GEF-6 REQUEST FOR PROJECT ENDORSEMENT/APPROVAL

PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND:GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title: Comprehensive Environmentally Sound Management of PCBs in Montenegro			
Country(ies):	Montenegro	GEF Project ID:[1]	9045
GEF Agency(ies):	UNDP (select) (select)	GEF Agency Project ID:	5562
Other Executing Partner(s):		Submission Date:	2016-09-09
GEF Focal Area (s):	Chemicals and Wastes	Project Duration (Months)	60
Integrated Approach Pilot	IAP-Cities ☐ IAP-Commodities ☐ IAP-Food Security ☐	Corporate Program: SGP ☐	
Name of Parent Program	[if applicable]	Agency Fee ($)	332,500

A. FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES[2]

Focal Area Objectives/Programs	Focal Area Outcomes	Trust Fund	(in $)	
			GEF Project Financing	Co-financing
CW-2 Program 3	Outcome 3.1 Quantifiable and verifiable tonnes of POPs eliminated or reduced	GEFTF	3,500,000	19,803,691
	Total project costs		2	2

B. PROJECT DESCRIPTION SUMMARY

Project Objective: Comprehensive identification and disposal/treatment of PCB contaminated equipment and waste in Montenegro through legislative improvements, national PCB inventory exercise, and specialized capacity building for stakeholders in public and private sectors on Environmentally Sound Management principles for pure and low-concentrated PCBs and associated waste material, supported by general awareness raising on hazardous waste handling.

Project Components/ Programs	Financing Type[3]	Project Outcomes	Project Outputs	Trust Fund	(in $)	
					GEF Project Financing	Confirmed Co-financing
Component 1. Capacity strengthening on PCB management	TA	1.1 Operators of the electric sector and of the environmental control authority trained on the ESM of PCB	1.1.1 Training and development of guidance document for sampling of online and offline equipment, handling storage and disposal of PCB containing waste and equipment 1.1.2 Training and development of procedural and guidance documents for environmental authorities on Stockholm and Basel conventions, EU	GEFTF	283,000	975,555

[1] Project ID number remains the same as the assigned PIF number.
[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.

			regulation on POPs and PCBs, BAT and BEP for PCB treatment and disposal operation. 1.1.3 Awareness raising for the public and the workers on issues related to PCBs and POPs, with enhancement on gender related issues			
		1.2 Enforcement of the Montenegro law on PCB management strengthened	1.2.1 Gap analysis and assistance in further improvement of the country technical regulations and official guidance on PCBs and POPs in view of the alignment with EU regulation. 1.2.2. Technical assistance to the environmental authorities on the enforcement of the law and regulation related to PCB 1.2.3. Study on gender dimension on POPs issues in Montenegro			
Component 2. PCB Inventory, planning and establishment of public-private parthership	TA	2.1 PCB inventory updated and completed with sampling and analysis of phased out and in-use equipment (3,000 samples)	2.1.1 Inventory preparatory activity and sampling plan developed; 2.1.2 Implementation of the nation-wide PCB sampling and analysis plan (at least 3,000 samples) 2.1.3 Establishment of a computerized database for PCB containing equipment	GEFTF	350,000	2,418,310
		2.2 The PCB national management plan approved	2.2.1 Development and approval of the national PCB management plan 2.2.2 Yearly upgrade of National PCB Management Plan (2 upgrades during project implementation).			
		2.3 An innovative public-private partnership for the management of PCB	2.3.1 Establishment of a public / private partnership for conducting all the			

		contaminated equipment and waste is established	activities related to PCB ESM, 2.3.2 Sustainability plan for the public/private partnership drafted and discussed with stakeholders			
Component 3. Environmentally sound management (ESM) of PCBs	TA/Inv	3.1 Selected storage facilities upgraded for the safe storage of PCB equipment pending disposal or decontamination.	3.1.1 Identification of storage facilities for the temporary storage of PCB contaminated equipment 3.1.2 Upgrade of safety measures and emergency response in selected storage facilities	GEFTF	2,550,000	16,059,826
		3.2 Environmentally sound technologies or services for PCBs disposal identified, assessed and procured	3.2.1 Identification and technico-economical feasibility analysis of disposal options based on the amount of pure and low-concentration PCBs identified. 3.2.2 Drafting of TORs for the procurement of PCBs disposal service and equipment. 3.2.3 EIA process over new decontamination technology carried out to enable technology to operate locally			
		3.3 Environmentally sound management of PCBs ensured with the disposal or decontamination of at least 700 t of PCBs contaminated equipment and 200 t of PCB contaminated soil	3.3.1 PCB pure and contaminated equipment tested, inventorized, disposed of or treated to decontaminate (PCB treatment/ disposal services contracted). 3.3.2 Destruction / treatment of 700 tons of PCB contaminated equipment 3.3.3 Disposal / treatment of 200 t of PCB contaminated soil.			
Component 4. Knowledge Management and M&E	TA	4.1. Project's results sustained and replicated	4.1.1. M&E and adaptive management applied to project in response to needs, mid-term evaluation findings with lessons learned extracted.	GEFTF	150,350	50,000

			4.1.2. Lessons learned and best practices are disseminated at national level.			
				Subtotal	3,333,350	19,503,691
				Project Management Cost (PMC)[4]	GEFTF	166,650	300,000
				Total project costs	3,500,000	19,803,691

C. CONFIRMED SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE

Please include evidence for co-financing for the project with this form.

Sources of Co-financing	Name of Co-financier	Type of Cofinancing	Amount ($)
GEF Agency	UNDP	Grants	50,000
Private Sector	EPCG FUD (*)	Grants	11,176,296
Private Sector	EPCG FUD (*)	In-kind	975,555
Private Sector	KAP	Grants	6,728,840
Private Sector	KAP	In-kind	673,000
Recipient Government	Ministy of Sustainable Development and Tourism (MoSDT)	In-kind	200,000
Total Co-financing			19,803,691

Legend: (*) Co-financing committed in EUR, converted to USD based on EUR to USD rate of 1.101575 (24/02/2016). The EPCG FU Co-finance letter caters for both Grants and In-kind amounts ($11,176,296 + $975,555 = $12,151,851 / 1.101575 = 11,031,340 EUR)

D. TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country Name/Global	Focal Area	Programming of Funds	(in $)		
					GEF Project Financing (a)	Agency Fee[a)] (b)[2]	Total (c)=a+b
UNDP	GEF TF	Montenegro	Chemicals and Wastes	POPS	3,500,000	332,500	3,832,500
Total Grant Resources					2	2	3,832,500

a) Refer to the Fee Policy for GEF Partner Agencies

[4] For GEF Project Financing up to $2 million, PMC could be up to10% 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.

E. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS[5]

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	*hectares*
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	*hectares*
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;	*Number of freshwater basins*
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	*Percent of fisheries, by volume*
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)	metric tons
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)	*900 metric tons*
	Reduction of 1000 tons of Mercury	*metric tons*
	Phase-out of 303.44 tons of ODP (HCFC)	*ODP tons*
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	*Number of Countries:*
	Functional environmental information systems are established to support decision-making in at least 10 countries	*Number of Countries:*

F. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? NO

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

[5] Update the applicable indicators provided at PIF stage. 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.

PART II: PROJECT JUSTIFICATION

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN WITH THE ORIGINAL PIF[6]

A.1. *Project Description*. Elaborate on: 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, GEF focal area[7] strategies, 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) innovativeness, sustainability and potential for scaling up.

There are no changes in the alignment with the project design with the original PIF.

Sections A.1 1) and A.1 2) are reported in the developed and detailed UNDP project document, Chapter I (Development Challenge), sections "The global environmental and/or adaptation problems, root causes and barriers that need to be addressed", The baseline scenario or any associated baseline projects".

Sections A.1 3), A.1. 4) and A.1 6) are reported in the UNDP project document, Chapter II (Strategy), sections "The proposed alternative scenario", "Incremental Cost reasoning" and "Innovativeness, sustainability and potential for scaling up".

