Annex III

LIST OF ODS DISPOSAL PROJECTS THAT WERE REMOVED FROM THE BUSINESS PLANS AND EXPLANATIONS OF THOSE MAINTAINED IN THE BUSINESS PLANS

Part I

LIST OF ODS DISPOSAL PROJECTS THAT WE REMOVED FROM THE BUSINESS PLANS

Country	Agency	Type	Sector / Sub-Sector	Value ($000) in 2009	ODP in 2009	Value ($000) in 2010	ODP in 2010	Value ($000) in 2011	ODP in 2011	Value ($000) After 2011	ODP After 2011
Bolivia	UNDP	DEM	Demo on ODS Banks Mgt and Destruction			376	38				
Bolivia	UNDP	PRP	PRP for Demo on ODS Banks Mgt and Destruction	32							
Chile	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	645	60	0	0	0	0
Chile	UNIDO	PRP	Pilot project for the destruction of ODSs	65	0	0	0	0	0	0	0
China	UNDP	DEM	Demo on ODS Banks Mgt and Destruction			1,505	151				
China	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	806	50	806	50	0	0
China	UNIDO	PRP	Pilot project for the destruction of ODSs	108	0	0	0	0	0	0	0
Colombia	UNDP	DEM	Demo on ODS Banks Mgt and Destruction			753	75				
Colombia	UNDP	PRP	PRP for Demo on ODS Banks Mgt and Destruction	43							
Croatia	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	323	15	0	0	0	0
Croatia	UNIDO	PRP	Pilot project for the destruction of ODSs	32	0	0	0	0	0	0	0
Cuba	UNDP	DEM	Demo on ODS Banks Mgt and Destruction			286	29				
Cuba	UNDP	PRP	PRP for Demo on ODS Banks Mgt and Destruction	32							
Democratic People's Republic of Korea	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	218	10	0	0	0	0
Democratic People's Republic of Korea	UNIDO	PRP	Pilot project for the destruction of ODSs	43	0	0	0	0	0	0	0
Egypt	UNDP	DEM	Demo on ODS Banks Mgt and Destruction			753	75				

Country	Agency	Type	Sector / Sub-Sector	Value ($000) in 2009	ODP in 2009	Value ($000) in 2010	ODP in 2010	Value ($000) in 2011	ODP in 2011	Value ($000) After 2011	ODP After 2011
Egypt	UNDP	PRP	PRP for Demo on ODS Banks Mgt and Destruction	43							
Ethiopia	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	131	5	0	0	0	0
Ethiopia	UNIDO	PRP	Pilot project for the destruction of ODSs	32	0	0	0	0	0	0	0
Gabon	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	131	5	0	0	0	0
Gabon	UNIDO	PRP	Pilot project for the destruction of ODSs	32	0	0	0	0	0	0	0
India	UNDP	DEM	Demo on ODS Banks Mgt and Destruction			753	75				
India	UNDP	PRP	PRP for Demo on ODS Banks Mgt and Destruction	65							
India	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	1,075	100	1,075	100	0	
India	UNIDO	PRP	Pilot project for the destruction of ODSs	97	0	0	0	0	0	0	0
Iran (Islamic Republic of)	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	538	30	0	0	0	0
Iran (Islamic Republic of)	UNIDO	PRP	Pilot project for the destruction of ODSs	65	0	0	0	0	0	0	0
Jordan	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	436	20	0	0	0	0
Jordan	UNIDO	PRP	Pilot project for the destruction of ODSs	43	0	0	0	0	0	0	0
Mexico	IBRD	DEM	Pilot ODS disposal project	0			100		135		540
Mexico	IBRD	PRP	Preparation of pilot ODS disposal project	54							
Morocco	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	218	10	0	0	0	0
Morocco	UNIDO	PRP	Pilot project for the destruction of ODSs	54	0	0	0	0	0	0	0
Nicaragua	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	218	10	0	0	0	0
Nicaragua	UNIDO	PRP	Pilot project for the destruction of ODSs	43	0	0	0	0	0	0	0
Nigeria	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	860	50	0	0	0	0
Nigeria	UNIDO	PRP	Pilot project for the destruction of ODSs	75	0	0	0	0	0	0	0
Pakistan	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	860	50	0	0	0	0
Pakistan	UNIDO	PRP	Pilot project for the destruction of ODSs	43	0	0	0	0	0	0	0
Serbia	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	860	50	0	0	0	0
Serbia	UNIDO	PRP	Pilot project for the destruction of ODSs	43	0	0	0	0	0	0	0
South Africa	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	860	50	0	0	0	0
South Africa	UNIDO	PRP	Pilot project for the destruction of ODSs	86	0	0	0	0	0	0	0

