



**United Nations  
Environment  
Programme**

Distr.  
GENERAL

UNEP/OzL.Pro/ExCom/73/37\*  
10 October 2014



ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Seventy-third Meeting  
Paris, 9-13 November 2014

**PROJECT PROPOSAL: THE DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA**

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

Phase-out

- HCFC phase-out management plan (stage I, first tranche) UNIDO/UNEP

\* Reissued for technical reasons on 15 October 2014.

Pre-session documents of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol are without prejudice to any decision that the Executive Committee might take following issuance of the document.

**PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS**  
**The Democratic People's Republic of Korea**

<b>(I) PROJECT TITLE</b>	<b>AGENCY</b>
HCFC phase out plan (Stage I)	UNEP, UNIDO (lead)

<b>(II) LATEST ARTICLE 7 DATA (Annex C Group I)</b>	Year: 2013	90.56 (ODP tonnes)
---	------------	--------------------

<b>(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)</b>								<b>Year: 2013</b>	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-141b		20.0							20.0
HCFC-22				10.7	59.8				70.5

<b>(IV) CONSUMPTION DATA (ODP tonnes)</b>			
2009 - 2010 baseline	78.0	Starting point for sustained aggregate reductions:	78.0
<b>CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)</b>			
Already approved:	0	Remaining:	78.0

<b>(V) BUSINESS PLAN</b>		<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>Total</b>
UNIDO	ODS phase-out (ODP tonnes)	0.0	10.7	1.5	0.7	12.9
	Funding (US \$)	0	580,347	128,400	64,200	772,947
UNEP	ODS phase-out (ODP tonnes)	0.0	0.0	0.0	0.0	0.0
	Funding (US \$)	0	0	0	0	0

<b>(VI) PROJECT DATA</b>			<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>Total</b>
Montreal Protocol consumption limits			78.00	70.20	70.20	70.20	70.20	n/a
Maximum allowable consumption (ODP tonnes)			n/a	70.20	70.20	70.20	66.30	n/a
Project costs requested in principle(US\$)	UNEP	Project costs	43,500	48,500	90,000	0	20,000	202,000
		Support costs	5,655	6,305	11,700	0	2,600	26,260
	UNIDO	Project costs	123,700	428,180	130,000	0	20,000	701,880
		Support costs	8,659	29,973	9,100	0	1,400	49,132
Total project costs requested in principle (US \$)			167,200	476,680	220,000	0	40,000	903,880
Total support costs requested in principle (US \$)			14,314	36,278	20,800	0	4,000	75,392
Total funds requested in principle (US \$)			181,514	512,958	240,800	0	44,000	979,272

<b>(VII) Request for funding for the first tranche (2014)</b>		
<b>Agency</b>	<b>Funds requested (US \$)</b>	<b>Support costs (US \$)</b>
UNEP	43,500	5,655
UNIDO	123,700	8,659

<b>Funding request:</b>	Approval of funding for the first tranche (2014) as indicated above
<b>Secretariat's recommendation:</b>	For individual consideration

## PROJECT DESCRIPTION

1. On behalf of the Government of the Democratic People's Republic of Korea, UNIDO as the lead implementing agency, has submitted to the 73<sup>rd</sup> meeting stage I of the HCFC phase-out management plan (HPMP) at a total cost of US \$1,053,660, consisting of US \$750,280, plus agency support costs of US \$52,520 for UNIDO, and US \$222,000, plus agency support costs of US \$28,860 for UNEP as originally submitted. The implementation of stage I of the HPMP will assist the Democratic People's Republic of Korea in meeting the Montreal Protocol's compliance target of 15 per cent reduction by 2018.

2. The first tranche for stage I of the HPMP being requested at this meeting amounts to US \$729,910 consisting of US \$87,000, plus agency support costs of US \$11,310 for UNEP, and US \$590,280, plus agency support costs of US \$41,320 for UNIDO, as originally submitted.

### Background

3. Stage I of the HPMP for the Democratic People's Republic of Korea was submitted to the 68<sup>th</sup> meeting<sup>1</sup> at a total cost of US \$2,316,527 (i.e. US \$1,528,016, plus agency support costs of US \$106,961 for UNIDO, and US \$605,000, plus agency support costs of US \$76,550 for UNEP) to assist the country in meeting the Montreal Protocol's compliance target of 10 per cent reduction by 2015.

4. The Secretariat and UNIDO discussed issues related to technical and financial aspects of the proposal; compliance with UN Security Council (UNSC) resolutions<sup>2</sup>; and alternative methods of disbursement, organizational structures and monitoring procedures (decision 66/15(k)). As a result of these discussions, the Secretariat recommended that the Executive Committee considered approval of stage I of the HPMP at a total cost of US \$ 922,380 (excluding support costs), to reduce HCFC consumption by 15 per cent of the baseline by 2017.

5. During the discussion on the HPMP, UNIDO reported to the Executive Committee that before implementing any activity of the HPMP, it would consult with the relevant Sanctions Committee to find out whether the equipment or any other services under the HPMP could be provided to the country. Following the discussions, the Committee decided to defer consideration of the request for stage I of the HPMP to the 69<sup>th</sup> meeting, and requested UNIDO to submit a report to the 69<sup>th</sup> meeting, through the Secretariat, that included information demonstrating that imports of equipment into the country under a previously implemented project (the CTC phase-out plan) were in accordance with the United Nations Security Council (UNSC) resolutions adopted from 2006 onwards (decision 68/34).

6. At the 69<sup>th</sup> meeting, the Executive Committee noted the report submitted by UNIDO confirming that the supply of equipment under the plan had been carried out in line with the resolutions of the UNSC (decision 69/4(a)(viii)).

7. In January 2013, UNIDO consulted with the UNCSC Committee established pursuant to resolution 1718 (2006) to ensure that the HPMP was in compliance with the UNSC's resolutions. After several exchanges of information, on 30 April 2014, the UNSC Committee concluded that:

- (a) The majority of the items related to the project were not prohibited by UNSC resolutions 1718 (2006), 1874 (2009), 2087 (2013) and 2094 (2013). For several items, the Committee was of the view that they were unlikely to be prohibited, however, the information provided by UNIDO was not sufficient to determine that with certainty;

<sup>1</sup> UNEP/OzL.Pro/ExCom/68/26.

<sup>2</sup> Resolutions 1695 (2006), 1718 (2006) and 1874 (2009).

- (b) None of the entities involved in this project was designated subject to the measures in the resolutions by the UNSC or the Committee, and it was unaware that any of these entities were acting on behalf of or at the direction of any of the entities or individuals who have been designated by the UNSC or the Committee;
- (c) Two laptop computers for database management, which are not specified as restricted “luxury items” in resolution 2094, could be classified as luxury items by some Member States. Care should be taken not to restrict the supply of ordinary civilian use goods to wider populations nor have a negative humanitarian impact on the country; and
- (d) The Committee understood that the precise specifications of each item can only be formulated at the project implementation stage. Therefore, the Committee recommended that UNIDO pays due diligence in ensuring that at the project implementation stage, all items to be procured under the project are not prohibited by the resolutions.

8. The UNSC Committee also recommended that UNIDO establishes proper monitoring mechanisms to ensure that the stated items would only be utilized for the purposes of the HPMP project and not for any prohibited programme or activities; and reiterated its understanding that nothing in UNSC resolutions 1718 (2006), 1874 (2009), 2087 (2013) and 2094 (2013) prohibited the project, which was to support the Democratic People’s Republic of Korea’s industrial development objectives and the implementation of the HPMP under the Montreal Protocol.

