2015

Project Implementation Review (PIR)

of

PIMS 4827

Integrated PCB Management in Ecuador

Table of Contents

A. Basic Project and Finance Data 2

B. Project Contacts and Links 2

C. Project Summary 3

D. Progress toward Development Objective 4

E. Progress in Implementation 29

F. Ratings and Comments on Project Progress 31

G. Project Planning 38

H. Critical Risk Management 39

I. Environmental and Social Grievances 39

J. Communicating Impact 39

K. Partnerships 40

L. Progress toward Gender Equality 41

M. Annex 1 - Ratings Definitions 43

A. Basic Project and Finance Data

Project Implementing Partner:	Ministry of Environment of Ecuador
GEF Focal Area:	POPS
Country(ies)	(ECU) Ecuador
Project Start Date:	03-Feb-2014
Planned Project Closing Date:	22-Oct-2015
Revised Planned Closing Date:	31-Oct-2017
Dates of Project Steering Committee/Board meetings during reporting period:	June 2014 September 2014 January 2015 May 2015
Total GEF Grant (U$S)	$ 2,050,000
GEF Grant Disbursed as of 30 June (U$S):	$ 253,320.08
Total Co-financing (as planned in CEO endorsement request):	$ 9,393,949.00
Overall Risk Rating	Moderate
Overall DO Rating	Satisfactory
Overall IP Rating	Satisfactory

B. Project Contacts and Links

Partner	Contact Name	Email Address
Project Coordinator / Manager	Mario Rodas	mario.rodas@ambiente.gob.ec
UNDP Country Office Programme Officer	Monica Andrade	monica.andrade@undp.org
Project Implementing Partner	Marco EnrÃ-quez, Director of Environmental Control in MAE	marco.enriquez@ambiente.gob.ec
GEF Operational Focal Point	SofÃ-a Panchi (Delegated by Lorena Tapia, Ministry of MAE)	sofia.panchi@ambiente.gob.ec
Other Partners	Alonso Moreno, ARCONEL Environmental and Social Director	aloalonso.moreno@regulacionelectrica.gob.ec
UNDP Technical Adviser	kasper koefoed	kasper.koefoed@undp.org
UNDP Programme Associate	Christopher Hawkins	christopher.hawkins@undp.org

Project website, etc.	Project page on UNDP website: http://www.ec.undp.org/content/ecuador/es/home/operations/projects/environment_and_energy/proyecto-manejo-integrado-y-ambientalmente-sostenible-de-bifenil.html
Links to	- Launching of the â€œZero PCBâ€• initiative in the Galapagos Islands: http://www.ec.undp.org/content/ecuador/es/home/presscenter/articles/2014/11/17/arranca-la-iniciativa-cero-pcb-en-

media coverage	las-islas-gal-pagos.html - MAE opens Workshop on Integrated and Environmentally Sound Management of Polychlorinated Biphenyls (PCBs) in Ecuador: http://www.ambiente.gob.ec/mae-inauguro-taller-de-gestion-integrada-y-ambientalmente-racional-de-bifenilos-policlorados-pcb-en-el-ecuador/ - Kick-off workshop of the Project Integrated Management of Polychlorinated Biphenyls in Ecuador: http://www.ec.undp.org/content/ecuador/es/home/presscenter/articles/2014/06/19/-aller-de-arranque-del-proyecto-de-gesti-n-integrada-y-ambientalmente-racional-de-bifenilos-policlorados-pcb-s-en-el-ecuador-.html - UNDP promotes training for handling toxic substances: http://www.ec.undp.org/content/ecuador/es/home/presscenter/articles/2014/10/22/pnud-impulsa-capacitaciones-para-el-manejo-de-sustancias-t-xicas.html - In Galapagos, the "Zero PCB" project was presented: http://ecuadorinmediato.com/index.php?module=Noticias&func=news_user_view&id=2818772548&umt=en_galapagos_presentan_plan_piloto_cero_pcb - Training Workshop on ESM of PCB in Esmeraldas Province (Twitter account of the local office of the Ministry of Environment): https://mail.ambiente.gob.ec/service/home/~/Sin%20t%C3%ADtulo.jpg?auth=co&loc=en_US&id=24991&part=2 - FICA hosted the Conference on Persistent Organic Pollutants: http://www.epn.edu.ec/la-fica-fue-sede-de-la-conferencia-de-identificacion-de-los-contaminantes-organicos-persistentes/ - Invitation to the lecture on POPs and PCB giving by an international expert in National Polytechnic University in Quito: http://www.epn.edu.ec/events/proyecto-bifenilos-pcb-en-el-ecuador/?l=L2 - Expert offered in Quito international workshop on integrated management ofPCBs: http://www.ec.undp.org/content/ecuador/es/home/presscenter/articles/2015/07/14/experto-internacional-imparte-en-quito-taller-sobre-gesti-n-integral-de-pcb-/ http://www.un.org.ec/?p=7201 - Utilities learn to properly handle toxic substances: http://www.ec.undp.org/content/ecuador/es/home/presscenter/articles/2015/07/10/empresas-el-ctricas-aprenden-a-manejar-sustancias-t-xicas-adecuadamente/ http://www.un.org.ec/?p=7185 - Master Conference on International Chemicals Conventions, Hazardous Waste, POPs and polychlorinated biphenyls: http://www.ec.undp.org/content/ecuador/es/home/presscenter/articles/2015/07/14/conferencia-magistral-sobre-convenios-internacionales-en-qu-micos-desechos-peligrosos-contaminantes-org-nicos-persistentes-cop-y-bifenil-policlorados-pcb-/ http://www.un.org.ec/?p=7205

C. Project Summary

D. Progress toward Development Objective

Objective/Outcome	Description	Description of Indicator	Baseline Level	Target Level at end of project	Level at 30 June 2015
Objective	To promote the sound management of PCB contaminated oil, equipment, sites and wastes in Ecuador	Quantity of PCB (liquids and solids) destroyed in the project period (2013-2017). Quantity of PCBs stored in an environmentally sound manner.	Estimated inventory of 1,400 MT of PCBs. National inventory outdated and only estimate.	750 MT of PCBs (equipment, oils and wastes) disposed of in an environmentally sound manner. All PCB inventories stored in an environmentally sound manner	None of the 750 MT have been disposed of yet, for that, an updated inventory of the quantity of PCB is needed. The Project is developing a National System for Inventory and Monitoring of PCB (NSIM-PCB) - a computer program that all companies are required to use to report on the progress of their inventories. The system is expected to be operational by January 2016. Throughout 2014, the Project visited all electric companies to gather data and update the inventory. The results indicated that only 15% of the total number of electrical equipment in the country have been inventoried.

