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OZONE LAYER DEPLETION

The stratospheric ozone layer is a protective shield that absorbs most of the ultraviolet radiation that could harm living organisms on earth. Stratospheric ozone is constantly being created and destroyed by natural photochemical processes that are in dynamic equilibrium. This equilibrium has been disrupted by the release of anthropogenic chemicals--especially chlorine and bromine compounds such as chlorofluorocarbons (CFCs), halons, and a broad range of industrial chemicals used as refrigerants, foaming agents, aerosol propellants, fire retardants, solvents, and fumigants.

As a result of these chemical processes, the ozone layer is being depleted. Scientific observations show significant depletion throughout the year in both the northern and the southern hemispheres at middle and high latitudes, although not yet at the tropics.¹ This depletion allows more ultraviolet-B radiation to reach the ground, which could raise the incidence of skin cancer, cataracts, other irreversible eye damage, and could also suppress the immune system. In addition, even minor increases of ultraviolet-B radiation could disrupt ecological food chains, affecting agriculture, fisheries, and biological diversity.

Governments responded to concerns about ozone depletion by adopting the Vienna Convention on the Protection of the Ozone Layer (Vienna Convention) in 1985, the Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol) in 1987, and amendments to the protocol in London in 1990 and Copenhagen in 1992. By June 1995, almost 150 countries had ratified the Montreal Protocol. These agreements have significantly slowed the atmospheric accumulation of several major ozone-depleting substances. For example, worldwide production and consumption of CFCs decreased by more than 50 percent between 1986 and 1994. Many of the remaining major producers and consumers of CFCs and other ozone-depleting substances are the GEF-eligible countries that are required by Montreal Protocol control measures to phase out major ozone-depleting substances at the end of 1995. There is a risk that, unless assisted financially, these countries will continue to produce and use such substances and therefore negate much of the ozone layer protection that has already been achieved.

Ozone depletion is also linked to other global environmental problems. For example, both ozone and ozone-depleting substances are greenhouse gases. While the major ozone-depleting substances have very strong global warming potentials, the ozone depletion they have caused has had a net cooling effect that has offset about 20 percent of the radiative forcing due to the atmospheric accumulation of greenhouse gases between 1980 and 1990.² In restoring the ozone layer, it will be necessary to minimize the global warming that might be caused by substitutes for such substances. The relationship with biodiversity is more direct: protection of the ozone layer is a prerequisite for conservation and sustainable use of biodiversity. Ozone layer depletion, leading to increased ultraviolet radiation at the Earth's surface, would endanger species already under threat and biological diversity in general.

The GEF operates, on the basis of collaboration and partnership among its Implementing Agencies, as a mechanism for international cooperation for the purpose of providing new and

additional grant and concessional funding to meet the agreed incremental costs of measures to achieve agreed global environmental benefits in (among other focal areas) ozone depletion.³ Global environmental benefits will be in the form of the reduced risks of adverse effects. The GEF operational strategy for ozone depletion sets out the way in which the GEF, through the provision of finance and within its own mandate and according to its general policies, can assist eligible recipient countries to undertake activities to reduce ozone depletion.

The GEF's objective in ozone depletion is to contribute to measures that protect human health and the environment against adverse effects resulting, or likely to result from, human activities that modify or are likely to modify the ozone layer.⁴ The GEF's assistance in preventing the release of ozone-depleting substances will be in accordance with countries' commitments to the Montreal Protocol concerning phaseout schedules and control measures.

CONVENTION GUIDANCE

Although the GEF is not linked formally to the Montreal Protocol, the GEF operational strategy in ozone depletion is an operational response to the Montreal Protocol, its amendments, and adjustments.

Therefore, the GEF will use the Montreal Protocol specifically to guide its:

- Control measures
- The list of controlled substances contained in the annexes to the Protocol
- The phaseout schedules for ozone-depleting substances and the amendments and adjustments that are approved from time to time by the Meeting of the Parties

The Montreal Protocol contains agreed schedules for reduction of the production and consumption of specified "controlled substances" that deplete the ozone layer.⁵ The London Amendment and the Copenhagen Amendment established a financial mechanism, the Multilateral Fund, to provide developing countries with financial and technical assistance.⁶ These amendments also require that the financial mechanism uses the "agreed incremental cost" approach to financing measures.⁷ Taking into account the urgency of further steps to protect the ozone layer, the fourth Meeting of the Parties to the Montreal Protocol in Copenhagen in 1992 adopted further adjustments and an amendment to speed the phaseout of ozone-depleting substances.

