WORLD BANK APPRAISAL STAGE: GEF DATA SHEET

PROJECT TYPE: FSP Endorsement
TYPE OF TRUST FUND:GEF Trust Fund

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PROJECT INFORMATION

Project Title: Municipal Solid Waste Management Project			
Country(ies):	China	GEF Project ID:[1]	
GEF Agency(ies):	WB (select) (select)	GEF Agency Project ID:	P126832
Other Executing Partner(s):	Foreign Economic Cooperation Office (FECO) of the Ministry of Environmental Protection (MEP)	Submission Date:	2014-05-21
GEF Focal Area (s):	Persistent Organic Pollutants	Project Duration(Months)	60
Name of Parent Program (if applicable): ➢ For SFM/REDD+ ☐		Agency Fee ($):	1,200,000

A. FOCAL AREA STRATEGY FRAMEWORK[2]

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount ($)	Cofinancing ($)
(select) CHEM-1	Outcome 1.3 POPS releases to the environment reduced	Output 1.3.1 Action plans addressing unintentionally produced POPs under development and implementation	GEF TF	12,000,000	50,921,000
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
		Total project costs		12,000,000	50,921,000

B. PROJECT FRAMEWORK

Project Objective: To build capacity and demonstrate best available techniques and best environmental practices in MSW incineration in accordance with the Stockholm Convention.

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount ($)	Confirmed Cofinancing ($)
Capacity Building for Improved Operation and Regulation of MSW Incinerators	Inv	Regular and reliable monitoring data show operating conditions that lower dioxin levels to international emission standards at three demonstration incinerators in	A planned schedule of improvements in operating procedures established after measuring and evaluating the baseline situation at three demonstration	GEF TF	9,832,000	17,613,000

[1] Project ID number will be assigned by GEFSEC.
[2] Refer to the Focal Area/LDCF/SCCF Results Framework when completing Table A.

		Kunming Regulatory monitoring of incinerators in Kunming and Ningbo cities strengthened. Regulatory framework better aligned with Stockholm Convention BAT/BEP. Local communities' information on incinerators' environmental impact enhanced. Demonstration incinerators better able to reach internationally accepted dioxin emission levels.	incinerators Local enforcement authorities have continuous access to online data on incinerator operating conditions. Integrated environmental permits and inspection manuals completed for all Kunming incinerators. Ningbo EPB dioxin laboratory sampling equipment procured and staff trained. New technical code on fly ash management drafted and three existing technical codes on incinerator operations updated. Data on incinerator operating conditions and emissions disclosed to public in Kunming and Ningbo. Necessary pollution control investments carried out at three demonstration incinerators.			
Capacity Building for Improved MSW Management Planning,	TA	City and district level MSW management planners in China are better able to design waste minimization strategies that would reduce dioxin emissions. Kunming city and district officials prepare integrated MSW management	Ningo assessment of impact of baseline source segregation on incinerator dioxin emissions and operating conditions. Kunming - Ningbo twinning arrangement supporting learning by Kunming MSW management officials from Ningbo	GEF TF	1,568,000	30,186,000

		plan taking into account Ningbo's experience in waste minimization, notably segregation. MOHURD better able to promote efficient and less polluting regional disposal facilities among city and dsitrict authorities. City and district MSW management authorities have more accurate data to use in developing plans for source segregation and recycling. Awareness on BAT and BEP in MSW incineration and lessons learned from their applciaiton in China increased.	counterparts officials about costs, challenges and feasible approaches to promoting source segregation. Guidelines for regional planning of MSW disposal prepared. Statistical system properly accounting for recycled materials developed and in one or more cities. Conferences and workshops held with regulators and incinerator operators from cities across China internet-based and printed information materials disseminated.			
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal					11,400,000	47,799,000
Project management Cost (PMC)[3]				GEF TF	600,000	3,122,000
Total project costs					12000000	50921000

C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME ($)

Please include letters confirming cofinancing for the project with this form

[3] PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below.

