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EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL Seventieth Meeting Bangkok, Thailand 1-5 July 2013

PROJECT PROPOSAL: ECUADOR

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

Phase-out

• HCFC phase-out management plan (stage I, second tranche)

UNEP/UNIDO

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Ecuador

(I) PROJECT TITLE								AGENCY								
	НС		UNEP, UNIDO (lead)													
(II) LATI	EST ART	TICLE 7 D	ATA (Anne	x C Gr	oup l)		Year	: 2011						32.28 ((ODP tonnes)	
(III) LAT	EST CO	UNTRY P	ROGRAM	ME SE	CTORAL	DATA	(ODP to	onnes)							Year: 2012	
Chemica	l Aer	osol Fo	am Fire fighti		Ref	frigeratio	on	So	lvent		rocess	La	ab Use		tal sector sumption	
				N	Manufactu	ring	Servicin	g								
HCFC-12	3						0	.1							0.1	
HCFC-12	4						0	.4							0.4	
HCFC-14	lb						1	.3							1.3	
HCFC-14 in Importe Pre-blende Polyol	ed	1	6.6												16.6	
HCFC-14	2b						1	.1							1.1	
HCFC-22							35	.4							35.4	
(IV) CON	SUMPT	ION DATA	A (ODP ton	nes)												
2009 - 2 baselii				23.49		Starti	ng point	for sust	ained a	iggre	gate re	ducti	ions:		44.16	
			CONS	SUMPT	ION ELI	GIBLE	FOR FU	UNDIN	G (OD	P to	nnes)					
Alrea approv				23.18				Re	mainin	g:					20.98	
(V) BUSI	NESS PI	AN		2012	2013	2014	2015	201	6 2	017	201	8	2019	2020	Total	
UNE	P	ODS phase- tonnes)	out (ODP		0.2				0.3		C).3		0.1	0.9	
		Funding (U	S \$)		22,600			33,9	000		28,2	50		11,300	96,050	
UNID	О	ODS phase- tonnes)	out (ODP		0.9	0.0	0.0)	0.9	0.0	C).9	0.0	0.6	3.4	
		Funding (U	S \$)		92,988	0	0	92,9	88	0	92,9	88	0	59,125	338,088	
(VI) PROJ	ECT DAT	ГА	2011	2012	2013	2014	2015	2016	2017	7	2018	201	19	2020	Total	
Montreal Pr	rotocol cor	sumption	n/a	n/a	23.49	23.49	21.14	21.14	21.1	4	21.14	21	.14	15.27	n/a	
Maximum a		nnes)	n/a	n/a	23.49	23.49	21.14	21.14	21.1	4	21.14	21	.14	15.27	n/a	
Agreed Funding	UNEP	Project costs	30,000		20,000			30,000		2	5,000			10,000	115,000	
(US\$)		Support costs	3,900		2,600			3,900			3,250			1,300	14,950	
	UNIDO	Project costs	1,531,940		86,500			86,500			6,500			55,000	1,846,440	
		Support costs	114,896		6,488			6,487			6,487			4,125	138,483	
Funds appro ExCom (US		Project Costs	1,561,940	0	0	0	0	0		0	0		0	0	1,561,940	
m 10		Support Costs	118,796	0	0	0	0	0		0	0		0	0	118,796	
Total funds for approva meeting (U	l at this	Costs			106,500										106,500	
		Support Costs			9,088										9,088	
Secretariat	's recomn							For bla	anket ap	prov	al					

PROJECT DESCRIPTION

1. On behalf of the Government of Ecuador UNIDO, as the lead implementing agency, has submitted to the 70th meeting of the Executive Committee a request for funding of the second tranche of stage I of the HCFC phase-out management plan (HPMP) at a total cost of US \$115,588, consisting of US \$86,500, plus agency support costs of US \$6,488 for UNIDO, and US \$20,000, plus agency support costs of US \$2,600 for UNEP. The submission includes a progress report on the implementation of the first tranche of the HPMP together with the tranche implementation plan for 2013 to 2016.