Section A.1.5) is reported in Chapter III (Results and Partnership), section "Global Environmental Benefit".

***A.2. Child Project?* If this is a child project under a program, describe how the components contribute to the overall program impact.**

N/A

***A.3. Stakeholders*. Identify key stakeholders and elaborate on how the key stakeholders engagement is incorporated in the preparation and implementation of the project. Do they include civil society organizations (yes ☒ /no☐)? and indigenous peoples (yes ☒ /no☐)? [8]**

A list of the project partners and stakeholders, with their relative roles, is provided in Table 3 below.

Table 3: List of the main project partners and stakeholders with relative roles

Stakeholder type	Name	Key function and mandate	Role in the project
Government	Ministry of Sustainable Development and Tourism (MoSDT)	The main governmental authority responsible for policy making on Environment and Sustainable Development, with two key Directorates (for Waste Management and Utility Development, and for Environment) are in charge for Waste	Project's implementing institution

[6] For questions A.1 –A.7 in Part II, if there are no changes since PIF , no need to respond, please enter "NA" after the respective question.

[7] For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which Aichi Target(s) the project will directly contribute to achieving..

[8] As per the GEF-6 Corporate Results Framework in the GEF Programming Directions and GEF-6 Gender Core Indicators in the Gender Equality Action Plan, provide information on these specific indicators on stakeholders (including civil society organization and indigenous peoples) and gender.

		and Chemicals Management policy, and Control of Industrial Pollution.	
	Agency for Environmental Protection (EPA)	The mandate of EPA is to ensure implementation of environmental legislation, and includes implementation of strategies, programmes, laws and regulations in the field of environment, implementation of international treaties within its jurisdiction, environmental permitting, EIA/SIA on rental/establishment of PCB dehalogenation technology, strategic environmental assessment (SEA), Integrated Pollution Prevention Control (IPPC) licensing, environmental monitoring, keeping relevant registers and databases, and reporting and coordination of reporting on the state of the environment. The EPA is also responsible for the provision of associated environmental information/data to national and international organizations and to the public.	Institutional partner (regulatory aspects, monitoring, data management) and beneficiary
	Administration for Inspection Affairs	This Administration was established in 2012 to consolidate and integrate the majority of previously existing inspectorates (in order to facilitate better cooperation between inspections and enforcement functions), including the environmental inspectorate (previously within EPA), thermal energy plants inspectorate (supervision on compliance with technical norms and standards), and health and sanitary inspectorates.	Institutional partner (supervision and enforcement) and beneficiary
	Ministry of Economy	The Ministry is in charge (among others) of development and energy policies, energy efficiency and production activities. It is also in charge for support in development of small and medium-sized enterprises and industries, new industrial technologies, and industrial production overall, including sectors of electricity production, metal processing and energy efficiency.	Institutional partner (Key partner for with main PCB holders such as EPCG and KAP companies)
	Ministry of Finance	Ministry of Finance has a mandate (among others) in the development of economic policy , budgetary issues, finances, tax and custom control, coordination of activities financed by IFIs, control of tender procedures and state financial assistance.	Institutional partner (development of Public-private partnership, state financial assistance)
	The Ministry of the Interior-Directorate for Emergency Situations	The department is responsible for risk management and civil protection and rescue in the event of natural and technological disasters and other emergency situations, as well as emergencies with regard to radiation safety.	Institutional partner (emergency preparedness during hazardous waste handling and transportation, and PCB dehalogenation technology operation time, supervision on implementation of prevention and protection safety measures during

			(re) construction of objects and beneficiary
	Ministry of Transport and Maritime Affairs	The Ministry's mandate is related to the prevention of and response to marine pollution from vessels, and transportation of hazardous materials by air, water and rail.	Institutional partner (transportation of hazardous substances)
Local municipalities	Local Municipality Golubovci	Urban Municipality of Golubovci is a subdivision of the Podgorica Municipality. The town is located some 15 km south of the city of Podgorica, in the Zeta valley near where KAP facility is located.	Project Beneficiary, environmentally impacted by management of temporary PCB storage at KAP
Industry	KAP	Aluminium Plant Podgorica (KAP) is an aluminium smelter company in Podgorica.	Owner of PCB contaminated equipment and waste.
	ECPG (FU distribution, FU supply and FU generation)	Production, distribution and supply of electricity are the main activities of the Montenegrin Electric Enterprise (EPCG).	Owner of PCB contaminated equipment and waste
	CGES	Company for maintenance and exploitation of electric power system elements (1,300 km of overhead lines with voltage levels of 400kV, 220kV and 110kV, and substations of 400kV, 220kV and 110/x kV voltage levels), in majority owned by state of Montenegro (55,00 % of shares).	Owner of PCB contaminated equipment and waste
	Chamber of Economy of Montenegro	The main function of the Chamber is the business interests' representation of Montenegrin companies and the creation of favorable conditions for improving their competitiveness in the global economic environment.	Institutional partner (helps coordinate conacts in the private sector)
	Other identified owners of PCB equipment and waste	As provided in Annex(es) to the project document	Owners of PCB contaminated equipment and waste
NGO	Ozon	The NGO is dedicated, among other matters, to the issues of waste management, air pollution, global warming, and ozone depletion.	Stakeholder (awareness raising, information dissemination)
	Green Home	The NGO is dedicated to environmental protection and environmental improvements that foster a sustainable future and lead to social and economic improvements in the communities at national level.	Stakeholder (awareness raising, information dissemination)
Academy / Laboratory	CETI	The CETI, a limited liability company, deals with the analysis of soil, waste sediments, surface water, groundwater, seawater, wastewater and drinking water, as well as the monitoring of air, ionizing radiation, noise, vibration and radon pollution. CETI has accreditation ISO/IEC 17025 to test POPs compounds in the samples from the environment.	Stakeholder (laboratory which has the capacity to test POPs compounds)

	Faculty of Mechanical Engineering	Faculty of Mechanical Engineering of the University of Montenegro is the only faculty in Montenegro covering the fields of Mechanical Engineering, and Power Plants	Stakeholder (advisory function)
	Montenegrin Academy of Sciences and Arts	The Academy is the most important scientific institution of Montenegro which deals with scientific aspects (among others) in energy use, waste and chemical management fields	Stakeholder (advisory function)
	Institute for public health	The Institute is a highly specialized health institution on the tertiary level health care, whose activity is focused on preserving and improving the health of all citizens, including from anthropogenic impacts such as waste/chemicals misuse.	Stakeholder (advisory function)

A.4. Gender Equality and Women's Empowerment. **Elaborate on how gender equality and women's empowerment issues are mainstreamed into the project implementation and monitoring, taking into account the differences, needs, roles and priorities of women and men. In addition, 1) did the project conduct a gender analysis during project preparation (yes ☐ /no☒)?; 2) did the project incorporate a gender responsive project results framework, including sex-disaggregated indicators (yes ☐ /no☒)?; and 3) what is the share of women and men direct beneficiaries (women 50%, men 50%)? [9]**

There are no tangible direct gender considerations detected, apart from direct exposure to PCBs in a work setting by staff of participating PCB equipment/waste owners, which may be identified under the project beyond the overall issues related to the higher risks generally associated with POPs being distributed in the broader environment. This is especially true for women, specifically related to their bioaccumulation and transfer through breast milk. However, it is fully acknowledged that particular attention has to be given to the connections between gender concerns and chemicals, and in work settings appropriate capacity building personal protection equipment are planned. Namely, women, men and children differ in their physiological susceptibility to the effects of exposure to toxic chemicals. Furthermore, women are particularly influenced by the adverse impact of the hazardous chemicals due to the structure of their reproductive systems.

POPs and particularly PCBs are particularly harmful due to their capacity to accumulate in body fats and in breast milk, therefore representing a significant risk for women and infants. Usually, risk-based environmental standards and risk-based corrective actions, following a precautionary approach, are designed taking into account the highest risk for the most sensitive and exposed population categories, therefore environmental and toxicological limits already take into account the specific issue of women and infants. Nevertheless, specific awareness raising initiatives will be adopted to further reduce the risk of exposure of women and infants given their specific sensitivity.

