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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Thirty-seventh Meeting  
Montreal, 17-19 July 2002

**COUNTRY PROGRAMME: KUWAIT**

This document consists of:

- Country Programme Evaluation Sheet (prepared by the Fund Secretariat)
- Comments and Recommendations of the Fund Secretariat
- Transmittal Letter from the Government of Kuwait
- Country Programme Cover Sheet
- Country Programme (Executive Summary)

## KUWAIT COUNTRY PROGRAMME EVALUATION SHEET

### *Status of ratification of the Vienna Convention and the Montreal Protocol*

|                             | Signature | Ratification Entry into force |           |
|-----------------------------|-----------|-------------------------------|-----------|
| Vienna Convention (1985)    |           | 23-Nov-92                     | 21-Feb-93 |
| Montreal Protocol (1987)    |           | 23-Nov-92                     | 21-Feb-93 |
| London Amendment (1990)     |           | 22-Jul-94                     | 20-Oct-94 |
| Copenhagen Amendment (1992) |           | 22-Jul-94                     | 20-Oct-94 |
| Montreal Amendment (1997)   |           |                               |           |
| Beijing Amendment (1999)    |           |                               |           |

**Production of controlled substances:** No controlled substances produced

**Consumption of controlled substances (2000)** 423.0 metric tonnes  
420.0 weighted tonnes (ODP)

| (tonnes) | CFC-11 | CFC-12 | CFC-113 | CFC-114 | CFC-115 | TOTAL | Halon121 | Halon130 | TOTAL | CTC | MCF | TOTAL | Me-Br |
|----------|--------|--------|---------|---------|---------|-------|----------|----------|-------|-----|-----|-------|-------|
| ODS      | 35.0   | 380.0  | 0.3     |         | 7.7     | 423.0 |          |          |       |     |     |       |       |
| ODP      | 35.0   | 380.0  | 0.2     |         | 4.6     | 419.9 |          |          |       |     |     |       |       |

**Distribution of ODP by substance:** CFC 100.0% Halon CTC and MCF MB

**Distribution of ODP by sector:** Aerosol Foam Halon Refrigeration Solvent Other MB

Consumption (ODP tonnes): 0.0 0.0 0.0 420.0 0.0 0.0 0.0

Percent of total: 100.0%

**MONTREAL PROTOCOL (ODP tonnes)** CFCs Halons Methyl bromide

Baseline consumption 480.4 3.0

Allowable level of consumption in 2005 240.2 1.5

Source: UNEP/OzL.Pro.11/6 (5 October 1999)

### Country Programme

**Duration of country programme:** 4 years (2002-2006)

**ODS phase out target:** Complete phase out of CFCs by end-2007

**Phase out priority area:** Refrigeration sector

**Cost of activities in country programme:** \$967,950

**Strategy:**

*The Government is committed to undertake all necessary steps for achieving the complete phase out in the consumption of ODS by 2010. The Government is proposing to establish an Ozone Unit that will act as the focal point for monitoring and controlling ODS consumption and managing phase-out activities and projects; implement additional policy measures to control the manufacturing and importing of any ODSs and ODS-based equipment; prohibit the establishment of new enterprises consuming, producing and/or assembling equipment and products using ODSs; establish a new test unit within Environmental Public Authority's Analytical Laboratory to perform necessary tests on ODS containing products to monitor and control illegal trades; and implement relevant projects, including the RMP.*

