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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Seventy-first Meeting
Montreal, 2-6 December 2013

PROJECT PROPOSAL: NAMIBIA

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

Phase-out

- HCFC phase-out management plan (second tranche) Germany

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Namibia

(I) PROJECT TITLE	AGENCY
HCFC phase-out management plan (second tranche)	Germany

(II) LATEST ARTICLE 7 DATA	Year: 2012	1.35 (ODP tonnes)
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)							Year: 2012			
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption	
				Manufacturing	Servicing					
HCFC-123										
HCFC-124										
HCFC-141b					0				0	
HCFC-142b										
HCFC-22					4.76				4.76	

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	8.4	Starting point for sustained aggregate reductions:	8.4
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	8.4	Remaining:	0

(V) BUSINESS PLAN		2013	2014	2015	2016	2017	2018	2019	2020	Total
Germany	ODS phase-out (ODP tonnes)	1.64				1.84			0.61	4.09
	Funding (US \$)	269,067	0			302,700			100,900	672,667

(VI) PROJECT DATA			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020-2024	2025	Total
Montreal Protocol consumption limits			n/a	n/a	8.40	8.40	7.56	7.56	7.56	7.56	7.56	5.46	2.73	n/a
Maximum allowable consumption (ODP tonnes)			8.87	8.40	7.22	6.64	5.88	4.24	2.94	1.68	0.76	0.76	0.21	n/a
Agreed funding (US \$)	Germany	Project costs	300,000		240,000				270,000				90,000	900,000
		Support costs	36,333		29,067				32,700				10,900	109,000
Funds approved by ExCom (US \$)		Project costs	300,000											300,000
		Support costs	36,333											36,333
Total funds requested for approval at this meeting (US \$)		Project costs			240,000									240,000
		Support costs			29,067									29,067

Secretariat's recommendation:	For individual consideration
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PROJECT DESCRIPTION

1. On behalf of the Government of Namibia, the Government of Germany, as the designated implementing agency, has submitted to the 71st meeting a request for funding for the second tranche of the HCFC phase-out management plan (HPMP)¹ at the amount of US \$240,000, plus agency support costs of US \$29,067. The submission includes a progress report on the implementation of the first tranche of the HPMP, and a tranche implementation plan for the period of 2014 to 2017.

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

2. Namibia's ODS regulations were amended in December 2010, to incorporate *inter alia* a licensing and quota systems for HCFCs and bans on imports of new HCFC-based equipment as well as imports of HCFC-141b in bulk as of 1 January 2013.

3. The following activities were implemented:

- (a) A total of 135 customs officers were trained on identification and control of import of ODS and ODS-based equipment and six refrigerant identifiers for ODS blends were purchased for border posts;
- (b) A total of 83 technicians were trained on good service practices, use of hydrocarbon refrigerants (mainly R-290 and R-600a) and safety measures;
- (c) Service tool kits (charging station, nitrogen cylinder, regulators) were provided to technicians to assist in working with hydrocarbon refrigerants; and six R-290-based air-conditioning units were procured for training and demonstration purpose;
- (d) Fifteen recovery units and two recycling units will be procured in 2013 to assist in the recovery and reuse of refrigerants mainly in the commercial refrigeration sector; and
- (e) Equipment was purchased for two vocational training centres (VTC) which will conduct training courses annually for refrigeration technician.

4. Awareness-raising activities were also conducted including regular coordination meetings with stakeholders to create an enabling environment for HCFC phase-out and several newspaper advertisements on HCFC controls, licensing and quota system and phase-out targets. The National Ozone Unit (NOU) showcased R-290-based air-conditioning split units to industrial stakeholders aiming to shift the market away from HCFCs and HFCs. Moreover, the NOU is responsible for the overall implementation and project monitoring which carries out regular consultations with key stakeholders. In 2013, the monitoring team verified the amount of HCFCs used for servicing foreign-owned ships. Accurate data was collected for reporting.

5. As of September 2013, of the US \$300,000 approved for the first tranche, US \$166,595 had been disbursed and US \$57,600 had been committed. The balance of US \$75,805 will be disbursed in 2014.

