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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Thirty-fifth Meeting
Montreal, 5-7 December 2001

PROJECT PROPOSALS: BOSNIA AND HERZEGOVINA

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

Foam

- Conversion from CFC-11 to methylene chloride in the production of flexible slabstock foam at Inga Co. UNIDO

Refrigeration

- Replacement of refrigerants CFC-12 and R-502 with HFC-134a and R-404A, and foam blowing agent CFC-11 with HCFC-141b in the manufacture of commercial refrigeration equipment and cold refrigeration chambers at Soko UNIDO
- Replacement of refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane in the manufacture of commercial refrigeration equipment at Bira, Bihac UNIDO

**PROJECT EVALUATION SHEET
BOSNIA AND HERZEGOVINA**

SECTOR: Foam ODS use in sector (2000): 52.0 ODP tonnes

Sub-sector cost-effectiveness thresholds: Flexible US \$6.23/kg

Project Titles:

(a) Conversion from CFC-11 to methylene chloride in the production of flexible slabstock foam at Inga Co.

Project Data	Flexible slabstock
	Inga
Enterprise consumption (ODP tonnes)	21.00
Project impact (ODP tonnes)	21.00
Project duration (months)	30
Initial amount requested (US \$)	101,950
Final project cost (US \$):	
Incremental capital cost (a)	100,000
Contingency cost (b)	10,000
Incremental operating cost (c)	-8,050
Total project cost (a+b+c)	101,950
Local ownership (%)	100%
Export component (%)	0%
Amount requested (US \$)	101,950
Cost effectiveness (US \$/kg.)	5.50
Counterpart funding confirmed?	Yes
National coordinating agency	Ministry of Foreign Trade and Economic Relations
Implementing agency	UNIDO

Secretariat's Recommendations	
Amount recommended (US \$)	101,950
Project impact (ODP tonnes)	21.00
Cost effectiveness (US \$/kg)	5.50
Implementing agency support cost (US \$)	13,254
Total cost to Multilateral Fund (US \$)	115,204

PROJECT DESCRIPTION

Sector background*

- Latest available total ODS consumption (2000)	184.70 ODP tonnes
- Baseline consumption of Annex A Group I substances (CFCs)	Not reported ODP tonnes
- Consumption of Annex A Group I substances for the year 2000	106.60 ODP tonnes
- Baseline consumption of CFCs in foam sector	Note reported
- Consumption of CFCs in foam sector in 2000	52.00 ODP tonnes
- Funds approved for investment projects in foam sector as of end of July 2001	0
- Quantity of CFC to be phased out in approved investment projects in foam sector as of end of July 2001	Not applicable
- Quantity of CFC phased out from approved investment projects in the foam sector as of end of July 2001 (including CFC phased out in projects not yet reported as completed)	Not applicable
- Quantity of CFCs in approved ongoing investment projects in the foam sector as of end of July 2001	Not applicable
- Quantity of CFCs remaining to be phased out in the foam sector as of end of July 2001	52.00 ODP tonnes
- Quantity of CFCs to be phased out in investment projects being submitted to the 35 th ExCom (December 2001).	21.00 ODP tonnes
- Quantity of CFCs remaining to be phased out in the foam sector by the end of 2001	31.00 ODP tonnes

* Analysis based on data reported to the Fund Secretariat by the Government of Bosnia & Herzegovina on 16 October 2001. Report of the Ozone Secretariat as of 24 October 2001 shows the Bosnia & Herzegovina has not reported consumption data for 2000 and previous years.

Flexible Slabstock Foam

Inga Co.

1. This project is the first of three projects envisioned by Bosnia and Herzegovina (BiH) to be undertaken to phase out CFC use in the foam sector. Inga Co., stated to be one of the three biggest furniture manufacturers in BiH, consumed 21 tonnes CFC-11 in 2000 in the production of slabstock foam for mattresses and furniture applications using a Hyma Maxfoam. The total incremental capital cost of conversion amounts to US \$100,000 which includes US \$85,000 for equipment (methylene chloride metering system, process and cure area ventilation facility) and US \$13,000 for trials, technology transfer and training. Incremental operating savings of US \$8,050 are realized. The project is expected to be completed in 2 ½ years.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

2. The Secretariat and UNIDO concluded discussion of the project and agreed on its costs which reflect the recommended grant.

Actions on relevant sections of Decision 33/2

Government and Enterprise Commitments

3. The Secretariat received a letter of transmittal of the umbrella project from the Government of Bosnia and Herzegovina in which it stated, inter alia, consistent with Executive Committee Decision 33/2 (c) that:

- (a) The National Ozone Unit has validated the CFC-11 consumption of 21 ODP tonnes to be phased out by enterprises in the umbrella projects.
- (b) The Government of Bosnia & Herzegovina has been advised that its agreement with the project indicates a commitment to ensure that the validated phase-out figure of 21 ODP tonnes was realized and yielded a sustained reduction from its 2000 foam sector consumption of 52 ODP tonnes.