In addition to that, in the course of project implementation, compliance with UN policies on equal opportunities and the GEF policy on Gender Mainstreaming will be maintained at any stage to ensure that the project supports women's capabilities and their enjoyment of rights, and women's equal and meaningful participation as actors, leaders and decision makers.

[9] Same as footnote 8 above.

In order to raise public awareness the project will target media like radio, and TV stations and programs mostly addressed to women.

In addition, the project will undertake a study on gender dimension on PCBs issues in Montenegro which may, under guidance from the Gender team of UNDP-Montenegro, cover the aspects of a proportion of worker women working within the main stakeholder facilities - KAP and ECPG - on various levels: as technicians dealing with electric equipment containing PCBs, for general safety and maintenance of these facilities, on the management level taking decisions over companies' PCB management plans, and on who will participate in the capacity building from the project.

A.5 Risk. **Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation (table format acceptable):**

As per standard UNDP requirements, project risks will be monitored quarterly by the Project Manager. The Project Manager will report on the status of the risks to the UNDP Country Office who will record progress in the UNDP ATLAS risk log. Risks will be reported as critical when the impact and probablity are high (i.e. level 5). Management responses to critical risks will also be reported to the GEF in the annual PIRs.

Overal project;s risk rating is considered as Medium.

Social and environmental risks are accommodated within the broader risk framework, and are separately described in the Social and Environmental Screening Template with proposed areas of attention/monitoring/follow-up actions for UNDP Country Office defined to guide the compliance process.

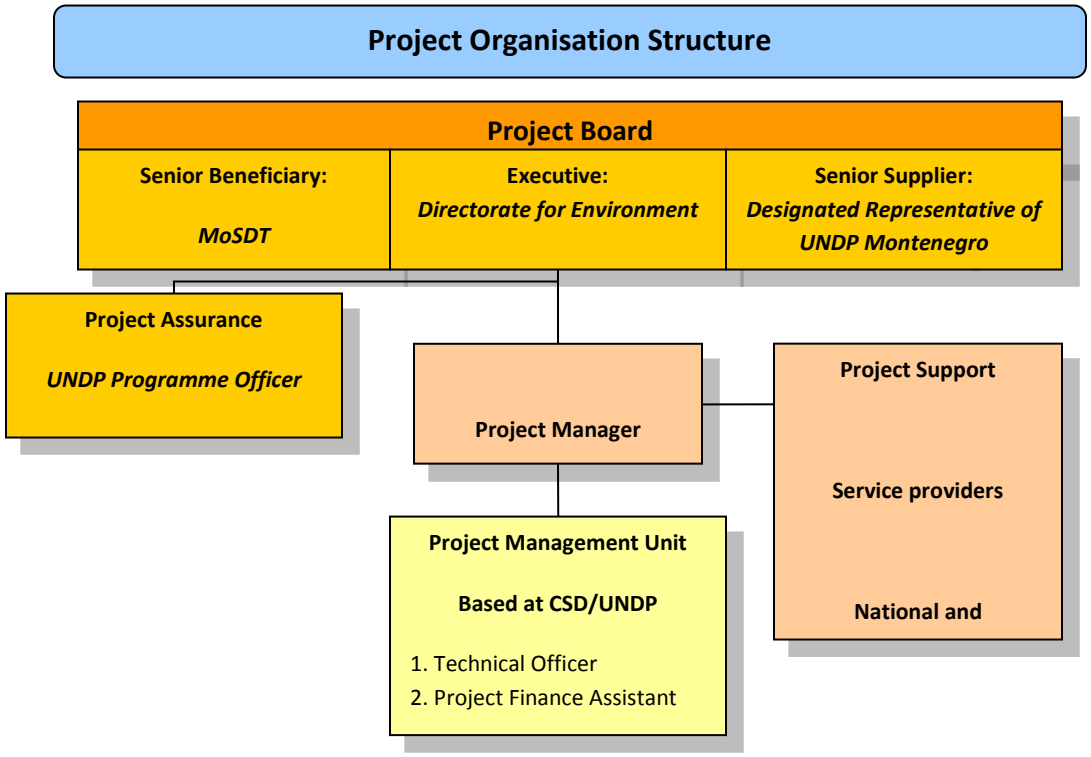
Project Risks					
Description	**Type**	**Impact and Probability**	**Mitigation measures**	**Owner**	**Status**
Delayed or incomplete PCB inventory due to the absence of coordination, and technical and economic difficulties in carrying out sampling of dielectric oil	Organizational	Delay I 3 P 3	The project intends to address this risk by establishing a feasible and cost-effective inventory plan integrated with the maintenance schedule of electric equipment in participating companies.	PMU, UNDP	N/A at this stage
Lack of commitment of PCB owners hindering the prompt identification and inventory of PCB equipment	Strategic	Incomplete achievement of GEB I 4 P 2	The project fully acknowledges the technical and financial impact of PCB management for manufacturing and electric power industries. An open discussion with the main industrial stakeholders (KAP and EPCG) already started at PIF stage, so that their commitments have been preliminary secured and tentative co-financing identified. At this stage, the commitment from main industrial stakeholders is high.	PMU, MoSDT	N/A at this stage
Project resources are not sufficient to ensure the disposal or decontamination of all the PCB containing	Financial	Incomplete achievement of GEB I 4 P 2	The project allocated enough grant and co-financing resources to dispose of and/or decontaminate 700 tons of PCBs containing equipment and 200 tons of PCB contaminated soil. This amount is a	UNDP	N/A at this stage

equipment.			realistic threshold which - based on the available information from recent tenders within the portfolio - should cover all the PCB contaminated equipment and waste in the country. Based on the PCB inventory, the exact quantity of PCBs will be better estimated to verify that the allocated resources are adequate.		
PCB contaminated equipment not secured for disposal at the project's start.	Environmental Organizational	Incomplete achievement of GEB I 4 P 2	Commitments from both KAP and EPCG, which are the 2 largest PCB owners in the country, have been already obtained.	PMU, UNDP	N/A at this stage
Chemical accidents or spillage of PCBs during sampling, transport, storage or disposal	Environmental	Environmental damage I 4 P 1	Procedures and associated training for the safe handling and disposal of PCBs will be established since the very beginning of the project. Reputable and qualified international waste management firms will be selected to ensure best standards are followed, and local capacity is improved for future similar work.	PMU, MoSDT, UNDP	N/A at this stage
Exposure to PCBs by workers involved in the management of PCB containing equipment.	Environmental	Health hazard I 4 P 1	Workers will receive practical training of safety matters related to handling of such specific hazardous waste and on the use of PPE since the very beginning of the project. Health checks for workers involved in PCB management operation will be ensured.	PMU, MoSDT, UNDP	N/A at this stage
Improper or unsafe technology selected for the disposal of PCBs.	Environmental	Incomplete achievement of GEB Environmental hazard I 4 P 1	The project will be built on the experience of many other GEF financed projects related at PCB management. There are already a clear information and experience both available on suitable technologies for treatment of particular categories PCB containing equipment and waste. In addition, the fact that Montenegro already has in place and enforced a national legislation on hazardous waste management inspired by the EU regulation and compliant with the Stockholm and Basel conventions on Best available Technologies (BAT) will ensure that the requirements of these conventions will be fulfilled. GEF STAP guidance material on selection of disposal/decontamination technologies will also be used in the project's implementation.	UNDP, PMU, MoSDT	N/A at this stage
Difficulties in establishing a complete regulatory system within project timeframe.	Regulatory Strategic	Reduced enforcement of legislation and associated impact on GEB I 3 P 2	Montenegro already has a foundational legislation on PCBs which is inspired by the EU directive on PCBs and which is compliant with the Stockholm and Basel conventions' requirements. The project intends to assist the country in drafting national technical level guidance documents, which will be therefore approved under a procedure which is faster compared to the approval of a new or amended overarching legislation.	PMU, MoSDT	N/A at this stage

A.6. Institutional Arrangement and Coordination. **Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.**

Roles and responsibilities of the project's governance mechanism: The project will be implemented following UNDP's direct implementation modality (DIM), according to the Standard Basic Assistance Agreement between UNDP and the Government of Montenegro, and the Country Program Action Plan (CPAP). The Implementing Partner for this project is the Ministry for Sustainable Development and Tourism (MoSDT). The Implementing Partner is responsible and accountable for managing this project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources.

