



REQUEST FOR CEO ENDORSEMENT

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title: Reducing Releases of PBDEs and UOPs originating from unsound waste management and recycling practices and the manufacturing of plastics in Indonesia			
Country(ies):	Indonesia	GEF Project ID: ¹	5052
GEF Agency(ies):	UNDP (select) (select)	GEF Agency Project ID:	5073
Other Executing Partner(s):		Submission Date:	2014-10-31
GEF Focal Area (s):	Persistent Organic Pollutants	Project Duration(Months)	48
Name of Parent Program (if applicable):		Project Agency Fee (\$):	379,050
➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> ➤ For PPP <input type="checkbox"/>			

A. FOCAL AREA STRATEGY FRAMEWORK²

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
(select) CHEM-1	Production and use of controlled POPs chemicals phased out. (GEF-5 Outcome 1.1)	Countries receiving GEF support to pilot new POPs reduction activities. (GEF-5 Output 1.1.2)	GEF TF	668,000	4,000,000
(select) CHEM-1	POPs releases to the environment reduced (GEF-5 Outcome 1.3)	Amount of un-intentionally produced POPs releases avoided or reduced from industrial and non-industrial sectors; measured in grams TEQ against baseline as recorded through the POPs tracking tool (GEF 5 Output 1.3.1)	GEF TF	2,405,000	4,640,000
(select) CHEM-1	Country capacity built to effectively phase out and reduce releases of POPs (GEF-5 Outcome 1.5)	Progress in developing and implementing a legislative and regulatory framework for environmentally sound management of POPs, and for the sound management of chemicals in general, as recorded in the POPs tracking tool (GEF 5 Output 1.5.1)	GEF TF	917,000	10,091,594
(select) (select)			(select)		

¹ Project ID number will be assigned by GEFSEC.

² Refer to the [Focal Area Results Framework and LDCF/SCCF Framework](#) when completing Table A.

(select)	(select)			(select)		
(select)	(select)			(select)		
(select)	(select)			(select)		
(select)	(select)			(select)		
Total project costs					3,990,000	18,731,594

B. PROJECT FRAMEWORK

Project Objective: To strengthen national institutional, technical, and legal infrastructure and capacity for POPs phase out and sound chemicals management

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Cofinancing (\$)
Component 1: Strengthening the national policy and regulatory framework to reduce UPOPs and PBDE releases from plastics manufacturing, recycling and disposal practices	TA	Outcome 1.1: Reduced PBDEs and UPOPs releases resulting from unsound waste management practices through the adoption and implementation of standards/measures, policies, plans and regulations	Activity 1.1.1: National standards on maximum PBDE content in products placed on the market adopted developed and adopted. Activity 1.1.2: Policy and regulatory framework for PDBE waste management in Solid Waste Mangement policy and regulatory framework developed and integrated. Activity 1.1.3: Technical by-laws, regulations and guidance aiming to reduce UPOPs/PBDE releases from plastics manufacturing, recycling and disposal practices developed adopted. Activity 1.1.4. Regulatory and policy framework pertaining to the import of PDBE and PBDE containing products wastes and material developed with technical guideline for PBDEs and UPOPs reductions/elimination from waste process	GEF TF	627,000	3,100,000

			<p>Activity 1.1.5. Institutional and technical capacity to control import of material streams potentially containing PBDEs increased. Including, policies for inspecting and monitoring PBDEs disposal</p> <p>Activity 1.1.6. Barriers to BAT/BEP implementation removed through economic instruments and incentives.</p>			
Component 2: Reduce or eliminate the importation and use of PBDEs from plastics manufacturing.	TA	<p>Outcome 2.1: Sufficient national technical expertise built to meet challenges with PDBEs in manufacturing and plastic raw material recycling</p> <p>Outcome 2.2: PDBE releases to the environment from the manufacturing sector reduced through phase out and introduction of PBDE avoiding quality control of raw material and awareness raising</p>	<p>Activity 2.1.1 Detailed inventory on PBDEs imported, handled and applied in plastics manufacturing</p> <p>Activity 2.1.2. Sufficient in-country PDBE capacity built to for selection and identification of suitable PBDE alternatives</p> <p>Activity 2.2.1. Assistance for Quality assurance programs for ensuring that PBDEs free plastic manufacturing</p> <p>Activity 2.2.2. Communication and awareness raising</p>	GEF TF	668,000	4,000,000
Component 3: Reduction of UOPs and PDBEs from unsound plastics recycling	TA	Outcome 3.1 Reduced releases of PBDEs as a result of improved handling, storage, recycling and disposal of PBDEs	Activity 3.1.1 (In) formal entities handling/ processing significant quantities of PBDEs containing plastics as well as	GEF TF	1,505,000	5,666,406