4. The Secretariat also received signed commitment note from the Manager of the Inga Co. which inter alia affirmed the commitment to completely phase out the CFC-11 and not to revert to its use after conversion, to co-operate with the implementing agency to return any unused contingency funds and funds deemed to have been used in situations of identified serious funding irregularities as well as other commitments stipulated under Decision 33/22 and other relevant rules governing project approval.

RECOMMENDATIONS

5. The Fund Secretariat recommends blanket approval of the Inga Co. project with the level of funding and associated support cost indicated below.

	Project Title	Project Funding (US\$)	Support Cost (US\$)	Implementing Agency
(a)	Conversion from CFC-11 to methylene chloride in the production of flexible slabstock foam at Inga Co.	101,950	13,254	UNIDO

**PROJECT EVALUATION SHEET
BOSNIA AND HERZEGOVINA**

SECTOR: Refrigeration ODS use in sector (2000): 123.5ODP tonnes

Sub-sector cost-effectiveness thresholds: Commercial US \$15.21/kg
Domestic US \$13.76/kg

Project Titles:

- (a) Replacement of refrigerants CFC-12 and R-502 with HFC-134a and R-404A, and foam blowing agent CFC-11 with HCFC-141b in the manufacture of commercial refrigeration equipment and cold refrigeration chambers at Soko
- (b) Replacement of refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane in the manufacture of commercial refrigeration equipment at Bira, Bihac

Project Data	Commercial	Domestic
	Soko	Bira
Enterprise consumption (ODP tonnes)	18.50	28.97
Project impact (ODP tonnes)	17.39	28.97
Project duration (months)	28	28
Initial amount requested (US \$)	262,310	536,956
Final project cost (US \$):		
Incremental capital cost (a)	139,900	489,960
Contingency cost (b)	10,792	46,996
Incremental operating cost (c)	9,015	
Total project cost (a+b+c)	159,707	536,956
Local ownership (%)	100%	100%
Export component (%)	0%	0%
Amount requested (US \$)	159,707	536,956
Cost effectiveness (US \$/kg.)	9.18	12.05
Counterpart funding confirmed?	Yes	Yes
National coordinating agency	Ministry of Foreign Trade and Economic Relations	
Implementing agency	UNIDO	

Secretariat's Recommendations		
Amount recommended (US \$)	159,707	536,956
Project impact (ODP tonnes)	17.39	28.97
Cost effectiveness (US \$/kg)	9.18	12.05
Implementing agency support cost (US \$)	20,762	69,065
Total cost to Multilateral Fund (US \$)	180,469	606,021

PROJECT DESCRIPTION

Sector Background

Latest available total ODS consumption (1998)	50.30 ODP tonnes
Baseline consumption of Annex A Group I substances (CFCs)	N.A. ODP tonnes
Consumption of Annex A Group I substances for the year 1998	45.10 ODP tonnes
Baseline consumption of CFCs in refrigeration sector	N.A. ODP tonnes
Consumption of CFCs in refrigeration sector in 2000	123.50 ODP tonnes
Funds approved for investment projects in refrigeration sector as of end of 2000	US\$0.00
Quantity of CFC to be phased out in investment projects in refrigeration sector as of end of 2000	0.00 ODP tonnes

6. The 2000 ODS consumption in the refrigeration sector in Bosnia and Herzegovina was recently confirmed by the Government of Bosnia and Herzegovina at the level of 123.5 ODP tonnes.

7. There are three major refrigeration companies in Bosnia and Herzegovina. Two projects for Bira and Soko have been submitted by UNIDO for consideration at the 35th Meeting of the Executive Committee.

Project description

8. The two enterprises consumed 40.96 ODP tonnes of CFC-11, 6.3 ODP tonnes of CFC-12 and 0.8 MT of R-502 (exclusively at Soko) in the manufacture of domestic and commercial refrigeration equipment in the year 2000. Bira has an installed capacity of 600,000 units of annual production of domestic appliances. The 2000 production was 47,175 units of 16 models. The baseline includes four cabinet and two door foaming lines operating with two high-pressure foam dispensers. Soko manufactures diversified commercial refrigeration equipment and cold refrigeration chambers and uses three low-pressure machines. The production was 1,057 units in 2000. Both enterprises operate production and portable refrigerant charging units, vacuum pumps and leak detectors in the baseline.

9. The total phase out of 47.26 ODP tonnes of CFC-11 and CFC-12 will be achieved by converting CFC-11 based technology to cyclopentane at Bira and to HCFC-141b at Soko as the foam blowing agents and from CFC-12 and R-502 to HFC-134a as the refrigerants. Under the current projects, the existing high-pressure dispensers at Bira will be retrofitted. High-pressure dispensers will replace the existing low-pressure foaming machines at Soko. Both enterprises will require provision of industrial or portable charging units, vacuum pumps and leak detectors suitable for the use of HFC-134a. The conversion to the flammable blowing agent at Bira will require safety measures. Other costs include re-design, technical assistance and training. Incremental operating costs are requested by the enterprises reflecting the higher cost of chemicals and components.