Background

2. The Executive Committee at its 65th meeting approved, in principle, stage I of the HPMP for Ecuador for the period 2011 to 2020 to meet the 35 per cent reduction in HCFC consumption, at the amount of US \$2,114,873, consisting of US \$1,846,440, plus agency support costs of US \$138,483 for UNIDO, and US \$115,000, plus agency support costs of US \$14,950 for UNEP, on the understanding that US \$630,000 were provided for the refrigeration servicing sector and US \$1,331,440 for the investment component for the phase-out of 14.96 ODP tonnes of HCFC-141b contained in imported pre-blended polyols used in the foam manufacturing sector. At the same meeting, the Executive Committee also approved US \$1,680,736 (i.e., US \$1,531,940, plus agency support costs of US \$114,896 for UNIDO, and US \$30,000, plus agency support costs of US \$3,900 for UNEP), for implementation of the first tranche of the HPMP.

Progress report on the implementation of the first tranche of the HPMP

- 3. With the assistance of UNIDO and UNEP, the Government of Ecuador established an adequate and operational HCFC imports and exports licensing system by July 2012, which allowed the initiation of disbursements of funds approved under stage I of the HPMP as per decision 65/25 (g)¹. The results achieved so far under stage I of the HPMP are described below:
 - (a) Strengthening of the legal framework and ODS control (UNEP): Complementary to the HCFC licensing and quota system established, the Government of Ecuador promulgated in December 2012 two additional resolutions to set the annual HCFC quota for 2013 and distribute it among the licensed importers. In cooperation with the Ministry of Industries and Productivity (MIPRO) and the Customs Directorate, UNEP started the customs training programme to support the implementation of the HCFC licensing and quota system and the control on illegal trade. A first train the trainers workshop took place with the participation of 30 customs officers and one refrigerant identifier was purchased;
 - (b) Technical assistance for large end-users of refrigeration and air-conditioning equipment (UNIDO): An agreement with the Ecuador professional training service (SECAP) was signed for the strengthening of nine refrigeration training centres. In May 2013, these centres started to receive sets of equipment and tools including recovery equipment. Equipment and refrigerants were also given to Universidad Politécnica in the preparation of two studies related to the use of hydrocarbons (HCs) as refrigerants;

¹ Decision 65/25 (g): "That funding would be disbursed only upon receipt by the Secretariat of confirmation that an adequate and operational licensing system was in place."

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A training workshop in good refrigeration practices was completed with the participation of 30 trainers from SECAP. The workshop demonstrated the use of the reclamation unit provided by the HPMP and the use of HCs as alternative refrigerants. In line with the HPMP strategy, the largest HCFC users were contacted to start training by SECAP during the second tranche;

- (c) Technical and institutional assistance for management of ODS related information (UNIDO): A contract was granted to a consultancy firm to assist the NOU with the management of HCFC related information including the quota system and reporting requirements; and
- (d) Investment project to phase out HCFC-141b contained in imported pre-blended polyols in Indurama (UNIDO): The legal agreement was signed with the beneficiary enterprise in April 2013. The equipment required for the conversion was procured and is expected for delivery by July 2013. Tests, trails and commissioning are planned for September 2013 and project completion for December 2013.
- 4. The submission also included a progress report on activities being implemented in the servicing sector with the remaining balance under the national CFC phase-out plan (NPP). The main activities reported included the promotion of the technicians' certification scheme, awareness activities informing end-users about energy efficient equipment, and the definition of the curricula for the custom training courses. In addition, under the NPP, certified refrigeration technicians received equipment and tools to recover CFCs from domestic refrigerators as part of an energy efficiency project under MIPRO that intends to replace 330,000 old inefficient units by new energy efficient ones. The CFC recovered will be directed to a CFC destruction unit located in the SECAP training centre in Quito. Out of the balance of US \$193,155 under the NPP at the time of approval of the HPMP, UNEP has spent US \$45,000. UNIDO had spent all its balance before the approval of the HPMP.

