management plan (TPMP). The request has been submitted in accordance with decision 45/54 (on TPMP for LVC countries). Project preparation activities in this country will be carried out jointly with UNEP.

Fund Secretariat's comments recommendation

17. The Secretariat's comments and recommendations for this project are contained in UNEP/OzL.Pro/ExCom/54/18 and discussed under the UNEP Work Programme Amendment.

B3. Other projects:

Moldova: Technical assistance to prepare an MDI transition strategy (US $30,000)

Background

18. The Executive Committee, at its 51st Meeting, agreed in decision 51/34(d) *inter alia*, "to consider on a case-by-case basis requests for transition strategies to non-CFC MDIs in Article 5 Parties that did not have MDI manufacturing facilities, in accordance with decision 45/54, when the need for a strategy had been fully demonstrated and documented through the submission of the following information for the previous three years"

(a) CFC and non-CFC MDIs and dry-powder inhalers: sold or distributed within the Party, by active ingredient, brand/manufacturer, and source;

(b) Non-CFC MDIs and dry-powder inhalers: date approved, authorized for marketing, and/or launched in the territory of the Party;

(c) CFC and non-CFC MDIs and dry-powder inhalers: estimated cost by active ingredient and source."

19. Moldova's TPMP was approved at the 52nd Meeting pursuant to decision 45/54. When the TPMP was presented at this meeting, the Secretariat 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. The Secretariat was subsequently informed that this project component was not requested at that time, however, UNDP indicated that with funding available from the preparation of the TPMP project, additional information on the MDI sub-sector will be gathered in order to submit a request for the preparation of the transition strategy to a future meeting of the Committee if necessary. This request from Moldova is being submitted pursuant to decision 51/34.

Project description

20. On behalf of the Government of Moldova, UNDP is submitting a request for the preparation of an MDI-transition strategy to phase-out CFC use in the MDI consumption sector. Data gathered during the TPMP showed that Moldova does not manufacture CFC MDIs. It also showed that the trends of both CFC and non-CFC MDIs imports are increasing. The available data indicates that 85,000 units of such medical products were in use in 2003 and this number increased to 140,000 units in 2007. There is also an overall concern from the Government of Moldova and its health authorities about the MDI sub-sector particularly, since the incidences of chronic destructive pulmonary disease (COPD) and asthma are rising, therefore there is a need to ensure a steady supply of MDIs to meet these patients' needs. The requested funding for the development of an MDI transition strategy will establish a clear schedule for import of alternatives to CFC-MDIs. Regulations would also be needed that would promote and support the phase-out of these products, and a programme that would raise physician awareness and patient acceptance of alternatives to CFC-MDIs, as well as monitoring imports of MDIs.

21. In support of their submission and based on decision 51/34, UNDP indicated that the situation with regards to the supply of MDIs and their non-CFC equivalents in Moldova can be briefly described as follows (summarised in Table 2 below):

(a) There are CFC MDIs, HFA MDIs and DPIs in the market;

(b) There is a growing share of HFA MDI's in the market, exceeding 90 per cent of the total MDI market in 2006 but this has decreased to not more than 55 per cent share in 2007;

(c) The imports of CFC MDIs during 2003-2005 were slowly decreasing with a slump down to 5 per cent of the market in 2006. This big decrease was attributed to difficulties in accessing inexpensive CFC-MDIs from the traditional supplier located in the Ukraine. However, imports of CFC MDIs went back up to 45 percent of the market in 2007;

(d) Imports of HFA MDIs were increasing from 2003 till 2006 but decreased sharply in 2007; and

(e) While there are DPIs in the market, their share is negligible

Table 2: Market share of MDIs

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

22. In addition, UNDP also provided a comprehensive table listing CFC and non-CFC MDIs and dry-powder inhalers imported, sold or distributed within the country, identifying each by active ingredient, brand/manufacturer, and source. The report also provided information on the source of CFC-MDIs, and these come mostly from Russia and China, with the shares of the market broken down as follows:

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

23. The data submitted also shows that CFC-MDIs are still less expensive than other MDIs, and offer a wider variety of moieties that are not readily available with HFA MDIs or DPIs. In 2007 for instance, the price of HFA MDIs was twice as much as the CFC based ones. However, the report also attributes it to a lack of a strong pricing policy which causes tremendous fluctuations between products depending on demand and supply.