		Number of environmental, health and customs authorities personnel trained to monitor compliance of Stockholm Convention requirements and norms.	Environmental, health, customs and electric sector authorities personnel do not have the knowledge and training to execute control and monitoring of the PCB inventory in the county.	30 officials of the environmental, health, customs and electric sector authorities trained to control the commerce, storage, transport, treatment and final disposal of PCBs.	The project has trained 193 officials (6.4 times more people were trained than initially targeted) from the environmental, customs and electric sector to control commerce, storage, transport, treatment and final disposal of PCBs. Training on environmentally Sound Management (ESM) of PCB was conducted during three training events in the reporting period of July 1, 2014 to June 30 2015. The project has already achieved its target.
		Number of environmental, health and customs authorities personnel trained to monitor compliance of Stockholm Convention requirements and norms.	Environmental, health, customs and electric sector authorities personnel do not have the knowledge and training to execute control and monitoring of the PCB inventory in the county.	1 Norm developed and validated	A Regulation (Procedures for Integrated and Environmentally Sound Management of Polychlorinated Biphenyls (PCBs) in Ecuador) has been drafted and sent for public consultation. The Project held the final public consultation process on June 2015.

					Currently the regulation is under revision by the Legal Department, prior to approval and signature by the Minister of the Environment, which is expected to be obtained in October 2015.
		Number of environmental, health and customs authorities personnel trained to monitor compliance of Stockholm Convention requirements and norms.	Environmental, health, customs and electric sector authorities personnel do not have the knowledge and training to execute control and monitoring of the PCB inventory in the county.	4 guidelines/manuals developed by the end of the project.	The "Manual for the Handling of PCBs in the Ecuadorian Electric Sector", which was developed in 2012 by the Ministry of Environment of Ecuador and Agency of Regulation and Control of the Electric Sector (ARCONEL), is a useful tool used by the PCB Project for training workshops and is being used by electrical companies to comply with PCB adequate management. The Manual is being updated by ARCONEL and will be revised by the PCB Project prior to its publication. In addition, the Project

					has developed two (2) technical guides, which are approved by MAE in its technical text and need to be validated in its visual part by the communication department prior to printing. The guides are: technical guide for general information of POPs and technical guide for environmentally sound management (ESM) of PCB. Other guidelines are being planned, such as, the occupational safety procedures for handling of dielectric oil and electrical equipment with PCB.
		Number of safe PCB management and disposal options.	Ecuador does not have any treatment/disposal facility for PCBs.	At least one treatment/disposal alternative in operation at the end of the project, if proven cost effective compared to export option.	Once an updated and more complete inventory data is available, the Project may have better tools to choose a treatment/disposal alternative and compared it to the export option.
		Number of companies of the electrical sector trained and	Existing guidelines for PCB management are limited and do	75% of the existing electrical sector companies trained and implementing	During the public consultation process

		implementing the new regulatory guidelines.	not cover the entire life cycle.	the new regulatory guidelines.	of the PCB Regulation developed with support of the Project, there has been significant collaboration with many State organizations, including environment, petroleum, mines, health, customs, electric, and port authorities as well as PCB holders, which has led to better awareness on among PCB issues. Once the Regulation is officially published, the Project will train all involved sectors in its compliance.
		Number of inspectors/enforcement officers trained to monitor compliance of national laws/norms on PCB management.	The environmental regulating authorities have limited knowledge about PCB management.	40 maintenance and other personnel at PCB holders trained in safe PCB management.	The Project has developed a training plan for the electric sector which begun implementation in 2014. Through three (3) training workshops in 2014 and two (2) training workshops until June 2015, with the topic of general information on POPs and ESM of PCB, the

					Project has trained 193 persons from various public and private sectors, 90 of these persons were maintenance personnel from electrical companies. The project is visiting the majority of Universities in the country (so far, 7 Universities have been visited), giving a 1-2 hour conference on POPs and PCBs to students and teachers and informing them about the PCB inventory program. Up until June 2015, the Project has reached 290 students and teachers.
		Number of inspectors/enforcement officers trained to monitor compliance of national laws/norms on PCB management.	The environmental regulating authorities have limited knowledge about PCB management.	10 inspectors/enforcement officers trained to enforce compliance of national laws/norms on PCB management.	During the public consultation process of the PCB Regulation developed with support of the Project, there has been significant collaboration with many State organizations, including environment,

					petroleum, mines, health, customs, electric, and port authorities as well as PCB holders, which has led to better awareness on PCB issues. Once the Regulation is officially published, the Project will start proper training to all involved sectors in its compliance.
				.	
				.	
Outcome 1	Institutional capacity strengthening for sound and environmentally friendly management of PCBs.	Number of PCB management regulations developed and validated by regulation institutions.	PCB management is not established by regulations and norms that guarantee their environmentally sound management.	PCB management regulations and environmentally sound management norms developed and validated.	A Regulation (Procedures for Integrated and Environmentally Sound Management of Polychlorinated Biphenyls (PCBs) in Ecuador), has been drafted and sent for public consultation. The Project held the final public consultation process on June 2015. Currently the regulation is under revision by the Legal Department, prior to approval and

					signature by the Minister of the Environment, which is expected to be obtained in October 2015.
		Number of electrical sector companies implementing PCB management and elimination plans to meet national goals by 2020.	The Constitution and the national development plan establish the elimination of PCBs but there are not regulations for it.	National PCB management and elimination plan up to 2020 approved and in implementation process.	The National Plan for PCB Management and Elimination has not yet been developed; this is planned by 2017, once an updated and more complete inventory data is available.
		Number of inspectors trained to conduct site visits for the verification of compliance to the PCB management regulations.	The regulating institutions do not have the trained inspectors that can evaluate the environmentally sound management of PCBs and compliance of its corresponding regulations.	At least 10 inspectors trained in PCB management evaluation and enforcement in the environmental, electric and health regulating institutions.	94 officials from many institutions including environment, petroleum, mines, health, customs, electric, and port authorities, have been trained in ESM of PCB during all the events held by the Project, these officials should be prepared to verify compliance of good practices for PCB management. During the public consultation process of the PCB Regulation

					developed with support of the Project, there has been significant collaboration with many State organizations, which has led to better awareness on PCB issues. Once the Regulation is officially published, the Project will start proper training to all involved sectors in its compliance.
		Number of inspections completed during project implementation (2013-2017).	Limited institutional capacity to present proper reports to the Stockholm Convention.	Inspections made by regulating institutions to each electrical company per semester.	All electric companies require an environmental license for its operation, in order to obtain a license, the company has to have management plan for oil and equipment containing PCBs. ARCONEL, which is the institution in charge of processing and issuing these licenses, performs audits of such plans two times a year or when the environmental authority so requires.