¹ The HPMP for Namibia was approved by the Executive Committee at its 63rd meeting to reduce HCFC consumption to a sustained level of 0.15 ODP tonnes prior to 1 January 2025 and zero ODP tonne prior to 1 January 2030.

Annual plans for the second tranche of the HPMP

6. The following activities will be implemented during the second tranche of the HPMP:
- (a) Training of an additional 100 customs and other law enforcement officers and monitoring of border posts through periodical visits (US \$23,500);
 - (b) Additional six training courses for 150 technicians, strengthening vocation training schools and purchasing additional equipment for the third VTC to facilitate training on hydrocarbon refrigerant (US \$65,000);
 - (c) Purchase of additional recovery equipment (i.e. 10 portable recovery units, two commercial units, two recycling units and 20 cylinders); training on refrigerant recovery, reuse and recycling; and monitoring impact through the Refrigeration Association (US \$29,000);
 - (d) Incentive programme for retrofitting or replacement of 150 HCFC-based equipment with low global warming potential (GWP) refrigerants (US \$100,000);
 - (e) Awareness-raising programme for HCFC phase-out and promotion of low GWP alternatives, advertising, coordination meeting and stakeholder workshop (US \$15,000); and
 - (f) Monitoring and evaluation of the activities of the HPMP (US \$7,500).

SECRETARIAT'S COMMENTS AND RECOMMENDATION**COMMENTS**Operational license system

7. In line with decision 63/17, confirmation has been received from the Government of Namibia 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 HCFC import quota for 2013 has been established at 7.22 ODP tonnes. Small quantities of HCFC-141b that were imported prior to 2013 for flushing refrigeration equipment has been banned as of January 2013.

HCFC consumption

8. The HCFC consumption in Namibia is presented in Table 1. Since the approval of the HPMP the HCFC baseline for compliance has been established at 149.8 mt (8.4 ODP tonnes).

Table 1 - HCFC consumption (Article 7 data)

Substances	2007	2008	2009	2010	2011	2012	Baseline
Metric tonnes							
HCFC-22	215.00	101.70	103.98	190.74	176.53	16.56*	147.4
HCFC-141b	0.00	1.65	2.80	2.00	2.18	4.03	2.4
Total	215.00	103.35	106.78	192.74	178.71	20.59	149.8
ODP tonnes							
HCFC-22	11.8	5.6	5.7	10.5	9.71	0.91*	8.1
HCFC-141b	0.0	0.2	0.3	0.2	0.24	0.44	0.3
Total	11.8	5.8	6.0	10.7	9.95	1.35	8.4

*The progress report for the implementation of the first tranche reported a consumption of 86.53 metric tonnes of HCFC-22 in 2012.

9. The Government of Namibia informed that a total of 137 metric tonnes (mt) of HCFC-22 was imported in 2012. Of this amount, 16.56 mt was reported as domestic consumption and 120.44 mt was reported as export (used for servicing foreign-owned ships). However, based on a recent survey conducted after Article 7 data was reported, only 50.47 mt can be confirmed having been used for servicing foreign-owned ships, resulting in a HCFC-22 consumption of 86.53 mt for 2012. The Government of Namibia indicated that it had submitted an official request to the Ozone Secretariat to correct the Article 7 data reported for 2012.

10. The Secretariat requested information on the amounts of HCFC-22 used for servicing foreign-owned ships in previous years. The Government of Germany advised that the HCFC-22 used for servicing foreign-owned ships had been included into its domestic consumption until 2011. This consumption was not noticed until recent time when the amount of HCFC-22 used for servicing ships (including national ships and foreign-owned ships) had increased significantly, which led to an increase in the number of servicing companies established along the coast. It is difficult to obtain accurate data with certain confidence on the amounts used in previous years, an estimation shows that approximately 20 to 30 mt might have been used for this purpose in 2011. To address this issue, a letter had been sent to the shipping industry of Namibia by the Government to recommend that foreign ships are not serviced in Namibia as there would be a shortage of HCFC-22 in the country if this practice continues. The servicing workshops have also been informed of the need to follow best practices when repairing vessels.

11. Through its HPMP, the Government of Namibia proposed a phase-out schedule faster than that in the Montreal Protocol and included phase-out targets for 2011 and 2012. Based on the established HCFC baseline for compliance, the Montreal Protocol reduction schedule and the maximum allowable consumption of HCFCs in Namibia have been adjusted as shown in Table 2 below.