9. On 18 October 2013, the Government of the Democratic People’s Republic of Korea sent a letter to the Ozone Secretariat informing it about the country’s situation of potential non-compliance with the 2013 HCFC consumption target, and requesting the Ozone Secretariat to:

- (a) “Notify as per Section 4 of the non-compliance procedure that the country has made *bona fide* efforts to address the potential non-compliance situation and is unable to comply with the 2013 and 2015 targets; and
- (b) Recommend the Multilateral Fund Secretariat and the relevant international organizations to assist the Democratic People’s Republic of Korea to comply with the Montreal Protocol by approving the HPMP and taking the timely measures to fund and provide equipment to the Democratic People’s Republic of Korea in the frame of the implementation of the Montreal Protocol.”

10. The situation of potential non-compliance by the Democratic People's Republic of Korea was analyzed by the Implementation Committee at its 52<sup>nd</sup> meeting<sup>3</sup>. As a result, the Implementation Committee agreed to take note of the information presented by the Ozone Secretariat and the updates by the Fund Secretariat and relevant implementing agencies and to revisit the matter at its 53<sup>rd</sup> meeting in the light of any additional information received. The Implementation Committee also agreed, without prejudice to the operations of the Executive Committee, that reconsideration of the HPMP of the Democratic People's Republic of Korea by the Executive Committee should be undertaken as a matter of urgency.

### **HPMP of the Democratic People’s Republic of Korea**

11. The following section describes stage I of the HPMP submitted by UNIDO to the 73<sup>rd</sup> meeting on behalf of the Government of the Democratic People’s Republic of Korea.

---

<sup>3</sup> UNEP/OzL.Pro/ImpCom/52/4 (agenda item VI).

ODS regulations

12. The Government of the Democratic People's Republic of Korea set up in 1996 the National Coordinating Committee for Environment (NCCE) chaired by the Vice Minister of Foreign Affairs, to coordinate the implementation of the Montreal Protocol. The National Ozone Unit (NOU), under the authority of the NCCE and the Ministry of Land and Environment Protection (MLEP), prepares and supervises the implementation of ODS phase-out projects and activities, collects ODS consumption and production data, fulfils reporting requirements to the Ozone Secretariat and the Fund Secretariat, and controls the use of ODS, including HCFCs, in collaboration with the environmental inspectors.

13. Several ozone protection laws and regulations have been introduced, including a ban on the manufacturing of ODS-based refrigeration equipment and a ban on the import or manufacturing of ODS-based industrial refrigerating equipment. An ODS import and export licensing system is operational and the HCFC quota system was established in 2011; however, in the absence of an HPMP, quotas were not applied to importers or the HCFC producer in 2013 and 2014.

HCFC production and consumption

14. Since 2004, HCFC-22 is the only HCFC produced in the country, only for the local market, by the Hamhung Refrigeration Factory of 2.8 Vinalon Complex, established in 1994, the only producer of ODS. All the HCFC-141b consumed in the country is imported, mostly from China, with a small portion from the Russian Federation. The level of production and imports of HCFC-22 is shown in Table 1. The HCFC production baseline for compliance has been calculated at 27.6 ODP tonnes.

**Table 1. HCFC-22 production and imports in the Democratic People's Republic of Korea**

HCFC-22	2009	2010	2011	2012	2013
<b>Metric tonnes</b>					
Production	504.0	498.0	480.0	521.0	578.9
Import	361.0	889.4	821.0	754.5	703.7
<b>Total mt</b>	<b>865.0</b>	<b>1,387.4</b>	<b>1,301.0</b>	<b>1,275.5</b>	<b>1,282.6</b>
<b>ODP tonnes</b>					
Production	27.7	27.4	26.4	28.7	31.8
Import	19.9	48.9	45.2	41.5	38.7
<b>Total ODP tonnes</b>	<b>47.6</b>	<b>76.3</b>	<b>71.6</b>	<b>70.2</b>	<b>70.5</b>

15. The levels of consumption reported under Article 7 of the Montreal Protocol are shown in Table 2. The HCFC consumption baseline for compliance has been calculated at 78.0 ODP tonnes.

**Table 2. HCFC consumption in the Democratic People's Republic of Korea (2009-2013 Article 7 data)**

HCFC	2009	2010	2011	2012	2013	Baseline
<b>Metric tonnes</b>						
HCFC-22	865.1	1,387.4	1,301.0	1,275.5	1,282.6	1,126.2
HCFC-141b	129.0	162.0	168.0	171.0	182.0	145.5
<b>Total (mt)</b>	<b>994.1</b>	<b>1,549.4</b>	<b>1,469.0</b>	<b>1,446.5</b>	<b>1,464.6</b>	<b>1,271.7</b>
<b>ODP tonnes</b>						
HCFC-22	47.6	76.3	71.56	70.15	70.54	62.0
HCFC-141b	14.2	17.8	18.48	18.81	20.02	16.0
<b>Total (ODP tonnes)</b>	<b>61.8</b>	<b>94.1</b>	<b>90.04</b>	<b>88.96</b>	<b>90.56</b>	<b>78.0</b>

16. Based on the HCFC consumption reported to the Government, it appears that the Democratic Peoples' Republic of Korea is in non-compliance with the 2013 HCFC consumption target.

HCFC consumption by sector

17. Consumption in the refrigeration and air-conditioning servicing sector and the foam manufacturing sector measured in ODP tonnes represent 64 and 21 per cent respectively of the baseline of 78.0 ODP tonnes, as shown in Table 3. The remaining consumption is in the manufacturing of HCFC-based refrigeration equipment and compressors.

**Table 3. HCFC consumption distributed by sector**

Sectors	Substance	2009	2010	2011	2012	2013	Baseline	Share (%)
<b>Metric tonnes (mt)</b>								
Commercial refrigeration and compressors manufacturing (Hamhung)	HCFC-22	149.0	139.2	111.9	120.3	123.8	144.1	11
Commercial refrigeration and compressors manufacturing (Pyongyang Automation)		69.9	81.2	89.2	70.6	71.5	75.6	6
Refrigeration servicing sector		646.1	1,167.0	1,099.9	1,084.6	1,087.3	906.6	71
<b>Sub-total</b>		<b>865.0</b>	<b>1,387.4</b>	<b>1,301.1</b>	<b>1,275.5</b>	<b>1,282.6</b>	<b>1,126.2</b>	<b>89</b>
Foam manufacturing sector	HCFC-141b	129.0	162.0	168.0	171.0	182.0	145.5	11
<b>TOTAL mt</b>		<b>994.0</b>	<b>1,549.4</b>	<b>1,469.1</b>	<b>1,446.5</b>	<b>1,464.6</b>	<b>1,271.7</b>	<b>100</b>
<b>ODP tonnes</b>								
Commercial refrigeration and compressors manufacturing (Hamhung)	HCFC-22	8.2	7.7	6.2	6.6	6.8	7.9	10
Commercial refrigeration and compressors manufacturing (Pyongyang Automation)		3.8	4.5	4.9	3.9	3.9	4.2	5
Refrigeration servicing sector		35.5	64.2	60.5	59.6	59.8	49.9	64
<b>Sub-total</b>		<b>47.6</b>	<b>76.3</b>	<b>71.6</b>	<b>70.2</b>	<b>70.5</b>	<b>62.0</b>	<b>79</b>
Foam manufacturing sector	HCFC-141b	14.2	17.8	18.5	18.8	20.0	16.0	21
<b>TOTAL ODP tonnes</b>		<b>61.8</b>	<b>94.1</b>	<b>90.1</b>	<b>89.0</b>	<b>90.5</b>	<b>78.0</b>	<b>100</b>

*Polyurethane (PU) foam manufacturing sector*

18. There are only three polyurethane (PU) foam manufacturing enterprises in the country using HCFC-141b imported in pre-blended polyols and reported under Article 7 of the Montreal Protocol, as shown in Table 4. Two of the enterprises are eligible for funding under the Multilateral Fund and are included in stage I: Pyongyang Sonbong PU Foam (PU rigid foam) and Puhung Building Material (spray foam for building insulation). Neither of these enterprises is a second-stage conversion. The third enterprise, Chongjin Sonbong PU Foam will convert with its own resources.