Status of fund disbursement

5. As of May 2013, of the US \$1,561,940 in funds approved for the first tranche, US \$413,262 had been disbursed (26 per cent). The balance of US \$1,148,678, mostly related to the investment project in Indurama, will be disbursed in 2013.

Annual plans for the second tranche of the HPMP

- 6. The main activities to be implemented during the second tranche of stage I of the HPMP include:
 - (a) Further strengthening of the legal framework and ODS control through drafting of regulations on handling, transportation, recycling, reclaiming and storage of refrigerants; limitation on imports of HCFC-based equipment; a revised import duties code; an updated online licensing system for the mandatory inspection of all ODS; acquisition of at least five ODS portable identifiers to detect new blends of HCFCs; continuation of the customs training, and two awareness workshops for enforcement officers (UNEP, US \$20,000);
 - (b) Continuation of the technical assistance for large end-users through training the largest HCFC consumers in the country; procurement and commissioning of two more reclamation units; development of a handbook for the use of HCs as alternative refrigerants; and initiation of a small scale pilot project to replace HCFC-22 with HC-290 in the air-conditioners of small hotels in the city of Coca; (UNIDO, US \$66,500);

- (c) Completion of conversion of Indurama, resulting in the phase-out of 136 mt (14.96 ODP tonnes) of HCFC-141b contained in imported pre-blended polyols (UNIDO); and
- (d) Monitoring and evaluation project (UNIDO, US \$ 20,000).

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Operational licensing system

- 7. In line with decision 63/17 and as required under the Agreement between the Government of Ecuador and the Executive Committee, confirmation has been received from the Government that an enforceable national system of licensing and quotas for HCFC imports and exports is in place and that the system is capable of ensuring compliance with the Montreal Protocol.
- 8. The Secretariat noted that the quota for 2013 was established in kilograms and distributed among the different substances and blends containing HCFCs. In converting the established quota to ODP tonnes, the Secretariat noted that in the event that the established quota was fully used, the country could be at risk of non-compliance. UNIDO advised that, on this basis, assistance was provided to Ecuador to prepare an amendment to the resolution establishing the quota. The new resolution which is expected to be approved within the next weeks, defines a modified system to establish the quota in ODP tonnes ensuring consistency with the baseline and the Agreement. UNIDO also indicated that the Government of Ecuador provided written reassurance that through the established Customs Portal, the MIPRO has the prerogative to know, authorize or deny any ODS import in order to ensure compliance with the Montreal Protocol targets.

HCFC consumption and change of baseline

9. The HCFC baseline for compliance was established at 17.49 ODP tonnes, based on the actual consumption reported under Article 7 of the Montreal Protocol for 2009 and 2010 as shown in Table 1. In 2012, the Government of Ecuador requested a revision of the data reported in 2009 and 2010 due to inconsistencies found in the custom codes and weight units used for some imports. The revision of the baseline of HCFC consumption data was recommended at the 49th meeting of the Implementation Committee and approved at the 24th Meeting of the Parties (decision XXIV/16). The new established HCFC baseline for Ecuador is 23.49 ODP tonnes, as shown in Table 1. Despite the increase in the baseline, the eligible level of funding for stage I would be very similar to that already approved at the 65th meeting when Ecuador was considered a low-volume-consuming country (LVC); therefore there are no modifications to the level of funds approved.

Table 1. HCFC consumption in Ecuador (2007-2011 Article 7, 2012 estimated)

Substance			HPMP BA	SELIN	E		REVISED BASELINE						
	Metric tonnes			ODP tonnes			N	Ietric tor	nes	ODP tonnes			
	2009 2010 Baseline		Baseline	2009	2010	Baseline	2009 2010		Baseline	2009	2010	Baseline	
HCFC-22	362.12	238.16	3.14	19.92	13.10	16.51	431.00	333.54	382.27	23.71	18.34	21.02	
HCFC-141b	4.20	6.99	5.60	0.46	0.77	0.62	6.28	9.40	7.84	0.69	1.03	0.86	
HCFC-123	13.57	13.89	13.73	0.27	0.28	0.27	8.75	9.62	9.18	0.17	0.19	0.18	
HCFC-142b	-	2.75	1.38	-	0.18	0.09	15.51	21.39	18.45	1.01	1.39	1.20	
HCFC-124	-	-	-	-	-	-	7.47	12.50	9.98	0.16	0.27	0.22	
Total	379.89	261.80	320.84	20.65	14.32	17.49	469.01	386.45	427.73	25.74	21.24	23.49	