To the extent consistent with other GEF policies (such as those for project cycle and incremental cost), GEF operational policies for financing activities in this focal area will also be consistent with those of the Multilateral Fund.⁸

In accordance with the GEF Instrument, the GEF Secretariat has exchanged letters with the secretariats of the Montreal Protocol and the Multilateral Fund that show areas of cooperation such as coordination of activities; exchange of information of mutual interest, methodologies, and methods of project assessment; and interpretation of relevant decisions of the Parties to the Protocol.⁹ This cooperation will facilitate consistency and complementarity with operations to phaseout ozone-depleting substances within the legal ambit of the Montreal Protocol.

GEF-Financed Activities

The overall thrust of the ozone depletion portfolio is to support activities to phase out ozone-depleting substances that are committed under the Montreal Protocol, with special emphasis on

short-term commitments and enabling activities. Because of the short deadlines for this phaseout, all measures will be considered under criteria for short-term response resources.

COUNTRY ELIGIBILITY

The Multilateral Fund provides assistance only for (a) developing countries operating under Article 5, paragraph 1 of the Montreal Protocol; and (b) activities incurring eligible expenditures.¹⁰ In conformity with the principle of complementarity--avoiding duplication of effort and not substituting for other sources of funds--the GEF will provide only complementary assistance outside the financial mechanism. This means, in effect, that the GEF will assist otherwise eligible recipient countries that are not Article 5 countries; or whose activities, while consistent with the objectives of the Montreal Protocol, are of a type not covered by the Multilateral Fund.^{11,12}

Ratification and Compliance

To be eligible, countries must also be Parties to the Montreal Protocol, have ratified the London Amendment,¹³ and have fulfilled their obligations to report on the production and consumption of ozone-depleting substances and trade according to the requirements of the Protocol.¹⁴ In cases of noncompliance with the obligations of the Montreal Protocol (as adjusted and amended), any funding is subject to the formal processes of the Montreal Protocol for non-compliance being initiated and followed through the Protocol's Secretariat and Implementation Committee. Such processes include notification of causes of noncompliance, assessments of expected delays in the implementation of control measures, and a revised schedule of commitments. GEF assistance will be in line with the "Indicative List of Measures that might be taken by a Meeting of the Parties to the Montreal Protocol in respect of noncompliance with the Protocol" and consistent with related recommendations of the Protocol Parties.¹⁵

The clarification of arrears in contributions to the Multilateral Fund of the MP, and demonstration of the needs for assistance, shall also be addressed in the framework of the relevant bodies of the Montreal Protocol.

SYNERGISM

Climate change. There are two potential ways in which the phase out of ozone-depleting substances might add to the risk of climate change. The first is the use of substitutes that have a high global warming potential. The second is the introduction of less energy efficient technologies that do not use ozone-depleting substances. If energy is supplied from fossil fuels, decreasing energy efficiency would increase emissions of greenhouse gases. Therefore, the GEF will fund the conversion to the technology with the least impact on global warming that is technically feasible, environmentally sound, and economically acceptable.¹⁶

Biodiversity. One potential way that GEF operations in the biodiversity focal area might add to ozone depletion would be through the use of methyl bromide as part of an integrated pest management program. Such programs will not be funded.

COUNTRY PROGRAM PREPARATION AND IMPLEMENTATION

To phase out ODS effectively, countries must prepare comprehensive country programs including full overview on production, consumption, trade and all projects to be implemented to ensure compliance with the Montreal Protocol. The GEF will fund country program preparation

activities, focussing on the identification of ODS phaseout projects, in those cases where a country program does not already exist.¹⁷

In the ozone depletion focal area, an integrated interagency operational approach to implementing country programs will be developed that sets out:

- Elements of country programs (for example, application of data provided in accordance with requirements of the Montreal Protocol on the production, use, trade, and consumption of ozone depleting substances; assessment of national options; and a phaseout plan in accordance with the phaseout schedules set out in the protocol)¹⁸
- Activities completed, under way, or planned and their elements and funding sources (to promote complementarity and avoid duplication)
- Cost norms
- Proposed activities.

