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1993 UNDP WORK PROGRAMME AMENDMENT

This document is a revision to the comments and recommendations from the Fund Secretariat on the 1993 UNDP Work Programme Amendment.

**COMMENTS AND RECOMMENDATIONS FROM THE FUND SECRETARIAT
ON 1993 UNDP WORK PROGRAMME AMENDMENT**

1. UNDP is requesting approval from the Executive Committee for 15 amendments to its 1993 Work Programme. They include two institutional strengthening proposals for Brazil and Indonesia and thirteen projects under US \$500,000 as follows, seven projects for China, one for Ecuador, four for Malaysia and one for Thailand. The total estimated cost of these projects is US \$4,517,041 including project support cost of US \$519,660.
2. Table 1 below provides a list of the institutional strengthening projects and projects under US \$500,000 indicating the amounts requested and the amounts recommended.

Table 1: 1993 UNDP Work Programme Amendments
Activities/Projects and Corresponding Funding Levels

Country	Nº	Activity/Project	Amount Requested US \$	Amount Recommended US\$
Brazil	1	Institutional strengthening	403,095	403,100
China	2	Elimination of CFCs in cleaning operations at the Nanjing Wire Works	459,000	409,000
	3	Elimination of CFCs in cleaning operations at the Chengdu Qianfeng Radio Instrument factory	444,700	394,700
	4	Strategy and action programme for the elimination of CFCs in the manufacture of foams	325,000	200,000
	5	Revising design standards for cold storage	200,000	200,000
	6	Testing of vacuum insulation panels for domestic refrigerators and freezers	50,000	0
	7	Implementation of the Halons phase-out plan for China: Current situation, revision of national codes and education and training	480,000	280,000
	8	Implementation of the Halons phase-out plan for China: Transfer of technology on alternatives to Halon fire protection systems.	350,000	300,000
Ecuador	9	Training and technology dissemination	150,000	40,000
Indonesia	10	Institutional strengthening	314,780	314,780

Country	Nº	Activity/Project	Amount Requested US \$	Amount Recommended US\$
Malaysia	11	Elimination of CFC-12 in the manufacture of extruded polystyrene foam sheet at Jumaya Industries	254,000	235,811
	12	Automobile retrofitting demonstration project with alternatives to CFC-12	426,806	0
	13	National ODS Conference, 20-21 July 1993	40,000	40,000
	14	Technical assistance, demonstration and investment project preparation	50,000	50,000
Thailand	15	Technical assistance, demonstration and investment project preparation	50,000	50,000
Sub-total			3,997,381	2,917,391
Project Support Costs (13 % of Sub-total)			519,660	379,261
Total			4,517,041	3,296,652

General Comment :

Although the projects being submitted as amendments were within the category of projects below US \$500,000, substantially detailed information was provided to facilitate their review. Where necessary the Secretariat had consultations with UNDP or on the advice of UNDP, with the respective experts responsible for the projects. Recommended funding levels are based mainly on these interactions.

Specific Comments

The following comments relate to the activities listed in Table 1 above, where necessary.

CHINA

Project No. 2: Elimination of CFCs in cleaning operations at the Nanjing Wire Works (US \$459,000) and

Project No. 3: Elimination of CFCs in Cleaning Operations at the Chengdu Qianfeng Radio Instrument Factory (US \$444,700)

1. These two projects will eliminate 11 tonnes and 9 tonnes of ODP/year (CFC-113 and Trichloroethane), respectively, by using aqueous and semi-aqueous cleaning technologies. The projects will also provide demonstration sites for training and dissemination of the technical know-how required to replicate the results at 120 computer manufacturing sites and 180 electronic instruments (such as radio instruments) manufacturing sites throughout China.
2. These two almost identical project proposals are based on detailed feasibility studies prepared by China Electronics Engineering Design Institute (CEEDI), at a cost of US \$10,000 each.
3. Study tours for implementation of these projects were not found eligible due to duplication of activities:
 - a) Similar study tours in the solvent sector have been undertaken last year, as indicated in the Status of Approved UNDP Work Programmes on the prefeasibility study to phase-out CFC-113 in electronic cleaning in four production line (UNEP/OzL.Pro/ExCom/10/9).
 - b) The specified technology has already been chosen (reference number of specified equipment is stated in the report of the feasibility study)
 - c) Cost of foreign experts is included in the budget of each proposal.
4. Costs of preparation of feasibility studies should be met by UNDP from project preparation funds, allocated to it at the 9th Meeting of the Executive Committee.
5. Hence, US \$409,000 is recommended for Nanjing Wire Works and US \$394,700 is recommended for Chengdu Qianfeng Radio Instrument Factory.