10. The Secretariat noted that in 2012 Ecuador reported in its country programme data an exceptionally large consumption of 35.34 ODP tonnes of HCFC-22, which is 69 per cent above its revised baseline consumption of 21.02 ODP tonnes. UNIDO explained that it was a reaction from the importers to the uncertainty on the ratification of the Beijing Amendment. Aware that one of the consequences of the non-ratification was the suspension of trade with any HCFC as at 1 January 2013, the importers overstocked to avoid shortages of refrigerant. With the assistance of UNIDO and UNEP, Ecuador completed the process of ratification of the Beijing Amendment on 31 January 2013². It is expected that with this high level of imports in 2012, the amount of HCFC-22 required for imports in 2013 will be drastically reduced helping the country to achieve the compliance with the first Montreal Protocol target.

Technical issues

- 11. The Secretariat noted that Ecuador committed to eliminating the use of HCFC-141b as cleaning agent in refrigeration by 1 January 2017, and requested UNIDO to consider including activities to achieve this objective before the planned date given the emissive nature of the practice and the existence of alternative methods. UNIDO indicated that good practices in cleaning refrigeration circuits is already included in the refrigeration training and that the issue will be addressed during the second tranche. However, the date established for the ban continues to be the same.
- 12. The Secretariat discussed with UNIDO technical and policy issues related to the safe use of flammable refrigerants. In providing more details on its approach for the introduction of HCs in the country, UNIDO clarified that it is not intended to promote them as a drop-in alternative for HCFC-based air-conditioners. Some window air-conditioners were converted to HC-290 as part of the refrigeration training for trainers to create awareness in the country and start introducing the concept of HCs as refrigerants to technicians and trainers. UNIDO is also supporting a study on the use of HCs being conducted at 'Universidad Politécnica Nacional' and is promoting the use of HCs through the importers and suppliers to create the market. UNIDO will provide in parallel support to the Government to update the legislation to introduce the use of HCs as refrigerants and to prepare safety protocols and manuals.
- 13. Upon further discussion, UNIDO indicated that the second tranche will address the importance of operation, service, standards, installation, safety, regulation and all related topics to the use of HCs. The main objective of the tranche will be creating awareness, training trainers, and working on legislation and standards for the use of HCs as refrigerants. UNIDO decided not to implement further pilot projects for reconversion for the time being as the strategy to introduce HCs as alternatives to HCFCs is at an early stage; however, UNIDO will continue to assist the country in introducing the alternative and searching for possibilities and the best options to use the already imported propane.

Funding balance under the NPP

14. During the review of the HPMP submission at the 65th meeting, it was agreed that the NPP would be refocused to support the phase-out of HCFCs. Accordingly, UNEP committed to completing all NPP activities and to use the unspent balance of US \$193,155 by July 2012³. At the 69th meeting, UNEP submitted the outstanding verification reports and indicated that the project was still on-going due to a delay in the opening of a special bank account in MIPRO. Consequently the NPP completion was rescheduled for July 2013.

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² As indicated in the Ozone Secretariat website.

³ Decision 65/10 (c)(ii) and (c)(iii) requested UNEP and UNIDO to expedite the completion of the remaining activities under the NPP, to submit the verification reports on the 2009 and 2010 CFC consumption and to report to the Executive Committee at its 67th meeting on the completion of the implementation of the NPP.

15. In reviewing the progress report the Secretariat noted that the disbursement under the NPP was still low (US \$45,000) and there was little indication of achievement of the committed outputs. UNEP explained that the opening of the bank account was authorized and on-going activities under the NPP are focused on supporting the second phase of the customs training and extending the training and certification scheme to informal technicians. Upon further discussion, it was agreed that as of 31 December 2013 the NPP will be completed and any remaining funding balance by that date will be returned to the Fund. UNEP would be requested to report on this at the 72nd meeting of the Executive Committee.

