



GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

For more information about GEF, visit TheGEF.org

PART I: PROJECT INFORMATION

Project Title:	Implementation of PCB Management Programs for Electric Cooperatives and Safe e-wastes Management		
Country(ies):	Philippines	GEF Project ID: ¹	9078
GEF Agency(ies):	UNIDO (select) (select)	GEF Agency Project ID:	150048
Other Executing Partner(s):	Department of Environment and Natural Resources (DENR- EMB Lead Executing Agency); National Electrification Administration (NEA); Department of Trade and Industry (DTI), Technical Education and Skills Development Authority (TESDA)	Submission Date:	03/13/2015
		Re-submission Date:	03/30/2015
GEF Focal Area(s):	Chemicals and Wastes	Project Duration (Months)	60 months
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP <input type="checkbox"/>	
Name of parent program:	[if applicable]	Agency Fee (\$)	589,000

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
(select) CW-1 Program 1 (select)	GEFTF	800,000	3,200,000
(select) CW-2 Program 3 (select)	GEFTF	5,400,000	32,720,000
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
Total Project Cost		6,200,000	35,920,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: Protection of human health and the environment through sound management of PCBs and PBDEs in e-wastes.						
Project Components	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
1.Management of POPs in Waste	TA/Inv	1.1 Strengthened legislation and	1.1.1 A rationalized National Policy on	GEFTF	3,000,000	15,000,000

¹ Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

² When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#).

³ Financing type can be either investment or technical assistance.

Electrical and Electronics Equipment (WEEE)		<p>institutional capacity in implementing PBDE action plans</p> <p>1.2 Reduction and eventual elimination of POPS-PBDEs releases from WEEE to mitigate their health impact.</p>	<p>WEEE Management formulated including incentive packages and Extended Producers' Responsibility (EPR) initiatives.</p> <p>1.1.2 Systematized and standardized system for inventory of PBDE in WEEE in the country.</p> <p>1.1.3 BAT/BEP demonstrated for the sustainable sound management of WEEE leading to a significant reduction of primitive recycling activities for both the formal and informal sectors.</p> <p>1.1.4 Safe disposal of PBDE-containing plastics</p>			
2. Sound Management of PCB-contaminated equipment, PCB wastes and stockpiles from electric cooperatives	Inv	2.1. PCB management plans of selected rural cooperatives effectively implemented.	<p>2.1.1 Screening criteria and financial mechanism formulated for subsidized funding for qualified electric cooperatives to implement PCB management plans.</p> <p>2.1.2. PCB wastes screened, transported, treated and disposed at the existing Non-Combustion Facility at Limay, Bataan.</p>	GEFTF	2,300,000	16,500,000

3. Institutional strengthening, capacity building and awareness raising.	TA	3.1 Increased capacity for and awareness on sustainable and effective WEEE and PCB wastes management by relevant stakeholders	3.1.1. Training programs on PCB and WEE management for relevant stakeholders designed and implemented. 3.1.2 Awareness programs on WEEE and PCB waste management formulated and conducted. 3.1.2 Knowledge management infrastructure established.	GEFTF	400,000	1,600,000
4. Project Monitoring and Evaluation and Implementation	TA	4.1. The project and all its stakeholders are able to monitor and evaluate the project's progress allowing for the implementation of the National framework plan.	4.1.1 .A system of procedures for full monitoring (including gender and environmental and social safeguards) and evaluation mechanism setup ensuring best performance as indicated in the project's work plan.	GEFTF	200,000	1,200,000
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal					5,900,000	34,300,000
Project Management Cost (PMC) ⁴				GEFTF	300,000	1,620,000
Total Project Cost					6,200,000	35,920,000

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ()

⁴ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Beneficiaries	National Electrification Administration/Electric Cooperatives	Loans	10,000,000
Others	Development Bank of the Philippines	Loans	15,000,000
Recipient Government	Department of Environment and Natural Resources	In-kind	2,000,000
Recipient Government	Department of Environment and Natural Resources	Grants	500,000
Recipient Government	Department of Trade and Industry	In-kind	1,000,000
Private Sector	TSD Facilities	Equity	5,000,000
Recipient Government	Local Government Unit	In-kind	1,000,000
Recipient Government	Local Government Unit	Grants	500,000
Recipient Government	TESDA	In-kind	500,000
GEF Agency	UNIDO	Grants	165,000
GEF Agency	UNIDO	In-kind	255,000
Total Co-financing			35,920,000

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS ^{a)}

GEF Agency	Trust Fund	Country/Regional/Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) ^{b)}	Total (c)=a+b
UNIDO	GEFTF	Philippines	Chemicals and Wastes	POPS	6,200,000	589,000	6,789,000
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
Total GEF Resources					6,200,000	589,000	6,789,000

a) Refer to the [Fee Policy for GEF Partner Agencies](#).

E. PROJECT PREPARATION GRANT (PPG)⁵

Is Project Preparation Grant requested? Yes ☒ No ☐ If no, skip item E.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

Project Preparation Grant amount requested: \$160,000					PPG Agency Fee: 15,200		
GEF Agency	Trust Fund	Country/Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ⁶ (b)	Total c = a + b
UNIDO	GEF TF	Philippines	Chemicals and Wastes	POPS	160,000	15,200	175,200
(select)	(select)		(select)	(select as applicable)			0

⁵ PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$2m (for MSP); up to \$100k for PF up to \$3m; \$150k for PF up to \$6m; \$200k for PF up to \$10m; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁶ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

(select)	(select)		(select)	(select as applicable)			0
Total PPG Amount					160,000	15,200	175,200

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁷

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	<i>hectares</i>
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	<i>hectares</i>
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	<i>Number of freshwater basins</i>
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	<i>Percent of fisheries, by volume</i>
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	<i>metric tons</i>
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	<i>600 metric tons of PCBs and 1.13 tons of PBDEs</i>
	Reduction of 1000 tons of Mercury	<i>metric tons</i>
	Phase-out of 303.44 tons of ODP (HCFC)	<i>ODP tons</i>
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	<i>Number of Countries:</i>
	Functional environmental information systems are established to support decision-making in at least 10 countries	<i>Number of Countries:</i>

PART II: PROJECT JUSTIFICATION

1. *Project Description.* Briefly describe: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, with a brief description of expected outcomes and components of the project, 4) [incremental/additional cost reasoning](#) and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and [co-financing](#); 5) [global environmental benefits](#) (GEFTF) and/or [adaptation benefits](#) (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.

A.1.1. Global environmental and/or adaptation problems, root causes and barriers that need to be addressed

1. The management of persistent organic pollutants (POPs) listed under the Stockholm Convention (SC) remains to be a global challenge. While the success of the global efforts to rid the world of POPs have been demonstrated,

⁷ Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

developing countries are still in need of new and additional resources to address existing and emerging chemicals issues including the 'old' and 'new' POPs listed under the Convention.

