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

PROJECT PROPOSAL: SWAZILAND

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) UNDP/UNEP

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Swaziland

(I) PROJECT TITLE	AGENCY
HCFC phase-out management plan (stage I)	UNEP (lead), UNDP

(II) LATEST ARTICLE 7 DATA	Year: 2011	3.14 (ODP tonnes)

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)									Year: 2011
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123									
HCFC-124									
HCFC-141b		2.18							2.18
HCFC-142b									
HCFC-22					0.96				0.96

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	7.3	Starting point for sustained aggregate reductions:	7.3
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	6.19	Remaining:	1.11

(V) BUSINESS PLAN		2013	2014	2015	2016	2017	2018	2019	Total
UNEP	ODS phase-out (ODP tonnes)	0.52			0.47			0.28	1.27
	Funding (US $)	62,150			56,500			33,900	152,550

(VI) PROJECT DATA			2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Montreal Protocol consumption limits			n/a	n/a	7.30	7.30	6.57	6.57	6.57	6.57	4.75	n/a
Maximum allowable consumption (ODP tonnes)			n/a	n/a	7.30	7.30	1.53	1.53	1.53	1.53	1.11	n/a
Agreed Funding (US$)	UNEP	Project costs	75,000	0	55,000	0	0	50,000	0	0	30,000	210,000
		Support costs	9,750	0	7,150	0	0	6,500	0	0	3,900	27,300
	UNDP	Project costs	667,948	0	0	0	0	0	0	0	0	667,948
		Support costs	50,096	0	0	0	0	0	0	0	0	50,096
Funds approved by ExCom (US$)		Project Costs	742,948	0	0	0	0	0	0	0	0	742,948
		Support Costs	59,846	0	0	0	0	0	0	0	0	59,846
Total funds requested for approval at this meeting (US$)		Project Costs	0	0	55,000	0	0	0	0	0	0	55,000
		Support Costs	0	0	7,150	0	0	0	0	0	0	7,150

Secretariat's recommendation:	Blanket approval

PROJECT DESCRIPTION

1. On behalf of the Government of Swaziland UNEP, as the lead implementing agency, has submitted to the 70th meeting of the Executive Committee a request for funding for the second tranche of stage I of the HCFC phase-out management plan (HPMP) at a total cost of US $55,000, plus agency support costs of US $7,150 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 HPMP for Swaziland was approved by the Executive Committee at its 63rd meeting, to completely phase out the consumption of HCFC-141b used as a foam blowing agent and to further reduce the consumption of HCFC-22 by 35 per cent of the baseline by the end of 2020. The total funding for stage I of the HPMP amounted to US $955,344, consisting of US $210,000, plus agency support costs of US $27,300 for UNEP for the refrigeration servicing sector and US $667,948, plus agency support costs of US $50,096 for UNDP for the investment project to phase out 7.66 ODP tonnes of HCFC-141b used in the foam sector. Also at the 63rd meeting, the Executive Committee approved US $802,794 consisting of US $75,000, plus agency support costs of US $9,750 for UNEP, and US $667,948, plus agency support costs of US $50,096 for UNDP), for implementation of the first tranche of stage I of the HPMP.

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

3. The ODS regulations under the Environment Management Act (2002), which were revised in 2010-2011, include control imports and exports of ODS and ODS-based equipment (including HCFCs), and a quota and licensing system for all ODS; phase-out schedules for all ODS including the accelerated phase-out of HCFCs; and the registration of all stakeholders dealing with ODS. The Government of Swaziland further adopted the Environmental Audit, Assessment and Review Regulations of 2000, which also assist in identifying and safeguarding against projects that might use ODS including HCFCs.

4. Implementation of the project for the conversion of the Palfridge Factory, the domestic and commercial refrigeration manufacturing enterprise, from HCFC-141b to cyclopentane blowing agent is going well. The equipment required for the conversion (e.g. pentane storage system and premixing station with buffer tank) was purchased and delivered in November 2012, and installed in January 2013. Trials, training, safety audits and commissioning of the enterprise (including destruction of the baseline equipment) are planned for July 2013. Counterpart funding of approximately US $400,000 was provided for *inter alia* civil works related to the construction of the area for the foaming machine and premixing station, construction of the preheating room and construction of the mixing head carrier for cabinets and ventilation. The enterprise also converted, with its own resources, the manufacturing refrigeration equipment using HCFC-22 and HFC-134a refrigerants to isobutene and propane, respectively.

