Addendum

PROJECT PROPOSALS: D.P.R. KOREA

This addendum is being issued to:

- **Add** the following paragraphs pursuant to paragraphs 20 and 34:

A proposal for the CFC in the refrigeration sector in D.P.R. Korea

20 bis. The refrigeration sector in D.P.R. Korea has characteristics which are unique in comparison to any other Article 5 country:

(a) Due to natural disasters and to a reduction in trade with many countries, the CFC consumption decreased from 496.5 ODP tonnes in 1995 to 65 ODP tonnes in 2000. D.P.R. Korea has reported that in 2002, CFC consumption increased to 299 ODP tonnes;

(b) Currently, all CFC requirements are met through local production; however, the production will cease in 2003;

(c) About 92 per cent of refrigeration appliances in the country are domestic refrigerators (where CFC recovery is practically nil); the remaining equipment is mainly small commercial and industrial refrigeration systems and MAC units;

(d) The Research Centre for Environment Protection has developed a new refrigerant produced from propylene as a CFC-12 replacement for domestic refrigerators; however, this refrigerant has not yet been proven to be a commercially viable alternative; and
In order to achieve the 50 per cent Montreal Protocol reduction target for CFCs in 2005 (i.e., 220.8 ODP tonnes), the Government needs to phase out 70.9 ODP tonnes. Of this amount, 56 ODP tonnes are used in the refrigeration manufacturing sub-sector (for which an investment project has been submitted to the 40th Meeting of the Executive Committee).

Notwithstanding the uniqueness of the refrigeration sector in D.P.R. Korea, UNEP and UNIDO submitted what amounts to a standard RMP proposal (assistance for the development of regulations/legislation; training programmes for refrigeration technicians and customs officers; and provision for recovery and recycling machines).

Based on the above observations and after further discussion, agreement has been reached with UNEP and UNIDO on a revised, two-phase proposal for phase-out of CFCs in D.P.R. Korea. In Phase I (2003-2006), the following activities are proposed:

(a) Implementation, in the shortest time possible, of the investment project for the conversion of domestic and commercial refrigerators and compressors to non-ODS refrigerant, which would result in the phase out of 56 ODP tonnes (US $1,365,011);

(b) Assistance for development of a licensing system and training of customs officers (US $50,000);

(c) Training of refrigeration service technicians in good servicing practices, including leak detection and repair and use of alternative CFC refrigerants (US $70,000);

(d) Provision of basic tools for the registered service workshops, including vacuum pumps, leak detectors, scales, service hoses, recovery bags and small cylinders, to reduce the amount of CFC used during servicing operations (US $100,000); and

(e) Monitoring the sub-projects in the RMP (US $10,000).

At the end of Phase I (2006), the Government of D.P.R. Korea will submit a comprehensive report on the activities undertaken and results achieved, including the amount of CFC permanently phased out. The report will be reviewed by the Secretariat before submission to the Executive Committee. The Government of D.P.R. Korea could then be advised through the relevant implementing agency to prepare and submit Phase II of the project to achieve the complete CFC phase out in the servicing sector. The activities in Phase II would be identified at that time, as those best suited to the circumstances and needs of the country.

Refrigeration manufacturing sub-sector

UNIDO provided additional information related to consumption of CFC-12, CFC-11, polyol and isocyanate used in production of refrigeration equipment by the enterprise in justifying the reported production level.
34 ter. The Secretariat and UNIDO agreed on the cost of conversion of refrigerator and compressor manufacturing at the 5th October Electronics and Automation Complex to be US $1,365,011. UNIDO requested this cost to be funded according to the following funding and ODS phase out schedule shown in the table below. However, the Secretariat has agreed on the cost of the project, but has reservations about the implementation time since the phase out of a total of 70.9 ODP tonnes is needed by 1 January 2005 to meet the 2005 reduction target. The issue is still under discussion with UNIDO.

<table>
<thead>
<tr>
<th>Year</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
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<tbody>
<tr>
<td>ODS phase out (ODP tonnes)</td>
<td>0</td>
<td>6</td>
<td>18</td>
<td>32</td>
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<tr>
<td>Project funding (US $)</td>
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<td>500,000</td>
<td>425,511</td>
<td>0</td>
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<tr>
<td>Agency Support cost (US $)</td>
<td>37,500</td>
<td>37,500</td>
<td>31,913</td>
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</tr>
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</table>

**RECOMMENDATIONS**

34 quar. The Executive Committee may wish to consider the above project proposals for D.P.R. Korea on the basis of the above comments. Approval would need to be on the basis that D.P.R. Korea would achieve at least the 2005 Montreal Protocol CFC reduction target without further assistance from the Fund.