		<p>containing wastes and products through the introduction of BAT/BAP in the plastics recycling sector.</p> <p>3.2 Reduced releases of UPOPs as a result of improved raw material (recycled plastics) supply chains as well as the introduction of environmentally sound disposal practices at recycling entities.</p>	<p>PBDEs and UPOPs specific challenges these entities encounter, identified</p> <p>Activity 3.1.2. Total four large scale formal and informal plastics recycling clusters Mojakerto, Bekasi areas entities supported in implementing BEP/BAT</p> <p>Activity 3.1.3. Total 6 medium scale informal plastics recycling entities supported in implementing BEP/BAT</p> <p>Activity 3.2.1. Regular re-collection systems set-up for PBDEs containing plastics and waste fractions as well as unrecyclable plastics for adequate disposal.</p>			
Component 4: Reducing releases of UPOPs and PBDEs from unsound plastic disposal practices	TA	Outcome 4.1: PBDEs and UPOPs releases to the environment reduced through the implementation of appropriate disposal options for hazardous and unrecyclable plastic waste fractions from both formal and informal recyclers and waste collectors.	<p>4.1.1. Total four municipalities/ local governments in Surabaya and Bandung area supported in designating disposal options for PBDEs-containing and unrecyclable plastic waste fractions' putting in place mitigation measures to avoid/reduce harmful releases to waters, particularly ocean bound river systems.</p> <p>4.1.2. Appropriate municipal waste separation and collection schemes,</p>	GEF TF	900,000	4,425,188

			<p>feasible logistical arrangements, including proper waste acceptance and outbound material criteria, and solution for final disposal of unrecyclable plastic waste fractions (fitting both the needs of formal and informal recyclers/processors) developed and set-up.</p> <p>Activity 4.1.3. Recycling chains for local markets further developed, recycling rates increased and maximum quantities of recyclable plastics diverted from inadequate disposal.</p> <p>4.1.4. Designated PBDEs acceptance/disposal "points" staff trained in best approaches to reducing harmful releases at disposal sites.</p>			
Component 5: Monitoring, learning, adaptive feedback, outreach, and evaluation	TA	5.1. Project's results disseminated and replicated	<p>5.1.1. M&E and adaptive management applied to project in response to needs, mid-term evaluation findings with lessons learned extracted;</p> <p>5.1.2. Lessons learned and best practices are disseminated at nationally and internationally.</p>	GEF TF	100,000	1,500,000
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal					3,800,000	18,691,594

Project management Cost (PMC) ³	GEF TF	190,000	40,000
Total project costs		3,990,000	18,731,594

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

Please include letters confirming cofinancing for the project with this form

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount (\$)
National Government	Ministry of Industry	In-kind	5,000,000
Private Sector	APHINDO	In-kind	12,000,000
Private Sector	Perum Jasa Tirta	In-kind	1,525,188
Local Government	Konsorsium Lingkungan Hidup	In-kind	166,406
GEF Agency	UNDP	Cash	40,000
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
Total Co-financing			18,731,594

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) ²	Total c=a+b
UNDP	GEF TF	Persistent Organic Pollutants	Indonesia	3,990,000	379,050	4,369,050
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
Total Grant Resources				3,990,000	379,050	4,369,050

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.

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

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

Component	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
International Consultants	260,000	500,000	760,000
National/Local Consultants	1,191,000	2,000,000	3,191,000