5. With regard to the refrigeration servicing sector, the following activities were implemented: ninety refrigeration technicians have been trained on good refrigeration servicing practices and in the use and safe handling of hydrocarbon-based refrigerants, and have been provided with appropriate service tool kits (i.e., portable recovery units, recycling kits, refrigerant identifiers, recovery cylinders and vacuum pumps). The National Refrigeration Association, which is now operational, has developed guidelines for the code of conduct for refrigeration technicians. The three vocational training institutions that were established under the terminal phase-out management plan (TPMP) continue to serve as referral sites for training of technicians, and to loan recovery equipment to technicians. Seventy-five customs and law enforcement officers have been trained on monitoring ODS imports and preventing illegal trade. Public awareness activities are continuously being undertaken, including the dissemination of the

amendments to the ODS regulations, promotion of ozone-friendly and energy efficient alternative technologies. The project management and monitoring unit has become operational.

6. As of May 2013, of the total funding of US $742,948 approved for the first tranche, US $656,616 had been disbursed. The balance of US $86,332 associated to the conversion of the foam enterprise will be disbursed in 2013.

Annual plans for the second tranche of the HPMP

7. The following activities will be implemented during the second tranche of the HPMP: completion of the conversion of Palfridge Factory; further dissemination of the amended ODS regulations, training of an additional 40 customs and law enforcement officers, strengthening the customs training schools; strengthening the technical colleges and training an additional 60 refrigeration technicians; and coordination, monitoring and reporting of HPMP activities.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Operational licensing system

8. In line with decision 63/17 and as required under the Agreement between the Government of Swaziland 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. The licensing system established by the Government includes imports of HCFC-141b and HCFC-22, which are the only HCFCs consumed in the country.

9. Import quotas for 2013 have been established as follows: 5.5 ODP tonnes (50.0 mt) of HCFC-141b for Palfridge Factory; and 1.65 ODP tonnes (30.0 mt) of HCFC-22 among 20 importers. From 2014 onwards, only HCFC-22 will be imported into the country for servicing refrigeration and air-conditioning systems.

HCFC consumption

10. The HCFC baseline for compliance has been established at 7.3 ODP tonnes, based on the actual consumption reported under Article 7 of the Montreal Protocol for 2009 and 2010 as shown in Table 1. The established baseline is 2.1 ODP tonnes lower than that of 9.4 ODP tonnes estimated at the time the HPMP for Swaziland was approved. The change in the HCFC baseline will not alter the funding level agreed in principle by the Executive Committee. HCFC consumption has been reduced from 103.7 metric tonnes (mt) (9.5 ODP tonnes) in 2009 to 60.0 mt (5.3 ODP tonnes) in 2012 (estimated). As explained by UNEP, this reduction was mainly due to the economic crisis that the country was facing which resulted in some enterprises closing down. However, the economic situation has improved; as shown by the increase in the number of importers in 2012. In the case of Palfridge Factory, the demand for refrigeration equipment exported to other countries in the region has decreased as a result of cheaper refrigerators from China. However, sales of refrigeration equipment manufactured by Palfridge Factory increased in 2012.

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

HCFC	2007	2008	2009	2010	2011	2012*	Baseline
Metric tonnes							
HCFC-141b	36.8	62.6	69.6	31.1	19.80	36.00	50.4
HCFC-22	28.2	31.6	34.1	28.6	17.40	24.00	31.4
Total (mt)	65.0	94.2	103.7	59.8	37.20	60.00	81.7
ODP tonnes							
HCFC-141b	4.1	6.9	7.7	3.4	2.18	3.96	5.6
HCFC-22	1.5	1.7	1.9	1.6	0.96	1.32	1.7
Total (ODP tonnes)	5.6	8.6	9.5	5.0	3.14	5.28	7.3

(*) Estimated consumption.

11. Noting that refrigeration technicians have been thoroughly trained on the use and safe handling of hydrocarbon technologies, the Secretariat requested additional information on the current use of hydrocarbon-based refrigerants in the country, including the extent of retrofitting HCFC-22 based equipment and the regulations in place for allowing the use of hydrocarbon-based refrigerants. The Secretariat also suggested that UNEP advise relevant Government authorities and key stakeholders to give due consideration to addressing barriers for the introduction of alternative technologies and refrigerants (including other aspects related to the equipment, such as energy efficiency), during implementation of the HPMP. UNEP indicated that the training of refrigeration technicians on the use and handling of hydrocarbon technology is an on-going process. The training given recently by the UNEP consultant assisted in capacity building of local trainers on issues related to the use of hydrocarbons and associated safety issues. However, the current use of this technology is still low in Swaziland although hydrocarbon-based equipment is now available in the local market. The HCFC-22 equipment in operation are not being retrofitted to hydrocarbon; the training programmes emphasize the introduction of good servicing practices so as to prolong the life span of the existing equipment. Currently, hydrocarbon-based refrigerants are more expensive as compared to other refrigerants available in the country. The Government of Swaziland is in consultation with relevant authorities and key stakeholders to encourage them to use energy saving equipment and the safe use of hydrocarbon technologies.