Project No. 4: Strategy and Action Programme for the Elimination of CFCs in the Manufacture of Foams (US \$325,000)

1. This project consists of subscription to additional literature, attendance of conferences/seminars, conduct of an industry survey, and preparation of an itemized phase-out strategy and action plan.

2. Regarding the activities:

- a) The Executive Committee has allocated US \$150,000 to UNDP for Information Clearing-House at NEPA under its institutional strengthening project, which should be used towards providing the required information. This is being in addition to pertinent information that can be obtained from UNEP IE/PAC Information Exchange System.
- b) The Executive Committee has approved at its 6th Meeting three technical assistance projects: CFC-11 substitute technology in flexible polyurethane foam (US \$70,000), CFC-11 substitute technology in rigid polyurethane foam (US \$70,000) and quality control testing on CFC-11 substitute technology in a production line for domestic refrigerators (US \$65,000). Costs for these three projects included study tours.
- c) Industry survey to prepare strategy and action programme for the elimination of CFCs in the manufacture of foams, is a necessary activity for China. However, industry survey in general is a responsibility of the Government and a preliminary survey must have been done by the Government while preparing the country programme. Some funds should be approved to update/upgrade the current industry survey and to prepare an action plan to implement the strategy.

3. Based on the above, the amount recommended for this project is US \$200,000 out of US \$325,000 requested.

Project No. 5: Revising design standard for cold storage (US \$200,000)

1. The project consists of survey on existing cold storage facilities in China, collection and review of standards from other countries, drafting of revised standards, measurements on new cold storage facilities in order to evaluate the new standards, amending of standards, publication and dissemination of new standard codes.
2. "Revising design standard" is a normal process undertaken by governments periodically and cold storage standard is not only related to CFCs but also to other items such as energy efficiency. The Government of China will provide RMB 850,000 (US \$150,200) to support this project.
3. The amount of US \$200,000 is recommended for this project.

Project No. 6: Testing of vacuum insulation panels for domestic refrigeration (US \$50,000)

1. The Guangzhou Electric Apparatus Research Institute has developed a new type of vacuum insulation panel. In order to assess the feasibility of the panels, a number of tests will be carried out.

2. Funding solely for testing of vacuum insulation panels developed by a research institute was not considered eligible for funding since it does not provide direct ODS reduction and does not relate to ODS phase-out projects.
3. No funding is recommended.

Project No. 7: Current Situation, Revision of National Codes and Education and Training (US \$480,000)

1. This project consists of investigation of current situation, examination of tests and model engineering project, formulating and revising standards and codes, national education and training programme, and establishment of an information and consultation station for limiting halon use.
2. "Revision of National Codes and Education and Training" is a normal activity undertaken (periodically) by governments. The Government of China will provide RMB 550,000 (US \$97,200) to support this project.
3. Inputs are available from ongoing activities and should be taken into account. These include:
 - Technical study on halons usage and applications of halons substitutes" (approved by the Executive Committee at the 6th Meeting);
 - Global Halon project (approved at the 8th Meeting of the Executive Committee);
 - US EPA's bilateral assistance: Halon-1211 recycling/recharging workshop 22-25 April 1993 in Beijing and technical assistance in the preparation of Halon Management Resource Manual for China; and
 - UNEP OzonAction Information clearing house activities, should be taken into account.
4. Part of the costs of information, forum for soliciting opinions, meeting for examination and approval and labour for formulating of new/revision of existing Standards and Codes, would be eligible for funding by the Fund.

Training and education costs for limiting halon use would be borne by the Fund.

Costs for operation and personnel for the Information and Consultation centre for limiting halon use, would also be borne by the Fund.