G. 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).

PART II: PROJECT JUSTIFICATION

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF⁴

- A.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc. N/A
- A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities. N/A
- A.3 The GEF Agency’s comparative advantage: N/A
- A.4. The baseline project and the problem that it seeks to address: Minor revision of the approach introduced, mainly as consequence of putting more emphasis in the recycling stage as compared with plastic manufacturing stage, where less intentional use of PBDE has been found than anticipated. The support towards plastic manufacturing industry remain important but require less GEF support than assessed at PIF stage. The number of informal plastic recyclers is higher than anticipated but PPG investigations have revealed that they are concentrated in fewer location and cluster. Overall the problem of managing and separating PBDEs in plastic sector remains at anticipated level in Indonesia, However the most effective intervention can be achieved by putting more emphasis and resources towards the recycling and waste stages, which will remain also most important when managing the PBDE waste phase-out tail in the years to come. Another item that has been given a higher emphasis in the project structure is the sustainability of the operations. For this economic instruments as already possible in the national legislation is planned to be utilised, with possible EPR structure put in place for Electronics and automotive plastic and spare parts in order to finance the safe disposal of the PBDE containing plastics. The final Project has also re-organized some of the activities as per stakeholder involvement in order to facilitate the implementation stage.
- A. 5. Incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:
- The project is designed to support both national development objectives as well as contribute towards global environmental benefits. The project is expected to lead to the following important results that are incremental for the global environment:
- Through capacity building and technical assistance, the authorities responsible for international agreement compliance are better positioned to manage POPs and report on progress;
 - The country’s legal and institutional framework is reviewed and updated to address both intentionally produced POPs flame retardants as well as unintentional POPs releases from waste management;

⁴ For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter “NA” after the respective question.

- Through capacity building and technical assistance for quality assurance programme which would have more stringent recycling raw material requirements and a control, industry in Indonesia and wider region are actively reducing and managing PBDEs in plastic recycling and waste.
- POPs releases and risks are reduced through technical assistance, dedicated investment support demonstrating waste separation and management approaches and technologies, improved regulatory framework as well as enforced technical guidelines.

Overall, the project reduces barriers to the implementation of the Stockholm Convention on Persistent Organic Pollutants and integrate POPs management into overall country environmental and ties manufacturing industrial production. Thus, this project would promote a more holistic approach to the issue of chemicals and waste management, and through this, promote environmentally sound and sustainable development in the country.

Incremental cost reasoning and global environmental benefits:

In the baseline scenario, the awareness of decision-makers of the economic and social benefits for promoting sound POPs management is not high enough to lead to substantial improvements in the country. The issue of POPs flame-retardants are practically unknown outside of a small group of experts, and the government at central or regional level have yet to increase their knowledge base before POPs flame-retardants can get the central attention they require in the manufacturing and environmental control

The current development dynamics puts, rightly, the emphasis of Indonesia to address poverty through increased economic output and activity. The protection of the resource basis and high recycling of materials is a welcome part of the policy and action by the government and private actors. It should, however, be kept in mind that not all inputs are beneficial to recycle. This applies for example to PBDE containing plastics that are routinely recycled in Indonesia.

A flipside of economic development is the increased generation of waste, particularly municipal solid waste. Most countries suffer from non-established tradition of how to deal with this at household level in addition to the capacity and financial resources available to municipalities and the lower-earning households. This leads to several POPs release situations that increases the global POPs burden including releases of UPOPs to air from burning of waste as well as further loading of the global marine ecosystems, and ocean waste patches, with plastic waste when household waste is dumped in rivers in high quantities. The global POPs issue is further worsened by the fact that some of the plastic floating to the ocean current contain PBDEs.

In the Baseline scenario, the current PBDE containing plastic will be recycled with the corresponding plastic fraction. The coming 5-10 years will be the only opportunity to revert the PBDE plastic towards safe disposal after which it will be diluted to the overall plastic and its recovery will become practically impossible. The dilution does not however mean a risk reduction from POPs as they bio-accumulate and it will only increase the sources of POPs. Because of this and the fact that there would not be any action to divert PBDE containing plastics from recycling, all action and recovered material is incremental from the global environmental perspective.

In the Baseline scenario, there will be improvements to Indonesia municipal waste management but the approach is not comprehensive enough for allowing the UPOPs release reduction to be optimized. Indeed, without the project there would be several locations where uncontrolled burning would continue. Only through a concerted effort and financing from local and GEF resources, particularly in areas that are at the municipality limits, to educate and demonstrate sustainable, both from environmental and financial perspective, waste management approaches can lasting reduction in UPOPs be achieved. As the project will be working in communities on waste burning and river waste dumping issues, the global environmental benefits from the action is optimized. The activities on avoiding open burning as well as fuel use in food industry will reduce UPOPs reduction, possibly significantly as the plastic waste burning for tofu drying could have quite similar emission factors as burning of light shredder waste without air pollution control systems. This UPOPs reduction needs to be further estimated during implementation, but a high risk reduction is certain as much of the dioxins emitted is directly adsorbed to food in such processes.

In summary, the Global Environment Benefit (GEB) from the project would consist of the separation and safe disposal of PBDE containing plastics, reduction of UPOPs releases from uncontrolled waste burning and decrease of marine litter all beneficial to the global environment.