**Table 4. Consumption of HCFC-141b by foam enterprises**

Enterprise	2009	2010	2011	2012	2013
<b>Metric tonnes</b>					
Pyongyang Sonbong PU Foam	52.6	64.3	73.0	64.3	67.0
Puhung Building Material	36.9	35.6	35.0	57.9	63.7
Chongjin Sonbong PU Foam	39.5	62.1	60.0	48.8	51.3
<b>Total (mt)</b>	<b>129.0</b>	<b>162.0</b>	<b>168.0</b>	<b>171.0</b>	<b>182.0</b>
<b>ODP tonnes</b>					
Pyongyang Sonbong PU Foam	5.8	7.1	8.0	7.1	7.4
Puhung Building Material	4.1	3.9	3.9	6.4	7.0
Chongjin Sonbong PU Foam	4.3	6.8	6.6	5.4	5.6
<b>Total (ODP tonnes)</b>	<b>14.2</b>	<b>17.8</b>	<b>18.5</b>	<b>18.8</b>	<b>20.0</b>

19. HCFC-141b consumption has increased during the last three years due to a growing demand for spray foam by the construction industry triggered by the Government's demand for improvements in the energy-efficiency of buildings.

*Refrigeration manufacturing sector*

20. There are two commercial refrigeration equipment and compressor manufacturers in the country: Hamhung Commercial Machinery Factory, and Pyongyang Automation Equipment Factory. No activities for these enterprises are being included in stage I.

*Refrigeration and air-conditioning servicing sector*

21. The annual consumption of HCFC-22 in the refrigeration servicing sector was above 1,000 mt (55 ODP tonnes) during the last four years. Servicing of residential and small commercial refrigeration and air-conditioning systems is provided by several small service workshops, while servicing of large installations is provided by in-house technicians. There are 210 registered refrigeration service workshops throughout the country. A distribution of HCFC consumption in the servicing sector by each major application is shown in Table 5.

**Table 5. Distribution of HCFC consumption in the servicing sector**

<b>Application</b>	<b>Consumption (mt)*</b>	<b>Share (%)</b>
Split unit air-conditioners	436.98	48.2
Central air-conditioners	125.11	13.8
Cold storage	64.37	7.1
Industrial process refrigeration	175.88	19.4
Retail food refrigeration	3.63	0.4
Other commercial	100.63	11.1
<b>Total</b>	<b>906.6</b>	<b>100.0</b>

\*Based on the baseline for compliance.

22. During the implementation of the national phase-out plan (NPP) a recovery and recycling network consisting of 25 regional centres was established to ensure the continuous operation of refrigeration equipment and prevent its early retirement. However, during the implementation of the scheme major difficulties were encountered, including low recovery levels, lack of an economic incentive to recover refrigerant, frequent damage of equipment due to electricity fluctuations and lack of legislative support for the recovery and recycling practice. The HPMP will include a component to improve the existing recovery and recycling network established under the NPP.

HCFC phase-out strategy

23. The Government of the Democratic People's Republic of Korea has submitted an HPMP including activities to return to compliance with the assistance of the Multilateral Fund. The plan of action for returning to compliance includes speedy implementation of HCFC phase-out activities combined with policy initiatives and awareness activities. In line with the overarching strategy, the Government proposes to implement the following specific activities:

- (a) Conversion of the Pyongyang Sonbong Foam Factory, manufacturing rigid PU foam, to cyclopentane technology. The conversion includes a cyclopentane storage and handling system, a pre-mixing station, two foam machines, safety systems for operation with hydrocarbons, civil engineering, technical assistance, trials, training, certification and contingencies;

- (b) Conversion of the Puhung Building Materials Factory, specialized in building spray insulation, to methyl formate. The conversion includes a spray foam mini-dispenser, technical assistance, testing, training and contingencies;
- (c) Self-funded conversion of the enterprise Chongjin Sonbong PU Foam Factory to ensure total phase-out of HCFC-141b by 1 January 2018;
- (d) Strengthening of enforcement measures of laws and regulations to control HCFCs. It involves establishing a team to review enforcement measures in imports control of HCFCs and HCFC-based equipment, organizing workshops and distributing education materials for enforcement;
- (e) Enforcement capacity building for HCFC imports control. It includes training of 300 custom officers so that import/export of HCFCs and HCFC-based equipment are monitored on a regular basis;
- (f) Training in good practices of refrigeration service. It includes training of 50 trainers and 600 technicians in good refrigeration servicing practice; and procurement of basic equipment for training purposes;
- (g) Improvement of the existing recovery and recycling network established under the NPP and distribution of an additional 25 recovery machines and ancillary equipment; and
- (h) Awareness and public outreach activities, including a media campaign on the acceleration of the HCFC phase-out schedule, on relevant policies and regulations to be promulgated, and on available and emerging alternative technologies.

24. The HPMP also includes a project monitoring and evaluation unit, responsible for the overall coordination and implementation of the activities included in stage I of the HPMP. The unit will prepare annual implementation programmes; coordinate the annual audit; prepare annual progress reports; and support the implementing agencies for the verification of HCFC consumption.

#### Cost of the HPMP

25. The total cost of stage I of the HPMP to achieve 15 per cent reduction of the consumption baseline by 2018 was estimated at US \$972,280, plus the Government's contribution estimated at US \$115,000, as shown in Table 6. Implementation of stage I will result in the reduction of consumption of 23.15 ODP tonnes of HCFCs, representing 29.7 per cent of the HCFC consumption baseline.

**Table 6. Estimated cost of stage I of the HPMP for the Democratic People's Republic of Korea**

Activity	Agency	Substance	Reductions (ODP tonnes)	Cost (US \$)	In-kind contribution (US \$/kg)
Conversion of Pyongyang Sonbong PU Foam Factory	UNIDO	HCFC-141b	7.49	416,680	
Conversion of Puhung Building Materials Factory	UNIDO	HCFC-141b	5.74	105,600	
Development of enforcement measures for laws and regulations to control HCFCs	UNIDO	HCFC-22	4.28	16,500	15,000
	UNEP			13,500	
Training of customs officers	UNEP			60,000	20,000
Improvement of recovery and recycling scheme (R&R)	UNIDO			100,000	
Technician training for good refrigeration servicing practices	UNIDO			11,500	20,000
	UNEP			118,500	
Awareness-raising and public education	UNEP			30,000	10,000
Monitoring and evaluation	UNIDO			All	
<b>TOTAL FUNDED ACTIVITIES</b>			<b>17.51</b>	<b>972,280</b>	<b>115,000</b>
Self-funded conversion Chongjin PU Factory		HCFC-141b	5.64		
<b>GRAND TOTAL</b>			<b>23.15</b>	<b>972,280</b>	

## SECRETARIAT'S COMMENTS AND RECOMMENDATION

### COMMENTS

26. The Secretariat reviewed the HPMP for the Democratic People's Republic of Korea in the context of the guidelines for the preparation of HPMPs (decision 54/39); the criteria for funding HCFC phase-out in the consumption sector agreed at the 60<sup>th</sup> meeting (decision 60/44); subsequent decisions on HPMPs; the 2014-2016 business plan of the Multilateral Fund; and decision 68/34. In the review of the HPMP, the Secretariat also took into consideration decision 66/15(k) on alternative methods of disbursement, organizational structures and monitoring procedures for allowing the transfer of funding associated with the institutional strengthening (IS) project; the UNSC resolutions 1695 (2006), 1718 (2006), 1874 (2009), 2087 (2013) and 2094 (2013); and procedures established by UN agencies to provide assistance to the Democratic People's Republic of Korea.