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount ($)
GEF Agency	World Bank P123323	Hard Loan	30,000,000
National Government	FECO	In-Kind	1,650,000
National Government	MOHURD	In-Kind	323,000
Local Government	Yunnan Environmental Protection Department, Kunming Environmental Protecion bureau (EPB), district EPBs, Kunming Urban Management Bureau	In-Kind	4,278,000
Local Government	Ningbo EPB	In-Kind	1,019,000
Private Sector	Demonstration incinerators	Grant	11,528,000
Private Sector	Demonstration incinerators	In-Kind	2,000,000
Private Sector	Incinerators receiving BAT BEP training	In-Kind	123,000
(select)		(select)	
Total Co-financing			50,921,000

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY[1]

Type of Trust Fund	Focal Area	Country Name/ Global	(in $)		
			Grant Amount (a)	Agency Fee (b)[2]	Total c=a+b
GEF TF	Persistent Organic Pollutants	China	12,000,000	1,200,000	13,200,000
(select)	(select)				0
(select)	(select)				0
(select)	(select)				0
(select)	(select)				0
(select)	(select)				0
(select)	(select)				0
(select)	(select)				0
(select)	(select)				0
(select)	(select)				0
Total Grant Resources			12,000,000	1,200,000	13,200,000

[1] In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

[2] Indicate fees related to this project.

E. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? No

(If non-grant instruments are used, provide in Annex D an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/NPIF Trust Fund).

ANNEX A: PROJECT PREPARATION GRANT (PPG) REPORTING[4]

[4] If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF:			
Project Preparation Activities Implemented	***GEF/LDCF/SCCF/NPIF Amount ($)***		
	Budgeted Amount	***Amount Spent Todate***	***Amount Committed***
CS-1 Technical Support- International Consult Expert on Stockholm Convention BAT/BEP for MSW Incineration	30,000	30,000	30,000
CS-2 Technical Support- National Consultant Financial Analyst	19,110	11,466	19,110
CS-3 Technical Support- National Consultancy social impact assessment	29,926	29,926	29,926
CS-5 Technical Support - National Consultant Dioxin Laboratory Specialist	3,948	3,948	3,948
CS-4 Technical Support - National Consult Expert for Environmental Impact Assessment	30,000	18,000	30,000
CS-7 Technical Support- National Consult Expert on MSW Treatment and Disposal	20,000	12,000	20,000
CS-8 Project ManagementTechnical coordinator	15,225	7,612	15,225
IOC	76,791	51,880	76,791
Total	225,000	164,832	225,000

ANNEX B: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used**)**

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

ANNEX C RESPONSE TO COUNCIL COMMENTS
China Municipal Solid Waste Management Project
Responses to November 2011 GEF Council Comments

Germany Comments
The baseline scenario is presented in a clear and comprehensive way. However, further clarification is needed as to why the overall release of PCDD/PCDF is expressed according to WHO standards, i.e. TEQ (338g TEQ/a; it is assumed that the number refers to the country) and the possible savings on the other hand are expressed according to the NATO standard, i.e 22g I-TEQ/a. These savings presume that the pilot project is implemented in the remaining 40 fluidized bed incinerators (it is not clear whether the 40 incinerators refer to the pilot region or to the country).
Assuming that the 22g I-TEQ/a refers to the country, then why are the savings so small compared to the baseline scenario of China of 2004?

Response: Project preparation has shown that information on the operating conditions and dioxin emissions at the participating incinerators is incomplete. Therefore the project has been designed to first support comprehensive operational and environmental performance audits of four participating incinerators in Kunming during the first year of the project. Based on the findings of the audits, operational and environmental improvement plans would be designed for and implemented by incinerators that fulfill financial eligibility conditions. These plans would demonstrate BAT/BEP for reducing dioxin emissions. Baselines for dioxin emissions would be established based on the findings of the first year audits and targets would be determined as part of the operational improvement plans. Under these

GEF Secretariat on the completion of PPG activities and the amount spent for the activities; and report to Trustee on the closing of PPG in the quarterly report to Trustee.

conditions, the project benefits in terms of dioxin emissions, both at the demonstration incinerators and through replication would be estimated after the first year audits. In other words, at this point uncertainties around emission factors are too high to allow estimation of a emission reduction figure with any credibility.

