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Executive Committee of
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**TERMS OF REFERENCE FOR THE STUDY ON TECHNOLOGY TRANSFER
(DRAFT)**

This document contains the draft Terms of Reference (TOR) for the preparation of a final report on the transfer of technology under the Multilateral Fund. It is recalled that, following its review of the Interim Progress Report on the Transfer of Technology under the Multilateral Fund submitted by the Executive Committee, the Seventh Meeting of the Parties requested the Executive Committee "to provide a final report on this issue to the Eighth Meeting of the Parties" (UNEP/OzL.Pro.7/12, Decision VII/26).

Accordingly, the Fund Secretariat, in consultation with UNEP Industry and Environment and UNEP Technology and Economic Assessment Panel, has prepared this draft Terms of Reference for the review of the Executive Committee.

Introduction

1. In December 1995, the Executive Committee submitted to the Seventh Meeting of the Parties an Interim Progress Report on the transfer of technology under the Multilateral Fund (UNEP/OzL.Pro/7/10) in response to the following request from the 12th Meeting of the OEWG:

“(a) To prepare an itemised progress report on measures taken so far, in the context of Article 10 of the Protocol, to establish a mechanism specifically for the transfer of technology and the technical know-how at fair and most favourable conditions necessary to phase-out ODS; and at the same time,

(b) To request UNEP to intensify its efforts to collect information from relevant sources, and to prepare an inventory and assessment of environmentally sound and economically viable technologies and know-how conducive to phase-out of ODS. This inventory should also include an elaboration of terms under which transfers of such technologies and know-how could take place;

(c) To consider what steps can practicably be taken to eliminate any impediments in the international flow of technology;

(d) To further elaborate the issue of the eligible incremental costs of technology transfer, including costs of patents and designs and the incremental costs of royalties as negotiated by the recipient enterprises.” (UNEP/OzL.Pro/WG.1/12/4, Annex, Recommendation 21)¹).

2. The Interim Report covered only sub-paragraphs (a), (c) and (d) of Recommendation 21 since the request in sub-paragraph (b) could not be adequately addressed by UNEP due to time constraints between the conclusion of the 12th Meeting of the OEWG in August and December 1995, when the Seventh Meeting of the Parties took place.

3. The Seventh Meeting of the Parties reviewed the Interim Report and decided:

“3. To request the Executive Committee to re-examine its interim conclusions contained in paragraphs 11 and 13 of that report in the light of issues raised in paragraph 45 of the report of the Eighteenth Meeting of the Executive Committee (UNEP/OzL.Pro/ExCom/18/75), the Report on the Review under Paragraph 8 of Article 5, and the Study on the Financial Mechanism of the Montreal Protocol, and other issues including equity, limited resources, conditions attached to project approvals and payment of technology transfer fees as negotiated by enterprises in Parties operating under Article 5;

¹ The twenty-one Recommendations from the Open-ended Working Group were later adopted at the Seventh Meeting of the Parties as twenty-one Actions under Decision VII/22 (UNEP/OzL.Pro.7/12).

4. To request the Executive Committee to provide a final report on this issue to the Eighth Meeting of the Parties. In particular, in preparing its report to the Eighth Meeting of the Parties, the Executive Committee is requested to seek input from Article 5 Parties on their experience with impediments to technology transfer and to identify solutions to overcome such impediments. The Executive Committee is authorised to provide appropriate funding, if necessary, for this purpose;" (UNEP/OzL.Pro.7/12, Decision VII/26).

4. The Seventh Meeting of the Parties also decided that TEAP, by virtue of its mandate and expertise, should:

"Collaborate with the Industry and Environment Programme Activity Centre of the United Nations Environment Programme to prepare, in accordance with the provisions of decision VII/22, the report on inventory and assessment of technologies and know-how to phase out ozone-depleting substances, including an elaboration of the terms under which transfer of such technology and know-how take place;" (Decision VII/34, para. 5(g)).