5. An amount of US \$280,000 out of US \$480,000 requested, is recommended for this project.

Project No. 8: Transfer of Technology on Alternatives to Halon Fire Protection Systems (US \$350,000)

1. Prototype of alternative fire protection system for replacement of halons will be installed and tested in order to examine their performance and capability against a number of typical applications in China at Tianjin Fire Research Institute.
2. "Technical information collection" and "set-up test procedure and demonstration test" would be supplied by fire protection system manufacturers.
"Technology introduction" (import and installation of four alternative extinguishing systems) and "Identification and specification of field of uses" are eligible for funding.
3. An amount of US \$300,000 out of US \$350,000 requested, is recommended for this project

ECUADOR

Project No. 9: Training and technology dissemination (US \$150,000)

1. US \$100,000 was approved for UNDP at the Sixth Meeting of the Executive Committee for CFC refrigerant conversion and material handling training programme. Additional US \$150,000 is being requested for expansion of the programme to cover all sectors on the basis of a project document originally provided in the World Bank's 1993 Work Programme.
2. Subsequent to the development of the original project, a number of projects have been approved for Ecuador which have direct impact on the cost and orientation of the project. These have not been taken into consideration for corresponding revision of the project budget. The new projects approved appear to preempt some of the activities originally envisaged in the project or provided some of the resources which are being requested. Thus, most of the cost items and activities would not be eligible as incremental costs as they would duplicate already approved activities.
3. The objective of the project, which is to be carried out in one year, is to "organize training activities for MPPU's staff, for members of other public entities interested in the elimination of ODS such as the Ministry of Health and local municipalities, representative of ODS-using industries and to contribute to general public awareness". For these activities, a separate set-up with a co-ordinator who will be "reporting progress to executing agencies and the Executive Committee", one of the staff of MPPU on secondment, a secretary, office equipment and operational budget of US \$35,000 is to be established. The organization of the seminars and preparation and presentation of audio/visual dissemination programmes will be done by private companies on service contracts at a total cost of US \$164,000. US \$30,000 is requested for expenditure on three experts in refrigeration, aerosol and foam.

4. The most critical audience is industry. However,
 - for the aerosol industry, which accounted for about 50 % of the ODS consumption in 1992, US \$697,000 has been approved for a conversion programme for the whole sector, which includes 18 factories. Industry ODS-phase out initiative propelled by market forces is evident. Nonetheless, the phase-out programme has a strong four-part training component for all the factories involved, as follows:
 - 1) training for plant managers and owners on characteristics of hydrocarbon propellants (HPs) restrictions on plant expansion, installation of new equipment, and storage of materials.
 - 2) training for department heads - overview of the changes in product characteristics, safety requirements in the production area, plant safety.
 - 3) training for plant and production managers, maintenance managers and production supervisors in all aspects of plant safety.
 - 4) training for supervisors and workers on the production line. Training manuals would be modified to emphasize special detail that affects safety in that particular plant.
 - for the foam sector, US \$665,000 has been approved for the reduction of CFC-11 use in foam insulation at three refrigerator manufacturing plants. This also includes training.
 - for the refrigeration sector, US \$100,000 has been approved for UNDP for training and activities have commenced.
5. While the other interested governmental organizations and the general public could well be served by the seminars, this would not justify the engagement, for one year, of a full time training co-ordinator with a secretary and an organizational set-up separate from the MPPU. The training co-ordinator effectively takes over the co-ordinating responsibilities of MPPU.
6. The engagement of the training co-ordinator and the establishment of a set-up under him constitutes double-counting in view of the institutional strengthening funds approved within the World Bank Work Programme.
7. In view of the industry related activities, six seminars in three cities in one year could not be supported. The aerosol industry, for instance, is concentrated in two cities, Quito and Guayaquil.
8. UNEP has earmarked US \$130,000 for a workshop for ODS focal points in Latin America in the 3rd quarter of 1993. This could provide a more cost-effective way of meeting the training needs of the staff of these newly established Ozone Offices than individual national training activities.

9. The main source of information material remains UNEP IE/PAC and outputs from completed projects. UNDP indicated in its Progress Report that a video tape prepared in Spanish to be used by other countries has resulted from the refrigeration training activity in Venezuela.
10. Contracts for preparation and presentation of audio/visual dissemination programmes at US \$128,000 appears to be high and may not be cost-effective given that adequate resources have been provided for MPPU to play a more significant role and that source materials could be obtained from UNEP and other agencies at virtually no cost to MPPU.
11. In view of the above comments it is recommended that an additional amount of US \$40,000 be granted to UNDP to cover the expenditure on a foam expert, possible cost of translation (estimated at \$5,000) and possible overhead cost of organizing additional seminars. This will bring the total cost of the project to US \$140,000 (taking account of the amount of US \$100,000 already approved).