It is difficult to exactly calculate the amount of PBDE waste recovery that will be initiated by the project as it can be expected that the market dynamism will shift to positive directions once the plastic recycling chain will understand the need and have the tools to divert PBDE containing plastics. The direct minimum benefit in form of GEB which will be demonstrated through buy-back and disposal scheme will safely dispose some 750 kg of PBDEs contained in some 1,000 metric tons of plastics.

The decrease of uncontrolled waste burning and corresponding UOPs release reduction is practically impossible to calculate as most of the project activities are happening in a very wide area involving many stakeholders and therefore difficult to monitor. The co-financing activities and developments happening in parallel to the project can easily be 10-20 times the action directly undertaken by the project, especially in settings where the waste generation is high and baseline action is low. Only the community based waste separation and management is calculated to decrease the waste burning with more than 400 tons/year resulting in a conservative total outcome effect of 4000 tons per year reduction in waste burning. In addition to this open burning of industrial waste will contribute towards decrease of waste being uncontrollably burnt increasing the global benefits to around 1 g I-TEQ per year. In parallel, the reduced amounts of waste disposed, with sanitary landfilling or waste to energy processes as planned in Surabaya and Bandung will reduce uncontrolled burning of compacted waste reducing the overall UOPs releases with up to 10 g I-TEQ/a.

The municipal waste stream will also contain some PBDE containing plastics that will be brought into recycling and therefore avoided in marine litter. The total amount of PBDEs from one mini-depo processing is estimated at 0.27 kg/y bringing the total to some 2 kg per year for direct project activities and some 20kg/a when counting replicative effect totalling in some 100 kg PBDEs avoided in marine debris during the project.

In total, 750 kg of PBDEs will be separated and safely disposed with an additional 100 kg of PBDEs captured before ending in marine environment. Further, as the project will address mainly semi-urban as well as some restricted quantities of industrial plastic waste, it can be expected that correspond to approximately 11 g I-TEQ/a in air and land releases of UOPs, with the possibility of significantly higher release reduction depending of the conditions where industrial plastic is burnt as fuel in food industry.

A.6 Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:

1. Delay in adoption as overlapping mandates of ministries - Low

Project's multi-stakeholder coordination will ensure coordination and agreement between the ministries.

2. Poor project ownership or commitment to the project's implementation by any of the project's stakeholders causing a barrier during data collection, but also negatively impacting project implementation and its success. - Low

All project stakeholders will be fully involved and engaged throughout the project's proposal planning phase, their buy-in with respect to project objectives, outcomes and activities as well as responsibilities of different stakeholders will be incorporated in the project document/proposal.

Awareness raising will be conducted in such a manner that the focus will be on the economic and social advantages of project implementation as well as the use of BAT/BEP, ensuring the commitment to project implementation of all stakeholders.

3. Slow implementation of barrier reducing measures such as the further development and adoption of revised strategies, policies and regulations pertaining to the use of PBDEs in industry, safe and environmentally sound practices in plastics recycling and disposal. - Low to Moderate

The proposed project supports GOI in the strengthening of the national policy and regulatory framework pertaining to these sectors, thus the project itself can influence the timing of the creation of an enabling environment.

Waste management is a public and government priority and as such the risk is deemed very low. However, particularly with respect to the informal plastics recycling sector the risks are deemed moderate, as incentives in the informal sector often are financial and to a lesser extent health related. Due to this the project approach puts high emphasis

on economic incentives for informal sector to separate PBDE containing waste and the sustainability of these incentives

4. Industry and commerce sectors opposition to EPR and consequent delays. - Moderate

Series of information meetings with experiences from other countries on the success and easiness of establishing EPR for electronics.

5. Establishment of routine identification scheme takes longer than anticipated to reach goals. - Low

Recycling cluster involvement and interest indicate that critical number of plastic processors willing and able to invest in BAT/BEP. Incentives to move fast to be established.

6. Making mini-depos commercially viable in low income communities. - Moderate

Education that all also commercially valuable waste should go through depo to keep it viable

7. Waste to Energy project in Bandung and landfill enlargement in Surabaya delayed. - Low

Keep up urgency through community and NGO involvement.

8. Climate risks from changing weather patterns and sealevel rise, may increase leaching of toxics from recycling operations or waste depots - Low

The recycling cluster locations and susceptibility to sealevel rises and increased flooding will be mapped during introduction of BAT/BEP in the clusters. The minidepos will be established at elevated locations from rivers.

9. Political situation, especially the general election that takes place may change the post in the Ministry of Industry and other relevant ministries. - Low

It will require extended time for adjustment and adaptation.