		Number of reports to the Stockholm Convention presented on time and in an effective manner. Number of inventories updated on line with information from the electrical sector companies with PCBs identified and eliminated.	Limited institutional capacity to present proper reports to the Stockholm Convention.	PCB inventory updated including equipment, oil and waste, identified and the amounts of tons that have been eliminated, incorporated into the monitoring information system.	In 2014 the Project support the countryÂ´s Technical Focal Point for the Stockholm Convention, to report on the progress of inventory and the amount of PCBs eliminated. The report was based in preliminary data, because progress had not been made at that time in the inventory and no PCBs has been eliminated. The Project is developing a National System for Inventory and Monitoring of PCB (NSIM-PCB) - a computer program that all companies are required to use to report on the progress of their inventories. The system is expected to be operational by January 2016. Throughout 2014, the Project visited all electric companies to gather data and update the inventory. The results indicated

					that only 15% of the total number of electrical equipment in the country have been inventoried. Three soil characterizations for contaminated sites were performed in 2014. One, presented contaminated soil above 750 ppm of PCBs, the volume of contaminated soil was determined in line with the UNIDO technical guide POPs: Contaminated Site Investigation and Management Toolkit. All contaminated soil has been properly stored and registered in the inventory for future treatment or disposal. In 2015, the Project has been assessing 13 additional sites for possible PCB contamination. According to preliminary results, 7 sites have been prioritized for further analysis (phase II) to determine the volume of

					contaminated soil. In 2014, with the aim of speed the inventory of PCB, the Project purchased and donated to the Ministry of Electricity and Renewable Energy (MEER), a gas chromatograph with ECD column (electron capture detector). This equipment allowed the establishment of an agreement between the two ministries, whereby the MEER agreed to double its analytical capacity (from 200 to 400 samples per month), accredit ISO 17025 the method of analysis (with the quality agency in Ecuador) and reduce, in 35%, the cost of the analysis of each oil sample, exclusively for electric utilities. In addition, with the support of the Ecuadorian Accreditation Service (SAE), five (5) laboratories of state

					universities and the laboratory form MEER, were trained in the method of analysis for determination of PCB in oil samples and obtaining ISO 17025 accreditation. Currently, one laboratory has already obtained its accreditation and another laboratory is in process of accreditation and expects to obtain it this year.
		Number of publications and activities developed under the awareness raising campaign.	General public and private sectors are not aware of the risks to health and the environment from inadequate PCB management practices.	Environmentally sound management of PCB training manual elaborated and implemented in parallel to a training plan for electrical sector companies.	As a training manual for workshops, the Project uses the "Manual for the Handling of PCBs in the Ecuadorian Electric Sector", which was developed in 2012 by the Ministry of Environment of Ecuador and ARCONEL. Electrical companies to comply with PCB adequate management also use this Manual. The Manual is being updated by ARCONEL

					and will be revised by the PCB Project prior to its publication. The Project has also developed a training plan for the electric sector which begun implementation in 2014. Up until June 2015, the Project has trained 193 persons from various public sectors, as well as private and public entities.
		Number of publications and activities developed under the awareness raising campaign.	General public and private sectors are not aware of the risks to health and the environment from inadequate PCB management practices.	Awareness raising campaign among public and private sectors involved in chemicals management on proper PCB management.	The Project started a campaign in 2015 for awareness raising on POPs and PCBs, this activity includes lectures in the main Universities in the country: Up until June 2015, seven (7) Universities have been visited and 290 students and teachers have been informed about these topics. In addition, in partnership with the National Secretary of Education (SENESCYT), the Project has started a campaign to facilitate

					economic resources to University projects related to POPs and PCBs (determination of POPs and PCBs in soil, water and biota, inventory of PCBs in the mining industry, PCBs treatment, etc.). These projects will be evaluated by SENESCYT and the PCB Project prior to be accepted for financing. During all training events organized by the PCB project, participants are given a leaflet and a notebook with information on PCB. These materials were developed by the project and approved by MAE before being printed. Both the leaflet and the notebook are visual material and serve to attendees to retain information and replicate it in their respective institutions. Furthermore, the Project is developing a video showing the steps to an

					environmentally sound management of PCB and showing the main achievements and future activities of the Project. This video will be made available to all public with the objective to raise awareness and to provide basic knowledge and contacts to get more information if needed.
Outcome 2	Environmentally sound management of PCBs.	Number of electrical sector companies with PCB management plans, developed and presented to the CONELEC/MAE for approval.	There is a lack of a national environmental management and elimination plan that will be a guide for the electrical companies to budget and program activities regarding their PCB issues.	Technical guidelines for PCB management approved and in process of implementation.	In 2013, before the start of the PCB Project, all the electrical companies in Ecuador presented their PCB Management Plans to ARCONEL (former CONELEC), all of which were approved. This indicates that all companies are working based on their respectively approved Plans and based on the Manual for the Handling of PCBs in the Ecuadorian Electric Sector, also

					developed by ARCONEL in 2012. In order to complement the information that electrical companies have, the Project has developed two (2) technical guides, which are approved by MAE in its technical text and need to be validated in its visual part by the communication department prior to printing. The guides are: technical guidelines for general information of POPs and technical guidelines for the environmentally sound management (ESM) of PCB. Additional guidelines are being planned for 2016, such as, the occupational safety procedures for handling of dielectric oil and electrical equipment with PCB.
		Number of occupational health and safety trainers to implement guidelines. Number of occupational health and safety guidelines issued and implemented by the electrical	Occupational health and safety issues are important when evaluating potential risk for workers who have may have been exposed to PCBs in the past and to	Occupational health and safety regulations for personnel exposed to PCB contaminated equipment, oil and waste prepared and in process of	The Regulation on PCB previously mentioned, contains norms on occupational safety

		companies.	prevent future incidents.	implementation.	and health aspects for personnel coming in contact with PCB-contaminated equipment, oil and wastes. The Regulation will be official in the coming months.
		Number of alternative PCB disposal options evaluated with a feasibility study.	There is no differentiation, because of the limited inventory, between high and low concentrations of PCB to decide on alternative options.	Feasibility studies completed to determine technically and economically viable in-country and out-of-country alternatives for the elimination of PCB contaminated equipment, oil and wastes.	The feasibility study will start once the NSIM-PCB system is fully operational. However, the project is investigating some alternatives of destruction for PCB, one of which is the co-processing in cement kilns for which, the Project has met with two leading cement plants in Ecuador, to determine if it is possible to co-processed oil with more than 50 ppm of PCBs in their kilns. If the test is positive, this could be a local alternative treatment for PCB oil. The project has also coordinated visits to Ecuador for the months of July and