The project organisation structure is as follows:



The **Project Board** (also called Project Steering Committee), is responsible for making by consensus, management decisions when guidance is required by the Project Manager, including recommendation for UNDP/Implementing Partner approval of project plans and revisions. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value for money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached within the Board, final decision shall rest with the UNDP Programme Manager. The Project Board is comprised of the following individuals:

- Ministry of Sustainable Development and Tourism: Director of the Directorate for Environment;
- EPCG: legal representative;
- KAP: legal representative;
- UNDP: program officer.

The **Project Manager** will run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the Board. The Project Manager function will end when the final project terminal evaluation report, and other documentation required by the GEF and UNDP, has been completed and submitted to UNDP (including operational closure of the project).

As a senior supplier, UNDP also has a role of **project quality assurance**. This role will be exercised by the UNDP Programme Officer responsible for the project, based in the UNDP Country Office (CO), and an International Technical Specialist, funded by the project.

Both the PMU (which is indeed established at UNDP offices) and the PSC will implement mechanisms to ensure ongoing stakeholder participation and effectiveness with the commencement of the Project by conducting regular stakeholder meetings, issuing a regular project electronic newsletter, conducting feedback surveys, implementing strong project management practices, and having close involvement with UNDP Montenegro as the GEF implementing agency.

Additional Information not well elaborated at PIF Stage:

A.7 *Benefits.* Describe the socioeconomic benefits to be delivered by the project at the national and local levels. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

The project will bring direct and indirect social and economic benefits. The direct and immediate benefits are those related to the implementation of the project itself, including employment of project staff and operators; establishment of a public-private partnership for the management of the PCB contaminated equipment and waste; financial incentive for the PCB owners for the sampling, analysis and treatment of their PCB-contaminated equipment.

The project will also bring obvious indirect benefits. The removal of PCB sources (equipment, waste, contaminated soil) from the environment will prevent the contamination of the environment by these substances. This will translate in a reduced mortality and morbidity of the population in the long term, with specific reference to the pathologies associated to exposure to PCBs, resulting in the reduction of social and economic costs. In addition, the technical capacity developed by the project partners (project staff, consultants, stakeholders) in the management of PCB waste will allow for the creation of skills and capacities on the management of hazardous substances and waste in general that will result in the creation of specialized jobs in the country.

A.8 *Knowledge Management.*

Elaborate on the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives (e.g. participate in trainings, conferences, stakeholder exchanges, virtual networks, project twinning) and plans for the project to assess and document in a user-friendly form (e.g. lessons learned briefs, engaging websites, guidebooks based on experience) and share these experiences and expertise (e.g. participate in community of practices, organize seminars, trainings and conferences) with relevant stakeholders.

The work of the project will build on existing experience gained in similar programmes from the regional network. UNDP has to-date been implementing such similar approaches in Latvia, Kazakhstan, Kyrgyzstan, Jordan, Morocco, Mexico, Pakistan, Turkey, formulating new programmes in Belarus and other partner countries for PCBs and a range of projects on POPs pesticides re-packaging and disposal. Information exchange between these is expected to happen via

accumulated knowledge at UNDP Regional Hub (Istanbul, Turkey), that provides technical oversight to ongoing UNDP-PCB initiatives in the region and through engagement of qualified technical expertise that will be beneficial to the project in Montenegro.

The project will generate a significant account of knowledge which will be carefully managed during the project implementation, so that the project results will be properly communicated and disseminated during the whole project lifecycle, lesson learned and success stories will be shared among other countries / UN country offices.

The Stockholm Convention's mechanisms like the PCB Elimination Network (PEN) and participation in collective information events such as Webinars organized by the Basel Convention Secretariat will be utilized as knowledge management tools. On the national level, during project implementation, a web portal for sharing relevant project information will be designed and launched. Public access will be granted to all resources which are of public relevance such as project performance, guidances on PCB material management, environmental impact assessment documents etc. User-friendly summaries and multi-media materials of the project activities will be uploaded in the portal periodically. Further, project will plan for workshops and conferences will be held with the purpose to introduce previous experiiences on POPs and PCBs management from other countries.

B. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

B.1 *Consistency with National Priorities.* Describe the consistency of the project with national strategies and plans or reports and assessements under relevant conventions such as NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.:

The proposed project is fully consistent with National strategies as follows.

1) PCBs are listed as the most urgent priority in the Montenegro National Implementation Plan of the Stockholm Convention. The following urgent action for solving the PCBs issue are identified in the NIP:

   a. Organize training for the environmentally safe use and disposal of PCB containing equipment.
   b. Establish system for collecting data on use of PCBs in the industry
   c. Establish temporary storage for equipment and waste containing PCBs pending final disposal,
   d. Develop Plans for replacement of equipment containing PCBs in accordance with the Law on Waste Management
   e. Ensure financial support for resolving PCB elimination.

2) The project design is in line with the national regulation on PCBs and waste , and indeed intends to provide a substantial technical and financial support to the Government of Montenegro for the more effective and timely enforcement of this regulation, which requires the phasing out and disposal of PCB containing equipment by 2020.

3) The project further plans to address the current obstacles found in Montenegro in aligning the country's PCB regulation with basic international benchmarks which are also in line with the EU regulation on PCBs and POPs, namely:

   a. Lack of inventories of the existing PCB equipment;
   b. Unavailability of data on storage and removal of the obsolete equipment and waste oils containing PCB;

c. Lack of uniform instructions for identification, decontamination, use, transport, storage and disposal of PCB equipment or products.
d. Need of particular efforts for the safe disposal of the PCB containing equipment
e. Facilitation of control and surveillance of imported equipment and devices that may contain PCBs,
f. Sound management and phasing-out of PCB contaminated equipment, taking into account its age , and commercial and economic situation in Montenegro, as well as the European regulations governing deadlines for displacing devices with PCBs.

C. DESCRIBE THE BUDGETED M &E PLAN:

The Monitoring and Evaluation plan is described in detail in Chapter VIII (Monitoring and Evaluation Plan) of the attached project document.

PART III: CERTIFICATION BY GEF PARTNER AGENCY(IES)

A. GEF Agency(ies) certification

This request has been prepared in accordance with GEF policies[10] and procedures and meets the GEF criteria for CEO endorsement under GEF-6.

Agency Coordinator, Agency Name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Adriana Dinu, Executive Coordinator, UNDP-Global Environmental Finance		9 Sep 2016	Jacques Van Engel, Director, MPU-Chemicals	00-1-212-906-5782	jacques.van.engel@undp.org

[10] GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

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).

The project result framework is included in Chapter V of the attached project document. In addition, in chapter XII of the project document a tentative Multi Year Work Plan for the project is also reported.

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).

UNDP answers to the STAP Advisory Response provided to the GEF on May 4, 2015.

The STAP, on May 4, 2015, sent an advisory response identifying "Major issues to be considered during project design".

All the concerns raised by the STAP were addressed in the PIF revised for resubmission, as from the document attached below. The resubmitted PIF was endorsed without additional comments from either the STAP or the GEF.

In addition, to address the concerns related to the speculative approach which in the view of the STAP were adopted for quantifying the amount of PCB to be destroyed during the project, in the course of project preparation a preliminary inventory has been carried out to verify the presence of 200 t of PCB contaminated soil and 200 t of PCB contaminated equipment, as anticipated in the PIF in addition to the around 500 t of PCB waste identified and stored pending disposal.