Table 2 – HCFC phase-out schedule in Namibia

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020-2024	2025-2029	2030
Montreal Protocol reduction schedule (ODP tonnes)	n/a	n/a	8.4	8.4	7.56	7.56	7.56	7.56	7.56	5.46	2.73	0.21
Maximum allowable consumption (ODP tonnes)	8.87	8.40	7.22	6.64	5.88	4.24	2.94	1.68	0.76	0.76	0.21	0
Actual reported consumption (ODP tonnes)	9.95	7.53*										

* Total import including the HCFC-22 used for servicing foreign-owned ships.

12. The Secretariat noted that the total import (including the amount used for servicing foreign-owned ships) of 9.95 ODP tonnes for 2011 had exceeded the maximum allowable consumptions set in the Agreement. On this issue, the Government of Germany explained that the maximum allowable limits for 2011 and 2012 were proposed by the Government of Namibia in the intention to phase out HCFCs earlier than the Montreal Protocol phase-out schedule. These limits were proposed based on an estimated consumption of 6.25 ODP tonnes in 2010, which was substantially lower than the 10.7 ODP tonnes reported for 2010. The growth in HCFC-22 used for servicing foreign-owned ships might have also impacted on the overall consumption since 2011 consumption would have been below the target in the Agreement if excluding the HCFC-22 used for servicing foreign-owned ships. The Secretariat further noted that a change of the National Ozone Officer in 2012 interrupted the implementation; consequently the licensing and quota system came into effect only in January 2013 instead of January 2012 as originally proposed.

13. The Secretariat noted that the non-compliance in 2011 with the Agreement seems to originate from a substantial underestimation of the actual consumption of HCFCs in 2010 and 2011, as well as from lacking control measures as a licensing and quota system had not been in place. It also noted that the HCFC-22 used for servicing foreign-owned ships had noticeably increased in recent years, which is

beyond the control of the Government. Namibia has put in place an operating licensing and quota system. Quotas for 2013 and 2014 have been established at 7.22 ODP tonnes and 6.72 ODP tonnes respectively following the accelerated phase-out schedule committed in the Agreement between the Government of Namibia and the Executive Committee. It has also enforced a ban for HCFC-based equipment and for the import of HCFC-141b starting from 1 January 2013. The Government further committed to include the HCFC-22 used for servicing foreign-own ships in its domestic consumption from 2013 onwards and is confident that the compliance targets will be met in future years.

Technology issues

14. Noting that hydrocarbon technology is the main alternative technology to be promoted in the HPMP, the Secretariat requested additional information on market penetration of hydrocarbon-based equipment, technicians' capability in using flammable refrigerants, regulations, safety standards and guidelines, proper tools and related safety measures. The Government of Germany informed that training on the use of hydrocarbon refrigerants started during implementation of the terminal phase-out management plan. The training courses conducted so far included all aspects of dealing with hydrocarbons, i.e. transportation and storage, safe handling, standards and norms, risk assessment, leak testing, correct brazing and use of nitrogen. The industry appears to be confident in using hydrocarbon refrigerants especially in the refrigeration sector. Approximately 20 per cent of the currently operating equipment in the country is hydrocarbon-based, while the majority of new domestic refrigeration equipment is R-600a based. Refrigerant grade hydrocarbons (99.95 per cent) are imported by a South African-based enterprise from a producer in Italy following European Union product standards. The Refrigeration Association is developing codes of practices for using hydrocarbon refrigerants based on the international norms that can be applied to local conditions. With the available supplies and trained technicians for servicing, the industry seems confident in using hydrocarbon refrigerants as a promising alternative.

Revision to the HPMP Agreement

15. In line with the established baseline for compliance, the Secretariat has updated the relevant paragraphs of the Agreement between the Government of Namibia and the Executive Committee, 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 the present document. The full revised Agreement will be appended to the final report of the 71st meeting of the Executive Committee.