2. The impacts of PCBs on human health and the environment is very well documented. Thus, according to Annex A part II of the Stockholm Convention, Parties to the Convention are obliged to eliminate equipment and oils containing PCBs from use by 2025 and bring these under environmentally sound waste management by 2028. However, developing countries and countries with economies in transition face several challenges concerning the environmentally sound management (ESM) of PCB oils and PCB-containing equipment including lack of capacities, poor inventories, limited resources and inaccessible information (PCB Elimination Network, accessed March 2015).
3. Around 2% of the total solid waste generation in developed countries consists of waste electrical and electronics equipment (WEEE) (UNEP, 2007). UNEP estimates of per capita WEEE generation within the EU at 14 to 15 kg annually and is expected to grow at a rate of 3% to 5% per year. These translates to around 5 to 7 millions tonnes per annum. The presence of hazardous substances in WEEE makes it imperative to effectively manage them, as well as, to strictly implement regulations concerning their proper disposal. WEEE have components that are covered under the amended Stockholm Convention (2009) on POPs. These include certain brominated flame retardants (BFRs) that are listed in Annex A of the Convention. These are: (a) hexabromobiphenyl (HBB) and (b) polybrominated diphenyl ethers (PBDE) - commercial-OctaBDEs and commercial pentaBDE. There is no specific exemption for the production or uses of HBB, while production and use of POP-PBDEs have to be eliminated by Parties subject to the exemptions allowed by the Convention.
4. PBDE production data for 1970-2005 ranged between 1.3 million to 1.5 million tonnes as estimated by the POPs Reviewing Committee (POPRC) of the SC (UNEP, 2010). During this period, global usage for c-PentaBDE and c-OctaBDE was estimated at around 100,000 tonnes each. Production of c-pentaBDE and c-OctaBDE ended in 2004, while c-DecaBDE production continues. Commercial-DecaBDE production until 2005 was estimated to be at least 1.1 million tonnes. Although not listed at present, higher brominated PBDEs can be debrominated during its lifetime and thus could potentially be precursors of lower PBDEs, such as the POPS-PBDEs. It is also worth noting that, although the other PBDE homologues are no longer produced, recycling of plastic casings in computers and other WEEE products that contain PBDE into new plastic products give rise to secondary contamination and its associated health risks. Hence, the use of recycled plastics can be potentially more hazardous than its original intended use.

A.1.2. Baseline scenario or any associated baseline projects

5. As party to the Convention (SC) on Persistent Organic Pollutants (POPs), the Philippines is obliged to comply with the targets designed to reduce or eliminate releases from intentional and unintentional production of POPs. The Government of the Philippines, through the Department of Environment and Natural Resources, developed a National Implementation Plan (NIP) in 2006, which outlined programs and actions to achieve its obligations. The NIP has recently been updated to address the changes in the obligations to the SC, review the action plans previously developed and the achievements so far, and formulate new action plans that would address the additional obligations. In the updated NIP, two of the priority action plans identified were the need for the development and implementation of incentives for rural electric cooperatives to comply with the phase out of PCBs and management of PBDEs from WEEE stream in the country. The baseline situation and associated baseline projects are detailed in the following section:

Component 1: Management of Waste Electrical and Electronics Equipment (WEEE)

6. Most countries lack reliable data on WEEE generation, the Philippines included. Currently available generation reports of WEEE in the Philippines are based on the studies conducted by the University of the Philippines and are based primarily on sales data or partially estimated using material flow models. Peralta and Fontanos (2006) used the end-of-life model developed by Mathews (1997) of Carnegie Mellon University and accounted for the relationships among reuse, storage, recycling, and landfills. Yang et al. (2004) calculated e-waste generation by

using sales data for each year and assumed product lifetimes. Peralta and Fontanos (2006) estimated the level of e-waste generation based on domestic sales data of five major electrical and electronic products namely televisions, air conditioners, washing machines, refrigerators and radios. A total of 25 million units of e-waste were estimated as obsolete over a 10-year period (1995 to 2004), and around 2.7 million units became obsolete by the end of 2005. Another 14 million units have been projected to become obsolete in the next 15 years.

7. Many factors contribute to the increasing generation of WEEE in the local scene. Foremost is technology adoption. Individuals, households, private and public institutions rely heavily on electronic and electrical equipment. Rapid advancements in technology create continuously new models and, together with an increasing market penetration rate, make electronic and electrical equipment reach obsolescence quicker than ever. Moreover, a myriad of other causative factors including the importation of relatively cheap and used electrical and electronic equipment from other countries (Korea and Japan being the major exporters), the switch to digital programming and adoption of integrated service digital broadcasting-terrestrial (ISDB-T) system developed by Japan (NexTV, 2013), the rapid growth rate (30% per year) of the Information Technology and Business Process Management (IT-BPM) industry (DOST, 2012), and technology-driven export (semi-conductor industry) sectors in Special Economic Zones throughout the country will all likely continue to generate additional volume of WEEE in the near term.
8. Coupled with increased local generation, the country is faced with handling and management challenges. There are only a handful of TSD facilities that are into processing WEEE and even fewer still engage in treatment and recovery. The bulk of WEEE, therefore, end up in the unregulated informal sector, which are oblivious to the health and environmental health hazards associated with its improper handling. This is particularly striking since poverty is the main driver of WEEE recycling among the lower income brackets and who are at the same time most vulnerable to adverse health impact of improper WEEE handling.
9. The recent government initiative to implement the DAO 2013-22 Revised Procedures and Standards for the Management of Hazardous Wastes is a promising way forward to a sustainable management of WEEE in the country. Among its salient features include: streamlining the procedures for generation and compliance to the legal and technical requirements for hazardous waste management; ensuring that the provisions of DAO 1992-29 are followed particularly on the requirement for hazardous waste generators, transporters and treaters; and having classified WEEE as (M506) and under Miscellaneous Waste (M507). However, this may address only the formal sectors and a greater challenge lies on the e-wastes sector lies on the unregulated informal sector.
10. Isolated efforts on collection are somehow found in literature. In 2006, Recyclables Fair was initiated to establish WEEE markets. These events aimed to collect WEEE from shopping malls in Metro Manila on a regular monthly schedule. The activity provided the venue for households and offices to dispose their WEEE (Ayala Foundation, 2011). Also, DENR and the National Solid Waste Management Commission (NSWMC), in partnership with the Department of Trade and Industry- Board of Investment (DTI-BOI) and with technical assistance from Japan International Cooperation Agency (JICA), also implemented a project on Cell Phone Waste Collection and Recycling in 2007. Drop-off points for collection of discarded cell phones and components, including 20 collection bins in three designated areas in Metro Manila, were set up at shopping malls and other public places.
11. There are two (2) groups of e-waste recyclers in the country – formal and informal sectors. Of the 109 registered Treatment, Storage and Disposal (TSD) facilities in the country, only 14 are authorized to handle WEEE and are classified as formal recyclers. They engage in total recycling and recovery. Most of them export the recovered metals for further refining in European and some Asian countries. TSDs are required to secure an Environmental Clearance Certificate (ECC) from the Environmental Management Bureau of the DENR. Their continued operation is subject to compliance of conditions stipulated in the ECC and submission of a quarterly Self-Monitoring Report (SMR), which details all materials processed and their emissions. The other group constitutes the informal recyclers, which are basically junk shops and private individuals that do their own backyard recycling and recovery operations by dismantling WEEE components without using protective devices.
12. TSDs source out their WEEE from commercial partners and offices, including imported used electronic devices.

Other sources are from junkshops, households and waste markets organized by partner institutions, like Ayala and SM malls, as well as companies located in industrial zones, such as Fujitsu, Samsung, Philips, Panasonic, Sanyo and Toshiba. Recycling processes involve cutting/destruction, dismantling, sorting, and compaction of scraps. Processed e-waste are then exported to developed countries in Asia (China, Korea, Japan) and Europe (Italy, Germany, Finland) for further smelting or metals recovery. The imported near end of life EEEs are either re-exported as processed WEEE by the TSDs or disposed in open dumpsite by the informal group. Residual parts are often burned, stored in junkshops to accumulate or are indiscriminately thrown away (Carisma, 2009).

13. The disposal of WEEE via landfill could pose serious environmental threats, like groundwater and surface water pollution. Open burning emits toxic substances into the air, while direct human exposure to the hazardous components of WEEE poses serious health concerns.
14. Even with the foregoing initiatives, a number of issues remain. The Philippines still suffers from major gaps in management and enforcement of critical regulations. The regulatory framework dedicated for WEEE management is relatively new (DAO 2013-22), requiring strong enforcement. Compounding the problem is the absence or lack of consolidated and reliable data on generation, collection, disposal and management schemes, while environmental awareness on the hazards associated with WEEE is low.