The result of the preliminary inventory demonstrated that:

1) The soil surrounding the PCB storage facility is highly contaminated by PCBs (3 samples taken in the surrounding of the building resulted contaminated with a concentration ranging from 1,400 to 1,600 ppm of PCBs). Although an exact quantification of the PCB waste which may be generated through the dismantling of the storage can be done only after a detailed characterization of the site, giving the size of the storage, the analytical result reinforced the assumption made at PIF stage to aim at 200 t of PCB contaminated soil / waste to be removed in the course of rehabilitation / cleaning up of the PCB storage site at KAP.
2) The preliminary inventory also demonstrated that in the country there is a significant amount of PCB contaminated equipment. Nine (9) out of ten (10) transformers tested at KAP (which were previously thought PCB free) were found contaiminated with a concentration ranging from 6,100 to 95,000 ppm. Six (6) of the 220 transformers from EPCG tested revealed a concentration of PCB in the order of hundreds of ppm.
3) Totally, an additional amount of 47 tons of PCB contaminated equipment was identified through the analysis of 230 samples. As the project will carry out additional 3,000 samples, the additional amount of 200 t of PCB contaminated equipment envisaged at PIF stage should be considered as confirmed, and indeed very likely this amount is an underestimation of the real situation in the country.

STAP Comment 1.

Overall the PIF is written to basically follow past approaches for PCB projects that tend to come before the GEF, and properly embeds PCB disposal within a wider environmentally sound management framework. The problem, however, lies in the speculative approaches applied to scoping of the quantities of PCBs and PCB contaminated equipment, which in turn has implications not only for the size of the investment required, but the level of capacity and disposal technologies selected.

The PIF acknowledges that up to 3 years of inventory work will be required to determine the quantities of PCBs and PCB contaminated equipment in the country. It also admitted on page 7 that:

- Monitoring / inspections capabilities are limited;
- Information on cross-contaminated transformers (i.e. non pure PCBs) is scarce, as most of the information concern pure PCB equipment, therefore the extent of the PCB issue is not completely clear; indeed, CGES, the national electric company, started the activities for sampling, testing and labeling PCB equipment, which however is progressing very slowly;

- There are no disposal technologies for PCB in place. Although due to the size of the country it may still be more cost effective to send PCB waste abroad for disposal, an in-depth cost estimation on the matter has not been undertaken to allow documented and informed decision making

With these acknowledgements, the data presented in Table 2 is questionable since there is no way to know the proportion of online equipment that is actually PCB contaminated, so the total tonnage figure is speculative. Estimates could vary significantly. The soil contamination is also estimated.

UNDP clarifications to STAP comment 1.

Thank you for this comment, which gives us the opportunity to clarify the data presented in the PIF.

We acknowledge that the importance and meaning of Table 2 was not duly represented in the PIF. That table lists an overall amount exceeding 500 t of PCB equipment. Indeed, all the data from that table except the estimated contaminated soil refer to an officially confirmed inventory of PCB waste or equipment provided by KAP in the course of meeting and site visit. These waste / equipment are stored in the KAP site, have been assigned with a EU waste catalogue code (all the waste are classified as dangerous for their PCB content) and are ready for disposal or treatment. KAP already allocated a substantial co-financing for the disposal and further characterisation of these waste.

We agree that the information "PCB contaminated" is only qualitative; therefore the KAP equipment will be the first batch to be sampled during PPG inventory activities to check their contamination level.

The contaminated soil is the only part of table which is estimated. Very likely, the 200 t reported in table 2 is a gross underestimation of the real amount of contaminated soil in the site. Indeed the area is very large (tenths of hectares) and for many years PCB containing equipment have been drained, mobilized or stored within the area. The amount of contaminated soil estimated in table 2 instead only refers to the soil likely contaminated in the immediate vicinity of the PCB storage facility (approximate surface 20x20 m2), assuming a depth of contamination of 30cm and a soil density of 1.6 kg/m3, for the reason that project activity will necessarily involve that upgrading of that storage and therefore clean-up of the old storage will be necessary. No attempt has been made of estimating / listing the amount of PCB contaminated soil in the whole KAP area, which extends for several hectares and is out of the scope of the project.

Again, we want to stress the fact that the equipment and the small amount of contaminated soil listed in Table 2 is stored at the KAP site, ready for disposal and that in the absence of the project the risk is that the disposal of such equipment and waste will happen in an uncontrolled and unsafe way.

Instead, we believe that data in Table 1 (from NIP) are somehow questionable and difficult to be verified, and for this reason these were not used as basis for estimating the PCB amount to be disposed within the project. However, the NIP inventory is an important indication of the possible presence of PCB equipment scattered in the country.

The "speculative" part of the PCB amount reported in the project only refers to the PCB equipment in the hand of EPCG (the Montenegro electric power company). Concerning this point, the PIF states:

"PCB contaminated equipment from EPCG. During a recent meeting with the national electric company EPCG, it was reported that the company is already undertaking a sampling and analysis activity of their equipment, however this is going very slowly due to lack of staff and, technical capacity and issues related to the difficulty to sample pole transformers in remote areas. The company expects around 10% out of an overall number of 6,000 transformers to be PCB contaminated equipment. Assuming an average weight for transformers of 0.6 tons, that may lead to an overall number of 600 PCB contaminated transformers, with an estimated weight of 360 tons, to which large power

transformers contaminated by PCB need to be added. This figure needs to be confirmed by a proper sampling and analysis activity partially during PPG stage and later on during FSP implementation."

STAP Comment 2.

Verification of totals is critical to technology selection and cost-benefit analysis of choosing a technology (including simply shipping overseas for disposal).

If 3 of the 4 years of the project are to be spent on inventory, this leaves little time for actual technology assessment and disposal activity, meaning there is a great risk of the project going well past 4 years or of failing to meet disposal goals.

UNDP clarifications to STAP comment 2.

We agree with your comment. Please consider however that the PIF already fully acknowledges the concerns raised as following:

1) In no part of the PIF it is stated that 3 of the 4 year of the project will be spent only on inventory. The PIF instead states: *"It is expected that the inventory will be completed in the first 3 years of project implementation, whilst the prioritized sampling and analysis will be conducted in the first 12 months of project implementation to enable first rounds of PCB export for pure waste and decontamination locally if such option is feasible for cross-contaminated equipment."*
2) This means that disposal activities will start already after the first year of project implementation, and at the same time the inventory will continue. The reason is very simple: we consider that the amount of PCB equipment, waste and contaminated soil at KAP need only a further characterisation limited to the "PCB contaminated equipment", which can mostly be done at PPG stage and the first year of inventory activity during project implementation. This is the "*prioritized sampling and analysis* "proposed in the PIF. Therefore, the project envisages that disposal activities will start already after the first year of project implementation.
3) In the meantime, the project will complete the inventory of other equipment, mostly by sampling and analysis of the transformers owned by the EPCG (The Montenegro Electric Power Company). Indeed, to allow 3 years for completing PCB inventory was a decision taken in agreement with EPCG as the main issue for them, as for any other power utility, is that sampling of equipment need to be coordinate with the scheduled maintenance plan, to reduce the "power off" cost, which may be extremely high for power and manufacturing industry.
4) The criteria for cost-benefit analysis have been clearly depicted in page 15 of the PIF; and are based on the latest technological and regulatory development related to PCB decontamination and disposal. It is expected that after one year of sampling and analysis, the PCB inventory data will already have a high level of statistical significance which will allow sound projections of the amount of PCB contaminated equipment and good basis for the above cost-benefit analysis and PCB management plan. However it should be considered that some elements for selecting PCB disposal technologies are already available, as follows:
    a. The overall amount of PCBs (pure and contaminated PCB) is in the order of hundreds of tons. This makes the purchasing of a dedicated PCB treatment unit for Montenegro unlikely. Even the cost-effectiveness of renting of a small dehalogenation unit needs to be assessed. This analysis will start at PPG stage and can be confirmed after one year of PCB inventory.
    b. There is an amount already confirmed, stored and pending disposal, exceeding one hundreds of tons, which is pure PCB (transformers / capacitors filled with commercial PCB mixtures). The technical / economic analysis of the suitable option for disposal of this amount can start immediately at PPG stage. The project document could possibly already include a TOR for disposal services for the first batch of pure PCB equipment.