## COMMENTS AND RECOMMENDATIONS OF THE FUND SECRETARIAT

### COMMENTS

1. According to the ODS consumption data reported by the Ozone Secretariat, in 1986 Kuwait had a total consumption of 2,528 ODP tonnes of CFCs, and 1,540 ODP tonnes of halons. By 2000, the total CFC consumption has been calculated at 420 ODP tonnes, which represents the majority of ODS consumed in the country (in 1999, 3 tonnes of methyl bromide (MB) were imported into the country). In 1995, 9 ODP tonnes of halons were imported into Kuwait; since then halon imports are nil.
2. The level of ODS consumption in the country was estimated on the basis of a survey conducted during the preparation of the country programme. The total consumption of CFCs is used for servicing domestic refrigerators (41 ODP tonnes), industrial and commercial refrigeration equipment (113.1 ODP tonnes), MAC units (112 ODP tonnes) and chillers (147 ODP tonnes).
3. Two enterprises which manufacture refrigerators and water coolers (Al-Hasawi Refrigerators and Water Coolers Factory and Al-Ghanim Company) have already converted their processes to non-ODS technology. One additional manufacturer, Golden Sawrd, is still producing CFC-12 based water coolers (about 1,000 units per year) with a total annual consumption of 2.5 ODP tonnes of CFC-12 per year.
4. During the 1980s and early 1990s, the foam industry was the major CFC consumer in the country, with a consumption over 500 tonnes of CFCs. All the enterprises have already been converted to non-CFC processes (CFCs were replaced by methylene chloride in flexible foam, by HCFC-141b in rigid foam, and by a mixture of HCFC-22/HCFC-142b CFCs in extruded polystyrene foam).
5. In 1995, about 290 metric tonnes of methyl chloroform were used in refineries as a solvent. Since 1996 the main consumers switched to an alternative solvent; therefore, this chemical has not been imported into the country. Also, in 1995 the only aerosol manufacturer in the country (Al-Sharhan Co) replaced CFC-12 propellant with butane in its process.
6. The use of halon-1211 in portable fire extinguishers have been completely replaced by CO<sub>2</sub> and powder extinguishers. Regarding halon-1301, many owners of the systems have already converted to non-ODS alternatives (such as FM200); however, there are still a number of halon-1301 systems in operation. The Government of Kuwait has proposed a halon management plan through which, import and export of halons are banned; installation of new halon systems is prohibited; preventive maintenance of existing systems to prevent emissions is proposed; modifications to existing systems should be verified and approved by the Kuwait Fire Department as well as non-halon alternatives; halons could be recycled through a licensed company. Also, a halon national bank, and participation in the regional halon bank (operated with the assistance from the Government of Germany) have been proposed.
7. A quota system for importing ODS has been established and an annual rate of reduction of 10 per cent from the amount imported in 2000 (i.e., 420 ODP tonnes) is being applied, covering all ODS consuming sectors. Only licensed companies (currently 13 companies) are

allowed to import ODS. Each licensed company submits a request for ODS import before the beginning of the year and receives the approved quota as determined by the Environmental Public Authority (EPA).

8. The country programme includes a project for the establishment of a National Ozone Unit within the Environment Public Authority (institutional strengthening). The Government of Kuwait is requesting a total of US \$121,520 for the implementation of this project. The Fund Secretariat's comments and recommendations on this request are presented under UNEP's work programme amendments (UNEP/OzL.Pro/ExCom/37/26).

9. The country programme also includes a refrigerant management plan (RMP) project proposal. The Government of Kuwait is requesting a total of US \$624,586 for the implementation of this project. The Fund Secretariat's comments and recommendations on this request are presented in document UNEP/OzL.Pro/ExCom/37/45.

## **RECOMMENDATIONS**

The Fund Secretariat recommends as follows:

10. To approve the Kuwait Country Programme. Approval of the Country Programme does not denote approval of the projects identified therein or their funding levels.

11. To request the Government of Kuwait to present information annually to the Executive Committee on progress being made in the implementation of the country programme, in accordance with the decision of the Executive Committee on implementation of country programmes (UNEP/OzL.Pro/ExCom/10/40, para 135). Using the approved format, the initial report, covering the period 1 August 2002 to 31 December 2003, should be submitted to the Fund Secretariat no later than 1 May 2004.



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ENVIRONMENT PUBLIC AUTHORITY  
State of Kuwait - دولة الكويت  
مكتب نائب المدير العام

الهيئة العامة للبيئة  
الرجوع  
1909 / EPA  
5 / 6 / 2002  
الرقم:  
التاريخ:

To,

The Chief Office

Secretariat Of The Multilateral Fund for The Montreal Protocol  
1800 McGill College  
27<sup>th</sup> Floor  
Montreal ,Canada H3A 3J6

Subject : CP / RMP for State OF Kuwait  
2002-2010

Dear Sir,

I have the honor to submit herewith the Country Program and Refrigerant Management Plan of State of Kuwait for the consideration and approval of the Multilateral Fund for the Implementation of the Montreal Protocol.

Kuwait adhered to the Protocol on the 23<sup>rd</sup> November 1992 and became a Party on 21<sup>st</sup> February 1993. It is classified as operating under paragraph 1 of Article 5 of the Protocol.

I would like to place on record the appreciation of the Government of Kuwait for the assistance extended to it through the UNEP DTIE OzonAction Programme for the preparation of the Country Programme which started during May 2001. I am pleased to say that the Government is committed to the implementation of the actions contained in this National Strategy.

I further assert that it is the Government's intention to monitor compliance with the Protocol. If necessary, further and different actions from those specified in the National Strategy will be updated and submitted to the Executive Committee of the Multilateral Fund.

We hope that the Executive Committee will approve the request for assistance made in respect of the following actions:

- A) Institutional Strengthening & capacity building -Establishing of Ozone Unit
- B) Refrigerant Management Plan
  - 1) Training Of The Customs Officers in Monitoring of ODS.
  - 2) Training Program on Good Refrigerant Management Practice.
  - 3) National Recovery And Recycling Project.