MALAYSIA

Project No. 11: Elimination of CFC-12 in the manufacture of extruded polystyrene foam sheet at Jumaya Industries (US \$254,000)

1. The project is subject to retroactive funding. Conversion from the use of CFC-11 to liquified petroleum gas (LPG) started in January 1992. Equipment has been purchased and installed. Invoices on equipment and materials purchased, installation works and expert assistance have been provided. The project will phase-out 150 tonnes of CFC-12 per year.
2. In view of technical difficulties associated with product quality and losses it is intended to substitute a more homogeneous gas, butane, as the blowing agent by the end of 1993. No cost in the second substitution is expected to be charged to the Fund.
3. The technical review estimates significant loss of products due to the use of the heterogeneous gas (LPG) which would offset potential savings arising from the use of the cheaper LPG. No significant change in the operational cost is expected from the use of butane, the eventual non-ODS substitute (Operational costs are estimated to be about US \$20,000 higher than in the case of CFC-11 due to the use of additives, additional recurring cost of maintenance, insurance and safety measures).
4. The total cost of equipment, installation works and safety measures according to the invoices provided was US \$200,811. The technical review indicates that additional safety systems may be required following a post-operational safety audit due to be undertaken by the technical expert in July 1993. These costs are estimated to be US \$35,000.
5. The unit abatement cost based on direct consumption of CFC-12 is US \$1.58 per Kg CFC-12 phase-out. This favourably compares with other similar projects approved earlier, namely US \$6.64 per Kg (Egypt) and US \$5.02 per Kg (Venezuela). On account

of its relative low cost, the possibility of using the project as a model for developing similar projects in future, particularly within the region, is being considered by UNDP's technical expert.

6. The project is eligible for retroactive funding in accordance with the guidelines approved by the Executive Committee (UNEP/OzL.Pro/ExCom/7/30, para. 84). It is therefore recommended that the amount of US \$235,811 be approved as amendment to 1993 UNDP Work Programme. US \$200,811 of the amount is to be reimbursed to the Government of Malaysia while US \$35,000 is to be disbursed by UNDP for the remaining activities if and when necessary.

Project No. 12: Automobile retrofitting demonstration project with alternatives to CFC-12 (US \$427,000)

1. The demonstration project aims at establishing three facilities for training a core of 50 mechanics as trainers through retrofitting of 200 cars in the governmental and private sectors to substitute HFC-134a (150 cars) and SUVA MP-52 blend (50 cars) for CFC-12. Eventually 2,000 mechanics are expected to be trained.
2. However, a MAC recycling training and demonstration project costing US \$910,000 aimed at training 90 core trainers and 500 technicians and the procurement of 200 recycling machines to establish a network of recycling centres for MACs has been approved for Malaysia in February 1992. Grant agreement for the implementation of the project was signed in November 1992. The project impact has not yet been appraised. The link between the retrofitting and the recycling project is also not clearly established.
3. A global MAC project has been approved for UNDP. Malaysia is one of the beneficiary countries. The first project of the global MAC project identified will be a retrofit demonstration trial in China for retrofit of 100 cars to HFC-134a and SUVA MP-52 blend (at a cost of US \$34,000).
4. There are some uncertainties among the major automobile manufacturers with regard to the cost of retrofitting MACs. The cumulative cost of retrofitting would be prohibitive both on a national and international scale. Thus, a strategic approach to the issue of MAC retrofits, just as in the retrofitting of household refrigerators, etc. may be needed.
5. According to the project plan, follow-up activities are to be established in 1995 following completion of the project. Policy details such as incentives, subsidies etc. and further project actions will then be determined. Such approach would lead to an open-ended commitment of the Multilateral Fund to a project in a sector where costs and future status of available technology remain uncertain.
6. It is recommended that approval of the project be deferred pending policy decision by the Executive Committee on retrofitting.

RECOMMENDATIONS

1. To approve the total amount of US \$3,296,652 including project support costs of US \$379,261 as funding for amendments to 1993 UNDP Work Programme.
2. There are certain completed projects in the approved UNDP Work Programme which have savings while there are a few others where there are minor over expenditures (UNEP/OzL.Pro/ExCom/10/9):
 - (i) UNDP should, within its approved Work Programme budget allocation, offset its project over expenditures against project savings.
 - (ii) To the extent that there are net savings after the above operation has been completed and following finalization by UNDP of its accounts, any net savings should be applied to new projects/programme approvals.