24. The document also indicates that the health authorities are not aware of the requirements of the Montreal Protocol to phase out CFCs in MDIs, and very often planning for MDI imports is based on the sources that could provide products at the least cost rather than on the propellant used.

Fund Secretariat's comments

25. The project preparation request is being submitted to enable the smooth transition to non-CFC MDIs in Moldova, therefore phasing out CFC consumption in the MDI sector. In reviewing the data and information submitted, the Secretariat noted that there are serious variations in the supply of the different MDIs and that the imports of CFC and HFA MDIs are prone to significant fluctuations. This results in problems with availability of affordable MDIs that could affect patient care. In seeking clarification with UNDP on why this was happening, it was explained that the planning of anti-asthma/COPD medicines imports is weak and, because of this, it impacts the patient population negatively, therefore there is a need to strengthen the system.

26. The Secretariat also noted that while there was a difference in the price between CFC-based MDIs and those with alternatives, would appear that the country has a stable pricing for unit costs, as prices for the last three years for specific products have remained the same. It could therefore be surmised that the fluctuation remains only in the availability of the product on the market but not in price per unit to the consumer.

27. In discussing the country's plans for the preparation of the transition strategy, the Secretariat was informed that the national strategy on replacement of CFC-based MDIs with alternatives is envisaged to consider the following:

(a) Better study and analysis of current MDI market consumption, supply sources and future trends;

(b) Analysis of alternative products and their effects and health benefits;

(c) Cooperation with the main importers and representatives of medical establishments towards organization and taking measures for shifting to affordable alternative medications, including timeframes for the import, substitution, and individual and group agreements with suppliers and distributors;

(d) Development of multi-year national planning on imports and ensuring a smooth shift towards alternatives;

(e) Adopting a wide, informed and participatory decision-making process;

(f) Through training and targeted awareness activities, to increase confidence and ensure acceptance of the alternative products by both patients and doctors; and

(g) Extended and targeted work with asthma associations and delivering of trainings in annual family-based financial planning to ensure better transition to HFA MDIs

Fund Secretariat's recommendation

28. In the light of the comments above, the Executive Committee may wish to consider approval of the request for preparation of an MDI transition strategy at the funding level of US $30,000, as indicated in Table 1 above. The Committee may also wish to confirm whether the information provided is consistent with the requirements of decision 51/34.

29. In approving this project UNDP is requested to note that no further funds for the phase out in the MDI sector will be available.

Pakistan: Project preparation for MDI Investment Project (US $60,000)

Background

30. The Executive Committee, at its 51st Meeting, agreed in decision 51/34 *inter alia*, "to consider, on a case-by-case basis, the submission of requests for project preparation for the conversion of CFC-MDI production facilities on the understanding that they must include a comprehensive justification from the country concerned for the need to receive assistance and, as a minimum, should provide the following detailed information:

(a) Name of nationally owned CFC-MDI manufacturing facilities, the date when the CFC production lines were established and the production capacity of each production line;

(b) Type of CFC-MDI products manufactured, active ingredients used, annual production output (units/year);

(c) Growth patterns of CFC-MDI production over the past five years;

(d) Whether any of the CFC-MDI manufacturing plants were contemplating alternatives to CFC-MDIs and what those alternatives were;

(e) Each production facility's plans for phasing out CFC consumption; and

(f) The number of non-CFC-MDIs and dry-powder inhalers sold or distributed within the Party, by active ingredient, brand/manufacturer, and source."

Project description

31. On behalf of the Government of Pakistan, UNDP is submitting a request for project preparation to phase-out CFC use in the MDI manufacturing sector.

32. At the 41st Meeting, the World Bank presented a country programme update for Pakistan, which showed that in 2002 the country reported under Article 7 of the Montreal Protocol a total CFC consumption of 1,646.7 ODP tonnes, including 69.4 ODP tonnes used for the manufacturing of MDIs by one multi-national company (with 22 per cent local ownership). At the same meeting, the Government of Pakistan submitted three project proposals in the foam and refrigeration sectors to phase out 1,063.6 ODP tonnes of CFCs (UNEP/OzL.Pro/ExCom/41/51). The letter regarding submission of the Pakistan country programme update indicated the sectoral distribution of the remaining CFC consumption eligible for funding among the three projects that were submitted to the 41st Meeting pursuant to decision 35/57.