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- 4) Training on Hydrocarbons (HC) Refrigerant safe handling and HCs based equipment operation and maintenance.
- 5) Monitoring Of RMP
- C) Establishing Halon Bank, Bilateral project with GTZ .
- D) Replacement of non-CFC chillers by non-CFC alternatives .

Concerning the Refrigerant Management Plan, it is based on a full survey of CFC consumption in all sub-sectors, and presents the government phase-out strategy developed based on this information. It also includes the commitment by the government of Kuwait to set up the required regulatory framework for the effective implementation of activities to phase out the use of CFC refrigerant.

The RMP will ensure the achievement, without further requests for funding, at least the 50% reduction step in 2005 and the 85% reduction step in 2007. Imports will be restricted, if necessary to achieve compliance with the reduction steps and to support RMP activities.

The RMP contains the current and forecast future consumption in relation to the freeze, 50% cut in 2005, 85% cut in 2007 and phase-out in 2010 and calculates the size of consumption cuts in the refrigeration sector required to meet these targets.

The current and expected future consumption of all sub-sectors, including the informal sector, small and medium-sized enterprises and mobile air conditioners are included.

For each activity identified, is included the cost and means of funding, including national financing. (Except for the projects that will be developed at later stages- as mentioned in the CP/RMP).



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It includes adequate provision for monitoring and reporting on progress, a commitment to annual reporting of progress in implementing the RMP and meeting the reduction steps.

Please accept, Sir, the assurance of my highest consideration.



Yours Sincerely

Deputy General Director

Dr. Rashed Hamad Al-Rashoud  
Deputy Director General  
Environment Public Authority

## COUNTRY PROGRAMME COVER SHEET

**Country:** Kuwait  
**Date Received:** April 2002  
**Lead National Agency:** Environment Public Authority  
**Lead Implementing Agency:** UNEP, UNIDO  
**Period Covered:** 2002-2006

### 1. PHASE OUT SCHEDULE

| Substance               | 2000 Consumption, ODP tons | Planned total consumption until phase-out, ODP tons | Planned year of phase-out |
|-------------------------|----------------------------|---|---------------------------|
| <b>Annex A, Group I</b> |                            |   |                           |
| CFC-11                  | 35                         | 158   | 2010                      |
| CFC-12                  | 380                        | 1714  | 2010                      |
| CFC-113                 | 0.24                       | 1   | 2007                      |
| CFC-114                 | 0                          | 0   |                           |
| CFC-115 (as R-502)      | 4.6                        | 21  | 2010                      |
| <b>Total</b>            | <b>419.84</b>              | <b>1894</b>   | <b>2010</b>               |
| <b>Annex E</b>          |                            |   |                           |
| Methyl Bromide          | 3*                         | 0   | 2005                      |
| <b>TOTAL</b>            | <b>421.84</b>              | <b>1894</b>   |                           |

\* 1999 import being used throughout 2000

### 2. THE ACTION PLAN

| Description  | Year        |
|--|-------------|
| 1. Establish National Ozone Unit (Office) to act as focal point for monitoring and controlling consumption and managing phase-out activities and projects.   | 2002        |
| 2. Raise public awareness on ozone layer protection.   | 2002 - 2006 |
| 3. Develop and implement control measures such as : Continuing the update of the existing EPA permission requirements system for manufacturing and importing of any probable ODS containing products or ODS using equipment. | 2002 - 2005 |
| 4. Continuing the implementation of existing ODS licensing and import quotas system. Prohibit the establishment of new enterprises consuming, Producing and/or assembling equipment and products using ODS.                  | 2002 –2006  |
| 5. Train Custom Department Officers to control ODS.  | 2002 – 2003 |
| 6. Establish a National Halon Bank and join the Regional Halon Banks after the approval of Country Program.  | 2003 -2004  |
| 7. Establish new test unit within EPA Analytical Laboratory to perform necessary tests (e.g. foam) on ODS containing products to monitor and control illegal trades.   | 2002 –2003  |
| 8. Implement Refrigerant Management action plan.   | 2002 – 2006 |