10. Tour of duties. The Implementing Partner and relevant stakeholders is transferred to other post. - Low

It will require extended time for adjustment and adaptation.

Overall Risk Low

A.7. Coordination with other relevant GEF financed initiatives

Close links are already established with the Ministry of Environment supported by UNIDO and GEF on updating the POPs NIP on data and ideas on how PBDEs should be managed in Indonesia. Linkages with GEF/UNIDO project on PCB project will be further explored during implementation. First assessment has not revealed any duplication of activity, and further collaboration particularly when it comes to working with plastic manufacturing and recycling companies will be explored particularly as smaller PCB containing equipment could be found in waste streams/companies targeted by the project.

B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:

B.1 Describe how the stakeholders will be engaged in project implementation.

As the project aims at working at both national and local levels the stakeholder groups are somewhat different

depending on project component. Project components 1 and 2 take a broad nationwide approach to POPs regulations and management of PBDE in the industrial sector when it comes to large scale plastic production and recycling. On the other hand project components 3 and 4 aims at piloting successful approaches on the ground paving way for wide replication of avoiding PBDEs and UOPs from recycling and waste management practices.

On national scale the main stakeholder groups consist of

1. Government Ministries such as the Ministry of Industry (MOI), Ministry of Environment (MOE), Ministry of Energy and Mineral Resources (ESDM), Ministry of Health (MOH), Ministry of Finance (Directorate General of Customs and Excise - Customs) as well as other ministries involved with aspects of POPs-, chemicals- and waste- management or whose activities have a significant impact on the sound management of chemicals and wastes (agriculture, education, health, information and communication, women affairs, education, defense, etc.).

When it comes to POPs management both Ministry of Industry as well as Ministry of Environment play very important roles. For this project dealing with manufacturing and recycling companies and entities, the Ministry of Industry will be responsible for overall project implementation. Several ministries (MOI, MOE, MOH and MOF) will be involved in the development of national standards on PBDEs content in articles; Development, revision and improvement of the national policy and regulatory framework for PBDE (waste) management; Development, adoption and implementation of technical by-laws to i) Reduce releases of UOPs/PBDEs from unsound waste management practices and ii) Regulate the import of PBDEs and PBDE containing products and wastes; and, putting in place incentives for BAT/BEP implementation.

2. National Associations and Institutions: such as the National Agency of Drug and Food Control (Badan Pengawas Obat dan Makanan/BPOM); the Agency for the Assessment and Application of Technology (BPPT); the Indonesian Association of Aromatic, Olefin and Plastics Industries (INAPLAS); the Association of Downstream Plastics Industries (APHINDO); the Association/ Union of Diverse Indonesian Plastics Weaving Industries (GIATPI); the Association of the Indonesian Inorganic Basic Chemicals (AKIDA); the National Committee of Responsible Care Indonesia (KN-RCI), etc. as well as other associations and institutions supporting activities or companies involved in plastics manufacturing and recycling, waste collection, reuse, etc. as well as companies involved in the importation and distribution of PDBEs.

National associations and institutions will play a critical role during the baseline and national inventory, based on their knowledge of the sector and the activities of their members. They will also play an important role in identifying suitable recipients (e.g. manufacturers and recyclers) for the project's TA as well as facilitate training of trainers to ensure long sustainability and knowledge management on PBDE phase-out and management; towards the end of the project they will support the dissemination of the project's lessons-learned as well as the replication efforts.

3. Workers unions/representative groups: Representing employees in the plastics manufacturing and plastics recycling and waste management sectors. Their engagement in the project to support the training of workers in

personal protection measures and safe working conditions; dissemination of the project's lessons-learned in particular those related to workers and informing of particular harmful conditions workers are facing as well as any gender considerations that would have to be taken into account.

4. National NGOs: Such as Rencana Tata Ruang Wilayah Propinsi (RT/RWP), Pembinaan Kesejahteraan Keluarga (Family Welfare Movement) (PKK), Karang Taruna, in addition environmental organizations, women's organizations, recycling networks, and groups representing the rights of waste pickers and poor communities, such as the Indonesian Scavengers Association are important at a national level and can play a in Awareness raising dissemination of lessons-learned and dissemination of best practices at national level.

In components 3 and 4 the stakeholder groups include on local authorities, formal local industries but also informal industries (recycling clusters) as well as NGOs and CSOs active in the project pilot areas in and around Bandung and Surabaya.