Country	Agency	Type	Sector / Sub-Sector	Value ($000) in 2009	ODP in 2009	Value ($000) in 2010	ODP in 2010	Value ($000) in 2011	ODP in 2011	Value ($000) After 2011	ODP After 2011
Syrian Arab Republic	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	436	20	0	0	0	0
Syrian Arab Republic	UNIDO	PRP	Pilot project for the destruction of ODSs	54	0	0	0	0	0	0	0
The Former Yugoslav Republic of Macedonia	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	218	10	0	0	0	0
The Former Yugoslav Republic of Macedonia	UNIDO	PRP	Pilot project for the destruction of ODSs	32	0	0	0	0	0	0	0
Uruguay	UNDP	DEM	Demo on ODS Banks Mgt and Destruction			376	38				
Uruguay	UNDP	PRP	PRP for Demo on ODS Banks Mgt and Destruction	32							
Venezuela (Bolivarian Republic of)	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	1,075	100	1,075	100	0	0
Venezuela (Bolivarian Republic of)	UNIDO	PRP	Pilot project for the destruction of ODSs	75	0	0	0	0	0	0	0
Yemen	UNIDO	DEM	Pilot project for the destruction of ODSs	0	0	436	20	0	0	0	0
Yemen	UNIDO	PRP	Pilot project for the destruction of ODSs	43	0	0	0	0	0	0	0

Part II

ODS DISPOSAL PROJECTS THAT WERE MAINTAINED IN THE BUSINESS PLANS AND DESCRIPTIONS OF THE PROJECTS

A. UNDP

1. Introduction.

1. UNDP included 8 pilot projects on ODS waste management in its business plan as a response to Decision XX/7 from the Meeting of the Parties. In including these proposals UNDP took into consideration the conditions and priorities established by the Decision.

2. All the projects selected by UNDP to be included in its Business Plan have merits to be part of the set of pilots that can contribute to generate practical data and experience on management and financial modalities, achieve climate benefits and explore opportunities to leverage co-financing. Although each one of the countries is in a different stage of advance in the work related to ODS waste management, the group of projects selected represents the geographical and size diversity that will provide the information searched by the decision.

3. In order to establish priorities, each one of these proposals was analyzed against the criteria established by the Decision XX/7 and by the contact group. The projects for UNDP that best complied with the criteria were Brazil and Ghana as explained below.

Brazil

1. Mandate: The pilot project will cover a range of activities (collection, transport, storage and destruction of ODS) consistent with decision XX/7, paragraph 2. The project in Brazil will cover all the elements involved in a comprehensive waste management system including collection, transport, storage and destruction of ODS. There are several initiatives and actors already involved in some of the different activities related to ODS waste management, the project will help articulate them to determine a sustainable model.

2. Legislation: Brazil has in place legislation to phase out ODS and is in compliance with the agreements with the Excom. In particular Brazil has legislation that promotes best servicing practices in refrigeration including recovery of refrigerants; and through the implementation of the National Phase Out Plan it has established the infrastructure to manage ODSs, including several reclaiming centers. On the other hand Brazil has in place a regulation that requests the power distribution companies to invest 0.5 percent of their net operating revenue to undertake projects that promote energy efficiency. As a result of this regulation several of the power distribution companies have established projects to collect and disassemble old domestic refrigerators in order to be preplaced by more energy efficient ones. These initiatives have generated assembled stocks of ODS with high GWP that needs to be disposed of.

3. Stocks of ODS: Currently there is a large stock of ODS being built in the country through the domestic fridges replacement programmes. In 2008 the first pilot project initiated by one utility replaced 50,000 domestic refrigerators. Currently there are ~500,000 refrigerators. There are 7,150 Tonnes of CFC installed in domestic fridges to be disassembled it and replaced by energy efficient ones. In addition 91 ODS tonnes of ODS (including CFCs, HCFCs and mixes) are ready for destruction as result of the recovery and recycling activities;

and also Brazil, through its environment enforcement body – IBAMA, has cumulated a stock of ODS that should be sent for destruction.

4. Sustainability: It is estimated that there are 50M domestic fridges in use in the country. The government of Brazil has approved at Presidency level a 10 year project to replace 1M domestic fridges per year focusing on low income families. This has stimulated the private sector to compete for the de-manufacturing operations and invest on equipment. Two private companies have started investments to provide this service. Two de-manufacturing units have been purchased.