The UNDP and UNEP will collaborate in the preparation of country programs. Specifically, the UNDP will identify investment projects and will have responsibility for all technical assistance, in particular that related to project identification, analysis, and initial formulation (preappraisal). During the preparation of country programs the UNDP will consult regularly with the World Bank in order to ensure consistency with information requirements for planning of investment projects. The UNDP may also provide technical assistance for implementation of elements of a country program that will be financed by national sources.

The UNEP will provide relevant information and training, as the basis for preparation and implementation of Country Programs. The provision of support for such enabling activities shall be demand-driven within specified budget parameters.

Country programs developed with GEF assistance will be made available to the Parties of the Montreal Protocol through the Ozone Secretariat by the Implementing Agencies concerned. The World Bank will develop and manage the investment projects, namely, the short-term measures to phase out ozone-depleting substances set out below.

SHORT-TERM PROJECTS TO PHASE OUT OZONE DEPLETING SUBSTANCES

GEF funding for phaseout measures will be based on a nationally approved country program, submitted by the recipient government to the GEF secretariat. The country program should include country commitments to fulfill control measures as specified in the Montreal Protocol, as amended and adjusted, and a detailed workplan of all necessary steps (including projects) to ensure compliance with the Protocol. Government approval of country programs is required at least at the cabinet level. The content of country programs must be consistent with the guidelines developed by the Multilateral Fund and endorsed by the fourth Meeting of the Parties to the Montreal Protocol.¹⁹

Eligible Expenditures

The incremental costs of the following activities are eligible for GEF financing: expenditure items in accordance with the Indicative List of the Montreal Protocol; other activities consistent with the objectives of the Montreal Protocol in accordance with the GEF policy on incremental costs,

especially taking into account incremental benefits arising from technology upgrades in production facilities included in several technology conversions to phase out ozone-depleting substances.²⁰ In particular, conversions that are economic in their own right are not eligible for any GEF grants.

So as not to exceed the terms of the parallel operations of the Multilateral Fund, other expenditure eligibilities will also apply.

Retroactive financing. Expenditures should follow Council consideration of a project. However, to avoid delays in projects that are ready for implementation, and to encourage immediate preparations to phase out ozone-depleting substances, certain expenditures will be considered for retroactive financing on a case by case basis. These expenditures:

- Will only relate to projects that were neither completed nor ongoing at the time the Implementing Agency identified the proposed project
- Will not exceed 20 percent of the total approved grant for a particular enterprise.²¹
- Will not have been committed more than 12 months prior to the approval of the relevant GEF work program by the Council.

Exports. Eligible expenditures are reduced by the extent to which the recipient enterprise produces ozone-depleting substances or products containing ozone depleting substances for export to a country that either is not eligible to be a GEF recipient; or is eligible to receive assistance from the Multilateral Fund. Such exports are the "relevant exports" for calculating the eligible expenditures, as follows:

- The GEF will not finance expenditures of an enterprise whose relevant exports account for more than half of its relevant production.
- If relevant exports account for less than half of production, the GEF will finance a pro rata share of the expenditures.²²

Ownership. Expenditures of enterprises located in tax-free zones, or fully owned by transnational corporations based in non-GEF-eligible countries, or in countries that are not Parties to the Montreal Protocol, are not eligible for GEF financing. Expenditures of enterprises that are partially owned by local interests will be reimbursed in the same proportion as the local ownership. If local ownership is less than 20 percent, GEF assistance will not be considered. The GEF will not fund any costs which result from taxation arrangements of the recipient countries.

Operational costs. Net operational costs (operational costs in excess of operational savings) are not eligible for GEF financing.

Increases in use of ozone-depleting substances. Only enterprises that used ozone-depleting substances when the Montreal Protocol entered into force in the concerned country are eligible for GEF financing. Financial assistance will be provided only for the amount of ozone-depleting substance that was being consumed at the time of project appraisal, or at the time of ratification, whichever is less.

Criteria for Short-Term Response Measures

Proposed measures will satisfy the following criteria:

Cost-effectiveness. The measures will ensure the maximum phaseout of ozone-depleting substances with the minimum of GEF funding. The least-cost means of phaseout will be used within each subsector and country. Therefore, the unit costs of phaseout would rise as the implementation of a country program progresses, because with lower unit costs will be implemented first. Unit phaseout costs of Multilateral Fund projects that correspond to the country's phaseout stage and the technology used will be used as benchmarks for the costs of proposed GEF projects and will be reported at the same time. Where a proposed GEF project has a lower cost-effectiveness than comparable projects of the Multilateral Fund, explicit justification for the disparity in the project document will be required.

