

# EP

# الأمم المتحدة

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الأمم المتحدة  
للبيئة



اللجنة التنفيذية للصندوق المتعدد الأطراف  
لتنفيذ بروتوكول مونتريال  
الاجتماع الحادي و الستون  
مونتريال، 5 - 9 يوليو/تموز 2010

اضافة

تعديلات على برنامج عمل برنامج الأمم المتحدة الانمائي  
لعام 2010

تصدر هذه الوثيقة لاضافة مقترح خاص بأموال تحضير المشروعات بخصوص مشروع تجريبي لتدمير المواد المستنفدة للأوزون في الهند و تقديمه للا اجتماع الحادي و الستين (المرفق الثالث من الوثيقة UNEP/OzL.Pro/ExCom/61/23) كما يرد في المرفق.

**UNDP - Amendment to the 2010 Work Programme  
Funding Request for Preparation of a Demonstration Project - India  
ODS Disposal**

PROJECT CONCEPT		
<b>COUNTRY:</b>	INDIA	<b>IMPLEMENTING AGENCY:</b> UNDP
<b>PROJECT TITLE:</b>	Preparation of a project for demonstration of a sustainable technological, financial and management model for disposal of ODS in India	
<b>PROJECT IN CURRENT BUSINESS PLAN:</b>	Yes	
<b>SECTOR:</b>	ODS Destruction (DES)	
<b>SUB-SECTOR:</b>	N/A	
<b>ODS USE IN SECTOR:</b>	N/A	
<b>PROJECT IMPACT:</b>	100 ODP tonnes annually*	
	*Preliminary estimates. More accurate estimates would be available in the actual project proposal	
<b>PROJECT DURATION:</b>	12 months	
<b>PROJECT COST:</b>	US\$	80,000
<b>REQUESTED GRANT:</b>	US\$	<b>80,000</b>
<b>AGENCY SUPPORT COSTS:</b>	US\$	6,000
<b>TOTAL COST TO MULTILATERAL FUND:</b>	US\$	<b>86,000</b>
<b>PROJECT MONITORING MILESTONES:</b>	N/A	
<b>NATIONAL COORDINATING BODY:</b>	Ozone Cell, Ministry of Environment and Forests	

#### PROJECT SUMMARY

This demonstration project, upon successful completion, will establish the suitability and viability of a sustainable technological, financial and management model for safe disposal of unwanted ODS in India. It will also result in environmentally sound destruction of about 100 ODP tonnes of CFCs initially, and an average annual disposal of about 100 ODP tonnes of ODS in subsequent years. The project is not intended for addressing Halons.

The outcome of this project preparation request will be a demonstration project proposal that will propose:

- (a) A multi-ODS destruction facility that would ensure environmentally sound destruction of ODS
- (b) A technological, financial and management model for sustainable operation of the facility

The estimated cost of the demonstration project will be about US\$ 5-10 million, which will only be partially financed through the Multilateral Fund resources, to be determined based on eligible components. The balance financing will be leveraged from private and public sector partners through structured investments including equity and debt, carbon finance and other sources.

#### PROJECT IMPACT

The successful implementation of this demonstration project will result in an environmentally safe, cost-effective and sustainable multi-ODS destruction facility in India, and demonstration of a sustainable technological, financial and management model for ODS disposal, leading to avoidance of significant quantities ODS emissions, thus contributing to protection of the ozone layer as well as the climate system.

## Objective

The objective of this proposed demonstration project is to establish the suitability and viability of a sustainable technological, financial and management model for safe disposal of unwanted ODS in India.

## Background and Rationale

India was one of the large producers and consumers of ODS in the past decade. India has phased-out its consumption and production of CFCs since 2008, except in MDI manufacturing. The estimated quantities of CFC banks in appliances and equipment operating on CFCs range from 7,500 to 20,000 metric tonnes depending on estimates from various sources. These banks need to be managed strategically and in an environmentally sound manner, so as to avoid emissions of CFCs to the atmosphere and thereby minimize impact on the ozone layer and the climate system. This would require an effective and efficient mechanism, which incorporates technologically and environmentally sound destruction facilities and a sustainable financial and management model for its operation.

## ODS Waste Streams

The currently identified and potential sources of ODS waste streams in India are as below:

- (a) An estimated 100 metric tonnes of unwanted CFCs available with institutional end-users such as Indian Railways.
- (b) Up to 200 metric tonnes of CFCs from banks in appliances and equipment, which have reached end-of-life and whose retirement is imminent and current, from major sources such as ship-breaking yards.
- (c) Prospective quantities of off-specification CFCs resulting from production of pharmaceutical-grade CFCs for MDI manufacturing (subject to guidance from Montreal Protocol bodies)
- (d) CFC banks in appliances and equipment estimated between 7,500 and 20,000 metric tonnes, which will flow in the waste stream in the next 5-15 years.
- (e) Similar or higher quantities of banks of HCFCs, which will flow into the waste stream on a longer time horizon

The Indian Railways is currently implementing an aggressive programme to retrofit/replace its CFC-12 based air conditioning systems for rail cars. They had earlier been provided with the necessary equipment and support under the Servicing Sector project in India for proper recovery of ODS. In addition, other public sector undertakings as well as the Defense sector also have significant stocks of ODS collected as a result of equipment retrofitting/replacement programmes. Thus, the collection efforts for the initially available quantities of CFCs are either completed or are at a very advanced stage. The details of the various collected stocks will be provided in the full project proposal.

Due to recently launched appliance replacement programmes in response to regulatory initiatives on energy efficiency, the waste stream flow from CFC and HCFC banks in appliances and equipment is likely to be accelerated. In addition, there is also a likelihood of flow of significant quantities of CTC from unwanted co-production due to reduced demand for feedstock uses. This underscores the need for immediate interventions to manage the waste stream flows through introduction of multi-ODS disposal mechanisms and the associated financial, logistical and management arrangements.