					August with two European companies of incineration of PCB at high temperatures. The idea is that these companies can visit the PCB equipment and oil storage sites, check the approximate amounts of existing waste and provide an approximate cost of disposing of these stocks in their incineration plants.
		Number of alternative PCB disposal options evaluated with a feasibility study.	There is no differentiation, because of the limited inventory, between high and low concentrations of PCB to decide on alternative options.	Identification of process to be implemented for elimination of PCB contaminated equipment, oils and waste.	Planned after the feasibility study has been completed.
Outcome 3	Environmentally sound storage and disposal of PCB waste.	Number of electrical sector companies with a management plan for the temporary storage of PCB contaminated equipment, oil and waste presented to regulating authorities (CONELEC/MAE) for approval and being implemented.	Currently, there are no technical standards for temporary storage of PCB inventories.	Technical guidelines for temporary storage facilities for PCB inventories approved and implemented.	The technical guidelines for the ESM of PCBs, developed and approved with support of the project, contain a section on storage, which is in accordance with international standards and the Ecuadorian Standard NTE INEN 22:66-2013 (Transport, storage and handling of

					hazardous chemicals), where the conditions for warehouses for hazardous materials are prescribed.
		Number of electrical sector companies with a management plan for the temporary storage of PCB contaminated equipment, oil and waste presented to regulating authorities (CONELEC/MAE) for approval and being implemented.	Currently, there are no technical standards for temporary storage of PCB inventories.	Environmentally sound temporary storage of PCB contaminated equipment; oil and waste are implemented in the electrical sector companies.	In 2013, before the start of the PCB all the electrical companies in Ecuador presented their PCB Managements plans to ARCONEL (former CONELEC). These plans included proper storage of equipment, oil and wastes containing PCBs. The Project also visited all electric companies and most of their equipment and oil storage sites in 2014. It was observed that some companies have built adequate warehouses, however, many companies still have precarious and inadequate storage sites for hazardous materials. Therefore, the PCB Project is facilitating agreements in

					between large and small PCB holders, where large holder store the PCB equipment of small holders (example: PCB equipment from the Galapagos, will be stored at the Guayaquil electric company until destruction alternatives have been developed and approved). In addition, the PCB Project is analyzing the possibility of building a warehouse that complies with all requirements and conditions for adequate storage, which can be used by all electric companies that lack their own storage facility.
		One or a combination of PCB disposal options identified and in tender process for selection of servicers. Number of tons of PCB contaminated equipment; oil and waste are eliminated during the project (2013-2017).	Ecuador lacks of in-country options for PCB disposal and only the exporting of the equipment, oil and waste with a very high cost associated is available.	Technically and economically viable PCB elimination option identified and in process of implementation.	A feasibility study will start once the NSIM-PCB system is fully operational. The project has also developed a pilot test for PCB elimination with ECOSAFE product. The company Benimex in

					the presence of staff, appointed as an observer, by the Ministry of Environment, performed the test. Upon completion of the test and after performing the analysis, it was found that PCBs only moved from the liquid phase to a semi-solid phase, proving that the elimination of PCB with ECOSAFE not possible.
		One or a combination of PCB disposal options identified and in tender process for selection of servicers. Number of tons of PCB contaminated equipment; oil and waste are eliminated during the project (2013-2017).	There is not a defined disposal plan for the fulfillment of the countryÂ´s requirements under the Stockholm Convention or its national regulations.	National disposal plan developed, approved and electrical sector companies committed to its implementation.	In 2017, the Project will begin to elaborate the National Disposal Plan in line with the elimination options identified during the feasibility study and experiences gained from a PCB disposal pilot project. This plan will be elaborated in coordination with ARCONEL.
		Number of tons of PCB contaminated equipment, oil and waste identified in the Galapagos Islands.	The Galapagos Islands have electrical equipment that could be potentially contaminated with PCBs.	Pilot project for identification and removal of PCB contaminated equipment, oil and waste from Galapagos developed and	The Project has completed an inventory of all decommissioned

				implemented.	equipment (222) on the Galapagos Islands. Samples were analyzed by gas chromatography (GC) and only one equipment was reported to contain a PCB concentration greater than 50 ppm of PCBs, this equipment has been properly stored. During 2015, the Project will complete the inventory on the Galapagos Islands by sampling and analyzing all public and private in-line equipment (663). Once the results of this inventory are available, a decision can be made about the best alternative for treatment or elimination of PCBs.
		Number of tons of identified inventory is removed from the Galapagos island.	There is a need to develop an inventory and elimination plan for them.	Disposal plan for Galapagos PCB inventory developed approved and budgeted.	Due to the low volume of oil and small quantity of PCB contaminated equipment expected to be present in the Galapagos, a valid alternative could be to transport wastes

					to the continent for appropriate storage until a final decision is taken. The equipment, oil and wastes contaminated with PCB from Galapagos will be included in a pilot project of elimination, along with PCB containing wastes from other holders.
		Number of tons of PCB contaminated equipment, oil and waste eliminated.	Ecuador has committed to the disposal of 750 metric tons of PCBs during the project.	Disposal of 750 metric tons of the existing PCB inventory of contaminated equipment, oil and waste.	The amount of 750 metric tons of equipment, oil and wastes contaminated with PCB, which the project initially targeted to dispose of, appears to be overestimated. Based on GC results carried out by many electric companies and by the PCB Project, it can be concluded that the total amount of contaminated oil and equipment in the country will be lower than the one stated in the preliminary inventory (1,500 metric tons). Once updated and accurate