Component 2. Sound Management of PCB-contaminated equipment, PCB wastes and stockpiles from electric cooperatives

15. The Chemical Control Order (CCO), DAO 2004-01, for PCBs issued in 2004 targeted the complete phase-out of PCB equipment by 2014, while the complete disposal for PCBs was set for 2025. Moreover, Section 6 of the recently issued DENR-EMB memorandum circular 2015-004 proscribed the use and phase-out of remaining PCBs in the country. It states that no additional PCB equipment, PCB-contaminated equipment, and non-PCB equipment shall be used, and the remaining PCB equipment, PCB-contaminated equipment, PCB equipment in use and PCB wastes that were not disposed after March 19, 2014 shall be subject to phase-out and environmentally-sound treatment and disposal at the earliest possible time with a timetable to be indicated in the PCB Management Plan and subject for approval by the EMB Regional Office. Upon completion of the management plan, PCB owners shall submit a PCB-Free Certificate attesting that a PCB concentration of less than 2 ppm has indeed been attained
16. Since 2008, the Philippines has implemented GEF-funded POPs projects that address the management and disposal of PCBs and other POPs including: (i) GEF-World Bank Integrated POPs Management (ii) GEF-UNIDO Non-Com Project, which financed the deployment of a commercially available and proven non-combustion technology to eradicate 1,500 tons of PCBs (PCB contaminated oil and PCB containing equipment). The UNIDO-GEF-DENR Non-Combustion POPs Destruction Facility Project promotes the adoption of available non-combustion technologies for destroying Persistent Organic Pollutants (POPs) in the Philippines. It aims to eradicate some 1,500 tons of stockpile PCBs including the PCBs in electrical equipment. The project successfully treated low levels (<10,000 ppm) of PCB contaminated oils and equipment. Transfer of knowledge was also achieved by equipping personnel with skills and the technical capability in running the non-combustion facility.
The facility has a design capacity of 750 tons per year of different PCB-containing equipment and wastes, specifically PCBs-containing transformers, capacitors and contaminated oil. The facility has processed a total of 31 batches for low level PCB oil (concentration ranging from 34 to 12, 261 mg/kg) and successfully treated to meet the Philippine standard level of <2mg/kg. The same performance was shown for high level PCB (400,000 to 800,000 mg/kg) destruction. The plant was able to comply with the PCB destruction target of <2mg/kg on 3 initial runs. (Final Report. Outcome of Commissioning. The Non Combustion POPs (PCB) Destruction Facility. September 23, 2014). Currently, the facility charges a destruction/decontamination fee of US\$ 6 per kg of PCB wastes.
17. The integrated POPs management project of the World Bank provided technical assistance to PCB owners to implement an environmentally sound management and disposal of PCBs. It ensured compliance to existing regulations such as the DAO 2013-12 or the Revised Procedures and Standards for the Management of Hazardous Waste and the 2008 Code of Practice on Management of PCBs and the recently issued Memorandum

Circular 2015-004. PCB owners, including electric cooperatives, were required to prepare their own PCB management plan covering inventory with specific timelines for decommissioning, retiring, treatment and decontamination, as well as existing condition of the stockpiles, emergency preparedness and response procedures, and health and safety plan. However, based on the review of the submitted PCB plans that are still subject for review and approval of EMB, it was noted that the plans did not include the following: storage facility closure plan, closure and post-closure conditions and monitoring procedures. Cost estimates on the actives prescribed in the plan were not included together with the detailed timelines.

18. In the 2006 NIP, the total PCB stockpile from various sources including electric utilities and cooperatives, commercial buildings, industrial establishments/manufacturing plants, military camps and bases, servicing facilities and hospitals is 2,400 tons. The electric utilities and cooperatives comprise 68% of the total weight of PCB stockpile. In the updated NIP, one of the action plans identified is the development and implementation of incentives for rural electric cooperatives (ECs) to comply with the phase-out of PCBs set in the MC 2015-004. This was communicated to the ECs in different consultative meetings with DENR.
19. Republic Act No. 10531, approved on May 7, 2013, defines electric cooperative as electric distribution utility organized and registered pursuant to Presidential Decree 269, Republic Act No. 9520 and other related laws. Section 4 of RA 10531 states that the National Electrification Agency (NEA) shall have the powers, functions and privileges to strengthen electric cooperatives, help them become economically viable and prepare them for the implementation of retail competition and open access pursuant to Section 31 of the Electric Power Industry Reform Act (EPIRA) of 2001. NEA is likewise empowered to supervise the management and operations of all electric cooperatives, provide institutional, financial and technical assistance to electric cooperatives upon request, and serve as guarantor to qualified electric cooperatives in their transactions with various parties.
20. The National Electrification Administration (NEA), created on August 4, 1969 through RA 3068, is the agency mandated to implement a Rural Electrification Program for the country. It has provided technical, institutional, and financial assistance to the electric cooperatives (EC's) which in turn undertake power distribution on an area coverage basis. ECs serve as NEA's partners in the Rural Electrification Program. They are organized as private, non-stock, non-profit, non-political entities owned and operated by the consumers in their service area. There are 119 electric cooperatives (EC) operating nationwide, 39 of which are members of the Association of Island Electric Cooperatives (AIECs). In addition, there are ECs that are under the universal charge-missionary electrification subsidy of NEA. These are ECs that are perennially government subsidized because of low or negative revenues.
21. Recent consultation with 20 electric cooperatives revealed that some of the PCB stockpiles were already bidded-out for treatment, but majority are still stored in their stockyard awaiting advice from NEA or their respective EC board. The information gathered during the consultation was corroborated by the field reports of DENR-EMB from 2011 to 2012 in ten (10) selected ECs with the objective of updating and validating the PCB inventory as reported in the CCOs. The inspection reports showed poor storage practices of PCBs (no pallets and no PCB shelter), no laboratory analysis, and incidents of leaks and spillages and improper labeling were observed. Fifty percent of the inspected cooperatives had no Pollution Control Officers (PCOs), 30% disposed transformer oil through TSD facilities (however there was no record of these transactions), and 10% had no inventory record of the PCB stockpiles. One of the inspected facility, CasurecoIII, belongs to the ailing (red) ECs. Based on the inspection reports, there were TSD facilities identified that can handle PCB transformer oil. These are Bicol Transformer Rewinding Services & Supply (BTRSS) and Gulf Oil Petroleum Products. However, these facilities are not registered to handle PCB (L404) wastes. At present, only the Non Com Facility is registered to handle L404 wastes while there are five (5) DENR-registered transporters for such wastes
22. In order to meet the government target of total elimination of PCBs by 2025, these electric cooperatives are required to prepare their own PCB Management Plans and submit annual status reports to the DENR. The current situation of the ECs dictate that technical assistance is necessary for them to comply with the memorandum circular on the formulation of a PCB plan. Consequently, financial assistance, especially for the ailing cooperatives is needed. A review of the medium term development plan of NEA (2010-2016) includes 2

major projects - the Sitio Electrification Program (SEP) and Barangay Line Enhancement Program (BLEP) with PhP 33.8 B (around USD 767M) and PhP 3.51M (around USD 79M) budget respectively.