12. The Secretariat notes that the import licensing and quota systems are operational which will enable the Government to reduce its consumption by 10 per cent of its baseline by 2015. The conversion of the Palfridge Factory is almost completed and will result in the complete phase-out of HCFC-141b by July 2013. The activities in the servicing sector under current implementation and those proposed in the second tranche of stage I of the HPMP will allow for further reductions in the consumption of HCFC-22 through the implementation of better service practices, including leakage controls. Furthermore, as explained by UNEP, the Government of Swaziland is collaborating with the Vocational Training Centre and the Customs Training Unit to ensure that Montreal Protocol modules are fully incorporated into the training curricula and budget allocations from the Ministry of Finance reflect funds used for sustaining training for refrigeration technicians and customs officials. The Refrigeration Association is being strengthened with the aim of empowering it to undertake training and certification activities, inspection and monitoring of Montreal Protocol activities.

Revision to the Agreement of the HPMP

13. The HPMP for Swaziland was approved prior to the establishment of the 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 63/51(d)). Based on the data reported by the Government of Swaziland under Article 7 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

63rd 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

14. 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 Swaziland;

(b) Notes that the Fund Secretariat had updated paragraph 1, Appendices 1-A and 2-A of the Agreement between the Government of Swaziland 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 the Agreement that reached at the 63rd 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 7.3 ODP tonnes, calculated using consumption of 9.5 ODP tonnes and 5.0 ODP tonne reported for 2009 and 2010, respectively, under Article 7 of the Montreal Protocol.

15. The Fund Secretariat further recommends blanket approval of the second tranche of stage I of the HPMP for Swaziland, and the corresponding 2013 to 2016 tranche implementation plan, with associated support costs at the funding level shown in the table below:

	Project Title	Project Funding (US $)	Support Cost (US $)	Implementing Agency
(a)	HCFC phase-out management plan (stage I, second tranche)	55,000	7,150	UNEP

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Annex I

TEXT TO BE INCLUDED IN THE UPDATED AGREEMENT BETWEEN THE GOVERNMENT OF SWAZILAND 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 Swaziland (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 **1.11** ODP tonnes by 1 January 2020 in compliance with Montreal Protocol schedules.

16. This updated Agreement supersedes the Agreement reached between the Government of Swaziland and the Executive Committee at the 63rd meeting of the Executive Committee.

APPENDIX 1-A: THE SUBSTANCES

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	**1.7**
HCFC-141b	C	I	**5.6**
Total			**7.3**

APPENDIX 2-A: THE TARGETS, AND FUNDING

		2011	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	n/a	n/a	**7.30**	**7.30**	**6.57**	**6.57**	**6.57**	**6.57**	**6.57**	**4.75**	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	n/a	n/a	**7.30**	**7.30**	**1.53**	**1.53**	**1.53**	**1.53**	**1.53**	**1.11**	n/a
2.1	Lead IA (UNEP) agreed funding (US $)	75,000		55,000			50,000			30,000		210,000
2.2	Support costs for Lead IA (US $)	9,750		7,150			6,500			3,900		27,300
2.3	Cooperating IA(UNDP) agreed funding (US $)	667,948										667,948
2.4	Support costs for Cooperating IA (US $)	50,096										50,096
3.1	Total agreed funding (US $)	742,948		55,000			50,000			30,000		877,948
3.2	Total support costs (US $)	59,846		7,150			6,500			3,900		77,396
3.3	Total agreed costs (US $)	802,794		62,150			56,500			33,900		955,344
4.1.1	Total phase-out of HCFC-22 and under this agreement (ODP tonnes)											**0.59**
4.1.2	Phase-out of HCFC-22 in previously approved projects (ODP tonnes)											0.00
4.1.3	Remaining eligible consumption for HCFC-22											**1.11**
4.2.1	Total phase-out of HCFC-141b under this agreement (ODP tonnes)											**5.60**
4.2.2	Phase-out of HCFC-141b in previously approved projects (ODP tonnes)											0.00
4.2.3	Remaining eligible consumption for HCFC-141b											0.00

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