5. Local Governments in Bandung, Bekasi and Surabaya are important players for local initiatives to reduce UPOPs and PBDEs releases and find appropriate and economically viable solutions for the final disposal of unrecyclable plastic wastes that reach the municipal waste collection system. The local governments will also have an important role in facilitating the waste separation and sound disposal operations to be established in the pilot project areas through NGO involvement.

For plastic recycling and separation of PBDE containing plastic and their safe disposal, municipal level authorities have a particularly important role as the recycling clusters exist between formal and informal sectors. The local elected authorities such as village mayors and municipal environmental inspectors have an important role in getting buy-in from the whole community put in place mitigation measures and best approaches to reduce/avoid harmful releases; collaborate with recycling entities in the selection and implementation of appropriate collection schemes; and train workers in personal protection measures and safe working conditions.

6. Private sector at the regional level consists of formal and informal companies and enterprises involved in plastics manufacturing, plastics recycling, collection, reuse, etc. This part of the private sector is different from the national level players that are organized in national associations and alike. The common dimension that these regional and local level companies have is that all are, to a degree, involved with informal recycling and are in some cases are small family outfits. These companies are often receiving plastics that they themselves presort and resell and therefore are key players in separating PBDE containing plastics from recycling chains and reducing burning of unwanted waste. Also workers protection issues are directly dealt within these companies as they are too small for having organized labor relations.

7. Regional/local NGOs and CSOs are important players in the organization of the municipal waste collection and separation both in Bandung and Surabaya areas. These NGOs that include Konsorsium Lingkungan Hidup (Consortium of Environment) (KLH), Inspiracy and Ecoton in Surabaya area as well as My Darling and LPTT in Bandung can provide functioning networks and programming channels for activities that involve community level waste interventions, particularly training and disseminating safe and sound plastic recycling and

plastic waste collection, separation and safe disposal.

In addition to being partners in implementing project activities through sub-contracts, NGOs and CSOs will further contribute to awareness raising activities targeted towards the informal sector, as well as in the dissemination of lessons-learned and dissemination of best practices at national level.

Indeed, a careful analysis of the project set-up and the particular interest and responsibility areas of the stakeholders, combined with the long distances in Indonesia has led to organizing the project in regional entities with 2 local advisory boards with the chairperson of the local advisory board participating in the overall Project Steering Committee.

One of the features introduced to ensure participation of women and women's groups in the project are the Local Advisory Boards. These are established to ensure that these vulnerable groups are adequately represented during the implementation of the project, particularly in the regional components. In addition, representatives from ministries focusing on vulnerable population groups participate (Ministry of Health, Education, Women Affairs, Agriculture Forestry and Fisheries, Industry, Labor etc.) in project steering structures together with NGOs working on gender, health and environmental issues as well as labor organizations that represent the concerns of workers of sectors affected by the unsound management of chemicals.

B.2 Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF):

The introduction of BAT/BEP in plastics manufacturing, recycling and disposal as well as the phase-out of PBDEs in the plastics manufacturing sector will directly reduce releases of POPs (UOPs & PBDEs), protect environmental and human health, and result in social and economic benefits such as a reduced burden of disease and reduced health care and environmental remediation costs. This will have an overall positive impact in the society, best felt by more vulnerable groups.

The plastic recyclers' income and socio-economic standing range from very low to medium levels. Therefore any increase both in costs and profitability will be directly felt by their communities and families. One of the main barriers to separating PBDE-containing waste from plastic recycling is the income loss that will be felt by waste collectors and recycling chain. With this socio-economic factor in mind the project approach has been designed as supportive, giving incentive rather than hoping that the sector could provide services and material for free.

Through the outcomes of the project's interventions, plastics recyclers will be able to produce recycled materials that are purer in quality, are supplied in sufficiently large quantities to ensure a constant and reliable supply chain to plastics manufacturers and be able to offer them for internationally competitive pricing of their product. Furthermore, the increase in amounts and efficiency of the plastic recyclers will not only create additional income generating activities and jobs in the recycling sector, but also diverting waste from landfills and thus lowering the costs currently borne by municipalities and tax-payers.

The municipal waste management and industrial waste management activities in Component 4 have important socio-economic dimensions, as they ameliorate the living conditions of the communities both in the urban setting but particularly the ones living at river banks and close to industrial sites. The diversion from using waste as fuel in food processing can have very significant local health effects as well as the fact that waste is not constantly burnt. Beside the community mobilization and activation some additional employment and income generation opportunities will be created at the waste-depos which will could help reduce poverty.