33. In support of their submission for project preparation funds in response to decision 51/34, UNDP indicated that as of 2006 the Government of Pakistan has three CFC-MDI manufacturing enterprises, GSK Pakistan, a local subsidiary of GlaxoSmithKline (GSK) which started operations in 1981 with 22 percent local ownership, and two nationally owned enterprises, Zafra and Macter Pharmaceutical. Zafra discontinued production from 2005, while Macter commenced operations only in 2006.

34. GSK Pakistan has one production line. The production capacity of this line is stated as 48,000 per year initially in 1981. In 2006, CFC-MDI production in GSK was at 3.58 million units, all of it for domestic consumption. The company produces only two formulations, salbutamol and salbutamol/beclomethasone. The proposal shows that reformulation of the products to use alternatives are already being implemented by the GSK Research and Development based in the USA and the United Kingdom using the mother company's facilities. However it also mentions that the local manufacturing will need a complete new line to enable the production of non-CFC MDI's.

35. The annual production of GSK over the past five years is shown in the table below.

Year	Number of Units
2002	2,701,518
2003	2,556,277
2004	2,923,177
2005	2,165,912
2006	3,584,611

36. Macter International Pvt. Ltd. was established in 2006, and is 100 per cent nationally owned. It currently has 10 CFC MDI formulations in production. Its 2006 production was indicated at 170,000 units, with one production line. The company was unable to provide information on production for past years since it commenced only in 2006. The project data indicates that the company contemplates a shift to HFA alternatives, and the current production line will have to be entirely replaced as it cannot be retrofitted.

37. The table below shows the trend in CFC use for production in the MDI sector. The data shows consumption only for GSK:

Year	Quantity of CFC-11 (ODP tonnes)	Quantity of CFC-12 (ODP tones)	Total CFC used
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
Total	117.3	261.4	378.7

38. Pakistan imports both CFC and non-CFC-MDIs mostly through different companies. The prices of the imported MDIs are cheaper than the locally produced products, including the two formulations produced by GSK. Pakistan imports a total of over 162,000 units of MDIs annually. The table below shows the breakdown of imports per active ingredient as provided by UNDP:

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.
- 1 USD = 61 Pakistani rupees.

Fund Secretariat's comments

39. The project preparation request is being submitted to enable the phase-out of 85 ODP tonnes of CFCs used in the manufacture of CFC-MDIs. In reviewing the data submitted which covered only the production for GSK Pakistan, the Secretariat noted that the trend in production from 2003-2006 is generally increasing as evidenced by the total number of units being produced. In 2006, production was estimated at 3.5 million units. In responding to the Secretariat's query on reasons for this increase in production, UNDP advised that the incidence of asthma in Pakistan is on the rise, with a possible 5 percent of the total population (8 million people) afflicted. There is also a growing concern in the country that 50 percent of those with asthma are unable to afford the cost of treatment.

40. The Secretariat noted that the proposal includes a company that has commenced production of CFC MDIs only in 2006. This company is clearly not eligible for funding considering that this new production started after Pakistan had submitted its final sector plan to meet its remaining eligible consumption following decision 35/57. UNDP replied that the need for CFC MDIs as indicated above was the reason why a new MDI manufacturing facility was established in 2006.

41. The Secretariat also requested UNDP to provide data on the imports of non-CFC-MDIs into the country, as required in decision 51/34. UNDP provided a table summarizing imports of only four out of the 10 formulations they have identified in their submission as being imported

42. In discussing the company's plans for conversion, the Secretariat was informed that the GSK's research and development departments are looking at reformulation of the MDI to HFA, and that there is a possibility for co-financing of the conversion costs after a more detailed study is undertaken.