STAP Comment 3.

For example, High Temperature Incineration (HTI) may be used on soils in moderate quantities.
Chemical dehalogenation techniques as put forward also have limitations, such as sensitivity to co-contaminants, production of residuals that must also be treated/disposed of, and has not been proven to treat all PCB cogeners (http://www.chem.unep.ch/pops/indxhtms/cspcb05.html)

Dehalogenation has been considered in the PIF as one of the available options for the treatment of equipment containing low level (up to few thousands ppm) of PCBs. In no part of the PIF is proposed to adopt chemical dehalogenation for the treatment of contaminated soils.

In cases where there may be large levels of high contamination around storage facilities, as the document also admits may be possible on some sites, then perhaps the mechano-chemical dehalogenation (MCD™) ball milling technology recently demonstrated in the UNDP/GEF Vietnam project (proposed by Environmental Decontamination Limited (EDL), or perhaps enhanced batch thermal desorption technology called Matrix Constituent Separation (MCS™) proposed by Thermodyne Technologies Inc., might be explored.

The STAP and GEF Secretariat have recently received the technical report from this demonstration, and have noted with interest the global application potential of the technologies. Specifically, an excerpt from the report (GEF/UNDP Project on Environmental Remediation of Dioxin Contaminated Hotspots in Viet Nam - Independent Evaluation of Three Pilot/Laboratory Scale Technology Demonstrations on Dioxin Contaminated Soil Destruction from the Bien Hoa Airbase in Viet Nam) prepared by independent consultant states that:

"The current demonstration work in terms of direct application is specific to PCCD/F soil contamination. However, it also demonstrates potential for remediation and possibly destruction capability in relation to complex organic chemicals generally. As such there is a linkage to a wide range of chemicals related remediation and chemical waste destruction applications of global interest, and specifically of interest to the GEF in its Chemicals Focal Area. This would include POPs as covered under Article 6 of the Stockholm Convention which sets out obligations of Parties to address POPs stockpiles and waste and POPs contaminated sites. More specifically it would have application in dealing with soil contamination as a result of contamination with POPs pesticides (typically but not limited to DDT and HCH) and PCBs which are widely encountered in developing and so-called countries with economies in transition. The broadening global interest in man-made chemical contamination beyond POPs as reflected in the GEF's expanded eligibility to encompass environmentally sensitive chemicals generally also extends to a wide range of the halogenated chlorinated chemical waste and contamination issues involving PAHs, PCPs, heavy hydrocarbons and chlorinated solvents.

With that general overview of where these demonstrated technologies might have application, it is also emphasized that their applicability would have to be based on case specific demonstrations of their remediation and, in some cases, de-halogenation destruction effectiveness. They all have some track record on other priority chemicals and in fact the results of this demonstration for other secondary chlorinated chemical contaminants (acid herbicides and chlorophenols) add further evidence of their utility in other types of applications. Additionally, what the current work also demonstrates is the utility that each offer to do pilot or laboratory demonstrations and process optimization/treatability evaluations at readily available remote facilities. This could be a key element in the design of GEF funded projects in that it could be used as part of a qualification step in a staged procurement/contracting process."

UNDP clarifications to STAP comment 3

The selection of environmentally sound and cost effective technology is at the top of our concern, and indeed the team in charge of the preparation of the PIF has a consolidated experience in testing and evaluating technologies for PCB disposal in UN/GEF projects. We would like to organize our clarification on this aspect in 2 parts: one concerning contaminated soil, and the other concerning PCB containing equipment like transformers and capacitors, as these require very different technological approaches.

Contaminated soil

The PIF does not restrict to any technological option at this stage. It is only considered in the PIF that "For PCB contaminated soil, …. both the Stockholm convention and the EU regulation allows the landfilling of PCB contaminated soil only if the PCB concentration is below 50 ppm. For higher concentration, the PCBs must be destroyed or irreversibly transformed so that they do not exhibit the characteristics of persistent organic pollutants". This means that whilst soil with a PCB concentration smaller than 50ppm can be possibly landfilled on site, contaminated soil with higher concentration of PCBs need to be treated.

Therefore in the course of project implementation, due care will be taken to give to emergent technologies the opportunity to qualify for the disposal of PCBs soil.

This will clearly include mechano-chemical destruction or thermal desorption technologies, as long as the proposed technologies are consolidated for PCB treatment. It has however to be considered that due to the limited amount of contaminated soil envisaged (200t) the on-site testing and mobilisation of a dedicated disposal plant may be not the most cost effective option. Additional considerations will include EIA and public consultations which may delay the actual application of the technologies tested whereas EU based POPs disposal capacity is in the direct proximity to the country.

As far as Incineration is concerned, the main limitation would be transportation cost (hazardous waste incinerators for PCBs are not available in Montenegro). The processing of PCBs contaminated soil in BAT compliant hazardous waste incineration plant is technically feasible and accepted under BC and SC BAT/BEP rules, as well as under the EU legislation. Except for these budgetary considerations which might be minimal, there are no limit in the soil quantity which can be processed, and we have to consider that the estimated amount of PCB contaminated soil is indeed very small (200 t), and is further splittable into two batches if needed to allow two plants to take it. A previous example of GEF/UNDP project in Mauritius has demonstrated the feasibility of such POPs-contaminated soil transport and disposal in EU – 300 m3.

The chlorine concentration which may be accepted by hazardous waste incinerators depends on the effectiveness and design of APCS: for modern incinerator this is usually not less than 5% (50,000 ppm). For instance, the rotary kiln incinerator tested in the GEF/WB project 2360 "China PCB Management and Disposal Demonstration" successfully demonstrated the disposal of PCB contaminated soil with a concentration of PCB ranging from 1,7% to 2,5% and contaminated oil with PCB concentration up to 12,4% in compliance with SC BAT/BEP and national rules (i.e. PCDD/F stack emission lower than 0.1 ngTeq/Nm3 and DRE higher than 99.9999%)". The throughput of a medium size hazardous waste rotary kiln incinerator is in the order of 60-80 tons day, meaning that the estimated amount of PCB contaminated soil could be processed in few days.

PCB equipment and PCB contaminated oil (pure or contaminated)

In the PIF, a possible range of technologies for PCB pure or contaminated oil and for PCB containing equipment are and considered (Page 15). Obviously, only technologies compliant with the Basel and Stockholm guidance documents, STAP guidance document on technology selection and EU rules will be selected for the disposal of the PCB waste identified in the project.

Dehalogenation is proposed as a viable option for relatively new transformers and for end of life electrical equipment, provided that the PCB concentration is low (i.e. <10,000 ppm).

We would like to clarify that by PCB dehalogenation we mean the fully commercial PCB dehalogenation technologies falling in the family of "Alkali Metal/ Metal Hydroxide Reduction (Sodium Reduction, A-PEG), classified by the STAP as "Fully commercial and well established with multiple technology vendors and stable licensee arrangements capable of competitive tendering worldwide." – we refer to the STAP guidance document "Selection of Persistent Organic Pollutant Disposal Technology for the Global Environmental Facility" available at: https://www.thegef.org/gef/pubs/STAP/selection-persistent-organic-pollutant-disposal-technology-gef. Commercial providers are currently available, particularly in EU.

Concerning the issue of ineffective dehalogenation for some congeners, we believe that the concern raised in the STAP comments, discussed in the linked study by USEPA, might refer to possibly the BCD technology which indeed since the publishing of the paper has not yet qualified as a suitable technology in any UN/GEF project.

STAP Comment 4.