In consideration of gender dimension, the project will address the priority concerns of vulnerable groups including female workers to assess and strengthen their capacity to properly manage PBDEs recycling and waste. Many of the workers processing plastic recycling and waste, especially in the informal sector, are women and children and thus they are often among the most exposed to the toxic chemicals including POPs during their unsafe processing. By promoting proper collection and processing of plastic recycling and waste, health risks for the female workers and their children as well as local communities will be reduced from exposure of PBDEs/UOPs which would adversely affect human health.

In addition, the project will be implemented through active participation and engagement of Women's groups. Many of the project key stakeholders include female leaders at CSOs and NGOs as well as some recycling companies. They will be actively involved in the project activities and consultations throughout project implementation that will ensure that the gender issues are fully integrated in the project implementation. NGOs such as Pembinaan Kesejahteraan Keluarga (Family Welfare Movement) (PKK), and Karang Taruna, will support the project awareness raising activities, taking into consideration the specific impact of POPs on women and children, for them to be able to take preventive measures at home and in workplace.

In the long term, this project will have positive impact, in particular, on maternal and infant health, as women are biologically more susceptible for POPs. Thus the reduction of such releases and exposure will lead to higher health benefits for the population working at or residing near the facilities using or releasing PBDEs/UOPs.

B.3. Explain how cost-effectiveness is reflected in the project design:

Cost effectiveness in the project's regulatory and policy Component 1 has been achieved by thoroughly analyzing current possibilities to integrate further POPs regulation into the current framework and overarching policies, this coupled with identifying and selecting the most critical capacity building needs, such as Customs Department to ensure value for money.

Project Component 2 will be largely private sector run with project providing for key technical assistance in-form of technical expertise and some coordination of both the detail data and information analysis on PBDEs imported, handled and applied in plastics as well as the quality control program in the plastic manufacturing sector as laid down in Outcome 2.1. The remaining of the activities, both expert input as well as target groups, are planned to be from private enterprises providing a very efficient use of the GEF resources for getting PBDE situation fully understood and under control in plastic manufacturing in Indonesia. The Awareness and Communication Outcome 2.2 will provide a low-to-medium cost effectiveness. Being such a large country with a great number of industrial players the communication effort will bring some scale and associated cost effectiveness. However, the functioning networks of national, regional and local NGO will be fully utilized. As noted by STAP, the project opens a new area for GEF support and therefore the information dissemination also at the international level is of outmost importance.

Project Component 3 will be a new approach of trying to separate PBDE containing waste from post consumption stage in the recycling chain. This will inevitably require inputs making the cost-effectiveness lower than in scenario where one could assume recycler to separate and surrender (and even dispose) of PBDE containing waste by their own expense. It is not impossible that some recycler will move towards bearing the cost of this from their operations once the amounts decrease. At the beginning of the collection and safe disposal system operation, co-financing partners together with other public and private setcor partners will support setting up the economic instrument of repurchasing PBDEs waste from collectors. This operation is expected to be supported through an Extended Producer Responsibility scheme once established (proposed under Activity 1.1.6.) to ensure continued funding for the collection and safe disposal operation. Under the current scenario the collection and safe disposal of post-consumer PBDEs embedded in plastic is around US\$ 800 per/kg.

In the PBDE containing waste separation in project component 4, the low and dispersed volumes will, on

the other hand, make the effort less efficient. For the UPOPs reduction at larger municipalities, despite of low emission factors for burning of non-compacted MSW, will be at a reasonable cost-effectiveness. At the smaller riverside communities, which also give raise to marine litter, a good cost-effectiveness will be hard to achieve. Maybe it is not so surprising considering that they have been left out of municipal service probably because of the high cost.

C. DESCRIBE THE BUDGETED M & E PLAN: The project will be monitored through the following M&E activities. The M&E budget is provided in the table below. See UNDP project document for budgeting

Project start:

A Project Inception Workshop will be held within the first two months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

The Inception Workshop should address a number of key issues including:

- a) Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and RCU staff vis-à-vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
- b) Based on the project results framework and the relevant GEF Tracking Tool if appropriate, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
- c) Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
- d) Discuss financial reporting procedures and obligations, and arrangements for annual audit.
- e) Plan and schedule Project Steering Committee meetings. Roles and responsibilities of all project organisation structures should be clarified and meetings planned. The first Project Steering Committee meeting should be held within the first 12 months following the inception workshop.