5. Co-financing opportunities: In addition to the players mentioned above, with regards to establishment of partnerships and identification of opportunities for co-financing, Germany has donated 5 million euros into a de-manufacturing component that will allow fridge recycling equipment and training as well as certification of recycling standards. In addition to the demonstration on chillers approved by the MLF, Brazil has an approved US 13.5 M GEF project to transform the market for EE products, aimed to replace inefficient chillers, adding to the amount of ODS to be recovered and destroyed.

6. Provide practical data: Similar appliances schemes have proven successful in developed countries, when proper legislation and incentives are in place and the business is sustainable. Brazil, with the progress achieved on this area as of now, represents an excellent opportunity to demonstrate the applicability of the whole ODS waste management scheme in an Article 5 country with high level of consumption.

7. The proposed budget of the demo will be within the level of funding discussed by the contact group for this type of projects.

Ghana

1. Mandate: The pilot project will cover a range of activities (collection, transport, storage and destruction of ODS) consistent with decision XX/7, paragraph 2. However destruction of ODS in a country such as Ghana will be prohibitively expensive, and instead, management actions to ensure proper export of these ODS to environmentally sound facilities abroad will be implemented. These methods may be useful for other LVCs in the region.

2. Legislation: Ghana has ODS legislation and a well-functioning licensing system. They are in full compliance with all MP control measures.

3. Stocks of ODS: During a recent mission, it was confirmed that there are a significant number of cylinders of contaminated CFC to be disposed of, stored in the basement of the buildings of the Ghana-EPA. Other quantities were reported to exist at recycling centers and other places. In addition, Ghana, like many other developing countries, has a relatively large local market in inefficient used and rehabilitated refrigerators. It is estimated that there are currently 2.9 million refrigerators/freezers in the residential and non-residential sectors. Ghana is in the process of transforming its national refrigerator market to replace the old, inefficient refrigerators and freezers with new more efficient and environmentally friendly refrigeration appliances. Ghana is planning on using carbon credit finance to help finance the advertising and incentive program that will be removing the older, used refrigeration appliances from the market.

4. Sustainability: The proposal funded with MLF and GEF funds, will seek to put into place a system that would be sustainable without further grant assistance (MLF or GEF). This is also why application for carbon credits are being envisaged. In fact, a PDD will be prepared over

the coming months to look for credits in the Voluntary Market, and efforts will be made to apply for a gold standard, to validate the methodology that will be developed.

5. Co-financing opportunities: The proposed MLF demonstration project would be linked to a GEF proposal entitled "Promoting of Appliance Energy Efficiency and Transformation of the Refrigerating Appliances Market in Ghana" for US$ 3.95 million (of which US$ 1.95 million would come from the GEF) which was submitted by UNDP to the GEF in September 2008. During a recent UNDP visit discussions were held with Ghana's Energy Commission to start a dialogue to harmonize the GEF proposal with the MLF-funded ODS-Waste Demo.

6. Provide practical data: This project is the only one from the 6 demos selected at the 57th ExCom meeting in Africa, and the only one to benefit an LVC. The data and the methodologies that will be derived from this demo will be applicable to many other countries.

7. The proposed budget of the demo will be within the level of funding discussed by the contact group for this type of projects.

B. UNIDO

4. While selecting the destruction projects to be included for approval at the 57th Meeting within the first group of pilot projects, UNIDO took into consideration the following major criteria proposed by the working group:

A. General preconditions
- Limitation on number of projects and costs
- Regional distribution

B. Project specific requirements
- ODS legislation in place
- Priority to countries that have assembled stocks and existing facilities
- Stocks of ODS with high GWP
- Pilot projects should cover a range of activities (collection, transport, storage and destruction of ODS)
- Ensure sustainability of resulting projects from a business perspective
- Provide practical data
- Explore opportunities for co-financing

5. Based on the above project specific criteria UNIDO selected from its portfolio one country in each region as follows:

1. Africa – Egypt
2. Asia – China
3. Europe – Turkey
4. Latin America – Mexico

6. The projects selected above met all the criteria. Upon delineation of the list submitted by each of the Implementing Agencies the Secretariat, based on the regional distribution requirement and the limitation of the number of pilot projects to be included in the first group, recommended the following two countries to be selected from the list of UNIDO: Mexico and Turkey.