5. These terms of reference are intended for the preparation of a draft final report which updates the interim report and ensures adequate coverage of sub-paragraph (b) of Action 21 and the issues listed in paragraphs 3 and 4 of Decision V11/26. The draft final report will be reviewed by the Executive Committee prior to its submission to the Eighth Meeting of the Parties in November 1996.

Structure of the Report

6. The draft report should consist of two parts. Each part includes a list of tasks to be performed, with each task being targeted to a specific point from the decisions of the Eighteenth Meeting of the Executive Committee or the Seventh Meeting of the Parties. Part I: Assessment of Technologies and Terms of Transfers, includes the development of an inventory and assessment of environmentally sound and economically viable ODS substituting technologies and know-how, and the elaboration of the terms under which such technologies could be transferred. Part II: Review of Implementation of Transfers of Technology, involves a review of the Multilateral Fund in the implementation of transfer of technology both from the process followed and from the results achieved.

Part I: Assessment of Technologies and Terms of Transfers

7. The scope of work includes a description and characterization of the available ODS-substituting technologies, and an assessment of their commercial viability. As such, the following tasks are envisaged:

Inventory of Technologies

Task 1: Objective: compile and update an inventory of the ODS replacement technologies and technical options for each sector where ODS is being employed. **(Point to be addressed: Preparation of an inventory of environmentally sound and economically viable technologies and know-how conducive to phase out of ODS (Decision VII/22, Action 21 (b))).**

For each ODS technology application, the report should identify the commercially available technical options including ODS substitute, process modification, recycling and retrofitting types of options, keeping in mind the adaptability of the technologies to local conditions and the special operating parameters of small and medium-sized enterprises. Such information could be drawn from UNEP's TEAP reports, UNEP's technology sourcebooks, as well as other supplementary sources.

Assessment of Technologies

Task 2: Objective: assess the environmental soundness and economic viability of each of the technical options. **(Point to be addressed: Assessment of the environmental soundness and economic viability of technologies and know-how. (Decision VII/22, Action 21 (b))).**

Each technical option should be assessed according to the following criteria:

- (a) ODP;
- (b) GWP;
- (c) toxicity, flammability and other health impacts;
- (d) other environmental impacts (e.g., VOCs, effluents);
- (e) TEWI and energy efficiency;
- (f) availability of know-how to implement the technology;
- (g) ultimate or transitory; and
- (h) commercial viability.

Terms of Technology Transfer

Task 3: Objective: assess the current terms of availability of each technology for any valid intellectual property right coverage and any restrictions imposed either by the supplier, the recipient enterprise or the recipient country. **(Point to be addressed: Elaboration of Terms for the transfer of technology, (Decision VII/22, Action 21 (b)).**

The report should enumerate the terms under which transfer of technology could take place, including:

- Nature of the technology: in public domain, proprietary, patented, etc.;
- Terms of availability from the suppliers (e.g. licensing requirements, country restrictions, export restrictions, etc.); **(Point to be addressed: The issue of the possible growing reluctance on the part of some technology providers to participate in conversion and the retrofit projects rather than construction of and joint ventures in new facilities. (UNEP/OzL.Pro/ExCom/18/75, para. 45 (d)).**
- Import controls from Article 5 countries (e.g. ownership restrictions).

8. The results of the assessment work in Part I should be maintained in a database for easy access.

Part II: Review of Implementation of Transfers of Technology

9. The scope of work in this part is to undertake a review of the implementation of the transfer of technology under the Multilateral Fund against the results of the assessment done in Part I. The review will be both process- and result-oriented, with focus on the international flow of ozone-benign technologies supported by the Multilateral Fund. Active interaction and consultations with Article 5 governments and enterprises are anticipated. Specifically, the following tasks are envisaged:

Task 4: Define the context of the review

Objective: build a platform for a focused discussion on the issues to be addressed in this part.

This should include an articulation of “fair and most favourable conditions” for the transfer of technology within the defined context of the Montreal Protocol and the Multilateral Fund. This presupposes an examination, and reflection of such basics like:

- The Montreal Protocol, in particular Articles 5, 10 and 10A;
- Mandate of the Multilateral Fund in the transfer of technology: A means to an end: enabling compliance with the control measures in the Montreal Protocol; and
- The Indicative List of Categories of Incremental Costs.

