PROJECT PROPOSAL: SUDAN

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

Phase-out

- National CFC/CTC phase-out plan (second tranche)  UNIDO
PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS
SUDAN

PROJECT TITLE
National CFC/CTC phase-out plan (second tranche)

BILATERAL/IMPLEMENTING AGENCY
UNIDO

NATIONAL CO-ORDINATING AGENCY:
Ministry of Industry

LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT

A:  ARTICLE-7 DATA (ODP TONNES, 2005, AS OF SEPTEMBER 2006)

| CFC Consumption remaining eligible for funding (ODP tonnes) | 0 |

B:  COUNTRY PROGRAMME SECTORAL DATA (ODP TONNES, 2005, AS OF SEPTEMBER 2006)

<table>
<thead>
<tr>
<th>ODS</th>
<th>Aerosol</th>
<th>Foam</th>
<th>Ref. Servicing</th>
<th>ODS</th>
<th>Solvents</th>
<th>Process agent</th>
<th>Fumigant</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFC-12</td>
<td>30.00</td>
<td>155.00</td>
<td>0.33</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>CTC</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
</tr>
</tbody>
</table>

CURRENT YEAR BUSINESS PLAN:
Total funding US $237,000: total phase-out 41.9 ODP tonnes.

PROJECT DATA

<table>
<thead>
<tr>
<th>CFC (ODP tonnes)</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>Total</th>
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<tbody>
<tr>
<td>Montreal Protocol limits</td>
<td>456.8</td>
<td>228.4</td>
<td>228.4</td>
<td>68.52</td>
<td>68.52</td>
<td>68.52</td>
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<td>200.0</td>
<td>130.0</td>
<td>65.0</td>
<td>45.0</td>
<td>25.0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
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<td>0</td>
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<tr>
<td>Annual phase-out newly addressed</td>
<td>0</td>
<td>16.0</td>
<td>70.0</td>
<td>65.0</td>
<td>20.0</td>
<td>20.0</td>
<td>25.0</td>
<td>216.0</td>
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<tr>
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<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CTC (ODP tonnes)</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montreal Protocol limits</td>
<td>n.a.</td>
<td>0.33</td>
<td>0.33</td>
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<td>0.33</td>
<td>0.33</td>
<td>0</td>
<td>n.a.</td>
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<tr>
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<td>0.33</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>n.a.</td>
</tr>
<tr>
<td>Annual phase-out from ongoing projects</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<td>Annual phase-out newly addressed</td>
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<td>0.77</td>
<td>0.33</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.1</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

TOTAL ODS CONSUMPTION TO BE PHASED OUT
Total ODS consumption to be phased-in (HCFCs)
0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Final project costs (US $):
Funding for UNIDO 499,480 0 220,000 220,000 200,000 0 0 1,139,480
Total project funding 499,480 0 220,000 220,000 200,000 0 0 1,139,480
Final support costs (US $):
Support cost for UNIDO 37,461 0 16,500 16,500 15,000 0 0 85,461
Total support costs 37,461 0 16,500 16,500 15,000 0 0 85,461

TOTAL COST TO MULTILATERAL FUND (US $)
536,941 0 236,500 236,500 215,000 0 0 1,224,941

Final project cost effectiveness (US $/kg) 5.19

FUNDING REQUEST:
Approval of funding for the second tranche (2006) as indicated above.

SECRETARIAT’S RECOMMENDATIONS
Blanket approval
PROJECT DESCRIPTION

1. On behalf of Government of Sudan, UNIDO has submitted a request amounting to US $220,000 plus agency support costs of US $16,500 for the second tranche of the National CFC and CTC phase-out plan. UNIDO has also submitted a report prepared by a national consulting company describing the verification of reported 2005 CFC and CTC consumption, together with the 2005 progress report and 2006 annual implementation programme.

Background

2. The National CFC and CTC Phase-out Plan for Sudan (NPP) was approved at the 44th Meeting of the Executive Committee in December 2004. The Government of Sudan was provided with financial support of US $1,139,480 plus agency support costs to completely phase out its CFC and CTC consumption in accordance with annual targets set out in the Agreement between the Government and the Executive Committee. The NPP is to phase out the remaining consumption of 216 ODP tonnes of CFCs and 1.1 ODP tonnes of CTC over the 2004–2010 period. To achieve this target, a series of investment, non-investment, technical assistance, and capacity-building activities are to be carried out.