23. Electric cooperatives can avail of the yearly financial assistance from the NEA. In September 2014, the NEA Board of Administrators approved a lending rate on term loan approvals of (a) 6.5% interest rate per annum for repayment period of 3-15 years, and (b) 6% interest rate per annum for repayment period of two years. To date, NEA has already extended PhP30.425 billion (around USD 690M) in loans to the 119 electric cooperatives nationwide to finance various rural electrification projects and endeavors. This loan package maybe used for the replacement programs of PCB-containing transformers.
24. Electric cooperatives can also tap or seek assistance from the Development Bank of the Philippines (DBP) for the replacement of PCB-containing transformers. The DENR-approved PCB management plan can be provided to DBP, together with other requirements to assist in processing of loans to be awarded to qualified electric cooperatives. DBP can provide loan up to 80% of the total project cost.
25. While loan packages are available in the country, they mainly cater to infrastructure development and do not support wastes disposal plans. Thus, it is envisaged that through the project, a subsidy on the disposal cost maybe provided as assistance to enable qualified electric cooperatives to dispose of their PCB stockpiles while accessing either the NEA or DBP loan for the replacement of PCB-containing transformers.

Component 3: Institutional strengthening, capacity building and awareness raising.

26. The DENR-EMB has conducted and has been recipient of a number of trainings on environmental sound management of POPs including those on identification of POPs, conducting environmental audits in industries, drafting management plans for PCBs and other POPs, conducting inventories of PCB stockpiles, and analysis of PCBs and other POPs for the EMB laboratory staff. These seminars and trainings where later extended to stakeholders such as industry generators, PCB owners, academe, and NGOs. This component of the project aims to further enhance the training, capacity building and awareness raising programs through the inclusion of sound WEEE management. The project can benefit from the expertise of the Technical Education and Skills Development Authority, a government agency tasked to provide and supervise technical education and skills development in the Philippines. Regular short term vocational courses are offered, cellphone repair and servicing being one of them. TESDA resources will be made available to train MRF personnel in proper WEEE segregating and handling practices.
27. EMB and other stakeholders (LGUs, NGOs, PCOs of various industries, the media, environmental laboratories) participated in the environmental baseline and monitoring activities for POPs (dioxins, furans, PCBs) in the different environmental media namely soil, air, water, sediments, and biota environmental baseline and monitoring through programmes initiated by the institution and in coordination, with several programmes being implemented by the DENR. These activities generated particular awareness among the stakeholders on the presence of POPs in various environmental media.
28. While analytical trainings/activities on POPs analysis have been conducted, it is envisaged to further strengthen the infrastructure and analytical capacities of the laboratory division on POPs analysis. This is in support of Memorandum Circular No. 2014-007 requiring suspected PCB containing materials be tested for Aroclors and if results are negative further testing for PCB congeners be done. In addition, there is currently no protocol for sampling and analysis for PBDE as well as a standard procedure on estimating PBDE in WEEE and WEEE generation. These activities are envisaged to be undertaken through the current project.

A.1.3. Proposed alternative scenario, with brief description of expected outcomes and components of the project

29. The project is designed for the Philippines to meet its obligations under the SC and for the implementation of the identified priority action plans in its NIP that need urgent actions - total phase-out of PCBs and elimination of the environmental and health risks associated with the improper handling of e-wastes. The project in general

seeks to abate serious environmental threats caused by mismanagement of PCB and WEEE that are either disposed via landfills or open burning. The project aims to assist the government in meeting its obligations to the Stockholm Convention by developing and adopting a POPs management framework through policy reviews, development of technical guidelines, updating of national inventories on PBDEs, and reviewing of PCB wastes management plans. It also aims to increase the capacity of the DENR and other development partners in the monitoring and implementation of the POPs management framework, introduce BAT/BEP technology transfer and improved ESM using a pilot project demonstration facility from a selected site/industry covering POPs and other problematic components in e-waste streams. It will also provide support and technical assistance to rural electric cooperatives for the disposal of the PCB wastes facilitating the total PCB phase-out and disposal programs of the government by 2025.

The following provides the details of the project components:

Component 1: 1.Management of Waste Electrical and ElectronicsEquipment (WEEE)

30. This component aims to strengthen institutional capacity to implement the PBDE-related action plans in the NIP and to reduce and eventually, eliminate POPs-PBDEs releases from WEEE. It focuses on the establishment of a sound WEEE management system incorporating Extended Producers Responsibility (EPR) initiatives and compliance to be directly implemented by the DENR and the LGUs in cooperation with the civil society, business groups and other concerned sectors. The inventory of PBDE in WEEE will involve the validation of the data presented in the updated NIP. Validation may be carried out through the review of self-monitoring reports (SMRs) of the generators in the commercial and institutional areas. For the formal sector, WEEE is currently reported in the SMRs as it is now a regulated item in the Philippines. For the informal sector, this may be done using a waste analysis and characterization study (WACS) which will include WEEE or through estimation (total sales data for a given year - WEEE processed by the formal sector assuming a 2 year obsolescence period). PBDE quantities for disposal will be estimated from the accumulated volume of the validated WEEE figure.
31. This component also supports the establishment of an effective rationalized national policy on WEEE management. It envisages introduction of support mechanism and technical assistance to LGUs in setting up local municipal recycling facilities (MRFs) capable of handling WEEE and ensuring a sustainable WEEE management system leading to a significant reduction of primitive recycling activities in both the formal and informal sectors which would ultimately, lower health risks particularly among the specially impacted population, i.e., women and children. Establishment of incentive packages to alternative livelihood in the informal recycling sector will be conducted. The project will encourage the placement of the workers in the informal recycling sectors in the MRFs. LGUs, may partner with NGOs working closely with the informal sectors or with the private sector to identify and implement alternative livelihood programs for the informal sector who will no longer have access to WEEE sourced from the individual household as a result of the full implementation of DAO 2013-22. Small grants or loan packages (at low interest) may also be provided to the affected sector planning to switch livelihoods. Possible source of financing for the creation of identified alternative livelihood can come from poverty reduction programs of the LGU supplemented by its regular Internal Revenue Allotment from the National Treasury
32. For the demonstration activity, the target/pilot area will be Quezon City. It has a total land area of 166.2 square kilometers and is home to many government offices, including the House of Representatives, several major Philippine Universities, such as the University of the Philippines Diliman, the national university, and Ateneo de Manila University. It is also the headquarters of the Philippines' major broadcasting networks, as well as several of the country's major ICT-BPO providers. Based on the 2010 Census, the population of Quezon City stood at 2,761,000. The waste analysis and characterization study (WACS) of the pilot city can be updated to include WEEE components. The Waste analysis and characterization study (WACS) of the pilot city can be updated to include WEEE component. WEEE can be incorporated under recyclable category or residuals category. An over a period WACS activity can be done to account for the fluctuations and variations of the activities in the pilot city with source categories like institutional, household commercial establishments. This activity will determine current generation rates and the % composition of solid waste. In addition, the solid waste management plan of

the pilot city should incorporate the management of the identified Hazwastes -- such as WEEE and Mercury lamps and how to manage these in the MRF facilities of the pilot city.

The project also aims at identifying current infrastructures for WEEE management in the pilot city and recommend additional facilities as needed. Inventory of infrastructures, trained manpower and WACSs data can be used as criterion in clustering of MRFs in the pilot city. It will also document current WEEE handling practices of the pilot city and recommend schemes for further enhancement. Assessment of the financial aspects; i.e 5% of the IRA for solid waste, to ensure availability of funds for implementation, monitoring and sustainability aspects once UNIDO exits will be conducted.