43. In reviewing the country's CFC consumption data, the Secretariat also noted that pursuant to decision 35/57, Pakistan has chosen Option 1 as the basis for establishing its remaining eligible CFC consumption. As at the 41st Meeting where this choice was made, the level of consumption that was eligible was 518 ODP tonnes, to which Pakistan had agreed in an official communication to the Secretariat. Pakistan also indicated its country programme update submitted to the 41st Meeting, which formed the basis for this choice of remaining eligible consumption, that there was one company that produced MDIs with a CFC consumption of 69.4 ODP tonnes. This company was GSK Pakistan.

44. At the same meeting, Pakistan received funding for the foam sector which was to phase out 106.9 ODP tonnes. It also received funding for an RMP and its institutional strengthening renewal that enabled the phase out of 215 and 18.6 ODP tonnes respectively. At the 42nd Meeting, the country received funding for the rest of its eligible CFC consumption for the commercial refrigeration sector which was for the phase out of 181.3 tonnes, so covering all of the 518 ODP tonnes it had remaining.

Fund Secretariat's recommendation

45. Based on the above the Executive Committee may wish to consider whether to approve the request for project preparation at the funding level of US $60,000, as indicated in Table 1 above. The Committee may also wish to confirm whether the information provided is consistent with the requirements of decision 51/34.

46. In approving this project UNDP is requested to note the following:

(a) Project preparation should cover only the company and consumption that was identified at the time the remaining eligible CFC consumption was agreed upon and target only on the percentage that is locally owned;

(b) Any new MDI production after the 42nd Meeting where the last sector plan was approved for Pakistan is not eligible for funding consistent with approvals made for similar investment projects in this sector.

Annex I

INSTITUTIONAL STRENGTHENING PROJECT PROPOSALS

India: Renewal of institutional strengthening

Summary of the project and country profile	
Implementing Agency:	UNDP
Amounts previously approved for institutional strengthening (US $):	
Phase I: Oct 1992	484,690
Phase II: Oct. 1996	324,423
Phase III : Mar 1999	324,423
Phase IV: Jul. 2001	324,423
Phase V: Dec. 2003	401,222
Phase VI: Nov. 2005:	401,222
Total	2,260,403
Amount requested for renewal (Phase VII) (US $):	373,230
Amount recommended for approval for Phase VII (US $):	373,230
Agency support costs (US $):	27,992
Total cost of institutional strengthening Phase VII to the Multilateral Fund (US $):	401,222
Equivalent amount of CFC phase-out due to institutional strengthening Phase VII at US $12.1/kg (ODP tonnes):	
Date of approval of country programme:	Nov. 1993
ODS consumption reported in country programme (1991) (ODP tonnes):	13,111.0
Latest reported ODS consumption (2006) (ODP tonnes):	4,687.8
Baseline consumption of controlled substances (ODP tonnes):	
(a) Annex A Group I (CFCs) (Average 1995-1997)	6,681.0
(b) Annex A Group II (Halons) (Average 1995-1997)	1,249.4
(c) Annex B Group II (Carbon tetrachloride) (Average 1998-2000)	11,505.4
(d) Annex B Group III (Methyl chloroform) (Average 1998-2000)	122.20
(e) Annex E (Methyl bromide) (Average 1995-1998)	0.0
Latest consumption of controlled substances (2006) (ODP tonnes):	
(a) Annex A Group I (CFCs)	3,560.3
(b) Annex A Group II (Halons)	0
(c) Annex B Group II (Carbon tetrachloride)	1,127.5
(d) Annex B Group III (Methyl chloroform)	0.0
(e) Annex E (Methyl bromide)	0.0
(f) Annex C Group I (HCFCs)	592.5
Amount approved for projects (US $):	222,131,848
Amount disbursed (as at February 2008) (US $):	179,433,474
ODS to be phased out (ODP tonnes):	53,631.0
ODS phased out (as at February 2008) (ODP tonnes):	47,658.4

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

	Summary of activities	**Funds approved (US $)**
(a)	Investment projects:	210,910,876
(b)	Institutional strengthening:	2,260,403
(c)	Project preparation, technical assistance, training and other non-investment projects:	8,960,569
	Total:	222,131,848