Verification report

3. As per the Agreement, UNIDO submitted a verification report on the national consumption targets set in the NPP for Sudan. The report was prepared by a local consultant hired by UNIDO. According to the verification report, the consultant examined data provided to him by the Ministry of Industry in respect of import licences issued to 12 major importers. The list of importing companies with respective ODS quantities to be imported is attached to the verification report. The auditor verified the import quotas issued to importers with the factual import data made available to him through customs. The total 2005 consumption is equal to 185 ODP tonnes of CFC-12 and 0.33 ODP tonnes of CTC, which is lower than the 2005 consumption targets established in the Agreement. The auditor also reviewed national legislation policies and procedures on ODS imports, examined the system for collecting data on ODS consumption, and formulated conclusions and recommendations.

Progress report

4. The progress report presents major achievements in the implementation of phase-out activities for the January 2005 – August 2006 period. The ODS consumption and reduction targets established in the Agreement have been met and CFC and CTC consumption is below the 2005 annual consumption limits. The following activities have been accomplished:

   (a) Steps by the NOU to help upgrade, specify and improve enactment of already existing legislation to meet all the necessary requirements of the Montreal Protocol and provide a solid basis for the control of ODS imports and consumption;

   (b) Establishment of a project management and monitoring office in November 2005 to track CFC and CTC consumption, inspect converted companies, oversee the licensing system and verify data reporting by recycling centres and service workshops;
(c) Extension of the customs officer training course under the RMP to cover another 40 customs officers;
(d) Establishment of five new training centres for refrigeration servicing technicians, with a total of 56 participants trained as trainers;
(e) Training of 300 refrigeration servicing technicians under the NPP, with another 100 scheduled to undergo training by the end of 2006;
(f) Development of codes of good practice in refrigeration servicing;
(g) Upgrading the national recovery and recycling scheme by developing specifications for recovery, recycling and servicing equipment to be procured and distributed to 5 recycling centres and 300 servicing workshops selected by the NOU;
(h) Identification of 30 ODP tonnes of CFC-12 consumption in the aerosol sector, to be converted to hydrocarbon technology in 2006;
(i) Organization of two technical assistance workshops to phase out 0.33 tonnes of CTC in 2006; and
(j) Deployment of a public awareness campaign, starting in the first quarter of 2005.

5. Since the introduction of the licensing system, the customs authorities in Sudan have seized several shipments of mislabelled refrigerants. Thousands of cylinders labelled as HFC-134a have been checked using identifiers and found to be CFC-12 or a mixture of HFC-134a, CFC-12, HCFC-22 and hydrocarbons. Most of the cylinders were returned to countries of export. About 1000 cylinders are still stored in warehouses.

6. The actual expenditures of the first tranche amounting to US $499,480 constitute US $275,871 or 55.2% of the total allocations. Additionally, US $90,000 has been obligated for procurement of equipment.

7. The progress report contains a table with an assessment of implementation of the 2005 annual implementation programme. The implementation rate of planned activities is satisfactory.

2006 Annual Implementation Programme

8. The 2006 annual implementation programme provides information on ODS consumption and reduction targets as established in the Agreement, describes industry actions and lists the following technical assistance activities:

   (a) Continuation of the operational mechanism for managing and monitoring the NPP;
   (b) Continuation of the activity at the coordination office;
   (c) Supplementary customs officers training;
   (d) Ensuring the establishment of an additional 5 training centres;
   (e) Supplementary technician training (phase two);
   (f) Continued review of supporting legislation;
   (g) Public Awareness;
   (h) Improvement of legislation on the licensing system for service technicians.
9. The proposed 2006 budget is presented in the following table.