While STAP concurs that there certainly is a need for PCB abatement work in Montenegro, there needs to be a much better baseline analysis so that the appropriate, cost-effective technologies and disposal options can be selected. Given the limitations laid out in the PIF, the inventory and technology evaluation may well be considered a stand-alone project in and of itself.

Risks will also be better identified, making for a more robust disposal plan. Further, if past GEF investments and demonstrations in this domain can be brought to bear on this and other similar projects, additional effort could be focused on identifying and assessing new technologies which may be utilized.

UNDP clarifications to STAP comment 4.

As far as the baseline is concerned please consider that:

- More than 500 t of PCB contaminated material have been already identified at PIF stage in the course of PIF preparatory mission in Montenegro. This amount of PCBs is stored at the KAP site pending additional characterization and disposal. Around 316 t of this material has been officially listed by KAP either as pure PCB online equipment or PCB contaminated waste, whilst around 200 t of contaminated soil have been preliminary estimated by visual inspection during site visit.
- The remaining 400 t are speculative in the sense that likely these are a gross underestimation of what can be found in the course of the inventory to be carried out with the support of the EPCG, covering 3,000 of an overall amount of 6,000 transformers. Please refer to our clarification to the STAP comment 1.

Therefore, the project has a good merit in achieving the set targets. Currently, the PCB inventory and disposal project could benefit of the co-financing commitments of the 2 main PCB owners of the country (KAP and EPCG) on which it capitalizes – otherwise the momentum could be lost.

We confirm that the project can be phased as following.

- PPG stage: completing the inventory of the PCB contaminated equipment stored at the KAP site, first round of sampling and analysis of other equipment including EPCG equipment, technical specification suitable technologies for the disposal of pure PCB equipment.
- First year of project implementation dedicated to inventory and site characterisation (i.e., sampling and analysis of contaminated soil at KAP storage facility) and inventory of prioritized electrical equipment from the Electric Power Company.
- From the second year: design of disposal options based on cost-effectiveness analysis and compliance with BC, SC, EU and GEF rules; initial disposal of PCB waste from the KAP site; simultaneous continuation of PCB inventory.
- Third year: ESM disposal of PCBs contaminated equipment, waste and soil; completion of PCB inventory.
- Fourth year. Completion of PCB disposal, project closure

STAP Additional point 1.

Page 7: small typo in first para "Montenegro has also specific and strict rules concerning the level of PCB contamination in recycled oil: Waste oils with PCB content greater than 50 mg in 1 kg of oil, can be refined only if after the regeneration the obtained oil contains maximum 5 mg PCBs and maximum 30 mg halogen in 1 mg of oil". We assume that should read per kg of oil.

UNDP clarifications to STAP additional point 1.

Thank you for the comment and noted. The text will be revised accordingly.

STAP Additional point 2.

Page 9, Table 2: The column to denote number of pieces of equipment has numbers to two decimal places vs whole numbers. See earlier reservations on the lack of verification of actual contamination of equipment involved in generating totals, and other non-exhaustive methods to generate the scope of the problem.

UNDP clarifications to STAP additional point 2.

This is the typo due to a formatting issue. All the data in column 2 starting from the fifth row (PCB oil stored) are misplaced and should be deleted. These data are the same replicated in the correct position in the last column of the table. Please find below the corrected table.

Please consider that this does not affect the PCB amount.

Type of PCB oil contained in online equipment	No. of equipment	Oil weight (t)	Equipment or waste weight (t)
Online transformers	37	35.4	106.2
Online capacitors	325	28.5	85.5
Other equipment	2	4.8	14.4
PCB oil (stored)			12.1

Silicone oil contaminated by PCB	17
Mineral oil contaminated by PCB	0.8
Transformers contaminated by PCB (in use)	22
Capacitors contaminated by PCB (in use)	29.89
Barrels and containers contaminated by PCB	13.15
Other PCB contaminated material	0.646
Sludge	2.9
Soil contaminated with PCBs (in barrels)	9.1
Alumina contaminated by PCB oil	4
Soil and infrastructures contaminated by PCB (estimated) based on site visit observations (in December 2014)	200
Total amount of PCB contaminated equipment and PCB waste (t)	517.686

STAP Additional point 3.

In selecting sites for upgrading, there should also be consideration on the appropriate siting of facilities in the first place with respect to threat to water table, human settlement etc. This also has implications or the risk table on page 18 which currently does not take into account potential climate related risks to storage (and potential disposal) sites.

UNDP clarifications to STAP additional point 3.

We are grateful for this important comment. The environmental and social issues associated to upgrading of storage site will be duly considered in project design. The risk table in PIF will be revised taking into consideration potential climate related risks as recommended.

STAP additional point 4.

In developing the project document and determining disposal options, action should be taken to incorporate the Stockholm/Basel and GEF guidance on technology selection for POPs disposal and the overall development of the ESM system for PCBs. This would ensure that a comprehensive set of parameters be used to select technologies for GEF investment (e.g. environmental performance, ability to manage residuals and transformation products of the destruction and decontamination processes, full assessment of pre-treatment steps required and attendant associated risks, and required resources and capacities to manage them). Explicitly following these guidelines would be desirable in the course of project development, implementation, and monitoring and evaluation. This would also ensure that the true costs of a technology are brought to light since pre-destruction steps (eg. characterization of the PCB congeners to be handled, prioritization, capture and transport, containment and pre-treatment) can carry their own significant resource and capacity burdens, and can often be the barrier to implementation of technologies in developing countries and CEITs. Definition of environmentally safe low POPs concentrations would also be clearer and kept consistent with best practices. As noted above, STAP feels that this project needs to be phased, starting with an inventory and assessment process to better elaborate technology options and the true cost of remediation and/or disposal options.

UNDP clarifications to STAP additional point 4.

As described in the previous responses, the technologies proposed or prospected in the PIF will be compliant with Stockholm and Basel guidance on POPs disposal technologies, as well as the GEF guidance on technology selection. And, in terms of the PCB inventory and the proposed phased approach via a separate MSP, the PIF is built on the currently available information on actual PCB equipment numbers obtained via a physical verification during a PIF preparatory mission to Montenegro and constitutes in itself a phased approach with the focus on the inventory at the project's beginning, with initial PCB exports from KAP facility to EU starting during same time and then expanding on the inventory at the other key player EPCG, followed but additional exports.

As suggested, additional care will be paid in the course of project preparation / implementation (for instance during drafting technical specification for technology procurement) to ensure that all the technologies or disposal services contracted under the project are compliant with the above guidance and that the guidelines are duly considered in the course of project development, implementation and monitoring.

UNDP responses to comments from GEF Council Members (as received and addressed at PIF stage and in the FSP project documentation package).

Comments from the United States:

"The United States welcomes Montenegro's desire to establish an environmentally sound management system for PCBs. We support the STAP comments, and agree that as this PIF is further developed into a full project proposal the UNDP should develop more holistic baseline assessment to select appropriate technologies and waste disposal options. Additionally, the United States continues to believe that while contaminated site cleanup is important, it is not the most effective use of GEF resources to achieve global environmental benefits. Thus, we hope that as this project is further developed other aspects of the proposal will be prioritized."

UNDP Response:

UNDP agrees that the use of GEF funds for the clean up of POPs contaminated sites is not the most cost-effective way to use GEF resources to achieve substantial global environmental benefits (GEBs); however, there have been a few dedicated technology demonstration and POPs burial site treatment/decontamination programmes approved before or recently which may contribute to the knowledge on the cost and effectiveness of remediation processes.

Concerning the current Montenegro project, the amount of contaminated soil to be treated is limited to 200 tons of soil highly contaminated by PCBs which was found in the immediate surrounding of one of the major PCB owners - the KAP and, and in particular, its storage facility (concentrations measured at PPG stage reaching the order of 1,600 ppm) out of an overall target amount of 900 tons of PCB waste. The decision to treat that soil was taken because the project needs to access the KAP storage site were collected PCB materials will be temporarily stored and this has to be done in a safe way avoiding any increasing risks of further contamination spread during waste handling operations. The project does not intend to address other PCB contaminated sites, at a limited or wider scale, as this is not its key focus.