Revision to the Agreement of the HPMP

16. The HPMP for Ecuador was approved prior to the establishment of its HCFC baseline for compliance. Accordingly, in approving the HPMP the Executive Committee requested the Secretariat to, *inter alia*, update Appendix 2-A ("The targets, and funding") to the Agreement with the figures for the maximum allowable consumption, and to notify the Committee of the resulting levels accordingly (decision 65/25(e)). Based on the revised data reported by the Government of Ecuador under Article 7 and approved by the 24th Meeting of the Parties (decision XXIV/16), and its revised phase-out schedule, the relevant paragraphs of the Agreement have been updated, and a new paragraph has been added to indicate that the updated Agreement supersedes that reached at the 65th meeting, as shown in Annex I to this document. The full revised Agreement will be appended to the final report of the 70th meeting.

RECOMMENDATION

- 17. The Fund Secretariat recommends that the Executive Committee:
 - (a) Takes note of the progress report on the implementation of the first tranche of stage I of the HCFC phase-out management plan (HPMP) for Ecuador;
 - (b) Notes that the Fund Secretariat had updated paragraphs 1 and 2, Appendices 1-A and 2-A of the Agreement between the Government of Ecuador and the Executive Committee based on the established HCFC baseline for compliance, and a new paragraph 16 had been added to indicate that the updated Agreement superseded that reached at the 65th meeting, as contained in Annex I to the present document;
 - (c) Further notes that the revised starting point for sustained aggregate reduction in HCFC consumption was 44.16 ODP tonnes, calculated using consumption of 25.74 ODP tonnes and 21.24 ODP tonnes reported for 2009 and 2010, respectively, under Article 7 of the Montreal Protocol, plus 20.67 ODP tonnes of HCFC-141b contained in imported pre-blended polyol systems;
 - (d) Notes that the implementation of the national CFC phase-out plan (NPP) will continue until December 2013, and requests UNEP to return the remaining balance by that date to the Fund and to report to the Executive Committee at its 72nd meeting on the completion of the implementation of the NPP.
- 18. The Fund Secretariat further recommends blanket approval of the second tranche of stage I of the HPMP for Ecuador, and the corresponding 2013 to 2016 tranche implementation plans, with associated support costs at the funding level shown in the table below:

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		Project Title	Project Funding (US \$)	Support Cost (US \$)	Implementing Agency
	(a)	HCFC phase-out management plan (stage I, second tranche)	86,500	6,488	UNIDO
Ī	(b)	HCFC phase-out management plan (stage I, second tranche)	20,000	2,600	UNEP

Annex I

TEXT TO BE INCLUDED IN THE UPDATED AGREEMENT BETWEEN THE GOVERNMENT OF ECUADOR AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS

(Relevant changes are in bold font for ease of reference)

- 1. This Agreement represents the understanding of the Government of Ecuador (the "Country") and the Executive Committee with respect to the reduction of controlled use of the ozone-depleting substances (ODS) set out in Appendix 1-A ("The Substances") to a sustained level of **15.27** ODP tonnes by 1 January 2020 in compliance with Montreal Protocol schedules.
- 2. The Country agrees to meet the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A ("The Targets, and Funding") in this Agreement as well as in the Montreal Protocol reduction schedule for all Substances mentioned in Appendix 1-A. The Country accepts that, by its acceptance of this Agreement and performance by the Executive Committee of its funding obligations described in paragraph 3, it is precluded from applying for or receiving further funding from the Multilateral Fund in respect to any consumption of the Substances that exceeds the level defined in row 1.2 of Appendix 2-A as the final reduction step under this Agreement for all of the Substances specified in Appendix 1-A, and in respect to any consumption of each of the Substances that exceeds the level defined in rows 4.1.3, 4.2.3, 4.3.3, 4.4.3, 4.5.3 and 4.6.3 (remaining eligible consumption).
- 16. This updated Agreement supersedes the Agreement reached between the Government of Ecuador and the Executive Committee at the 65th meeting of the Executive Committee.