### 3. PROJECTS FOR FUNDING

| Project                            |   | Year   | Implementing agency             | Total Cost (USD) | Requested from MF (USD) |
|------------------------------------|---|--|---------------------------------|------------------|-------------------------|
| <b>Institutional Strengthening</b> |   | 2002-2005                                    | UNEP                            | 129,920          | 121,520                 |
| <b>Refrigerant Management Plan</b> | Training of Customs Officers in Monitoring of ODS   | 2003-2005                                    | UNEP                            | 53,445           | 53,445                  |
|                                    | Training Programme on Good Refrigerant Management Practices and Hydrocarbon (HC) Refrigerants safe handling | 2003-2005                                    | UNEP                            | 101,325          | 95,325                  |
|                                    | National Recovery and Recycling Project   | 2003-2006                                    | UNIDO                           | 448,816          | 448,816                 |
|                                    | Monitoring of RMP activities.   | 2003-2006                                    | UNEP                            | 27,000           | 27,000                  |
|                                    | Establishment of Halon National Bank  | 2003-2004                                    | Assistance through GTZ-Germany  |                  |                         |
|                                    | Transition to the non-CFC alternatives in water-coolers manufacturing sector                                | 2002-2003                                    | No external assistance required |                  |                         |
|                                    | Replacement of CFC-based chillers by non-CFC alternatives   | The project to be developed at a later stage |                                 |                  |                         |
| <i>Total for RMP</i>               |   |  |                                 | 630,586          | 624,586                 |
| <b>TOTAL</b>                       |   |  |                                 | 760,506          | 746,106                 |

## EXECUTIVE SUMMARY

1. The State of Kuwait is a member of the Gulf Cooperation Council with an area of approximately 17818 square kilometres. According to the records of The Public Authority Of Civil Information, the estimated population is 2,700,000 in the year 2000. The population expected average growth rate for the next ten years will be from 3 to 5%. Kuwait occupies the north western corner of the Arabian Gulf, between latitudes 28-30 and 30-06 to the north of the Equator and between longitudes 46-30 and 48-30 to the east of Greenwich determines. The weather of the country is typical of the desert geographical region. Summer season extends for six months with daily mean maximum temperature ranges between 42°C and 46°C, it some times exceeds 50°C. Due to extended summer season and high temperature and humidity, air conditioning is a necessity in Kuwait. Every public and private building, house, office and car is air-conditioned.

2. In the eighties Kuwait witnessed a turning point in the government efforts for sustainable development and environmental protection. Environment Protection Law No. 362 was issued in 1980. Environmental protection gained more importance and increased attention in Kuwait particularly after the Environmental Crisis of the burning of the oil wells, and the comprehensive devastation and the associated military operations.

3. Law No. 21 of 1995, as amended under law No. 16 of 1996, established the Environment Public Authority (EPA), granting it the necessary powers to overcome the various environmental problems.

4. Kuwait has ratified the Vienna Convention and Montreal Protocol in 1992, and London and Copenhagen amendments in 1994. While Montreal Amendment is in the process of ratification. Based on Annex-A ODS consumption of less than 0.3 kg/capita Kuwait was classified in January 1994 as a developing country operating under paragraph 1 of Article 5 of the Montreal Protocol. The base level (average of 1995-97) consumption of Annex-A Group-I is 481 ODP Tons.

5. Kuwait Country Program (CP) and Refrigeration Management Plan (RMP) has been prepared in accordance with the guidelines established by the Executive Committee. It includes a commitment by the Government to take appropriate actions to meet the phase-out requirements of the Protocol. It will also assist the Government to promote and monitor implementation of the Country Programme.

6. Kuwait does not produce any ODS. It imports all its demand from major international suppliers. All the consumed ODS are used in the field of servicing and maintenance of refrigeration and air-conditioning except for the 2.5 Tons of CFC-12 used in water coolers manufacturing.

7. Kuwait has finalized lately an overall elaborated Environmental Protection Strategy, with a special reference to phase out all ODSs. The Government is fully conscious of its obligation compliance with the Montreal Protocol and its amendments. The Government is committed to undertake all necessary steps for timely ODS phase out. It will take all the steps to implement the Action Plan outlined. Institutional strengthening and capacity building to ensure reliable data collection and monitoring of consumption of ODSs, immediate enforcement of import

restrictions, intensive awareness raising campaign and training activities are the main components of the Action Plan.

8. The Environment Public Authority (EPA) has been designated as the official institution for formulating, implementing and monitoring phase out programs of ODSs in the State of Kuwait.

9. The State of Kuwait have already reduced its consumption of Annexes A, B and E ODS from 4068 ODP tons in 1986 to 420 ODP tons in 2000, about 90% reduction achievement. Though it was not easy to reach the public, specially that Kuwait was in the state of rehabilitation after the destructive war. The remaining main ODS consuming sector is air-conditioning and Refrigeration which is so critical and essential for a very hot climate country like Kuwait.

10. As the RMP is constituting the main part of the National Phase out plan of Kuwait Country Program, the approval and the implementation of the proposed projects will be very crucial. If properly managed those projects are expected to enable the country to completely phase out ODSs of Annexes A and B of the Montreal Protocol by the year 2007. Kuwait decided also to submit its Country Programme for Phasing out Ozone Depleting Substances and is requesting funds to start the Institutional Strengthening Project. Funds for RMP Projects and Institutional Strengthening are being requested at the 37<sup>th</sup> Meeting of the Executive Committee of MF.

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