33. The implementation of DAO 2013-22 specifies that a separate stream for WEEE be part of the regular recovery activities in all MRFs. The WEEE stream from these MRFs will be transported to the appropriate TSD (which maybe further equipped for PBDE management through GEF resources) for dismantling and treatment/recovery of PBDE from the WEEE plastic components. PBDE flame retardants are held in place physically rather than chemically bonding to the plastic material in EEE. Hence, the PBDE can be recovered via appropriate extraction procedures and subsequently treated. With the efficacy of the collection and treatment technique successfully demonstrated in this project, other TSD facilities may be encouraged to set up similar PBDE treatment facilities in the country with funds from government financial institutions such as the DBP. Appropriate option for PBDE disposal will be identified during the PPG stage.
34. BAT/BEP measures are implemented in the overall cycle of WEEE (or PBDE-containing WEEE management) following the inverted pyramid waste management hierarchy namely: Dismantling → XRT/XRF screening → reuse/recycle → treatment → dispose. The emphasis is on preventing waste generation, and when not possible, re-use and recycling and finally treatment and disposal. The first step, then is to segregate and identify PBDE containing plastics from WEEE. Detection and identification is done through instrumental methods such as using portable X-ray fluorescence equipment which uses the characteristic fluorescxent x-rays emitted when a material is bombarded with high-energy X-rays or gamma rays or XRT (x-ray transmission) process which separate materials according to optical densities. These instruments can be costly such that some areas may resort to manual segregation. The guidance document on BAT/BEP for the recycling and disposal of articles containing PBDEs (UNIDO, 2012) provides some instances where manual sorting maybe applicable. However, it is still recommended to perform spot checks using an XRF to ascertain its applicability. Sorted plastics will be reused/recycled in the case of non-PBDE plastics while those that contain PBDEs will be subjected to treatment. Treatment/disposal options for PBDE-containing materials, from literature, includes extraction, co-firing in BAT cement kilns, and landfilling in secured cells. Appropriate disposal option that maybe applicable for the Philippines will be further evaluated during the PPG.

Component 2. Sound Management of PCB-contaminated equipment, PCB wastes and stockpiles from electric cooperatives

35. For the PCB component of the project, the aim is to assist the rural electric cooperatives (ECs) in addressing their PCB stockpiles. The inventory stockpiles of ECs will be validated by the regional offices of the DENR. The validated figures will be compared with the environmental management plans filed by ECs. In addition, the management plan will be verified whether it includes the analysis of PCB stockpiles, work plan and timetable for their eventual disposal including the expected costs. In addition, all applicable items specified in Memorandum Circular 2015-004 for inclusion in the PCB management plan should be complied with. Once approved by the DENR, the PCOs of these ECs will be trained on the adopted Code of Practice (MC 2009-007) for the management, storage, transportation and ultimate disposal of PCBs for the effective implementation of the plan.
36. The project component includes the formulation of a screening and selection criteria to be used for ECs applying for financial assistance. The criteria includes willingness of the ECs to comply, status of the inventoried stockpiles, and financial capacity among others. Qualified ECs will serve as pilot ECs of the study. It is envisaged that the loan package from the DBP and NEA will enable the ECs to replace their PCB-containing (in-

service) transformers while the GEF grant will be able to bankroll/subsidize the PCB disposal plans of 20 ECs at the minimum, with the assumption of 30 tons PCB wastes for disposal per EC.

Component 3: Institutional Strengthening, Capacity Building and Awareness Raising

37. Institutional needs assessment will be undertaken to determine capacity gaps in developing and implementing ESM especially for WEEE, and in implementing PCB Management Plans. The results of the needs assessment will be used in crafting a capacity building program that will address these needs. The needs assessment will also be considered in IEC activities for the awareness raising component of the project and the setting up of a knowledge management infrastructure on the areas of PCB and e-wastes management.

This component consists of activities such as trainer's training and seminar/workshop for stakeholders, development, formulation and creation of IEC materials such as multi-media educational materials, actual demonstration and field work activities in coordination with project partners, extending technical assistance in formulating PCB/WEEE Management plans. A documentation of these activities including lessons learned and best practices undertaken in pilot studies of electric cooperatives as well as MRF involved in WEEE collection will be made available to all stakeholders for adoption. The activities in this component are expected to enhance the ability of PCB owners among the electric cooperatives in formulating their own PCB Management Plans.

38. The IEC component of the project will bring about a better understanding and appreciation by the LGUs on the importance of having an ESM of WEEE that emphasizes health and environmental impacts. LGUs will accordingly be better guided in their policy and decision making functions. It is also expected these activities will encourage NEA and the ECs to include in their development plans, the safe disposal of PCB stockpiles and those in current use in consideration of the health risks associated with PCB. Moreover, one outcome of IEC activities is a better understanding of applicable environmental policies and regulations by all stakeholders which in turn promote better cooperation towards achieving compliance.
39. Knowledge management (KM) is also seen as an interesting feature of this component. While the Philippines has enjoyed GEF support in various POPs projects, there is seemingly lack of coordination and linkages on a national level. Thus, the project aims to promote an integrated approach in identifying, capturing, evaluating and sharing all information assets from the projects through the design and establishment of a KM framework. These framework maybe shared on a regional or global levels where UNIDO is operating.

A.1.4. Incremental/additional cost reasoning and expected contributions from the baseline

40. Technical and financial assistance from the GEF is the most feasible means to achieve the global environmental benefits that will be delivered by the proposed project. The reason being that the project falls within the GEF focal area on chemicals, particularly on POPs. It covers specific strategic goals to promote the sound management of chemicals throughout their life-cycle, as well as to build national and regional capacities and enabling conditions for global environmental protection and sustainable development.
41. The outcomes to be achieved from this project component which includes a strengthened institutional capability to implement PBDE targets in the NIP and the reduction and eventual elimination of POPs-PBDE, are not covered in the above-mentioned baseline projects. The existing framework plan does not include a WEEE management system that incorporates EPR initiatives and compliance. With the inclusion of BFRs (including HBB and PBDEs) in the list of POPs covered under the SC, there is a need to implement this project component to achieve sound management of the primary sources of PBDEs which are: electronic equipment, appliances like TV, computer CRT monitors and even plastics recycled from WEEE.
42. GEF funds will help the Philippines comply with its obligations under the expanded SC on POPs through funding, promotion and coordination. This will boost the capacity of the DENR and LGUs to establish a sound WEEE management system including the improvement of existing recycling facilities and the reduction of

primitive recycling activities in the informal sector. Funds can be sourced from EPR tax component on EEE to finance additional infrastructure for WEEE treatment by current TSDs accredited to handle WEEE. In addition, there will be increased investment for establishing more TSD facilities accredited as WEEE handlers in anticipation of the increase in the volume of WEEE to be collected upon enforcement of the new DAO on WEEE management.