					inventory data become available, it may be determine the amount of PCB for disposal.
Outcome 4	adaptive feedback, outreach and evaluation.	Number of high quality monitoring and evaluation documents prepared during the project implementation.	No documents in baseline situation.	4 Quarterly Operational Reports submitted to UNDP each year.	Instead of quarterly reports, and as per request of the UNDP Country Office, the Project has been presenting monthly Operational Reports.
		Number of high quality monitoring and evaluation documents prepared during the project implementation.	No documents in baseline situation.	1 annual APR/PIR submitted to UNDP each year.	This is the first PIR that PCB Project is preparing.
		Number of high quality monitoring and evaluation documents prepared during the project implementation.	No documents in baseline situation.	1 Mid-term evaluation.	Mid-term evaluation is planned for 2016.
		Number of high quality monitoring and evaluation documents prepared during the project implementation.	No documents in baseline situation.	1 Final evaluation.	Final evaluation is planned for 2017.
		Number of high quality monitoring and evaluation documents prepared during the project implementation.	No documents in baseline situation.	MTE and FE must include lessons learned section and a strategy for dissemination of project results.	The TE and MTE will include a lessons learned section and a strategy for dissemination of project results

E. Progress in Implementation

Project Outcomes	Description	Outputs Reported as of 30 June 2015
Outcome 1	Institutional capacity strengthening for sound and environmentally friendly management of PCBs.	1) Improved PCBs and POPs legislation: A Regulation developed by the project (Procedures for Integrated and Environmentally Sound Management of PCBs in Ecuador) is in the final phase of legal review and expected to be officially published within the coming months. 2) Improving institutional capacity to manage PCB, including the national capacity for reporting to the Stockholm Convention: The Project supported the national SC focal point in the preparation of the countryâ??s report to SC (the last one was prepared in 2014). Information provided was based on visits to all utility companies, which the Project carried out in 2014 to verify the presence of PCB stocks. Six (6) laboratories were trained in the analytical method of GC for PCB analysis in oil. In addition, these laboratories were trained in obtaining the ISO 17025 accreditation, one of these laboratories have already obtained its accreditation for PCB analysis and a second one is in process and close to get its accreditation. 3) Awareness raising: Three (3) trainings on ESM of PCB, were organized and performed in 2014, aimed to the electric sector and carried out in the cities of Quito, Guayaquil and Cuenca, reaching 106 persons, which exceeds the target set for the project. The Project also organized lectures on ESM of PCBs in Universities, with the goal to raise awareness on the problem and explain proper PCB management, so far, 290 students and teachers have received the lecture. In 2015, the project has carried out 2 training workshops for public and private sector on the ESM of PCBs in cities that have seaports, reaching several sectors and the port authorities responsible for verifying the entry and departure of any product (87 people trained). The Project has also produced a leaflet and a notebook describing a summary of the ESM of PCBs. During the events coordinated by the Project, all participants are provided with these materials with the goal to disseminate information to all sectors.
Outcome 2	Environmentally sound management of PCBs.	1) Improved management practices for PCB: The National System for Inventory and Monitoring of PCB (NSIM-PCB) is being designed; this System will serve all utilities that will be able to upload data of their inventory and results of PCB analysis. The information of the NSIM-PCB will be use by competent authorities to make decisions on the final disposal of PCB stocks. Three soil characterizations for contaminated sites were performed in 2014. One, presented contaminated soil above 750 ppm of PCBs, the volume of contaminated soil was determined in line with the UNIDO technical guide POPs: Contaminated Site Investigation and Management Toolkit. All contaminated soil was properly stored. In 2015, the Project has

		been assessing 13 additional sites for possible PCB contamination. According to preliminary results, 7 sites have been prioritized for further analysis (phase II) to determine the volume of contaminated soil. In the Galapagos, the Project has already analyzed all out-of-use equipment (222 pieces of equipment) and, is expected to sample all in-use equipment to analyze samples by gas chromatography (663 equipment). The Galapagos will be the first province to complete its inventory of PCB. The information of this inventory will be used to decide on the proper management of Galapagos PCB stocks.
Outcome 3	Environmentally sound storage and disposal of PCB waste.	1) Proper storage of PCBs: The Project has developed two technical guidelines for the ESM of POPs (Technical guidelines for general information of POPs, Technical guidelines for ESM of PCBs), which contain regulations related to storage. The project is also working closely with all electric companies to improve storage facilities. In coordination with ARCONEL, the project is also considering to construct an adequate warehouse for the storage of PCBs from companies that do not have proper options for storage. 2) Proper disposal of 750 MT: The Project has contacted many international companies with the capacity to destroy or treat PCBs, and has coordinated visits to the country (on the months of July and August), so they can see the reality of equipment and oil location, storage and possible quantity/volume and explain to the authorities, if the alternative they propose could be implemented in the country. The project developed a pilot test for PCB treatment with ECOSAFE product, which was performed by the company Benimex. The pilot aimed to prove that PCB-contaminated oil at a concentration of 322 ppm could be degraded to less than 50 ppm in a mixture of water and ECOSAFE. Upon completion of the test and after performing the analysis, it was found that PCBs only moved from the liquid phase to a semi-solid phase that was achieved by electroflocculation, this semi-solid phase had a concentration of 260 ppm of PCB. It is considered that the difference between the initial and final concentrations was emitted to the atmosphere as chlorine gas. Coordination for possible test of co-processing of PCBs in cement kilns has been initiated with the cement companies UNACEM and HOLCIM. The goal is to test if oil under and above 50 ppm of PCBs can be co-processed in the plants kilns. If the tests prove feasible, this might be a possible in-country alternative for destruction of PCB oil stocks.
Outcome 4	adaptive feedback, outreach and evaluation.	Monthly reports: 14 monthly reports delivered to UNDP Country Office since the beginning of the Project on May 15, 2014 to June 30, 2015. PIR: This is the first PIR being prepared.