Task 5: Process examination

Objective: determine whether the process followed by the Multilateral Fund in the implementation of technology transfer is adequate and transparent to allow the transfer of technology to take place at fair and most favourable conditions. **(Point to be addressed: To prepare an itemized progress report on measures taken so far to establish a mechanism specifically for the transfer of technology at fair and most favourable conditions (Decision VII/22, Action 21(a)).**

The various stages in the process of transfer of technology under the Multilateral Fund should be examined, from technology identification, selection, negotiation, adaptation, implementation and evaluation to determine whether the process ensures in the aggregate, the transfer of technology taking place at “fair and most favourable conditions”. It should examine in particular:

- The involvement of the recipient in the choice of technologies; the impact of the recipient specific selection on the ability of the Fund to facilitate fair and most favourable terms; and

- The source of advice and information available to the recipient to make intelligent decisions.

Task 6: An examination of the international flow of ozone-benign technologies under the Multilateral Fund

Task 6(a): An examination of availability and environmental soundness

Objective: use the results of the assessment done in Part I to undertake an environmental soundness and availability check on the portfolio of technologies implemented under the Multilateral Fund.

A desk review on a sector basis of the technologies transferred under the Multilateral Fund to date against the inventory and assessment developed in Part I should be undertaken.

On environmental soundness, analysis should be made in the case of the employment of transitory technologies, of justification of their choice and their environmental (including TEWI) and cost impact. **(Point to be addressed: the possible negative impact of the transitory nature of some non-ODS technologies and the fear of technological dependency. (UNEP/OzL.Pro/ExCom/18/75, para. 45 (c)).**

On the availability, hindrance to accessibility should be identified and their nature and causes be analyzed. **(Point to be addressed: the issue of impediments in the transfer of technology, UNEP/OzL.Pro/ExCom/18/75, para. 45 (b)).**

Task 6(b): An examination of the implementation of transfers of technology supported by the Multilateral Fund.

Objective: examine the flow of technology transfers supported by the Multilateral Fund through a check on the delivery of approved transfers of technologies.

This should first address the dichotomy between the price of transfer of technology negotiated by the recipient enterprises and the funding policies of the Multilateral Fund, especially on incremental costs and choice of the most cost-effective solution while being consistent with the national industrial policy. **(Point to be addressed: To further elaborate the issue of the eligible incremental costs of technology transfer, including costs of patents and designs and the incremental costs of royalties as negotiated by recipient enterprises. (Decision VII/22, Action 21(d)).** With that the report should address:

- the adequacy of approved funding to meet eligible incremental costs to implementing the transfer of technologies; **(Point to be addressed: The**

comparison between the price that enterprises in Parties operating under Article 5 actually pay technology suppliers and the corresponding funds provided by the Multilateral Fund. (UNEP/OzL.Pro/ExCom/18/75, para. 45(a)).

- any hindrance to the implementation process due to the attached conditions at project approvals (**Point to be addressed: Limited resources and conditions attached to project approvals, (Decision VII/26, para. 3))**;
- any other hindrance.

Task 7: The production sector

The transfer of technology for the production sector should be examined separately. Since there are very few projects approved to date in this sector, work should focus on:

- the availability of the technologies for the production of ODS substitutes, including contributions in-kind as a mechanism for transfer of technology;
- the terms of their transfers, especially the various modalities of industrial cooperation, including licensing, joint ventures, intellectual property, and technology dependence in relation to the industrial policy of the recipient country. (**Point to be addressed: the issue of impediments in the transfer of technology, particularly in the production sector (UNEP/OzL.Pro/ExCom/18/75, para. 45 (b)).**

This part should incorporate, as appropriate, the outputs from the Expert Group on the Production of ODS substitutes.

Modality of Implementation

10. It is envisaged that consultancy will be used to prepare the draft final report.