43. This project component is expected to facilitate effective management of the existing low level PCBs stockpiles from rural electric cooperatives. PCB inventory from the WB-GEF IPOP's project reported that electric utilities and cooperatives comprise 68% of the total quantity of PCB stockpile in the country. Previous initiatives have provided technical assistance to PCB stockpile owners to allow them to comply with the EMB Memorandum Circular on PCB eradication. But the incremental benefit from GEF funding for this project component is needed to augment the existing resources of qualified electric cooperatives particularly in the management, disposal including transport of their PCB stockpile to the treatment facility.
44. The GEF grant will be used to ensure the ESM of PCBs among local cooperatives with emphasis on identifying qualified cooperatives to be subsidized. The funds will be used for establishing screening criteria based on actual survey of electric cooperatives and their current management practices, for updating inventory of the stockpiles, and for reviewing possible funding mechanism for local cooperatives to achieve 100% compliance with the NIP targets.
45. One outcome from this project component is the increased capacity of local cooperatives in all regions of the country to effectively manage their PCB stockpile in a sustainable manner, i.e. adoption of the Code of Practice and implementation of their respective management plans. At present, personnel from the identified PCB generators are generally un-equipped to effectively manage their PCB stockpiles due to lack of trained personnel. Existing technical capacity of personnel from the DENR also needs to be augmented, particularly in the regional offices where technical expertise is not always available to respond to site specific PCB Management Plans. It is also expected that sound understanding on WEEE management and greater awareness of the PBDE situation by all stakeholders will be achieved. Presently, EMB offices nationwide have yet to adopt a systematic and standard procedure for the identification and quantification of PBDE from WEEE. Only then will a reliable data on POPs-PBDE generation from WEEE be made available for inventory purposes.
46. GEF intervention will make the outputs of this project achievable by using funds for increasing the pool of qualified trainers among the designated Pollution Control Officers of all electric cooperatives throughout the country. The training and seminars can be regular features in NEA electric cooperative training (OCET) course offerings. The crafting of effective PCB management plans can be included as one topic for the Basic Substation Tending and Maintenance course. It can also be adopted as a major activity in the yearly NEA-EC consultative conferences or it can be offered as a stand-alone course.
47. Also, in order to increase awareness, GEF funding will be used to produce effective IEC materials and programs with emphasis on corporate social responsibility and the risks associated with the improper handling of POPs in general. Likewise, to promote coordination and linkages on a national level a knowledge management framework is to be established with the corresponding data bases, project activities, lessons learned etc. made available.

A.1.5. Global Environmental Benefits

48. The project is expected to achieve effective management of POPs-PBDE from WEEE, and PCB stockpiles. These targets are essential to minimize or even eliminate exposure to POPs of stakeholders directly involved in the disposal, dismantling, and recycling of WEEE and PCBs, as well as those who may be exposed due to their lack of awareness on risks and those in close proximity to contaminated sites. Successful implementation of the project components will contribute significantly to the global environmental benefit of reducing risks to human health. Improper disposal of WEEE to landfill sites, as well as mismanagement of PCBs could be eliminated

through implementation of the project, thereby avoiding pollution of groundwater and surface water, as well as emission of toxic fumes to the atmosphere. As such, ecosystems are protected, while biodiversity is also preserved.

49. The GEF grant will subsidize the management of 1.13 tons of PBDE-containing plastics. Based on the updated 2013 NIP, the obsolete units (assuming 5 year obsolescence period) generated from imported second hand EEE in 2015 is 450, 695 units. The target was calculated based on the assumption of 2.5 kg flame retardant plastics per unit (EEE contains between 1-9 kg/unit European Flame Retardants Association (EFRA) Retrieved from <http://www.cefic-efra.com/index.php/electronics/introduction> on February 14, 2015) and 0.1% RoHS specification for maximum PBDE in EEE (RoHS Regulations, Government Guidance Notes, February 2011. Retrieved from www.bis.gov.uk on February 14, 2015).
50. It is expected that about 600 tons of PCBs from rural electric cooperatives will be disposed through the subsidy program and the available national loan packages that maybe accessed for the PCB transformer replacement programs.

A.1.6 Innovativeness, sustainability and potential for scaling up

51. The innovativeness of the project approach lies in the loan package that maybe created through the local development banks. The traditional elements of the loan packages being offered centers on building of infrastructure that addresses environmental issues. However, current discussion may bring about 'special' loan packages that maybe provided for both the phase out of PCBs and disposal of the wastes. DENR-EMB is poised to work hand-in-hand with DBP, as well as other financial institutions to assist eligible stakeholders in gaining access to financing programs for projects on improved environmental compliance, pollution control and waste management.
52. On the technology side, the project will be able to assess possible technologies that maybe adopted to address PBDE management. The usual disposal practice is to landfill PBDE contaminated plastics. During the course of the consultation process, the possibility of extracting PBDEs from the plastics and treating the extracted solution was considered a possibility.
53. The sustainability of the project outputs will be ensured by: (i) strengthening implementation of policies, laws and regulations related to PCB and WEEE management; (ii) mobilization of stakeholders becomes self-sustaining given the critical mass of the project activities; (iii) collaboration with financing institutions such as the Development Bank of the Philippines (DBP) can also augment existing programs to ensure sustainability; (iv) design and establishment of knowledge management framework and; (v) financial sustainability maybe ascertained through the emergence of disposal and recycling sectors dedicated in supporting sound management of both PCBs and e-wastes and of the EPR policy that will be implemented.
54. Scaling up and replication is also potentially possible for the successful implementation of the pilot activity on WEEE management.

2. *Stakeholders.* Will project design include the participation of relevant stakeholders from [civil society](#) and [indigenous people](#)? (yes ☒ /no ☐) If yes, identify key stakeholders and briefly describe how they will be engaged in project design/preparation.

While the project envisages collaboration with civil society on its activities, the participation of indigenous people is not foreseen. The key stakeholders of the project shall include the following:

Stakeholders	Role
EMB-DENR and National Solid Wastes Management Commission (NSWMC)	The Environmental Management Bureau is a supporting body for the Department of Environment and Natural Resources. Being the national authority responsible for pollution prevention and control, and environmental impact assessment, EMB will be the lead implementing agency for the project.

National Electrification Administration (NEA)	NEA is the government agency tasked with the total electrification of the Philippines. It partners with electric cooperatives (ECs) to ensure that they become more efficient, reliable and competitive. NEA will be a co-executing agency for project component 2.
Development Bank of the Philippines (DBP)	DBP is the country's premier development financial institution. It promotes inclusive Green Growth of the Philippine economy by providing "Green Loans" and technical advisory assistance to various clients. Its "Green Loans" program finances environmental projects such as pollution prevention and control, waste management, sanitation, clean transport and renewable energy. DBP's "Green Financing Program" designed to stimulate environmental investments in strategic sectors and industries, will be tapped to finance major components of the project namely PCB management for the rural electric cooperatives and the collection and treatment of WEEE in the LGU target area.
Local Government Units	Quezon City is targeted for the demonstration activities on inventory and collection envisaged in the project. Other LGUs will be involved on the training activities and in the dissemination of lessons and learnings from the project.
Technical Education and Skills Development Authority (TESDA)	TESDA is the government agency tasked to provide and supervise technical education and skills development in the Philippines. Regular short term vocational courses are offered, cellphone repair and servicing being one of them. TESDA resources will be made available to train MRF personnel in proper WEEE segregating and handling practices.
Owners of Treatment, Storage and Disposal facilities (TSDs)	The TSDs participating in the project will partner with the target LGU in providing preliminary treatment to WEEE collected by MRFs. It is expected that TSDs will increase their capital expenditures to accommodate increased WEEE as a result of improved waste collection efforts by LGUs.
Private companies in the EEE industry, IT-BPO sector	Private companies in the EEE industry will be encouraged to include proper WEEE handling in their advertising activities as part of their Corporate Social Responsibility program.
NGOs	NGOs currently working in the informal sector including junkshops will assist in promoting awareness of the health impact of improper WEEE handling. The contribution of NGOs in achieving the project's aim of reduced health risks is crucial given the informal sector's reluctance in interacting with government agencies.
Academe	The academe will assist in implementing the project's awareness raising component by incorporating impact and mitigation of WEEE in short courses and seminars designed for accreditation of PCOs by EMB.

3. *Gender Considerations.* Are [gender considerations](#) taken into account? (yes ☒ /no ☐). If yes, briefly describe how gender considerations will be mainstreamed into project preparation, taken into account the differences, needs, roles and priorities of men and women.

Gender and Development (GAD) considerations will be made an integral part of the project strategy in consideration of the Gender policies of the GEF, UNIDO and DENR-EMB.