APPENDIX 1-A: THE SUBSTANCES

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	С	I	21.02
HCFC-141b	С	I	0.86
HCFC-123	C	I	0.18
HCFC-142b	C	I	1.20
HCFC-124	C	I	0.22
Subtotal	C	I	23.49
HCFC-141b in imported polyol			20.67
Total			44.16

APPENDIX 2-A: THE TARGETS, AND FUNDING

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
1.1	Montreal Protocol	n/a	n/a	23.49	23.49	21.14	21.14	21.14	21.14	21.14	15.27	n/a
	reduction											
	schedule of											
	Annex C, Group I											
	substances (ODP tonnes)											
1.2	Maximum	n/a	n/a	23.49	23.49	21.14	21.14	21.14	21.14	21.14	15.27	n/a
1.2	allowable total	11/4	11) (4	20.15	20.15	21.11	21.11	21.11	21,11	21.11	10.27	11/ 4
	consumption of											
	Annex C Group I											
	substances											
2.4	(ODP tonnes)	1 721 010		0.5.500		0	0.5.500		0 5 700		77.000	1.015.110
2.1	Lead IA UNIDO agreed	1,531,940	0	86,500	0	0	86,500	0	86,500	0	55,000	1,846,440
	funding(US \$)											
2.2	Support costs for	114,896	0	6,488	0	0	6,487	0	6,487	0	4.125	138,483
2.2	Lead IA(US \$)	11.,050	Ü	0,.00	Ü		0,107	Ü	0,107		1,120	100,100
2.3	Cooperating IA	30,000	0	20,000	0		30,000	0	25,000	0	10,000	115,000
	UNEP agreed											
2.4	funding (US \$)	2.000		2 500		^	2 000		2.250		1 200	11070
2.4	Support costs for Cooperating IA	3,900	0	2,600	0	0	3,900	0	3,250	0	1,300	14,950
	(US \$)											
3.1	Total agreed	1,561,940	0	106,500	0	0	116,500	0	111,500	0	65,000	1,961,440
	funding (US \$)	-,,		,	,		,		,		,	-,,,
3.2	Total support cost	118,796	0	9,088	0	0	10,387	0	9,737	0	5,425	153,433
3.3	Total agreed costs	1,680,736	0	115,588	0	0	126,887	0	121,237	0	70,425	2,114,873
4.1.1	(US \$)	ICEC 22	1 4 - 1 1	L: d d	41-:	(ODD						7.26
4.1.1	Total phase-out of H Phase-out of HCFC-											7.36 n/a
4.1.3	Remaining eligible of		•			s (ODF tol	illes)					
4.1.3	Total phase-out of H	1		\		amant (OD	D tonnes)					13.66 0.86
4.2.2						,						
4.2.2	Phase-out of HCFC- Remaining eligible of					ecis (ODP)	ionnes)					0.00
4.3.1	Total phase-out of H					mont (ODE	tonnas)					0.00
4.3.1	Phase-out of HCFC-											n/a
4.3.3	Remaining eligible of		-			is (ODI to	mics)					0.18
4.4.1	Total phase-out of H					ement (OD	P tonnes)					0.00
4.4.2	Phase-out of HCFC-											n/a
4.4.3	Remaining eligible of					cets (ODI	ionnes)					1.20
4.5.1	Total phase-out of			•	•	reement (ODP tonnes)				0.00
4.5.2	Phase-out of HCFC	- 0				,		,				
4.5.3	Remaining eligible					., (31						0.22
4.6.1	Total phase-out of H					chieved un	der this agree	ment (ODF	tonnes)			14.96
4.6.2	Phase-out of HCFC-							cts (ODP to	onnes)			n/a
4.6.3	Remaining eligible of	consumption fo	r HCFC-1	141b in pre-bl	lended poly	ols (ODP t	onnes)					5.71

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