France Comments
The role of incineration in MSW management has been increasing and will continue to increase due to a shortage of available land for landfills and the incinerators potential ability to generate heat or electricity. Residential waste collected still contains a considerable proportion of plastic bags, packaging materials, while plastics lead to dioxin precursors, both causing PCDD/F generation and release.
The project tries i) to reduce the production of PCDD/F in pilot municipalities by applying best available techniques and best environmental practices (BAT/BEP) to municipal solid waste management and ii) to establish favourable conditions for replication of demonstrated BAT/BEP across China, including policy framework and increased awareness of among city administrators
The project operates through two main components:
- demonstrating modern MSW management practices meeting SC BAT/BEP
- support to replication through strengthening the policy and the regulatory environment building institutional capacity, dissemination and public awareness raising.

It seems to us i) that people's awareness of good practices (at source waste separation) and differences in the dioxin releases and associated health risks from incinerators with and without BAT/BEP, and ii) disseminating the lessons learnt from the project, are critical issues insufficiently developed in the project.
Opinion: favourable

Response: The project is closely linked to the USD 250million Ningbo Municipal Solid Waste Minimization and Recycling Project which the World Bank supports through a USD 80million IBRD loan. The project aims to assist selected districts in Ningbo Municipality to increase the volume and proportion of municipal solid waste recycled with processes for waste separation at source and recycling. The cost of the component that promotes MSW separation, collection, sorting and transportation, including through intensive public awareness raising to change behavior at the household level, is USD 178million. It is acknowledged that besides requiring very large monetary resources, awareness raising to change behavior at the household level towards waste segregation is a long term process. Therefore, the GEF grant allocated to this project would have been insufficient to induce any measurable change in terms of waste segregation in another city. Rather, the project focuses on regulatory and operational capacity building to improve incinerator operations towards BAT/BEP so as to reduce dioxin emissions. This is believed to be the most cost effective use of the GEF resources, since national or municipal resources are unlikely to be immediately available for such a concentrated effort. Nevertheless, the project will still promote segregation at source through (i) a twinning arrangement between Kunming and Ningbo, whereby Kunming authorities will learn directly from their counterparts implementing the above mentioned project and use this information in developing their municipal plans for MSW segregation; and (ii) incorporating the message on segregation in the public awareness raising campaign to be conducted in Kunming.

Canada Comments
On the China Municipal Solid Waste Management project: Canada agrees with GEF STAP comments in that the project focuses on BAT/BEP for incineration of municipal solid waste and, therefore, the reduction of dioxins and furans, instead of looking at upstream alternatives to incineration such as waste reduction, recycling, composting, etc… We also wonder that given that China’s municipal solid waste is high in organic matter and has a low calorific value, if incineration is indeed the best option for China’s municipal solid waste. Finally, we note that the 2nd most important source of global mercury emissions is the incineration of municipal solid waste. We wonder, therefore, if the GEF should be supporting a project that focuses on this.
Response: With regard to focus on BAT/BEP in incineration rather than upstream, please refer to the Bank’s response to the comments by France. The Bank, in its dialogue with Chinese policy makers, has pointed out that landfilling would be a preferred option over incineration, even where land is scarce, since land filling is much less expensive than incineration especially when the cost of environmental protection is taken into account. However, the Bank also recognizes that wide-spread incineration is a reality in China and there are significant regulatory and operational capacity gaps, which prevent minimization of the environmental impact of incineration, as in developed countries. This

is in line with the recent joint PRC State Council and World Bank publication Urban China Toward Efficient, Inclusive, and Sustainable Urbanization, which calls for improved environmental management of waste disposal, in general and waste incineration, in particular.

We would like to emphasize that the project's support will not be to support incineration but to building capacity to make existing incinerators more environmentally friendly.

Mercury per se is not created through the incineration process, but caused by the incoming waste content. Therefore, reduction of mercury emissions will be achieved as segregation of waste becomes more widespread. This notwithstanding, the operational and operational performance audits that will be implemented in four Kunming incinerators during the first year of the project will address mercury, along with other pollutants and the operational improvement programs that will follow from these audits will aim to improve the participating incinerators' pollution control equipment so that they can consistently achieve international standards. As such demonstration incinerators will also be in compliance with the World Bank Environmental, Health and Safety Guidelines. The project will support widespread dissemination of the results of the above-named audits among regulators and incinerator operators to raise awareness on incinerators' environmental impacts, including through mercury emissions, and the need to take measures to control them, both through prior waste segregation and through pollution control equipment at the incinerator.