Comments from Canada:

"While Canada welcomes this project, we have some concerns with aspects of the proposal, particularly as some sections appear incomplete and some components may be duplicative of efforts already undertaken by the international community. We request that all sections of the final project proposal are completed and that justification of the value-added of the project is provided.

Concerning project component 3 (page 3), outputs of this project include the identification of environmentally sound disposal technologies. The Basel Convention has developed and adopted technical guidelines for the environmentally sound management (ESM) of PCBs wastes, which identify pre-treatment methods and technologies appropriate for the destruction and irreversible transformation of PCBs. These guidelines should be consulted and referenced to in the final project proposal.

In terms of stakeholder engagement, the related section notes how civil societies and indigenous people will be involved; however, the document provides limited specificity with respect to organizational name and engagement approaches. Given the importance of stakeholder engagement, this section should be expanded in the subsequent document to ensure full and meaningful inclusion of relevant stakeholders, including CSOs and indigenous people."

UNDP Response:

The most recent guidance documents, both from the Basel Convention, and from the GEF-STAP have been duly considered and quoted when initially drafting the PIF and later during the formulation of the project document. No new guidance materials are intended for drafting in the project document, except for the adaptation of globally available reference standards to the Montenegro's context for application within the national ESM system.

The disposal and decontamination technologies, for both PCBs streams being addressed by the project: pure and low-concentrated oils, will be selected taking into account the criteria and the options listed in that guidance and important aspects such as inventory results (PCB concentration and type of equipment), specific condition of the site, and market availability of technologies will be taken into account during tendering and selection process. The selection of the technology therefore will include the development of technical specifications for the terms of reference attached to the bidding documents. Therefore the project minimizes duplication of efforts, as it envisages practical application of the foundational principles of the Stockholm and Basel Convention and GEF-STAP guidance documents on the selection of technologies.

On the stakeholder engagement, it has to be considered that the key stakeholders have been involved since the PIF drafting time and appropriate national level consultation processes and they will continue to be fully engaged during the implementation of the project. The project will be implemented side by side with the relevant institutional and industrial stakeholders, i.e. the Ministry for Sustainable Development and Tourism, EPCG, KAP and other holders of PCB containing equipment. More stakeholder engagement, by involving other Ministries, academic institutions and NGO sector will be undertaken during project implementation – this will be ensured by contacting civil society associations, trade unions, and other beneficiaries.

Comments from Germany:

"It is not clear from the current project proposal how awareness raising will be integrated to involve civil society. Ideas on how NGOs can play a stronger part in the monitoring process have to be developed.
It might be interesting to explore options of a common use of disposal facilities between Montenegro and Macedonia. When conducting the PPG, the feasibility of procurement of PCBs disposal service and equipment vs. the feasibility of transferring stockpiles for treatment in Macedonia, which recently set a PCB disposal facility throughout another GEF/UNIDO project, might be considered.
In determining disposal options, it is recommended to incorporate the Stockholm/Basel and GEF guidance on technology selection for POPs disposal and the overall development of the ESM system for PCBs.
The section on Global Environment Benefits is missing and should be completed.
It is suggested to perform a socio-economic or livelihood analysis to identify vulnerable groups."

UNDP response:

(1) Stakeholder involvement:

Part II, Section "Stakeholders" of the PIF (as submitted originally), and Section A.3/Table 3 of the CEO Endorsement document (with reference to UNDP project document, page 27, on Stakeholder Engagement – Table 4) define a range of partners which will be involved in the process of the project implementation, and expected support roles, including of public, private and non-government sectors.

Specific PCB equipment/waste holders and their workers, the general public, consumers and communities will benefit from the removal of PCBs as potential source of environmental contamination.

The civil society and the public at large will be kept informed of project objectives, its activities and achievements through an awareness campaign. In addition, the project will give the community several opportunities to provide comments on project activities:

- Participation of civil society NGOs in related forums/seminars/round tables related to decision making over project's implementation plans;
- Through establishment of moderated discussion forums on the project's website;
- As a part of the social and environmental impact assessments (SIA and EIA) procedures, in case the project will envisage the rental/establishment of a PCBs dehalogenation facility for low-contaminated PCB oil.

UNDP will be involving into the work on implementation of the project the civil society through appropriate nationally led consultation processes and public participation. A full description of such arrangements has been provided in the FSP submission package for additional review by the GEF Council members.

(2) Partnership with the PCB decontamination facility in Macedonia:

UNDP is aware of the previous GEF/UNIDO programme in Macedonia on the dechlorination facility for cross-contaminated PCB oils, and in case the facility operates on a commercial basis it will be welcome to participate in the future open bids to secure such disposal services for cross-contaminated materials.

The facility in Macedonia is a stationary facility developed by the company Sea Marconi who won an international bidding under that project and supplied the technology. The technology itself can treat electric equipment with only low PCB contamination, not the pure PCB oils. Therefore, partially this service provider can participate in the future UNDP bids – to address cross-contaminated PCB oil.

However, gearing the oil decontamination work specifically to this facility will be against UNDP open bidding rules which attempt to make sure as wide as possible qualified bidder's participation at the lowest possible costs for service which is also in line with the cost-effectiveness considerations of the GEF. Based on the results of future bids with participation of all interested service providers in the region, and specifically EU which is geographically very close to the project's site, contracting decisions will be taken accordingly.

As for pure PCBs and PCB contaminated soil, the project will also issue an open international bid for the disposal of that material. It is likely that high-temperature incineration facilities will be the most suitable for treating these materials.

(4) A socio-economic or livelihood analysis to identify vulnerable groups:

This issue has been addressed in the Social and Environmental Screening Procedure (SESP) which is a standardized document prepared by UNDP to ensure that any project does not affect negatively vulnerable groups. In addition, as vulnerable groups are the ones living nearby PCB contaminated areas, the identification of vulnerable groups will go hand in hand with the inventory of PCB envisaged by the project.

International ESM standards and local EIA/SIA procedures will be deployed during the management of PCB materials for final disposal or their treatment with in-situ rented PCB decontamination technology.

(3) Global Environmental Benefits (GEBs):

This is to confirm that Section F on GEBs (page 6) of the CEO Endorsement Document and Section III on Results and Partnerships (page 20) were developed and duly filled in with the confirmed GEBs as shown in the table's extract below:

"Global Environmental Benefits (GEBs): It is envisaged that under the project, 700 tons of PCB contaminated equipment, and 200 t of PCB containing waste including contaminated soil will be properly disposed of in such a way that the PCB content in these equipment or waste will be irreversibly destroyed. Therefore, the project will contribute to the implementation of the Stockholm Convention's requirements by Montenegro."

(5) Investment components:

UNDP is of opinion that the main Component 3 on Environmentally Sound Management of PCBs should receive this changed status from TA to investment category which has been corrected at the time of FSP submission

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS[11]

A. Provide detailed funding amount of the PPG activities financing status in the table below:

PPG Grant Approved at PIF (GEF): **US$ 160,000**					
GEF Outcome/Atlas Activity	***Project Preparation Activities Implemented (GEF)***	***GEF Amount ($)***			
		Budgeted amount	***Amount spent to date***	***Amount committed***	***Balance***
Project preparation grant to finalize the UNDP-GEF project document for project "Comprehensive Environmentally Sound Management of PCBs in Montenegro"					
	Component A: Technical review	61,400.00	47,920.00	13,480.00	0
	Component B: Institutional arrangements, monitoring and evaluation	15,300.00	12.500.00	2,800.00	0
	Component C: Financial planning and co-financing investments	15,300.00	13,000.00	2,300.00	0
	Component D: Validation workshop	8,000.00	8,000.00	0	0
Total		**100,000.00**	**81,420.00**	**18,580.0**	**-**

[11] If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue to 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. Agencies should also report closing of PPG to Trustee in its Quarterly Report.

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

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

N/A