F. Ratings and Comments on Project Progress

Project Progress toward Development Objective

Role	2015 Rating	2015 Comments
Project Manager/Coordinator	Satisfactory	Despite some delays in activities mostly due to administrative processes, the Project has advanced in a steady pace towards achieving all the planned outcomes. In 2014, the project accomplished all planned activities and performed other activities that were not planned at the beginning of the project and that were the result of the conversations with different sectors involved. For the remainder of 2015, the project is working to finish the year with similar results as the last year. There are, however, bigger challenges due to the limited government funding for all industrial sectors that create delays or re-planning of activities. The Project started operation on May 15, 2014 and during the second half of that year it already accomplished some goals that bring the project closer to comply with the bigger objective which is to create capacity for PCB management and to dispose of 750 tonnes of PCB contaminated waste, e.g., doubling the analytical capacity of the laboratories that can undertake PCB analysis in oil samples and training of five (5) additional labs in the analytical method for PCB gas chromatography; updating the equipment and oil inventory from the electrical sector; training staff from all electrical companies and all Provincial Directorates of the Ministry of Environment on the environmentally sound management of PCB; completing the inventory of out of use equipment in the Galapagos performed by GC and establishing many agreements with other institution to facilitate the implementation of project activities. In 2015, major effort has been placed on updating the inventory of PCB, for which many activities have been planned and developed. The project has been working on coordination with all electric companies, since the exact knowledge of the quantity and volume of equipment and oil contaminated with PCB is crucial information that authorities and investors need. With this information the project and its stakeholders can decide if the investment for the implementation of a treatment or elimination plant for PCBs, is a valid option in the country or if the export of the PCB stocks is the most suitable and cost-effective option. In line with the above, the biggest risk for the accomplishment of the Projectâ??s main objectives (determining the most suitable alternative for destruction/treatment of PCBs and the disposal of 750 metric tons of PCB and developing of a National Elimination Plan for PCB) is that inventory will not be sufficiently advanced on time, to provide a good idea of the amounts of wastes, quantity of equipment and volume of oil contaminated with PCB. Without this information, decisions cannot be taken on disposal options and activities will be delayed. This major risk is affecting the Project now, and will be present throughout the entire duration of the Project as it also relates to the funds that each electric company receives from the State to comply with the environmentally sound management plans for PCBs. In order to mitigate the effects of this risk, the Project works closely with ARCONEL and all electric companies, to identify possible methods to speed up the inventory despite the limited funds available. In addition, the Project has drafted a regulation, which will be published shortly. Once this regulation has been adopted, it would be an additional incentive for the government and companies to speed up the inventory and analysis as well as the disposal and phase-out of equipment.
UNDP Country Office Programme Officer	Satisfactory	During its first year of implementation, the project has achieved very good results towards the accomplishment of the end goal by 2017, which is to support the country to respond to the environmentally sound management of PCB according to the international treaties. By the end of the project it is expected that the project will have achieved the disposal of 750 metric tonnes of PCBs and the development of a National Plan for PCB elimination by 2020. The main focus during this period of time has

		been directed to strengthening the institutional capacity to manage and dispose PCB in the country. This has included good progress in building capacity in public institutions regarding the sound management of PCBs, and creating awareness among the general public, including academic centers and universities. Considering that the country did not have significant experience in this area at the start of the project, it is important that the project is creating the basis for further activities with well-informed public and private actors. In addition, there has been good progress in developing regulations and guidelines for the ESM of PCB. The Regulation - Procedures for Integrated and Environmentally Sound Management of Polychlorinated Biphenyls (PCBs) in Ecuador - has been developed and its public consultation process has been completed. The regulation is under final revision by the legal department of the Ministry of Environment. Also, one of the main activities planned for 2015 is the update of the PCB inventory in order to have accurate information regarding the amounts of equipment and oil contaminated with PCBs, which will provide the inputs necessary to make decisions on the best options for the management and disposal of PCB in the country. Even though good progress has been made, there is a delay in this activity, basically due to a lack of resources of the electric companies to fulfill this requirement. The fiscal funds allocated to the electric companies are not sufficient to undertake these activities properly and as a direct impact they are not able to meet the targets set in their management plans. This represents a big risk for the completion of the projectÂ´s goal. If the companies do not have the resources to update the inventories, this may imply that the goal to eliminate 750 metric tons of PCB cannot be accomplished. In addition, if the inventories are not updated there will not be strong evidence in order to decide on alternatives for management and disposal of the PCBs; and thus the National Plan for PCB Elimination would not be well informed. Also, it is worth to note that the project has just commissioned the development of the National System of Inventory and Monitoring of PCB (NSIM-PCB), which will be populated by the electric companies with the information they gather from the PCB inventories; this is another reason why it is important to ensure the companies have the capacities and resources to gather such information. To address these challenges, the project is working closely with ARCONEL and other actors to find ways of supporting the electric companies to update their inventories and fill in these gaps. The UNDP Country Office will closely follow up this matter with the project unit and relevant actors.
Project Implementing Partner	Satisfactory	The products generated by the PCB Project agree with the planning and objectives, all are directed towards capacity building, management, storage and disposal of hazardous wastes containing PCBs. Planning and budget for each year is being optimized in activities nationwide to benefit human health and the environment. Thanks to international cooperation, which has been an important contribution to the development of the proposed activities and the budget delivered by the Ministry of Finance of Ecuador, the goals of the project in the first year of operation were achieved. One of the main risks that the PCB project faces is that many of its activities and outputs depend on the performance of other institutions, but the project has been able to address these problems and provide solutions and support to the institutions mentioned in order to continue processes. The Ministry of Environment through the Sub-Secretariat of Environmental Quality keeps close relations with the PCB Project, which periodically informs the activities and the advance they are accomplishing. As we are part of the Project Steering Committee, we recommend the Project to keep the level of progress and to create even more agreements with other institutions to make it easier to manage not only PCBs but also all POPs nationwide.
GEF Operational Focal point	Satisfactory	The PCB Project, since its inception in 2014 has been complying with the products and objectives in accordance with the original plan that was submitted to the GEF and the National Planning Secretariat (SENPLADES). The projectâ??s objectives, outputs and annual targets are being met and, in this way, Ecuador is complying with commitments in international agreements of chemicals and hazardous wastes. All progress and