27. This section of the document consists of:

Part I: Non-compliance with the HCFC consumption target in 2013;

Part II: Compliance with UNSC resolutions;

Part III: Methods of disbursement, organizational structures and monitoring procedures; and

Part IV: Technical and cost issues.

## PART I: NON-COMPLIANCE WITH THE HCFC CONSUMPTION TARGET IN 2013

### Operational licensing system

28. In line with decision 63/17, confirmation has been received from the Government of the Democratic People's Republic of Korea that an enforceable national system of licensing and quotas for production, imports and exports of all ODS including HCFC is in place. However, in view of the situation of non-compliance in 2013, the Secretariat requested clarification on whether the licensing and quota system was enforceable and capable of ensuring the country's compliance with the Montreal Protocol. UNIDO confirmed that the country has already established the licensing and quota system to control HCFC imports that has limited HCFC licensed importers to six enterprises. Under the current quota system, the yearly quota is allocated to each importer based on their demand. However, the quota for each importer has not been applied yet, given the absence of the HPMP. The utmost priority in the implementation of the HPMP is to operationalize the quota system for HCFC control. Once the HPMP is approved, the quota system to meet the phase-out schedule will be fully enforced under an anticipated agreement with key stakeholders. The yearly allowance for each importer to meet the reduction targets in the Agreement between the Government and the Executive Committee will be issued in the form of an administrative order, and their import activities will be strictly controlled.

### Schedule for return to compliance

29. At the time of preparation of the present document, the Government of the Democratic People's Republic of Korea was preparing an action plan to return to compliance to be submitted for consideration by the Implementation Committee at its 53<sup>rd</sup> meeting. The plan is based on activities in the HPMP and policies that will allow the country to return into compliance by 2015 as shown in Table 7. It includes a ban on new installation of industrial refrigeration equipment using HCFCs from 2016; a ban on import of HCFC-based equipment from 2018; a ban on production of HCFC-22 and production of HCFC-based equipment after the conversion of production lines of HCFC-22 and HCFC-based equipment during stage II of HPMP; compulsory licensing/certification of refrigeration service workshops and technicians to handle HCFC-based equipment after the training of technicians is completed; and ensuring that recovery and recycling machines are deployed.

**Table 7. Schedule for return to compliance by the Democratic People's Republic of Korea**

Year	Max. allowable Consumption in ODP tonnes	Proposed target Consumption in ODP tonnes	Max. allowable production in ODP tonnes	Proposed target production in ODP tonnes
2013	<b>78.00</b>	90.60	<b>27.60</b>	31.80
2014	<b>78.00</b>	80.00	<b>27.60</b>	29.00
2015	<b>70.16</b>	70.16	<b>24.84</b>	27.60
2016	<b>70.16</b>	70.16	<b>24.84</b>	24.84
2017	<b>70.16</b>	70.16	<b>24.84</b>	24.84

Source: Action plan to return to compliance submitted by the Democratic People's Republic of Korea to the Implementation Committee.

## PART II: COMPLIANCE WITH UNSC RESOLUTIONS

30. The Secretariat discussed with UNIDO the current status of consultations with the UNSC Committee established pursuant to resolution 1718 (2006), in particular with regard to the items that the UNSC Committee considered unlikely to be prohibited but for which the information provided by UNIDO was not sufficient to determine with certainty (e.g., 20 m<sup>3</sup> underground tank and delivery pumps included under the cyclopentane storage and handling system; pumps, pipes, containers, heat exchanger, agitator and valves included in the cyclopentane premixing station system; foam machine; pre-dispensing

equipment and cooling system). UNIDO explained that in order to provide more detailed information, it would require to prepare the technical specifications of the project upon visits to the enterprises.

31. The Secretariat noted that all the items above are related to the conversion of Pyongyang Sonbong PU Foam to cyclopentane but the items related to the conversion of Puhung Building Material (i.e., foam spray mini dispenser or retrofit spray mini dispenser) and to the customs training project (i.e., ODS identification kit) were not in the list of potentially prohibited items, and therefore they could be imported in the country. This was confirmed by UNIDO upon consultation with its experts and on this basis, the Secretariat suggested to UNIDO:

- (a) To focus the first tranche of the HPMP on phasing out the consumption of 7.00 ODP tonnes of HCFC-141b<sup>4</sup> used for the spray foam applications by Puhung Building Material project where there are no potentially prohibited equipment items; on the purchase of ODS identifier kits for custom training, which are also not in the list of potentially prohibited items; on activities to strengthen the enforcement measures of laws and regulations to control imports and exports of HCFCs; and on capacity building for customs officers. These activities would allow the country to return into compliance in 2015. The Secretariat also suggested that during the first tranche, UNIDO organizes a mission to the country by an expert to determine the technical specifications of the equipment to be procured for the PU rigid foam project converting to cyclopentane, where there are items for which additional information is required. UNIDO will subsequently submit these specifications to the UNSC Committee for clearance. UNIDO would then be able to design a project that fulfills all the requirements of the UNSC Committee. UNIDO will be reporting to the first meeting of 2015 on the results of this consultation and will present an action plan in the event that any item is not allowed; and
- (b) That the second tranche would cover the conversion of PU rigid foam enterprise (Pyongyang Sonbong PU consuming 7.4 ODP tonnes of HCFC-141b) and could be submitted to the first meeting of the Executive Committee in 2015.

32. These suggestions were agreed by UNIDO and the HPMP was adjusted accordingly.

33. With regard to the UNSC Committee recommendation to establish proper monitoring mechanisms to ensure that the stated items will only be utilized for the purposes of the HPMP project and not for any prohibited programme or activities, UNIDO indicated that the NOU agrees with the unhindered access to project sites by the implementing agencies to the extent necessary for the implementation, monitoring and oversight of the project. This has been included in the Agreement between the Government and the Executive Committee.

### **PART III: METHODS OF DISBURSEMENT, ORGANIZATIONAL STRUCTURES AND MONITORING PROCEDURES**

34. In the review of the HPMP submitted to the 68<sup>th</sup> meeting, the Secretariat also took into consideration decision 66/15(k) on alternative methods of disbursement, organizational structures and monitoring procedures for allowing the transfer of funding associated with the institutional strengthening (IS) project. UNIDO reiterated that it would use the following system that was described in paragraph 24 of document UNEP/OzL.Pro/ExCom/68/26:

- “(a) Procurement of equipment and services is arranged through competitive bidding. The respective purchase order/contract on the goods/services supply is concluded between UNIDO and the selected supplier. The HPMP for the Democratic People’s Republic of

<sup>4</sup> Using as reference Puhung Building Material’s consumption in 2013.