Progress report

2. For the Phase VI of its institutional strengthening (IS) project, India continues its excellent efforts in the monitoring and management of its production and consumption phase-out activities through close coordination with implementing agencies, industries and other relevant governmental departments to ensure compliance of MP obligations and sustainability of phase-out achievements. The NOU has carefully monitored its import and export licensing system for effective control of the supply and consumption of ODS. NOU participated extensively and contributed significantly to all Executive Committee, OEWG, MOP meetings and joint regional network meetings. As a member of the Implementation Committee under the Non-compliance Procedures, India also participated in two meetings held during 2007. The NOU has also conducted extensive public awareness and information activities to facilitate users and stakeholders to access information on ozone layer protection and related non-ODS technologies, in order to enable a smooth implementation of the phase-out programme. NOU also shared its experience on management of ISP through organized trainings provided to Ozone Officers in other countries. In 2006 and 2007, training was provided to Ozone Officers from Iran and Bhutan. The most significant was the NOU's effort in assisting with the excellent arrangements of the 18th MOP Meeting and the 50th ExCom Meeting held in New Delhi during November – December 2006, contributing to a very smooth meeting process.

Plan of action

3. The objective of the Phase VII of the institutional strengthening project will be to continue the effective management, monitoring and enforcement on ODS activities in order to meet the MP obligation of complete phase-out by 2010 and to ensure sustainability of phase out achievements. In this next phase of the IS project, India will need to address the MDI issues through the preparation, approval and implementation of its MDI transition strategy and investment activities to phase-out CFC in MDI manufacturing sector. It will continue to implement the Ozone Depleting Substances (Regulation and Control) Rules, Customs and Policy Training Strategy. The NOU will also strengthen its capacity to address the accelerated HCFC production and consumption phase-out through the preparation of Strategy and Phase-out Management Plan and demonstration projects. It will strengthen on its roles to control and monitor ODS activities, and increase public awareness so that the complete phase-out of CFCs by end of 2010 will be smoothly achieved and sustained.

Nigeria: Renewal of institutional strengthening

Summary of the project and country profile	
Implementing Agency:	UNDP
Amounts previously approved for institutional strengthening (US $):	
Phase I: Mar. 1993	339,000
Phase II: Jul. 2001	226,000
Phase III: Jul. 2003	279,500
Phase IV: Apr. 2006	279,500
Total	1,124,000
Amount requested for renewal (Phase V) (US $):	260,000
Amount recommended for approval for Phase V (US $):	260,000
Agency support costs (US $):	19,500
Total cost of institutional strengthening Phase V to the Multilateral Fund (US $):	279,500

Equivalent amount of CFC phase-out due to institutional strengthening Phase V at US $12.1/kg (ODP tonnes):	n/a
Date of approval of country programme:	Jul. 1997
ODS consumption reported in country programme (1996) (ODP tonnes):	1684.8
Latest reported ODS consumption (2006) (ODP tonnes):	454.0
Baseline consumption of controlled substances (ODP tonnes):	
(a) Annex A Group I (CFCs) (Average 1995-1997)	3,650.0
(b) Annex A Group II (Halons) (Average 1995-1997)	285.3
(c) Annex B Group II (Carbon tetrachloride) (Average 1998-2000)	152.8
(d) Annex B Group III (Methyl chloroform) (Average 1998-2000)	32.9
(e) Annex E (Methyl bromide) (Average 1995-1998)	2.8
Latest consumption of controlled substances (2006) (ODP tonnes):	
(a) Annex A Group I (CFCs)	454.0
(b) Annex A Group II (Halons)	0.0
(c) Annex B Group II (Carbon tetrachloride)	0.0
(d) Annex B Group III (Methyl chloroform)	0.0
(e) Annex E (Methyl bromide)	0.0
(f) Annex C Group I (HCFCs)	35.8
Amount approved for projects (US $):	32,400,328
Amount disbursed (as at February 2008) (US $):	25,129,238
ODS to be phased out (ODP tonnes):	4,430.0
ODS phased out (as at February 2008) (ODP tonnes):	3,834.0

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

	Summary of activities	Funds approved (US $)
(a)	Investment projects:	29,220,739
(b)	Institutional strengthening:	1,124,000
(c)	Project preparation, technical assistance, training and other non-investment projects:	2,055,589
	Total:	32,400,328