		achievements of the project will be reported to the Secretariat of the Stockholm, Rotterdam and Basel so that other countries can replicate the experience of Ecuador. The implementation of activities and execution of financial resources of the Project is information that contributes to the reports that our country sends to the Stockholm Convention and therefore, The Ministry of Environment of Ecuador performs a thorough monitoring of compliance of the activities of the Project. Is worth mentioning that the PCB Project maintains close communication with all departments of the Ministry of Environment, giving a rapid response to the requested information and registering their progressive implementation in the country monitoring tools such as "Government by Results (GPR)". This makes it easier for the Ministry to provide all necessary support to achieve the objectives of the country and the Project in the proper management of PCB. The project, has not only been concerned with the performance of its activities, but also to greatly extend the management carried out and the knowledge on PCBs, so that all agencies that have responsibilities pertaining to the control and prevention from the Ministry of Environment will be able to continue the work to eliminate these pollutants and waste within the deadlines given by the Stockholm Convention. It is also important to note that the project has made several alliances with other government institutions to facilitate the development of the activities and the widest application of the proper management of PCB.
Other Partners	Satisfactory	Filled in by Alonso Moreno, Head of the Department of Environment of the Agency for Regulation and Control of Electricity (ARCONEL) The management performed by the PCB Project during the first year of its implementation is satisfactory, however some partial goals have not yet been met. Oils containing more than 50 ppm of PCBs have not yet been destroyed. The Company ECOTECNO S.A. has coprocessed only PCB oils with less than 50 ppm of PCBs in cement kilns of HOLCIM. It is necessary to create the necessary capacity for coprocessing in other cement kilns such as those owned/managed by LAFARGE, Chimborazo and Guapan, to allow electric companies to destroy oil faster, thereby gain space in their warehouses. The inventory of oils and equipment contaminated with PCBs is advancing but not at the pace planned. Out of use equipment has been analyzed by most electric companies, however these companies do not have sufficient resources to meet the original action plans, which also include the sampling and analysis of in-service equipment. In the case of the largest power companies such as Electric Company Quito (EEQ), Electric Company Guayaquil, Electric Company of Cuenca, the amount of equipment in operation is quite significant, so that the original goal to conclude the inventory by December 2016, does not seem feasible, therefore the inventory of in-service equipment has been rescheduled for the end of 2020. It should also be noted that electric companies must include in their inventories, equipment of other holders (private and public sectors), whose characterization has some inconveniences in terms of the responsibilities of the owner and the company, which provides electricity service. As such, equipment owned by petroleum companies, must also be analyzed. It is recommended that the Ministry of Environment (MAE) manages and facilitates resources to assist electric companies in the execution of a definitive inventory of oils and equipment with PCBs. This may be done through the provision of colorimetric kits, Personal Protective Equipment (PPE), adequacy of warehouses, procurement of laboratory for gas chromatography, implementation of a pilot project for the destruction/treatment of oils that have more than 50 ppm of PCBs, which are stored in the warehouses of the electric companies. It is necessary to strengthen the operational capacity of electric companies for the characterization of oils with or without PCBs, with training workshops, based on the proper use and application of the "Manual of procedures for handling PCBs in the Ecuadorian electricity sector", document which is valid and in force since July 2012. Training should be followed up, since not all attendees are those who really are able to perform characterization tests. A Manual update is required, the Technical Committee of PCBs, led by ARCONEL, Ministry of Environment and the largest electrical companies in the country, is carrying

		out this task.
UNDP Technical Advisor	Satisfactory	The Development Objective rating for the project is satisfactory. The Project has made advances in preparing the bases to achieve a smooth implementation of the project and to achieve a sound management of PCB in the country; to do so, it has involved the main stakeholders in the country, working with public and private entities. During the first year of implementation, the project coordination team has demonstrated great dynamism and commitment to reach the project objectives. The project team was hired and is working closely with the energy companies and the environmental authorities of the country. The project has made advances on the preparation of the national inventory, in the strengthening of its legal framework, on training of technical official from the environmental and customs authorities and from the electrical companies, activities that strength the national capabilities to comply with the development objective of the project. Among the progress made, it is worth noting the work being done on updating the inventory; Project staff knows that this is a key activity for achieving its development objectives. It is also important to highlight the work conducted by the project in the province of GalÃ¡pagos, province of incalculable ecological value and high sensitivity, where the inventory of all out-of-use equipment was completed. The project team is aware of the basic information required to fulfill its development objective, this includes a complete and updated inventory, and is working to address these key component, working closely with the stakeholders in the electricity sector and local authorities. Also worth noting it is the work made by the project to strengthen the analytical capacity of the country. Thanks to its efforts, one laboratory was certified in the method of analysis for determination of PCB in oil samples and others have been trained and are in the process of certification. The project has organized an active and purposeful team, which has the support of local authorities and electric utilities companies, it has developed activities that have had dynamic participation of the main stakeholders which has increased the interest on the environmentally sound management of PCBs. The project has had a participatory and open attitude towards all PCBs owners and other entities related to their control. In relation to monitoring and follow-up, the project has maintained a constant communication with the local UNDP office, preparing monthly progress reports and exchanging information about the implementation of the work plan. This is the first PIR of the project and, as mentioned before, the activities implemented in this reported period are paving the road for achieving the fulfillment of all projectâ??s outcomes. Taking in consideration the advances reached so far, the rating of progress towards the development objective of the project is satisfactory.

Project Progress in Project Implementation

Role	2015 Rating	2015 Comments
Project Manager/Coordinator	Satisfactory	The Project activities have been planned according to the requirements of the country and are aimed to meet the final objectives of the Project. These activities and their timing (taken up in the projectâ??s Annual Work Plans) have been agreed by everyone involved in the management of PCBs, such as the Projectâ??s Steering Committee and the PCB Technical Advisory Committee comprising representatives of several of the largest power companies in the country, the Ministry of Environment and ARCONEL as the governing body of the electric sector. In 2014, a combined implementation (State and cooperation funds) greater than 99% was achieved. In the year 2015, despite being behind in the implementation of activities, due to delays in administrative instances, all possible efforts are being made to complete all the required processes and to ensure that the procurement of goods and services are launched, awarded and are culminated within the planned period. It is expected that most of the planned