Korea does not envisage local procurement of equipment and goods; therefore, the funds obligated under UNIDO's contract will be disbursed directly to the selected international supplier;

- (b) The terms of reference on the equipment supply always include the provision of services such as equipment delivery, installation, testing, trial runs, operator's training and commissioning. The costs of these services are included into the respective contract and are also disbursed to the selected international supplier upon submission of the respective commissioning report countersigned by the project beneficiary. To avoid any non-compliance with the respective UN resolutions, UNIDO will also apply the modified procurement procedures introduced by the UNDP country office; and
- (c) The required local staffs (national experts/consultants) are recruited in close consultations with the NOU, which submits résumés of the recommended candidates to UNIDO. The selection of a candidate is done on the basis of matching his/her education and working experience with the duties to be performed. Each selected national expert/consultant signs an Individual Service Agreement with UNIDO and disbursement of the service fee is done through the UNDP country office in local currency. The same applies to the recruitment of local institutions, for instance, to arrange and carry out training workshops, where the NOU collects at least three offers from the local suppliers and UNIDO's contract is awarded to the lowest offer that complies with the requirements. Since UNIDO does not have a country office in the Democratic People's Republic of Korea, such contracts are issued by the local UNDP office on UNIDO's behalf. In addition the UNDP country office will arrange customs clearance and tax exemption of imported equipment delivered to the country under UNIDO contracts and/or purchase orders."

35. In the case of UNEP, the Secretariat expressed concern about the delays in the IS project approved at the 68<sup>th</sup> meeting, due to difficulties with fund disbursement in view of the prevalent restrictions. UNIDO explained that UNEP in collaboration with UNIDO has organized certain technical assistance events and awareness activities by direct implementation. The Government has used its counterpart contribution (as mentioned in the IS project) for providing local logistical support for these activities. A work plan following this approach has been developed in consultation with the Government for the remaining funds of the IS project. UNEP could demonstrate that it has been able to implement some of the activities under the IS project for which no local disbursements are required. Taking all these factors into consideration, it was agreed that the first tranche of the HPMP would only include two activities for UNEP that will be implemented through a contract with a technical institute at the Malaysia Customs Academy: the training of customs officers and the training on law enforcement status, as specified in previous section.

#### **PART IV: TECHNICAL AND COST ISSUES**

##### Starting point for aggregate reduction in HCFC consumption

36. The Government of the Democratic People's Republic of Korea had agreed to establish as its starting point for sustained aggregate reduction in HCFC consumption the baseline of 78.0 ODP tonnes, calculated using actual consumption of 61.8 ODP tonnes and 94.1 ODP tonnes reported for 2009 and 2010, respectively, under Article 7 of the Montreal Protocol.

##### Issues related to the foam sector

37. The submission to the 73<sup>rd</sup> meeting already reflects the changes to the foam sector plan agreed upon during the discussion on the original submission to the 68<sup>th</sup> meeting. During that discussion the cost

of the Pyongyang Sonbong project was adjusted from US \$752,748 to US \$416,680 with a cost-effectiveness of US \$7.13/kg, and the cost of the Puhung Building Materials spray foam enterprise project was adjusted from US \$231,868 to US \$105,700, with a cost-effectiveness of US \$2.92/kg. During that discussion it was also agreed that the Chongjin Sonbong foam enterprise, initially planned to convert with its own funds at a future stage, would convert in stage I ensuring that HCFC-141b will be completely phased out in line with relevant decisions on prioritization of substances adopted by the Parties to the Montreal Protocol and the Executive Committee.

38. The present submission differs from the agreement between the Secretariat and UNIDO at the 68<sup>th</sup> meeting in the following manner:

- (a) The Government has committed to promulgating a ban on imports of HCFC-141b pure or contained in pre-blended polyols by 1 January 2018, instead of 1 January 2017, due to the time that has passed since the first submission;
- (b) The Puhung Building Materials spray foam enterprise is going to convert to methyl formate instead of HFC-245fa<sup>5</sup> at a total cost of US \$105,600. In discussions with the Secretariat, it was agreed that neither the cooling system nor the premixer, used for HFC-245fa, would be needed as the methyl formate will be procured already pre-blended in polyol. Accordingly, the cost of conversion of this enterprise was adjusted to US \$57,200; and
- (c) As the consumption of both eligible enterprises, especially Puhung Building Materials, has increased in the last two years (Table 4), the projects have better cost-effectiveness than when they were submitted at the 68<sup>th</sup> meeting. Using the consumption of the last three years as reference, the cost-effectiveness of Pyongyang Sonbong is US \$6.12/kg and of Puhung Building Materials is US \$0.94/kg. Accordingly, these projects will also represent a larger deduction from the starting point.

39. The starting point for HCFC-141b is 16.00 ODP tonnes. Given the increase in consumption in the sector during the last three years, the amount of HCFC-141b being phased-out (18.87 ODP tonnes) is larger than the starting point. It consists of 13.23 ODP tonnes funded by the Fund and 5.64 ODP tonnes self-funded by Chongjing Sonbong PU Foam. Given the total phase-out of HCFC-141b, deduction from the starting point will be 16.00 ODP tonnes (including 13.23 ODP tonnes from assisted enterprises and 2.77 ODP tonnes from Chongjing Sonbong PU Foam).

#### Issues related to the servicing sector

40. At the 68<sup>th</sup> meeting the Secretariat and UNIDO had agreed on a policy and servicing sector component for US \$300,000 and a monitoring component under UNIDO's responsibility for US \$100,000<sup>6</sup>. The policy and servicing sector component includes a recovery and recycling activity on a pilot scale (US \$100,000) to address the issues faced with the implementation of the scheme initially established during the NPP, and to develop a strategy to promote and support recovery and recycling. It also includes the development of enforcement measures for laws and regulations to control HCFCs (US \$30,000); customs training (US \$60,000); technicians training (US \$100,000); and the awareness component (US \$10,000).

<sup>5</sup> At the time, it was agreed with UNIDO that the enterprise undertake tests with other low-global-warming potential (GWP) alternatives before committing to the HFC-245fa technology. If by the end of 2014 a non-HFC alternative were technically feasible and commercially available, the proposed HFC-245fa technology would be introduced based on reduced formulations (i.e., co-blown with water).

<sup>6</sup> The policy and servicing sector component submitted to the 68<sup>th</sup> meeting was for US \$758,400 and the monitoring and evaluation was for US \$225,000.

41. The present submission maintains the same components and activities agreed at the 68<sup>th</sup> meeting, with an increase of US \$30,000 for the technicians training and an increase of US \$20,000 for the awareness component. Upon discussion, the Secretariat considered that only the increase for the training programme was justified as it would allow greater flexibility to train trainers outside the country given the existing limitations for implementation in the country. The awareness component's budget was not increased.

#### Agreed commitments and cost of stage I of the HPMP

42. The activities included in stage I of the HPMP and funded by the Multilateral Fund will reduce 17.26 ODP tonnes of HCFC consumption, representing 22.1 per cent of the consumption baseline. By receiving this assistance, the Government of the Democratic People's Republic of Korea commits to reducing 15 per cent of the baseline and introducing the ban on imports of HCFC-141b pure or contained in pre-blended polyols by 2018. In addition to the funded reductions, stage I will also include one self-funded activity (conversion of the Chongjing foam enterprise) with an additional reduction of 5.64 ODP tonnes of HCFC-141b, which corresponds to 7.2 per cent of the consumption baseline.

43. The total cost of stage I of the HPMP for the Democratic People's Republic of Korea is US \$903,880 at a cost-effectiveness level of US \$4.67/kg as presented in Table 8.