7. The projects being designed by UNIDO will include the following components:

a. Inventory of unwanted ODS;
b. Collection and transportation;
c. Screening and selection of destruction technologies;
d. Up-date of national legislation and regulations to support destruction activities;
e. Determination of training needs and training programmes to develop capacity in dealing with stockpiling and subsequent destruction of unwanted ODSs;
f. Consideration of different potential funding sources (such as CDM and voluntary markets, or other financial instruments).

Mexico has been the largest CFC and HCFC producing country in Latin America, with a diversified industrial infrastructure. Thus, the technical capacity to implement the fairly complicated ODS destruction project is readily available in the country. Mexico has been consuming a multitude of ODSs. The country has implemented a halon phase-out and banking scheme, is working on a MeBr phase-out plan and completing a very successful refrigerant recovery and recycling programme. Over 5,000 technicians were trained on good servicing practices, concentrating also on containment and recovery of refrigerant. A domestic refrigerator replacement programme has been implemented through which old refrigerators were collected and the refrigerants were recovered and recycled wherever it was possible. The unwanted (mixed, seriously contaminated etc.) refrigerants are stocked and are waiting for environmentally sound destruction. Mexico has in place very effective ODS legislation and has been complying with all MP control measures. The ODS awareness programme reached out to the general public all over the country. The results of the project could be replicated in other countries of the Central American and the Caribbean region.

Turkey has been a large ODS consuming European country with a diversified industrial infrastructure, which caters for the technical capacity required to implement the fairly complicated ODS destruction project. Turkey has been consuming a multitude of ODSs. The country implemented a halon phase-out and banking scheme and is working on a MeBr phase-out plan and is completing a very successful refrigerant recovery and recycling programme. Three reclamation centres are fully operational in three major cities of the country. Large groups of refrigeration service technicians were trained on good servicing practices, also concentrating on containment and recovery of refrigerant. An end-user refrigerator replacement programme has been established for retrofitting CFC containing refrigeration equipment. The unwanted (mixed, seriously contaminated etc.) refrigerants are being stocked and they will require environmentally sound destruction. Turkey has in place very effective ODS legislation and has been complying with all MP control measures. The ODS awareness programme reached out to the general public all over the country. The results of the project could be replicated in other countries of the European and Middle East region.

C. World Bank

Description of Proposed Pilot ODS Disposal Projects

(From Annex II of the World Bank Work Programme, UNEP/OzL.Pro/ExCom/57/21)

1. Three pilot ODS disposal projects are proposed in the 2009 World Bank Business Plan and its associated Work Program for the consideration of the 57th Meeting of the Executive Committee. These pilot projects are being proposed for Indonesia, the Philippines, and Mexico.

2. The three pilot ODS disposal projects will be designed to capture different circumstances of unwanted ODS (i.e., sources of unwanted ODS, collection, transportation, packaging, storage, and final disposal) in these three countries. The proposed activity for Mexico will demonstrate the employment of ODS disposal methodologies and criteria developed by the ODS disposal study to unwanted ODS to be

collected from refrigerators and air-conditioners under the Mexico energy efficiency appliances program being developed by the World Bank. Both CFC-12 and CFC-11 from the old units will be collected and disposed of.

3. For Indonesia, the project will address disposal of ODS from illegal imports. This project will explore feasibility of having ODS eliminated by the local disposal facility. The design of this project will be built on experience of the earlier ODS disposal project financed by the Government of Japan as part of its bilateral contribution to the Multilateral Fund.

4. For the Philippines, the project will address not only disposal of bulk CFCs but also contaminated CFCs (mix of CFC-12, HFC-134a and others). For the Philippines, the project will address transportation of CFCs from service shops to the recovery and recycling center financed by the NCPP, packaging, and final disposal.

5. The three pilot projects will also include a financial analysis to determine financial viability of ODS disposal for different streams and for different local conditions. Actual costs of carrying out of ODS disposal are expected to be covered by carbon credits generated by ODS disposal. Disposal of ODS will be carried out at existing disposal facilities that meet the destruction efficiency of at least 99.99%.

6. Expected amounts of ODS to be disposed of are included in the 2009 World Bank Business Plan. For easy reference, those figures are summarized below.

Country	ODP tons				
	2009	2010	2011	2012 - 2015	Total
Indonesia		60			60
Philippines		12			12
Mexico		100	135	540	775

Note: The quantity of ODP tons for Mexico is made on the assumption that 1.2 million refrigerators and a/c will be exchanged under the energy efficiency appliance program.