Progress report

5. For the Phase IV of its institutional strengthening (IS) project, the National Ozone Office of Nigeria has continued to fulfil its reporting duties for the Ozone Secretariat and the Multilateral Fund Secretariat and has conducted various awareness-raising activities such as: The preparation and distribution of awareness materials such as information brochures, leaflets, file jackets, T-Shirts, face caps and stickers, the holding of workshops for media practitioners and a "national sensitization and awareness workshop", the yearly celebration of the "international day for the preservation of the ozone layer", various ozone outreach programmes for schools, organizing TV messages and regular radio jingles and programmes nationwide, and the development and hosting of a website. In order to strengthen ODS import/export control mechanism and preventing illegal trading in ODS and ODS-based equipment, the National Ozone Office has held a retreat with officials of the Federal Ministry of Justice on the legal redrafting of the draft ODS legislation and conducted zonal training in Lagos, Port Harcourt and Kano for Customs and other relevant enforcement officers including NAFDAC, Standard Organisation of Nigeria (SON) and the Consumer Protection Council of Nigeria, which has been a huge success. Finally it has also continued its coordination role for all ongoing programmes for CFCs (with OPIAMU as implementing arm) and for the solvents, halons and methyl bromide

projects. It participated in key meetings such as the MOP and various UNEP regional network meetings.

Plan of action

6. The objective of the Phase V of the institutional strengthening project will be to continue all activities described in the progress report and the effective management, monitoring and enforcement on ODS activities in order to ensure sustainability of phase out achievements. In this next phase of the IS project, Nigeria will strengthen the capacity and facilitate the work of the local institutions on their roles to control and monitor ODS activities, and increase public awareness so that the complete phase-out of CFCs by end of 2010 will be sustained. In addition, new programmes on MDIs, and HCFCs will be developed during this period as well.

Annex II

VIEWS EXPRESSED BY THE EXECUTIVE COMMITTEE ON RENEWALS OF INSTITUTIONAL STRENGTHEING PROJECTS SUBMITTED TO THE 54th MEETING

India

1. The Executive Committee has reviewed the information presented with the institutional strengthening renewal request for India and notes with appreciation that India has taken significant steps on the implementation of its sectoral and National CFC consumption Phase-out plans on its ODS production and consumption in order to achieve the 2007 compliance milestone and subsequent complete phase-out in 2010. In its submission, India reported on a number of successful phase out activities, including timely monitoring and coordination of its phase-out activities under the sectoral plans and strict monitoring of its import and export licensing system to control supply and consumption of ODS, conducting public awareness campaign and seminars and provision of assistance and information on appropriate alternative technologies to facilitate the implementation of ozone layer protection activities. The Executive Committee also notes that India will strengthen capacity to monitor and control ODS activities to ensure sustainability after achieving the targets of complete phase-out by end of 2010. The Executive Committee expresses the expectation that India will successfully complete the implementation of its programmed activities with outstanding progress, sustain and build upon its current levels of reduction in CFCs to achieve its goals of complying with the reduction schedule of the Montreal Protocol, and will intensify its effort to prepare for the accelerated HCFC phase-out activities. [Further comment pending the result of the Executive Committee's discussion of the issue of India's consumption in 2006 under document UNEP/OzL.Pro/ExCom/54/34.]

Nigeria

2. The Executive Committee has reviewed the terminal report presented with the institutional strengthening project renewal request for Nigeria and notes with appreciation the achievements made by Nigeria's National Ozone Unit during the implementation of the fourth phase. In particular the Executive Committee notes the progress made by Nigeria towards reducing its CFC consumption and meeting the 2007 Montreal Protocol control measure in advance, and that consumption of CTC/TCA, halons and methyl bromide has been zero. It also notes that it has ratified the Beijing Amendment, continues to implement the phase-out projects in key ODS-consuming sectors. The Executive Committee encourages the Government of Nigeria to implement its ODS legislation at the earliest possible time in order to strengthen ODS control measures in the country and ensure compliance with the requirements of the Montreal Protocol. The Executive Committee is hopeful that the objectives set out in the next phase of the institutional strengthening project will be achieved with outstanding success and enable the Government of Nigeria to meet all its obligations under the Montreal Protocol in a timely manner.

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