Likelihood of success. Projects should have a very high likelihood of success. Supporting assessments of technical and institutional risk will be required to demonstrate the economic sustainability of the ultimate recipients of GEF grants. Only financially viable enterprises will be eligible.

Country integration. Proposals should be country-driven and emerge as national priorities in the country program.

Nontoxicity. Toxicity of several substitutes for ozone-depleting substances will be taken into account, particularly during project preparation and implementation, based on environmental impact assessments, according to policies of the Implementing Agencies and in line with best environmental practice.

Initial Emphasis

Initially, projects will be chosen to emphasize:

- The greatest reduction of ozone-depleting substances for the lowest cost within each recipient country
- Avoidance of noncompliance with agreed control measures under the Montreal Protocol, particularly on such substances included in annexes A and B of the Protocol
- Complete phaseout of ozone-depleting substances (except for essential uses) in entire sectors or countries
- Achievement of additional global environmental benefits in other GEF focal areas.

NOTES

¹ Scientific assessment of ozone depletion 1994, Report of the Scientific Assessment Panel, UNEP March 1995.

² These vary from 4,000 for CFC-11 to 11,700 for CFC-13 (on a 100 years' time horizon). See Scientific Assessment of Ozone Depletion 1994, Report of the Scientific Assessment Panel, UNEP March 1995.

³ Global Environment Facility, 1994. Instrument for the Establishment of the Restructured Global Environment Facility, GEF, Washington, D.C. para 2(a).3. Vienna Convention for the Protection of the Ozone Layer, Article 2.5. Montreal Protocol, Article 2 A - 2H.6. The mechanism became permanent after the Copenhagen meeting in 1992.7. Montreal Protocol, Article 10 , paragraph 1 as amended by decision II/8 of the Second Meeting of the Parties.8. Technical consistency of GEF projects, with relevant guidance used within the Multilateral Fund of the Montreal Protocol, would be ensured by using the same technical expertise for technical review. In this regard those technical advisors who are involved in the technical review of Multilateral Fund projects are being included into the STAP roster.

⁴ Vienna Convention for the Protection of the Ozone Layer, Article 2.

⁵ Montreal Protocol, Article 2A-2H.

⁶ The mechanism became permanent after the Copenhagen meeting in 1992.

⁷ Montreal Protocol, Article 10, paragraph 1 as amended by decision II/8 of the Second Meeting of the Parties.

⁸ Technical consistency of GEF projects, with relevant guidance used within the Multilateral Fund of the Montreal Protocol, would be ensured by using the same technical expertise for technical review. In this regard those technical advisors who are involved in the technical review of Multilateral Fund projects are being included into the STAP roster.

⁹ GEF Instrument, paragraph 21(f).

¹⁰ In accordance with Decision IV/5 of the Fourth Meeting of the Parties to the Montreal Protocol which established a list of eligible activities in an indicative list.

¹¹ Many CEITs, but not all, are outside the financial mechanism. Article 5 defines eligibility in terms of per capita consumption of ozone-depleting substances, and some CEITs (such as Romania) are eligible under the Multilateral Fund.

¹² Subject to Council consideration of an overall policy on research and monitoring, such activities could include a project such as the Latin America regional project in the Pilot Phase Monitoring and Research Network for Ozone and Greenhouse Gases in the Southern Cone.

¹³ Modest technical assistance to enable country program preparation may be provided after Montreal Protocol ratification, even if the process of ratifying the London Amendment has not been finalized.

¹⁴ Montreal Protocol, Article 7.

¹⁵ Decision IV/5 of the Fourth Meeting of the Parties to the Montreal Protocol.

¹⁶ The assessment shall be based on the "Total equivalent Warming Impact" concept.

¹⁷ The GEF will not finance in-country staff costs.

¹⁸ Montreal Protocol, Article 7.

¹⁹ Decision IV/18 of the Fourth Meeting of the Parties to the Montreal Protocol.

²⁰ As approved in Decision IV/18 of the Fourth Meeting of the Parties to the Montreal Protocol.

²¹ This provision does not affect the total level of GEF-funding in the ozone focal areas.

²² This restriction parallels that of the Multilateral Fund, which provides that exports to non-Article 5 countries affect the eligible expenditures.