55. The Toxic Substances and Hazardous and Nuclear Wastes Control Act (RA 6969, which covers both PCBs and PBDEs) and Ecological Solid Waste Management Act (RA 9003, which covers WEEE in MRFs) have gender awareness policies in place, daily tasks and responsibilities are considered, and the increasing awareness of women to toxic substances in hazardous waste management are highlighted.

56. RA6969 gives due consideration to the daily tasks and responsibilities of women, especially those who are exposed to household hazardous chemicals, as well as the generators of such wastes and chemicals. The EMB-DENR through the Environmental Education and Information Division (EEID) is tasked to deliver proper information, procedures and guidelines about these laws. Both men and women should be made aware that generators of such chemicals have the responsibility to properly manage and dispose of these wastes. The generators are accountable for the cost of proper storage, treatment, and disposal of such wastes. They should also be given access to information on chemical inventory and to the priority chemical list. The general public shall have access to the safety data sheets prepared by the DENR. Women who are more exposed to unsafe environment should be made aware that generators of chemical substances, especially those in the Priority Chemical List, are subject to fines and penalties.

During the project implementation, women and children who are often involved in WEEE business (to be validated via surveys and ocular inspections) will be the recipients of IEC and trainings on health impact of improper WEE handling. Children will be discouraged from participating in WEEE processing. Technicians (usually men) in transformer maintenance facilities and disposal facility will be provided with information on the effects of PCBs and possible exposure of their families if mismanaged in their facilities,

57. RA 9003, the Ecological Solid Waste Management Act, also considers the daily tasks of women in households, commercial establishments, and even barangays as they generally, are directly responsible for the management of solid wastes from direct sources. The reason being that women are continuously exposed to polluted water as they do their daily household chores. Generally, they are most prone to exposure to a changing and unsafe environment, such as in the collection of firewood for fuel and raw materials in small businesses like handicrafts. As such, they have primary responsibility to maintain a safe environment by considering reduction or avoidance of wastes in homes and business operations, as well as the re-use and recycling of valuable products from wastes.

58. Barangay leaders, being directly responsible for solid waste management in the barangays, maybe tapped to assist WEEE collection activities in their jurisdiction. The assistance can be in the form of information dissemination on the new waste stream to be collected separately, coordinating schedules of collection, supervise operation of the barangay MRFs including preliminary WEEE plastics segregation. Thus, barangay leaders are encouraged to seek the active involvement of women residents in the village with regard to the establishment and management of the Materials Recovery Facility and in the SWM Program of the barangay. Women may also be propped to venture into livelihood and community projects that produce environment-friendly products. Barangay leaders should take into consideration women's views when formulating local policies pertaining to SWM.

59. In addition, the project will take into consideration UNIDO and GEF Gender policies during its formulation and implementation. Active participation of women in proposed activities will be supported. Gender neutral publications will be designed. GEF and UNIDO gender markers will be applied, and that the project shall be rated for gender relevance. Gender marking entails inclusion in project reporting of the following data: (i) Total number of full-time project staff that are men/women; (ii) Number of jobs created by the project that are held by men/women; (iii) Number of gender sensitive publications produced

4 *Risks*. Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable).

<i>Project component/aspects</i>	<i>Degree of risks</i>	<i>Mitigating measures</i>
Weak coordination among stakeholders	Low	Hold regular consultations and workshops to clarify specific roles of each stakeholder and facilitate its fulfillment
Resistance from informal sectors involved in WEEE dismantling	Moderate	Provide incentives for shifting to more lucrative alternative livelihood.

activities to modify their operations		
Delayed and unsustained efforts of collection, treatment and disposal of PCBs	Low	Provide access to technical and financial assistance to qualified electric cooperatives facilitating efforts towards successful implementation of their PCB management plan.
Weak implementation of national regulations	Low	Formulate mechanisms for giving incentives to compliant entities, as well as penalties for non-compliance.
Frequent typhoon and flooding episodes may hamper WEEE and PCB collection, transport and handling operations	Low	Ensure that the WEE and PCB Management plan take into account weather disturbances during its execution.

5. *Coordination.* Outline the coordination with other relevant GEF-financed and other initiatives.

60. The proposed project will bank on previous and ongoing GEF projects in the Philippines. Full coordination will be undertaken with the UNIDO-GEF-DENR Non-Com POPs Project, which aims to demonstrate the viability and promote the adoption of commercially available non-combustion technologies for eliminating Persistent Organic Pollutants (POPs) in the Philippines. It specifically targets to eradicate an estimated 1,500 tons of stockpile PCBs including the PCBs in electrical equipment. Validation of PCB inventory will render realistic estimates of the volume to be endorsed for hauling, treatment and disposal at the existing Non-Com facility.
61. Another associated project is the WB-GEF-DENR Integrated Persistent Organic Pollutants (IPOP)s Management Project. The project components include: strengthening the regulatory framework and capacity building for POPs monitoring, reducing releases of unintentionally produced POPs, managing PCBs, and identifying and remediating POPs contaminated sites. With existing initiatives to build capacity for the reduction and containment of POPs, stakeholders in the project will coordinate in areas of training and information dissemination to raise public awareness, as well as the improvement in the methodology for characterization and audit of POPs from identified sources.
62. GEF-UNIDO project on BAT/BEP for fossil fuel-fired utilities and industrial boilers. Implemented in 2011, the project aims to reduce POPs releases through capacity building towards an implementation of BAT/BEP schemes in fossil fuel-fired power utilities and industrial boilers. Complementing the project's capacity building for industry is the development of a curriculum of study for engineering students featuring green boiler technology. It has been expanded and adopted for future trainers. The capacity building and awareness raising components on POPs issues will be coordinated with the project.
63. The newly approved GEF-UNIDO regional project on reduction of UPOPs releases from open burning activities which aims to assist in the rehabilitation of dumpsites and develop the municipal recycling facilities in target areas in the Philippines would support the initiatives of the current project in terms of WEEE management. Full coordination will be undertaken with the project team to develop complementary activities.

6. *Consistency with National Priorities.* Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes ☒ /no ☐). If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.

64. The proposed project generally adheres to the policy of the state as to the regulation, restriction or prohibition of the importation, manufacture, processing, sale, distribution, use and disposal of chemical substances and mixtures that present unreasonable risk and/or injury to health or the environment. Importantly, this project contributes directly to the country's development priorities articulated in the Midterm Update of the Philippine Development Plan (PDP) 2011 - 2016. The PDP highlights the criticality of improving the state of the environment and natural resources (ENR) as key to achieving sustained and inclusive economic growth in the

country. It recognizes ENR's vital contributions, in the form of inputs and ecosystem services, to sustain resource - dependent communities, the agriculture and industry sectors, as well as water supply systems and the energy sector. Components in this project will provide strategic interventions that will enable government and other stakeholders to strengthen the implementation of various environmental laws on solid and hazardous waste management that help protect the environment. Equally important is the project's indirect contribution to the country's priorities in the area of social development through improving human capabilities to achieve freedom from illnesses.