An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

Quarterly:

- ☐ Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform.
- ☐ Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Based on the information recorded in ATLAS, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.
- ☐ Other ATLAS logs can be used to monitor issues, lessons learned etc. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

Annually:

□ Annual Project Review/Project Implementation Reports (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements.

The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
- Project outputs delivered per project outcome (annual).
- Lesson learned/good practice.
- AWP and other expenditure reports
- Risk and adaptive management
- ATLAS QPR
- Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.

Periodic Monitoring through site visits:

UNDP CO and the UNDP RCU will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Board members.

Mid-term of project cycle:

The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation (approximately end 2016). The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Center (ERC).

The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term evaluation cycle.

End of Project:

An independent Final Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development

and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Center (ERC).

The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.

During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

Audit: The project will undergo annual audit by a certified auditor according to UNDP rules and regulations, policies and procedures.

Learning and knowledge sharing:

Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums.

The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation through lessons learned. The project will identify, analyse, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

Finally, there will be a two-way flow of information between this project and other projects of a similar focus.


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

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

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Dana A. Kartakusuma	Assistant Mnister, Economy and Sustainable Devleopment	MINISTRY OF ENVIRONMENT	03/09/2012

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Ms. Adriana Dinu UNDP-GEF Executive Coordinator		10/31/2014	Mr. Jacques Van Engel	+1 (212) 906-5782	jacques.van.engel@undp.org

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).
Please see Annex A. of the UNDP Project document.

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Comments from United States of America at PIF approval

“We believe that this is a worthwhile project, which may have overlap with the U.S. Environmental Protection Agency’s work in Indonesia through the Global Methane Initiative. We recommend that the project implementers consult with local representatives of this initiative so that any redundancies can be avoided and synergies can be promoted.”

Response: Possible overlaps with the U.S.EPA Global Methane Initiative projects in Indonesia has been carefully avoided, by working at other municipalities than are included in the Global Methane Initiative. Further cooperation and coordination will be sought particularly on the project component supporting national waste policies to build up on the work of GMI as well as to ensure synergies and consistency in advance.

II. STAP Advisory Response (see table below for explanation)

Based on this PIF screening, STAP’s advisory response to the GEF Secretariat and GEF Agency(ies): Consent

III. Further guidance from STAP

PIF Information Extract:

The objective of this project is to reduce releases of PBDEs and UPOPs by improving overall life-cycle management of plastics and PBDEs containing plastics through the introduction of alternatives to PBDEs in plastics manufacturing processes and the application of BAT/BEP in plastics recycling and disposal practices.

STAP Guidance:

This project is one of the first of its kind in the GEF portfolio in taking on the PBDE issue, as there are few lessons learned available for this new area of POPs work; and the STAP is interested in seeing the lessons learned carefully recorded and disseminated for this project. It is quite well thought out, and makes connections to mitigation to other environmental issues such as Marine Debris. Nevertheless, the project has a very thorough consideration of related initiatives to build on for this project. However, there is no mention of utilizing UNEP's 2012 publication "Guidance on best available techniques and best environmental practices for the recycling and disposal of articles containing polybrominated diphenyl ethers (PBDEs) listed under the Stockholm Convention on Persistent Organic Pollutants" (see (<http://chm.pops.int/Implementation/NIPs/Guidance/GuidanceonBATBEPfortherecyclingofPBDEs/tabid/3172/Default.aspx>)).

Note should also be taken of the 2011 STAP guidance document "Marine Debris as a Global Environmental Problem: Introducing a solutions based framework focused on plastic" (<http://unep.org/stap>). The PIF document refers to 400 00 tons of plastics entering the waterways of Indonesia every year. It should be recognised that not only are the components of plastics toxic, plastics themselves are also pollutants. This guidance also proposes a framework on how to achieve a reduction in the quantities of waste being produced.

In any case, as this is a prototype sort of project, the project needs to have a strong monitoring and knowledge management component to capture lessons learned, with a clear mechanism for communication of results.

Response: STAP guidance has been taken onboard in the development of the project and the associated guidance documents will be used in both project implementation as well as capacity building and technical assistance activities during project implementation.

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS⁵

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

PPG Grant Approved at PIF: 100,000			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
Activity 1: Establish coordination mechanisms for PPG management and organization	20,000	25,283	5,215
Activity 2: Data collection and information and analysis for project document preparation	60,000	33,772	0
Activity 3: Develop a Full-Size Project (FSP) document (prodoc)	20,000	35,730	0
			0
*The figures are as of 3 September 2014			
Total	100,000	94,785	5,215

⁵ 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 GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

ANNEX D: 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)

N/A