10. In accordance with decisions of the Executive Committee on the use of HCFCs, a letter of transmittal from the Government of Bosnia and Herzegovina endorsing the use of HCFC-141b by Soko is attached.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

11. The Secretariat has discussed with UNIDO the retroactivity of conversion of the refrigerant part at Bira.

12. Soko is involved in production of cold stores which are installed in-situ and equipped with compressors above 5kWt. The Secretariat and UNIDO agreed that Decision 31/45 on the guidelines for the sub-sector for assembly, installation and charging of refrigeration equipment should apply in the case of Soko. Incremental operating costs (IOC) associated with production of cold stores (refrigerant part) were recognised as ineligible for funding. The cost-effectiveness threshold of US \$7.83/kg ODP was applied to determine the level of eligible incremental costs for the foam part of the project. The budget of the project was revised accordingly

RECOMMENDATIONS

13. The Secretariat recommends blanket approval of the projects at the funding level indicated below.

	Project Title	Project Funding (US\$)	Support Cost (US\$)	Implementing Agency
(a)	Replacement of refrigerants CFC-12 and R-502 with HFC-134a and R-404A, and foam blowing agent CFC-11 with HCFC-141b in the manufacture of commercial refrigeration equipment and cold refrigeration chambers at Soko	159,707	20,762	UNIDO
(b)	Replacement of refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane in the manufacture of commercial refrigeration equipment at Bira, Bihac	536,956	69,065	UNIDO



BOSNIA AND HERZEGOVINA
Ministry of Foreign Trade and Economic Relations
National Ozone Unit

No: 05 – 5387/01

Date: 8 October 2001

**GOVERNMENT NOTE OF TRANSMITTAL OF INVESTMENT PROJECTS TO THE
EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL**

PROJECTS OF THE GOVERNMENT OF BOSNIA AND HERZEGOVINA

The Government (Council of Ministers) of Bosnia and Herzegovina requests the *United Nations Industrial Development Organization* to submit the projects, listed in the attached Table I to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol for consideration at its 35th Meeting.

Section I: ODS Consumption Data

1. The ODS consumption figure of the projects has been validated by the National Ozone Unit (NOU).
2. The consumption data have been retained in the records of the NOU for reference and/or future verification.
3. The Government has been advised by the NOU that the agreement to the projects indicates a commitment to ensure that the validated phase-out figure was realized and yielded a sustained reduction from the current sector consumption of 127.9 ODP tones.

Section II: Other Relevant Actions Arising from the Decision 33/2

4. It is understood that, in accordance with the relevant guidelines, the funding received for a project would be partly or fully returned to the Multilateral Fund in cases where technology was changed during implementation of the project without informing the Fund Secretariat and without approval by the Executive Committee;
5. The National Ozone Unit undertakes to monitor closely, in cooperation with customs authorities and the environmental protection authorities, the importation and use of CFCs and to combine this monitoring with occasional unscheduled visits to importers and recipient manufacturing companies to check invoices and storage areas for unauthorized use of CFCs.
6. The National Ozone Unit will cooperate with the relevant implementing agencies to conduct safety inspections where applicable and keep reports on incidences of fires resulting from conversion projects.

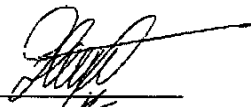
*Ministry of Foreign Trade and Economic Relations
National Ozone Unit*

Section III. Projects Requiring the Use of HCFCs for Conversion

7. In line with Decision 27/13 of the Executive Committee and in recognition of Article 2F of the Montreal Protocol, the Government
- (a) has reviewed the specific situations involved with the project, SOKO-RKT Co. Mostar as well as its HCFC commitments under Article 2F; and
 - (b) has nonetheless determined that, at the present time, the project needed to use HCFCs for an interim period with the understanding that no funding would be available for the future conversion from HCFCs for the company involved.

Name and signature of responsible Officer:

Ibro Ćengić, Ms. Spec., B.Sc. Eng.



Designation:

Date: 8 October 2001

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Ministry of Foreign Trade and Economic Relations
National Ozone Unit

Table 1: Projects Submitted to the 35th Meeting of the Executive Committee

Project Title/Sector	Type of ODS	Consumption of ODP (tonnes) in Year of 2000	Amount to be Phased Out (ODP tonnes based on Year of 2002)	Implementing Agency
<u>Refrigerating Sector</u>				
Replacement of refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with HCFC-141b in the manufacture of household refrigeration equipment at BIRA Co, Bihac, Bosnia and Herzegovina	CFC-11 CFC-12	28.97	28.97	UNIDO
Replacement of refrigerant CFC-12 and R-502 with HFC-134a and R-404, and foam blowing agent CFC-11 with HCFC-141b in the manufacture of commercial refrigeration equipment and cold storage rooms at SOKO-RKT Co, Mostar, Bosnia and Herzegovina	CFC-11 CFC-12 R-502	18.5	17.39	UNIDO
Total		47.47	46.36	