65. The project is also reflective of the United Nations Country Team's commitment to streamline and align the different programmes and projects of the individual UN agencies in the Philippines to support the PDP. The United Nations Development Assistance Framework (UNDAF) 2012 - 2018 strongly considers the cross-cutting nature of environmental sustainability in the implementation of development projects in the country. It also recognizes the extreme importance of providing assistance to the government in increasing resilience to the impacts of climate - related events and man - made disasters through climate change adaptation / mitigation and disaster risk reduction and management. Through UNIDO's mandate and global competencies, this project will create the opportunity for the country to increase its capacity in addressing issues pertaining to environmental protection including the prevention and risk reduction from man - made disasters.
 66. It is aligned with the PCB and PBDEs targets stipulated in the National Implementation Plan of 2013. It also specifically aims to enhance the country's compliance to the Stockholm Convention on POPs, including PBDEs through the strengthened capacity and reduction of POPs-PBDEs emissions. The new regulation (DAO 2013-22) includes PCBs (with code L404) and classifies WEEE as M506 and as miscellaneous waste (with code M507), which include "all waste electrical and electronic equipment that contain hazardous components such as lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyls (PBBs) and polybrominated diphenyl esters (PBDEs) that include its peripherals i.e., ink cartridges, toners, etc." The regulation also adds a waste classification - special waste (with code M507), which include "all household hazardous wastes emanating from residential and commercial sources that are consolidated by Materials Recovery Facilities (MRFs) such as consumer electronics, white goods (i.e. refrigerators, washing machines, air conditioners, etc.), batteries, and busted lamps." This is a way forward to implementation and compliance to the SC on POPs, which is also a major goal of the project. The IEC component of the project will also complement the information dissemination activities arising from the implementation of DAO 2013-22.
 67. Moreover, the Government of the Philippines recognizes the need to address POPs issues in the country and has included the current project in its priorities in its National Portfolio Formulation Exercise (NPFE) for the GEF-6 cycle.
7. *Knowledge Management.* Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.
68. Knowledge management will be an integral part of the project. This would ensure that coordination and linkages are established within the project outputs themselves and those of the existing POPs projects in the country. Existing databases will be reviewed, continuously updated and made available online for easy retrieval by all potential users to include all stakeholders, NGOs, academe and other project partners. A project website will be established and will be linked to the DENR website. It will feature a webpage for public participation in updating relevant data. The website will include linkages or related links to all relevant projects implemented in the public sector. Success stories, manuals, flyers, standard presentations will be made available in the website for possible knowledge roll-outs. Among the information to be included are the health impact of POPs (specifically PBDEs and PCBs), updates on regulations, targets and goals in the National Implementation Plan - in particular: the status of compliance of the Philippines in the Stockholm Convention and the like. A feedback mechanism on the usefulness of the data and information will be included for the enhancement of the website.

UNIDO will also ensure that the activities, achievements and lessons learned from the project will be shared to

all its relevant partners and in appropriate regional and global forums.


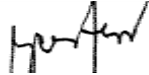
PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT⁸ OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):
(Please attach the [Operational Focal Point endorsement letter](#)(s) with this template. For SGP, use this [SGP OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Analiza Rebuelta-Teh	Undersecretary GEF OFP	DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES	03/12/2015

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies⁹ and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Mr. Philippe R. Scholtès Managing Director Programme Development and Technical Cooperation Division - PTC UNIDO GEF Focal Point		03/30/2015	Carmela R. Centeno 	+431- 260263385	c.centeno @unido.org

C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)

For newly accredited GEF Project Agencies, please download and fill up the required [GEF Project Agency Certification of Ceiling Information Template](#) to be attached as an annex to the PIF.

⁸ For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

⁹ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

List of References:

Ayala Foundation. (2011). High Five for the Ayala Recyclables Fair. Retrieved November 11, 2014, from <http://ayalanews.com/ayala-foundation/news/2011/10/high-five-ayala-recyclables-fair>.

Carisma, B. (2009). Drivers of and barriers to e-waste management in the Philippines. Unpublished MS Thesis. Lund University. Retrieved. January 28, 2013, from <http://lup.lub.lu.se/luur/download?func=downloadFile&recordId=1511085&fileId=1511091>.

Department of Environment and Natural Resources, RA 6969 or The Toxic Substances and Hazardous and Nuclear Wastes Control Act DAO 2013-22, *“Revised Procedures and Standards for the Management of Hazardous Waste (Revising DAO 2004-36.*

Department of Environment and Natural Resources DENR Administrative Order 2008- *“Code of Practice on the Management of PCBs”* MC 2015-004.

Department of Environment and Natural Resources DENR Chemical Control Order (CCO) for PCB. March 2004

Department of Environment and Natural Resources (DENR-EMB). Travel/Field Reports on Electric Cooperatives. 2011-2012.

Department of Environment and Natural Resources (DENR). Registered Hazardous Wastes Transporters Retrieved February 5, 2015, from <http://emb.gov.ph/internal/transporters.aspx>.

Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on Waste Electrical and Electronic Equipment (WEEE) - Joint declaration of the European Parliament, the Council and the Commission relating to Article 9.

Department of Science and Technology.(2012) 2012-2016 Philippine IT-BPM Road Map. Retrieved February 8, 2015, from <http://icto.dost.gov.ph/2012-2016-philippine-it-bpm-road-map/>

European Flame Retardants Association (EFRA) Retrieved February 14, 2015, from <http://www.cefic-efra.com/index.php/electronics/introduction>

National Economic Development Authority (2011). Philippine Development Plan 2011-2016. Retrieved February 7, 2015, from <http://www.neda.gov.ph/?p=1128>.

National Electrification Administration (NEA). Medium Term Development Plan 2010 – 2016. Retrieved January 15, 2015, from <http://www.nea.gov.ph/>.

National Electrification Administration (NEA). Isolated Island Coops Appeal to P-Noy. Tiselco and Maselco. Retrieved February 11, 2015 from <http://www.nea.gov.ph/news/117-isolated-island-coops-appeal-to-p-noy>

NexTV (2013, January 24). Philippines adopts ISDB-T standard for digital switch over. Retrieved February 8, 2015, from <http://nextvasia.com/4-free-to-air-dtt/philippines-adopts-isdb-t-standard-for-digital-switch-over/>

PCB Elimination Network (PEN) Retrieved 5 March 2015.

<http://chm.pops.int/Implementation/PCBs/PCBsEliminationNetwork/tabid/438/Default.aspx>

Peralta, G.L. and Fontanos, P.M. 2006. E-waste issues and measures in the Philippines. *Journal of Material Cycles and Waste Management* 8:34–39.

Matthews, H., McMichael, F., Hendrickson, C., and Hart, D. 1997. Disposition and end-of-life options for personal computers. Carnegie Mellon University, Pittsburgh. Design Initiative Technical Report #97-10.

Restriction of Hazardous Substances (ROHS). RoHS Regulations, Government Guidance Notes, February 2011. Retrieved February 14, 2015, from www.bis.gov.uk

United Nations Industrial Development Organization, (2012). Guidance for the inventory of polybrominated diphenyl ethers (PBDE) listed under the Stockholm Convention on Persistent Organic Pollutants. Retrieved February 11, 2015, from http://www.unido.org/fileadmin/user_media/Services/Environmental_Management/Stockholm_Convention/Guidance_Docs/UNEP-POPS-GUID-NIP-2012-PBDEs-Inventory.En.pdf

United Nations Industrial Development Organization.Final Report.Outcome of Commissioning.The Non Combustion POPs (PCB) Destruction Facility. September 23. IPM Report No.: 705P-UNIDO-COM4-Pr2. Kinetics Report No.: K-014853-PLANTCOM-0001.

United Nations Environment Program, 2010.Technical review of the implications of recycling commercial Penta and Octabromodiphenyl ethers.Stockholm Convention document for 6th POP Reviewing Committee meeting (UNEP/POPS/POPRC.6/2) Geneva 11-15. October 2010.

United Nations Environment Program, E-waste Management Manual, Volume 1. (2007). Retrieved from http://www.unep.or.jp/ietc/Publications/spc/EWasteManual_Vol1.pdf

Updated (2014) Philippine National Implementation Plan for Stockholm Convention on POPs

Yang, J.X., Xu, C., Liu, X.L. 2004.E-waste issues and measures in China. In: Proceedings of The Third Workshop on Material Cycles and Waste Management in Asia (NIES E-waste Workshop), December 14– 15, NIES, Tsukuba, Japan.