Conclusion

16. The Secretariat notes that an import licensing and quota system is operational and will enable reductions in HCFC consumption in line with the Montreal Protocol's phase-out schedule and the accelerated schedule under this HPMP. The activities in the servicing sector have been developed with the participation of key stakeholders and progressed as planned. Guidelines and codes of practice are being developed to include safety standards for using refrigeration and air-conditioning systems operating with hydrocarbons. HCFC has been integrated into the curricula of vocational institutions and the training curricula for customs officers. The Refrigeration Association will be further strengthened with the aim of empowering it to conduct training and certification of technicians, coordination, inspection and monitoring of Montreal Protocol activities beyond HPMP implementation. The activities in the second tranche focusing on HCFC import control and capacity enhancement of servicing sector will enable the country to achieve compliance with their accelerated phase-out targets.

RECOMMENDATION

17. This project is submitted for individual consideration since 2011 consumption was above the maximum allowable consumption defined in the Agreement between the Government of Namibia and the Executive Committee. The Executive Committee may wish to consider:

- (a) Noting:
 - (i) The progress report on the implementation of the first tranche of the HCFC phase-out management plan (HPMP) in Namibia;
 - (ii) That the Fund Secretariat had updated paragraph 1, Appendices 1-A and 2-A of the Agreement between the Government of Namibia and the Executive Committee, based on the established HCFC baseline for compliance and the original HPMP submission, and that a new paragraph 16 had been added to indicate that the updated Agreement superseded that reached at the 63rd meeting, as contained in Annex I to the present document; and
 - (iii) That the revised starting point for sustained aggregate reduction in HCFC consumption was 8.4 ODP tonnes, calculated using actual consumption of 6.0 ODP tonnes and 10.7 ODP tonnes reported for 2009 and 2010, respectively, under Article 7 of the Montreal Protocol;
- (b) Noting that the 2011 consumption reported by Namibia exceeded by 1.08 ODP tonnes the maximum allowable consumption, as set out in row 1.2 of its Agreement with the Executive Committee, as it included consumption of ODS used for servicing foreign-owned ships;
- (c) Further noting that the Government of Namibia had established a quota system to control the import and export of HCFCs, had committed to meeting the targets in its Agreement with the Executive Committee and had included the consumption of ODS used for servicing foreign-owned ships in its domestic consumption in its annual report under Article 7 of the Montreal Protocol;
- (d) Approving the second tranche of the HPMP for Namibia, and the corresponding 2014-2017 tranche implementation plan, at the amount of US \$240,000, plus agency support costs of US \$29,067 for the Government of Germany; and

Annex I

TEXT TO BE INCLUDED IN THE UPDATED AGREEMENT BETWEEN THE GOVERNMENT OF NAMIBIA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE PHASE-OUT OF HYDROCHLOROFLUOROCARBONS

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

1. This Agreement represents the understanding of the Government of Namibia (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 **0.21** ODP tonnes prior to 1 January 2025 and zero ODP tonne prior to 1 January 2030 in compliance with agreed Montreal Protocol schedules.

16. This updated Agreement supersedes the Agreement reached between the Government of Namibia 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	8.1
HCFC-141b	C	I	0.3

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020-2024	2025*	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	n/a	n/a	8.4	8.4	7.56	7.56	7.56	7.56	7.56	5.46	2.73	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes) under HPMP	8.87	8.40	7.22	6.64	5.88	4.20	2.94	1.68	0.76	0.76	0.21	n/a
2.1	Lead IA (Germany) agreed funding (US \$)	300,000		240,000				270,000				90,000	900,000
2.2	Support costs for Lead IA (US \$)	36,333		29,067				32,700				10,900	109,000
3.1	Total agreed funding (US \$)	300,000		240,000				302,700				90,000	900,000
3.2	Total support costs (US \$)	36,333		29,067				32,700				10,900	109,000
3.3	Total agreed costs (US \$)	336,333		269,067				302,700				100,900	1,009,000
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)												8.10
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)												n/a
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)												0.00
4.2.1	Total phase-out of HCFC-141b agreed to be achieved under this Agreement (ODP tonnes)												0.30
4.2.2	Phase-out of HCFC-141b to be achieved in previously approved projects (ODP tonnes)												n/a
4.2.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)												0.00

*Note: the remaining HCFC consumption from 2025 to 2029 will be **0.21** ODP tonnes as servicing tail.