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>Planned Expenditures (US $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project management</td>
<td>42,000</td>
</tr>
<tr>
<td>Technical assistance to phase-out CTC consumption</td>
<td>4,000</td>
</tr>
<tr>
<td>Technical assistance in CFC consumption sectors</td>
<td>4,000</td>
</tr>
<tr>
<td>Refrigeration servicing sector program</td>
<td>170,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>220,000</strong></td>
</tr>
</tbody>
</table>

SECRETARIAT’S COMMENTS AND RECOMMENDATIONS

COMMENTS

10. The Secretariat noted that the recovery and recycling (R&R) scheme in Sudan involves establishing 5 recycling centres and providing 250 refrigerant recovery units. The Secretariat also noted that the procurement of new R&R equipment has been made by UNIDO in one batch. New recovery and recycling equipment will be complementary to the existing 10 recycling centres and 250 recovery machines purchased and installed by UNIDO under the RMP approved at the 28th Meeting. The 2005 progress report does not indicate whether a preliminary analysis has been undertaken by UNIDO and the NOU in order to assess the effectiveness and sustainability of recovery/recycling operations in Sudan on the basis of gained experience through the implementation of the R&R components under the RMP. One of the recommendations made by the RMP evaluation team in Sudan particularly emphasized that recovery and recycling of CFCs might be a viable option for controlling and reducing consumption in the servicing sector in Sudan, if the stakeholders concerned succeed in finding a market-oriented solution which ensures self-sustaining refrigerant recycling operations.

11. The Secretariat sought clarification from UNIDO referring to provisions of decisions 41/100 and 49/6, which urged Article 5 countries and implementing agencies to be more selective in providing new recovery and, in particular, recycling equipment _inter alia_ by:

   (a) Estimating the likely demand for R&R equipment, delivering equipment to the country only against firm orders and with significant cost participation by the workshops to purchase equipment provided; and

   (b) Procuring, delivering and distributing equipment in several stages, after reviewing the utilization of equipment delivered and verifying further demand.

12. UNIDO responded that the high usage rate of recovery machines by beneficiary workshops has been confirmed. Almost 90% of recovery machines are currently in use. Data provided to the NOU by the refrigeration association and industry association show that the amount of recycled CFC-12 was 2.5 tonnes, 10 tonnes, 20 tonnes and 30 tonnes in 2000, 2001, 2002 and 2003 respectively. The success of R&R operations has also been confirmed by a sustainable decrease in the demand for virgin CFC refrigerants. New R&R equipment will be distributed among refrigeration servicing workshops located in geographic areas that were not covered earlier. The beneficiaries will be covering the cost of consumables in running recovery and recycling operations.
13. The Secretariat queried UNIDO regarding the plans for converting the only remaining aerosol company in Sudan to hydrocarbon technology. UNIDO responded that the conversion programme is still under discussion. However, the NOU informed the company that no CFC could be imported for it from 2006 onwards.

14. The Secretariat indicated to UNIDO that the 2006 annual implementation programme does not address the requirements to reduce CFC consumption in Sudan to 65 ODP tonnes in 2007 and requested additional information on measures to ensure compliance with the 2007 CFC consumption target. UNIDO provided projections of 2006 CFC consumption in Sudan and anticipated reductions associated with improved servicing practices and R&R operations, including coverage of new geographical regions. At the Secretariat’s request, UNIDO provided a detailed breakdown of 2005 expenditures and of the 2006-2007 budget, including unspent balances from 2005 to be carried over into 2006-2007.

15. The Secretariat noted the need to improve and enact ODS legislation in Sudan in order to meet all of the necessary requirements of the Montreal Protocol and to constitute a solid basis for the control of ODS imports and consumption. It also noted that the NOU requires additional assistance. UNIDO agreed to strengthen activities on the improvement and enactment of ODS legislation and allocated additional funding in the budget for this purpose.

RECOMMENDATIONS

16. The Fund Secretariat recommends blanket approval of the second tranche of the project, with associated support costs, at the funding levels shown in the table below, on the understanding that UNIDO will provide the necessary assistance to the National Ozone Office to improve and enact ODS legislation in Sudan, and report to the Executive Committee in 2007 when requesting for the third funding tranche:

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Project Funding (US$)</th>
<th>Support Cost (US$)</th>
<th>Implementing Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) National CFC/CTC phase-out plan (second tranche)</td>
<td>220,000</td>
<td>16,500</td>
<td>UNIDO</td>
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</table>