**Table 8. Agreed cost of stage I of the HPMP for the Democratic People's Republic of Korea**

Activity	Agency	Substance	Reductions (ODP tonnes)	Cost (US \$)	Cost-effectiveness (US \$/kg)
Conversion Pyongyang Sonbong PU Foam Factory	UNIDO	HCFC-141b	7.49	416,680	6.12
Conversion Puhung Building Materials Factory	UNIDO	HCFC-141b	5.74	57,200	0.94
Development of enforcement measures of laws and regulations to control HCFCs	UNIDO	HCFC-22	4.03	16,500	4.50
	UNEP			13,500	
Training of customs officers	UNEP			60,000	
Improvement of recovery and recycling scheme (R&R)	UNIDO			100,000	
Technician training for good practice of refrigeration service	UNIDO			11,500	
	UNEP			118,500	
Awareness raising and public education	UNEP			10,000	
Monitoring and evaluation	UNIDO	All		100,000	
<b>TOTAL FUNDED ACTIVITIES</b>			<b>17.26</b>	<b>903,880</b>	<b>4.67</b>
Self-funded conversion Chingjin PU Factory		HCFC-141b	5.64		
<b>GRAND TOTAL</b>			<b>22.90</b>	<b>903,880</b>	<b>3.69</b>

#### Impact on the climate

44. The implementation of the conversion of HCFC-141b to cyclopentane and methyl formate in the PU foam sector would avoid the emission into the atmosphere of 122,336 tonnes of CO<sub>2</sub> equivalent per year as shown in Table 9.

**Table 9. Climate impact of the projects in the foam sector in stage I of the HPMP**

<b>Conversion of enterprises funded by the Multilateral Fund</b>			
<b>Substance</b>	<b>GWP</b>	<b>Tonnes/year</b>	<b>CO<sub>2</sub>-eq (tonnes/year)</b>
<b>Before conversion</b>			
HCFC-141b	725	120.30	87,218
<b>After conversion</b>			
Cyclopentane	20	44.27	885
Methyl formate	20	31.85	522
<b>Net impact</b>			<b>(-85,810)</b>
<b>Conversion of enterprise not funded by the Multilateral Fund</b>			
<b>Before conversion</b>	<b>GWP</b>	<b>Tonnes/year</b>	<b>CO<sub>2</sub>-eq (tonnes/year)</b>
HCFC-141b	725	51.30	37,193
<b>After conversion</b>			
Cyclopentane	20	33.35	667
<b>Net impact</b>			<b>(-36,526)</b>
<b>Grand Total</b>			<b>(-122,336)</b>

45. The proposed technical assistance activities in the HPMP, which include the introduction of better servicing practices and enforcement of HCFC import controls, will reduce the amount of HCFC-22 used for refrigeration servicing. Each kilogram (kg) of HCFC-22 not emitted due to better refrigeration practices results in savings of approximately 1.8 CO<sub>2</sub>-equivalent tonnes. Although a calculation of the impact on the climate was included in the HPMP, it would be difficult to provide reliable data on climate impact since HCFC alternatives that will be used are not clearly identified at this stage. At this time, the Secretariat is not in a position to quantitatively estimate the impact on the climate. The impact might be established through an assessment of implementation reports by, inter alia, comparing the levels of refrigerants used annually from the beginning of implementation of the HPMP, the reported amounts of refrigerants being recovered and recycled, the number of technicians trained and the HCFC-22-based equipment being retrofitted.

#### Co-financing

46. In response to decision 54/39(h) on potential financial incentives and opportunities for additional resources to maximize the environmental benefits from HPMPs, UNIDO indicated the in-kind contribution amounting to US \$115,000 by the Government (as shown in Table 6) and the self-funded conversion of the Chongjin Songbong PU Factory at an estimated cost of US \$500,000.

#### 2014-2016 business plan of the Multilateral Fund

47. UNIDO and UNEP are requesting US \$979,272 (including agency support costs) for implementation of stage I of the HPMP. The total value requested for the 2014-2016 period of US \$935,272 including support costs is above the allocation in the business plan. UNIDO has stage I of the HPMP for the Democratic People's Republic of Korea in the 2014-2016 business plan starting in 2015, and UNEP did not include it in its 2014-2016 business plan.

#### Draft Agreement

48. A draft Agreement between the Government of the Democratic People's Republic of Korea and the Executive Committee for HCFC phase-out is contained in Annex I of the present document.

## RECOMMENDATION

49. In light of the information provided above and the Secretariat's comments, in particular those related to methods of disbursement, organizational structures, monitoring procedures and compliance with UN resolutions, the Executive Committee may wish to consider:

- (a) Approving, in principle, stage I of the HCFC phase-out management plan (HPMP) for the Democratic People's Republic of Korea for 2014 to 2018 to reduce HCFC consumption by 15 per cent of the baseline, at the amount of US \$979,272, consisting of US \$701,880, plus agency support costs of US \$49,132 for UNIDO, and US \$202,000, plus agency support costs of US \$26,260 for UNEP, on the understanding that approval was without prejudice to the operation of the Montreal Protocol's mechanism for addressing non-compliance;
- (b) Noting that the Government of the Democratic People's Republic of Korea has agreed to establish as its starting point for sustained aggregate reduction in HCFC consumption the baseline of 78.0 ODP tonnes, calculated using actual consumption of 61.8 ODP tonnes and 94.1 ODP tonnes reported for 2009 and 2010, respectively, under Article 7 of the Montreal Protocol;
- (c) Noting the commitment of the Government of the Democratic People's Republic of Korea to ban imports of HCFC-141b, both pure and contained in pre-blended polyols, no later than 1 January 2018;
- (d) Requesting UNIDO to report to the first meeting in 2015 on the results of the consultations with the UN Security Council Committee regarding equipment items considered unlikely to be prohibited by UN resolutions but for which additional information was collected by UNIDO to determine that with certainty. In the event that there are items not cleared by the UN Security Council Committee, requesting UNIDO to present an alternative action plan to address the associated HCFC consumption;
- (e) Deducting 20.03 ODP tonnes of HCFCs from the starting point for sustained aggregate reduction in HCFC consumption;
- (f) Approving the draft Agreement between the Government of the Democratic People's Republic of Korea and the Executive Committee for the reduction in consumption of HCFCs, as contained in Annex I to the present document; and
- (g) Approving the first tranche of stage I of the HPMP for the Democratic People's Republic of Korea, and the corresponding implementation plan, at the amount of US \$181,514, consisting of US \$123,700, plus agency support costs of US \$8,659 for UNIDO, and US \$43,500, plus agency support costs of US \$5,655 for UNEP.

-----

## Annex I

### **DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF THE DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS**

1. This Agreement represents the understanding of the Government of the Democratic People's Republic of Korea (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 66.30 ODP tonnes by 1 January 2018 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 and 4.2.3 (remaining eligible consumption).
3. Subject to compliance by the Country with its obligations set out in this Agreement, the Executive Committee agrees, in principle, to provide the funding set out in row 3.1 of Appendix 2-A to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A ("Funding Approval Schedule").
4. The Country agrees to implement this Agreement in accordance with the HCFC phase-out sector plans submitted. In accordance with sub-paragraph 5(b) of this Agreement, the Country will accept independent verification of the achievement of the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A of this Agreement. The aforementioned verification will be commissioned by the relevant bilateral or implementing agency.
5. The Executive Committee will not provide the Funding in accordance with the Funding Approval Schedule unless the Country satisfies the following conditions at least eight weeks in advance of the applicable Executive Committee meeting set out in the Funding Approval Schedule:
  - (a) That the Country had met the Targets set out in row 1.2 of Appendix 2-A for all relevant years. Relevant years are all years since the year in which this Agreement was approved. Years for which no obligation for reporting of country programme data exists at the date of the Executive Committee meeting at which the funding request is being presented are exempted;
  - (b) That the meeting of these Targets has been independently verified, unless the Executive Committee decided that such verification would not be required;

- (c) That the Country had submitted annual implementation reports in the form of Appendix 4-A (“Format of Implementation Reports and Plans”) covering each previous calendar year; that it had achieved a significant level of implementation of activities initiated with previously approved tranches; and that the rate of disbursement of funding available from the previously approved tranche was more than 20 per cent; and
- (d) That the Country has submitted an annual implementation plan in the form of Appendix 4-A covering each calendar year until and including the year for which the funding schedule foresees the submission of the next tranche or, in case of the final tranche, until completion of all activities foreseen.