## Cross-convention Synergies

In terms of cross-convention synergies, there are several initiatives underway currently:

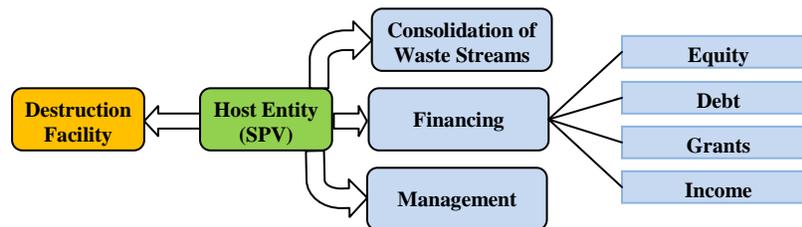
- Prioritizing of the management of e-waste at high-levels by government, industry and civil society (UNDP has already included interventions in its GEF-V business plan), which has led to recent adoption of standards for managing e-waste. Since domestic refrigeration and air conditioning appliances are considered a component of e-waste, this initiative will catalyze ODS waste-stream flows

- High-level government consultations on the policy and regulatory aspects of safe disposal of waste from the ship-breaking industry (India has the world's largest ship-breaking industry). These regulatory interventions will require safe collection and disposal of CFCs from the refrigeration systems in ships and contribute to CFC waste flows.
- A chiller replacement programme under implementation (WB), which will generate unwanted CFCs
- An extensive programmatic energy-efficiency project (ongoing with UNDP-GEF) as a part of which the BEE (Bureau of Energy Efficiency, Ministry of Power) has launched an intensive and successful campaign for promoting domestic appliance energy efficiency. In early January 2010, India became the first developing country to mandate minimum energy-efficiency standards for appliances. In response to these initiatives, two major appliance manufacturers have recently launched appliance replacement programmes. The service networks of these appliance manufacturers have been associated with the servicing sector project in India and many of them have been provided with the necessary equipment for recovery of ODS.

The ODS waste streams which will inevitably result from such initiatives, will need to be managed safely. The collection and transportation of unwanted ODS is not a critical challenge considering the size of the potentially accessible banks (and in any case will not be funded by MLF), provided that an appropriate management model and downstream facilities are available. The present proposal aims to demonstrate a public-private financing and management model, which will take into account the related infrastructural needs. Thus the demonstration element of this proposal will serve as a catalyst for ensuring sustainable and safe flow of unwanted ODS.

### Approach

The host entity is presently conceived as a Special Purpose Vehicle (SPV) comprised of multiple stakeholders including public and private sector players. The elaboration of whether such an SPV will be a corporate entity or otherwise, will be delineated in the full project proposal. The host entity will be operationally responsible for collection, transportation, handling, storage, disposal including destruction and financial management, as schematic below:



The SPV would be established as an independent legal entity, which would have defined procedures for ownership of equipment, receipt of proceedings from sales of emission reduction credits, ODSs destruction and safe disposal of effluents, monitoring and reporting of ODS destruction activities and other operational and administrative procedures. The SPV is expected to have investments through debt, equity and grants and its operations would be funded through carbon finance and cost-recovery mechanisms. The detailed investment plan will be included in the full project proposal. Government would play the key role of facilitating and catalyzing participation of stakeholders and also in policy, regulatory and monitoring aspects.

Currently, under the Indian Ozone Regulations, registration of destruction facilities of ODSs is mandatory. In addition to this, additional regulations are planned for (a) registration and reporting storage of ODSs which would be subsequently destroyed, (b) operating standards for destruction facilities and reporting. Besides, this project is expected to secure co-financing from voluntary carbon markets. Thus, monitoring and reporting procedures applicable under such mechanisms would also form a part of the regulatory framework for implementing this project.

## Scope and Outputs

The scope of this request covers the preparation of the demonstration project and will include the following key outputs:

- Further quantification and analysis including forward projections of imminent ODS waste stream flows
- Define process and estimated costs for consolidation of ODS waste streams
- Define technical and operational parameters and costs for the multi-ODS destruction facility
- Develop business model covering:
  - Establishing overall costs and investments needed
  - Assessing operational costs
  - Defining fund flows (equity, debt, grants)
  - Structuring the financing
  - Projected revenue (from carbon finance and other sources)
  - Investment returns analysis
  - Management arrangements
- Synergies with similar other initiatives in the country and region
- Formulation of regulatory and associated interventions

The overall outcome will be a full project proposal, which is expected to be partially financed through MLF grant funding depending on eligible components in accordance with the relevant ExCom decisions.

## Costs

The preliminary estimate of the cost of the project is about US\$ 5-10 million. However, only the eligible demonstration components of this project will be funded from MLF resources, consistent with relevant MLF policies. The balance funding would be leveraged from other sources such as cash and in-kind public and private sector investments, carbon finance and through synergies with ongoing upstream programmes.

## Funding Request

The present funding request for US\$ 80,000 plus agency support costs would cover the cost of national and international technical experts and related expenses for developing the full-fledged proposal. The breakdown will be as below:

Cost Head	Budget (US\$)
International Experts (50 days X US\$ 600)	30,000
National Experts (100 days X US\$ 200)	20,000
Workshops, meetings and logistics (5)	30,000
<b>Total</b>	<b>80,000</b>

## Impact

The successful implementation of this project will result in demonstration of an environmentally safe, cost-effective and sustainable multi-ODS destruction facility in India, and the demonstration of a sustainable technological, financial and management model for such a facility, leading to avoidance of significant quantities ODS emissions, thus contributing to protection of the ozone layer as well as the climate system.