6. The Country will ensure that it conducts accurate monitoring of its activities under this Agreement. The institutions set out in Appendix 5-A (“Monitoring Institutions and Roles”) will monitor and report on implementation of the activities in the previous annual implementation plans in accordance with their roles and responsibilities set out in Appendix 5-A. This monitoring will also be subject to independent verification as described in paragraph 4 above.

7. The Executive Committee agrees that the Country may have the flexibility to reallocate the approved funds, or part of the funds, according to the evolving circumstances to achieve the smoothest reduction of consumption and phase-out of the Substances specified in Appendix 1-A:

- (a) Reallocations categorized as major changes must be documented in advance either in an annual implementation plan submitted as foreseen in sub-paragraph 5(d) above, or as a revision to an existing annual implementation plan to be submitted eight weeks prior to any meeting of the Executive Committee, for its approval. Major changes would relate to:
  - (i) Issues potentially concerning the rules and policies of the Multilateral Fund;
  - (ii) Changes which would modify any clause of this Agreement;
  - (iii) Changes in the annual levels of funding allocated to individual bilateral or implementing agencies for the different tranches; and
  - (iv) Provision of funding for programmes or activities not included in the current endorsed annual implementation plan, or removal of an activity in the annual implementation plan, with a cost greater than 30 per cent of the total cost of the last approved tranche;
- (b) Reallocations not categorized as major changes may be incorporated in the approved annual implementation plan, under implementation at the time, and reported to the Executive Committee in the subsequent annual implementation report;
- (c) Should the Country decide during implementation of the agreement to introduce an alternative technology other than that proposed in the approved HPMP, this would require approval by the Executive Committee as part of an Annual Implementation Plan or the revision of the approved plan. Any submission of such a request for change in technology would identify the associated incremental costs, the potential impact to the climate, and any differences in ODP tonnes to be phased out if applicable. The Country agrees that potential savings in incremental costs related to the change of technology would decrease the overall funding level under this Agreement accordingly;

- (d) Any enterprise to be converted to non-HCFC technology included in the approved HPMP and that would be found to be ineligible under the guidelines of the Multilateral Fund (i.e., due to foreign ownership or establishment post the 21 September 2007 cut-off date), will not receive assistance. This information would be reported to the Executive Committee as part of the Annual Implementation Plan;
- (e) The Country commits to examining the possibility of using pre-blended hydrocarbon systems instead of blending them in-house, for those foam enterprises covered under the umbrella project, should this be technically viable, economically feasible and acceptable to the enterprises; and
- (f) Any remaining funds will be returned to the Multilateral Fund upon completion of the last tranche foreseen under this Agreement.

8. Specific attention will be paid to the execution of the activities in the refrigeration servicing sub-sector, in particular:

- (a) The Country would use the flexibility available under this Agreement to address specific needs that might arise during project implementation; and
- (b) The Country and the bilateral and implementing agencies involved will take full account of the requirements of decisions 41/100 and 49/6 during the implementation of the plan.

9. The Country agrees to assume overall responsibility for the management and implementation of this Agreement and of all activities undertaken by it or on its behalf to fulfil the obligations under this Agreement. UNIDO has agreed to be the lead implementing agency (the “Lead IA”) and UNEP has agreed to be the cooperating implementing agency (the “Cooperating IA”) under the lead of the Lead IA in respect of the Country’s activities under this Agreement. The Country agrees to evaluations, which might be carried out under the monitoring and evaluation work programmes of the Multilateral Fund or under the evaluation programme of any of the agencies taking part in this Agreement.

10. The Lead IA will be responsible for ensuring co-ordinated planning, implementation and reporting of all activities under this Agreement, including but not limited to independent verification as per sub-paragraph 5(b). This responsibility includes the necessity to co-ordinate with the Cooperating IA to ensure appropriate timing and sequence of activities in the implementation. The Cooperating IA will support the Lead IA by implementing the activities listed in Appendix 6-B under the overall co-ordination of the Lead IA. The Lead IA and Cooperating IA have reached consensus on the arrangements regarding inter-agency planning, reporting and responsibilities under this Agreement to facilitate a co-ordinated implementation of the Plan, including regular co-ordination meetings. The Executive Committee agrees, in principle, to provide the Lead IA and the Cooperating IA with the fees set out in rows 2.2 and 2.4 of Appendix 2-A.

11. Should the Country, for any reason, not meet the Targets for the elimination of the Substances set out in row 1.2 of Appendix 2-A or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding Approval Schedule. At the discretion of the Executive Committee, funding will be reinstated according to a revised Funding Approval Schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all of its obligations that were due to be met prior to receipt of the next tranche of funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amount set out in Appendix 7-A (“Reductions in Funding for Failure to Comply”) in respect of each ODP kg of reductions in consumption not achieved in any one year. The Executive Committee will discuss each specific case in which the Country did not comply with this

Agreement, and take related decisions. Once these decisions are taken, this specific case will not be an impediment for future tranches as per paragraph 5 above.

12. The Funding of this Agreement will not be modified on the basis of any future Executive Committee decision that may affect the funding of any other consumption sector projects or any other related activities in the Country.

13. The Country will comply with any reasonable request of the Executive Committee, the Lead IA and the Cooperating IA to facilitate implementation of this Agreement. In particular, it will provide the Lead IA and the Cooperating IA with access to the information necessary to verify compliance with this Agreement.

14. The completion of stage I of the HPMP and the associated Agreement will take place at the end of the year following the last year for which a maximum allowable total consumption level has been specified in Appendix 2-A. Should there at that time still be activities that are outstanding, and which were foreseen in the Plan and its subsequent revisions as per sub-paragraph 5(d) and paragraph 7, the completion will be delayed until the end of the year following the implementation of the remaining activities. The reporting requirements as per sub-paragraphs 1(a), 1(b), 1(d), and 1(e) of Appendix 4-A will continue until the time of the completion unless otherwise specified by the Executive Committee.

15. All of the conditions set out in this Agreement are undertaken solely within the context of the Montreal Protocol and as specified in this Agreement. All terms used in this Agreement have the meaning ascribed to them in the Montreal Protocol unless otherwise defined herein.

## APPENDICES

### APPENDIX 1-A: THE SUBSTANCES

Substance	Annex	Group	Starting point for aggregate reduction in consumption (ODP tonnes)
HCFC-22	C	I	62.0
HCFC-141b	C	I	16.0
Total			78.0

## APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars	2014	2015	2016	2017	2018	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substance (ODP tonnes)	78.00	70.20	70.20	70.20	70.20	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substance (ODP tonnes)	(*)	70.20	70.20	70.20	66.30	n/a
2.1	Lead IA (UNIDO) agreed funding (US\$)	123,700	428,180	130,000	0	20,000	701,880
2.2	Support costs for Lead IA (US \$)	8,659	29,973	9,100	0	1,400	49,132
2.3	Cooperating IA (UNEP) agreed funding (US \$)	43,500	48,500	90,000	0	20,000	202,000
2.4	Support costs for Cooperating IA (US \$)	5,655	6,305	11,700	0	2,600	26,260
3.1	Total agreed funding (US \$)	167,200	476,680	220,000	0	40,000	903,880
3.2	Total support costs (US \$)	14,314	36,278	20,800	0	4,000	75,392
3.3	Total agreed costs (US \$)	181,514	512,958	240,800	0	44,000	979,272
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this agreement (ODP tonnes)						4.03
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 of HCFC-22 (ODP tonnes)						57.97
4.2.1	Total phase-out of HCFC-141b to be achieved under this agreement (ODP tonnes)						16.00
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 of HCFC-141b (ODP tonnes)						0.00

(\*) The Government of the Democratic People's Republic of Korea estimated a consumption of 80.00 ODP tonnes, which is above the HCFC baseline for compliance.

## APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

1. Funding for the future tranches will be considered for approval at the first meeting of the year specified in Appendix 2-A.

## APPENDIX 4-A: FORMAT OF IMPLEMENTATION REPORTS AND PLANS

1. The submission of the Implementation Report and Plan for each tranche request will consist of five parts:

- (a) A narrative report, with data provided by calendar year, regarding the progress since the year prior to the previous report, reflecting the situation of the Country in regard to phase out of the Substances, how the different activities contribute to it, and how they relate to each other. The report should include ODS phase-out as a direct result from the implementation of activities, by substance, and the alternative technology used and the related phase-in of alternatives, to allow the Secretariat to provide to the Executive Committee information about the resulting change in climate relevant emissions. The report should further highlight successes, experiences, and challenges related to the different activities included in the Plan, reflecting any changes in the circumstances in the Country, and providing other relevant information. The report should also include information on and justification for any changes vis-à-vis the previously submitted Annual Implementation Plan(s), such as delays, uses of the flexibility for reallocation of funds during implementation of a tranche, as provided for in paragraph 7 of this Agreement, or other changes. The narrative report will cover all relevant years specified

in sub-paragraph 5(a) of the Agreement and can in addition also include information on activities in the current year;

- (b) A verification report of the HPMP results and the consumption of the Substances mentioned in Appendix 1-A, as per sub-paragraph 5(b) of the Agreement. If not decided otherwise by the Executive Committee, such a verification has to be provided together with each tranche request and will have to provide verification of the consumption for all relevant years as specified in sub-paragraph 5(a) of the Agreement for which a verification report has not yet been acknowledged by the Committee;
- (c) A written description of the activities to be undertaken until and including the year of the planned submission of the next tranche request, highlighting the interdependence of the activities, and taking into account experiences made and progress achieved in the implementation of earlier tranches; the data in the plan will be provided by calendar year. The description should also include a reference to the overall plan and progress achieved, as well as any possible changes to the overall plan that are foreseen. The description should cover the years specified in sub-paragraph 5(d) of the Agreement. The description should also specify and explain in detail such changes to the overall plan. This description of future activities can be submitted as a part of the same document as the narrative report under sub-paragraph (b) above;
- (d) A set of quantitative information for all annual implementation reports and annual implementation plans, submitted through an online database. This quantitative information, to be submitted by calendar year with each tranche request, will be amending the narratives and description for the report (see sub-paragraph 1(a) above) and the plan (see sub-paragraph 1(c) above), the annual implementation plan and any changes to the overall plan, and will cover the same time periods and activities; and
- (e) An Executive Summary of about five paragraphs, summarizing the information of the above sub-paragraphs 1(a) to 1(d).

## **APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES**

1. The HPMP implementation will be performed with the assistance from the Lead IA and the Cooperating IA. The Project Management Unit (PMU) will be responsible for the coordination and the implementation of the HPMP activities. The PMU role will include: the preparation of the annual implementation plan; the implementation of the HPMP activities; the monitoring and coordination of the activities related to the refrigeration equipment production factory, refrigerant factory and foam factories; the implementation of the annual audit; the preparation of the annual progress report; and the support to be provided to Lead IA and the Cooperating IA for the verification of the HCFC consumption.

2. The HPMP will be implemented in line with UN Security Council Resolutions 1695, 1718, 1874, 2087 and 2094. The recommendations by the UN review panel on procedural changes will be taken into account for the transfer of equipment and technology to the country. The established procedures of the UN agencies in the country, in particular the modified UNDP procurement procedures for the supply of equipment and services, will be used to implement the HPMP activities under the responsibility of the Lead IA. The HPMP activities under the responsibility of the Cooperating IA, also in charge of the institutional strengthening (IS) project will be implemented using the methods of disbursement, organizational structures and procedural arrangements applied to the IS project.

3. The Country agrees with unhindered access to project sites by the Lead and Cooperating Agencies to the extent necessary for the implementation, monitoring and oversight of the project.

#### **APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY**

1. The Lead IA will be responsible for a range of activities, including at least the following:
  - (a) Ensuring performance and financial verification in accordance with this Agreement and with its specific internal procedures and requirements as set out in the Country's HPMP;
  - (b) Assisting the Country in preparation of the Implementation Plans and subsequent reports as per Appendix 4-A;
  - (c) Providing independent verification to the Executive Committee that the Targets have been met and associated annual activities have been completed as indicated in the Implementation Plan consistent with Appendix 4-A;
  - (d) Ensuring that the experiences and progress is reflected in updates of the overall plan and in future annual implementation plans consistent with sub-paragraphs 1(c) and 1(d) of Appendix 4-A;
  - (e) Fulfilling the reporting requirements for the annual implementation reports, annual implementation plans and the overall plan as specified in Appendix 4-A for submission to the Executive Committee. The reporting requirements include the reporting about activities undertaken by the Cooperating IA;
  - (f) Ensuring that appropriate independent technical experts carry out the technical reviews;
  - (g) Carrying out required supervision missions;
  - (h) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Implementation Plan and accurate data reporting;
  - (i) Co-ordinating the activities of the Cooperating IA, and ensuring appropriate sequence of activities;
  - (j) In case of reductions in funding for failure to comply in accordance with paragraph 11 of the Agreement, to determine, in consultation with the Country and the Cooperating IA, the allocation of the reductions to the different budget items and to the funding of each implementing or bilateral agency involved;
  - (k) Ensuring that disbursements made to the Country are based on the use of the indicators; and
  - (l) Providing assistance with policy, management and technical support when required.
2. After consultation with the Country and taking into account any views expressed, the Lead IA will select and mandate an independent entity to carry out the verification of the HPMP results and the consumption of the Substances mentioned in Appendix 1-A, as per sub-paragraph 5(b) of the Agreement and sub-paragraph 1(b) of Appendix 4-A.

#### **APPENDIX 6-B: ROLE OF THE COOPERATING IMPLEMENTING AGENCY**

1. The Cooperating IA will be responsible for a range of activities. These activities are specified in the overall plan, including at least the following:

- (a) Providing assistance for policy development when required;
- (b) Assisting the Country in the implementation and assessment of the activities funded by the Cooperating IA, and refer to the Lead IA to ensure a co-ordinated sequence in the activities;
- (c) Providing reports to the Lead IA on these activities, for inclusion in the consolidated reports as per Appendix 4-A;
- (d) Ensuring that disbursements made to the Country are based on the use of the indicators;
- (e) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Implementation Plan and accurate data reporting; and
- (f) Providing assistance with policy, management and technical support when required.

#### **APPENDIX 7-A: REDUCTIONS IN FUNDING FOR FAILURE TO COMPLY**

1. In accordance with paragraph 11 of the Agreement, the amount of funding provided may be reduced by US \$105 per ODP kg of consumption beyond the level defined in row 1.2 of Appendix 2-A for each year in which the target specified in row 1.2 of Appendix 2-A has not been met.