		project activities for 2015 will be executed on time and that the project will achieve a similar delivery rate as last year. At the beginning of the Project there were risks that endangered the achievement of activities and goals, e.g., within the members of the Project, there was no one with knowledge of the Government tools of reporting and monitoring. This risk was identified early and was managed through the training of some government staff, who in turn trained the rest of the staff, in the use and requirements of these tools. We should also mention some fiscal budget cuts that will negatively impact the Projectâ??s results, which the project is trying to deal with by rethinking the scope of activities, keeping in mind that the activity needs to maintain a similar result to the result initially planned but needs to be achieved with the use of fewer resources. In situations when this is not possible, the project did an operational reform with the most important activities for achieving the ultimate goals of the project being prioritized, of course, always in full compliance with the requirements of the electric sector (largest holder of PCBs) and the reality of the country. This way, the project has been adapting to the different difficulties that have arisen and, has maintained a good pace of progress and achievement of objectives. As mentioned above, the biggest challenge is the allocation of budget for electric companies, as this allocation is insufficient and the companies cannot advance with the PCB management plans, including the inventory of in-use equipment. However, the PCB Project has been working with various institutions such as the Ministry of Electricity and Renewable Energy (MEER), Ministry of Strategic Sectors (MICSE), National Secretary of Education (SENESCYT), Ecuador Accreditation Service (SAE) and Quito Electric Company (EEQ), establishing important partnerships to overcome these shortcomings and achieve compliance with the objectives of the country and the project. Some of these agreements, for example with MEER, allow electric companies to perform gas chromatography analysis of PCBs in oil at a preferential cost $ 30 and thus achieve the analysis of existing oil samples with a saving of 35% compared to the previous cost. With MICSE, the project is working to develop techniques for coprocessing dielectric oil containing more than 50 ppm of PCB in cement kilns, performing a shared investment between all stakeholders to test the method and obtain the environmental permits for operation. Once the cement plant obtains this license, if coprocessing is proved feasible, cement companies will not charge the electric companies to eliminate their oil with less than 50 ppm of PCBs, while the price for coprocessing the oil with higher concentrations of PCB will have to be negotiated. The PCB Project also created an alliance with SENESCYT, which is in charge of all research in Ecuador. This institution will finance (with up to two million dollars) projects related to POPs investigations on different environmental matrix and PCBs inventories of mine areas. These projects must go through an expert assessment (SENESCYT expert) and the assessments from members of the PCB Project. So far, there are three projects in evaluation. SAE and EEQ, provided support to the project by providing equipment and personnel in most training events that the Project has sponsored. In addition, the project also has benefited from active participation in dissemination products on ESM of PCBs, for example the video that the Project is elaborating, which was recorded, for the technical part, entirely on facilities and with staff of EEQ.
UNDP Country Office Programme Officer	Satisfactory	The implementation of the project activities are mostly in line with the planned activities with some delays (mainly concerning procurements and administrative issues) which have and will be overcome in the upcoming months. Additionally is important to address, that given the fall of oil prices, there could be some fiscal budget cuts, that might have an impact on the Project activities and implementation, which might need the appropriate mitigation actions and readjustments to achieve the results initially planned. It is worth mentioning that all delays and barriers that the project has encountered have been managed appropriately and in a timely manner, presenting positive outcomes. It is important to consider that this is the first year of implementation of the project, and the delivery has been satisfactory so far. In terms of the coordination of the project, it is worth mentioning that the project unit

		is performing a satisfactory job, which facilitates the coordination with the Project Implementing Partner and other relevant actors such as ARCONEL. The project unit is very proactive and responsive to the requirements from UNDP, and the project implementing partner. The technical committee is also very responsive to the project needs. During the period, there have been 5 meetings of the Technical Committee and also 5 meetings of the Board. In terms of financial implementation, during 2014, considering that the project was just starting, it had a very high implementation of 98.56%. During the period January - June 2015, the implementation has reached 27,65%, which is not as high as expected; however, the biggest activities have commenced in July and are planned for the second half of the year . By the end of this year it is estimated that the project would have a final delivery of 97.34%
Project Implementing Partner	Satisfactory	The PCB project has met its objectives set for the first year of work getting a 99.34% execution of fiscal 2014 funds, this is due to good management of the project in all administrative and financial processes, as well as technical processes. In addition, the Project has concerted agreements with several state institutions such as MEER, SENESCYT, SAE, EEQ and MICSE to facilitate the implementation of activities and obtaining of their goals. In 2015, the Project is executing its planned objectives and by the end of the year, it is expected to have a similar execution as the one in 2014. The project staff has been trained in technical subjects on the ESM of PCB, project management and government tools for reporting progress, which enables the group to achieve a very good performance on their annual processes. Financial resources for monitoring and evaluation have been sufficient; the Ministry of Environment also allocates resources to the Department of Information, Monitoring and Evaluation (DISE) so they can track the compliance of products and activities planned by the Ministry Projects. It should be mentioned that the realization of all processes of the PCB Project, do not depend entirely on their management, this makes planning, at certain times, to be delayed. However, the Project takes mitigation measures for these shortcomings and has close work relations with all areas involved in both MAE and UNDP to expedite processes and fulfill the annual planning.
GEF Operational Focal point	Satisfactory	The ultimate objective of the Project is not the elimination of all equipment, oil and PCB wastes in Ecuador, but the strengthening of institutional capacity for environmental sound management of PCB so that this work can be continued after the project completion in 2018. In this regard, the staff of the Project is strengthened in technical, administrative, financial issues and they in turn spread this knowledge among all provincial divisions of the Ministry, other State institutions and public and private industrial sector, such as the Ministry of Electricity and Renewable Energy (MEER), the National Secretariat for Higher Education, Science, Technology, and Innovation (SENESCYT), Ecuadorian Service for Certification (SAE), QuitoÂ´s Electric Company (EEQ) and the Coordinating Ministry of Strategic Sectors (MICSE) , to meet this main objective of the Project. The Ministry of Environment of Ecuador (MAE) has been making efforts to implement proper management of PCB for several years, however, the PCB project, which began operations in 2014, is doing an excellent job of strengthening knowledge on environmentally sound management of PCBs. The staff of the electric companies now assume more responsibly PCB management and safety in hazardous waste storage sites. MAE as a member of the PCB Project Steering Committee knows that financial resources allocated to the project have been used in carrying out activities aimed at compliance with the Stockholm Convention guidelines for the proper management and disposal of PCBs. It also recognizes that activities undertaken by the project are designed to support, equally, the whole electricity sector and, since early this year 2015, the industrial sector in general. The Government of Ecuador through the Ministry of Environment concerned that the population of Ecuador lives in a healthy and ecologically balanced environment that guarantees sustainability and good living, "sumak kawsay", created the Project Integrated Environmentally Sound and Management of Polychlorinated Biphenyls PCBs in Ecuador, to assume responsibility for implementing the appropriate

		management of these pollutants in the country. We believe that the Project is fulfilling efficiently with each of their activities, goals and objectives, that is developing properly and has obtained good results, not only in the electricity sector, which possibly is the largest holder of PCB in the country, but with all industrial sectors of Ecuador.
Other Partners	Satisfactory	Filled in by Alonso Moreno, Head of the Department of Environment of the Agency for Regulation and Control of Electricity (ARCONEL) "STRENGTHENING THE INSTITUTIONAL CAPACITY FOR HEALTHY AND ENVIRONMENTALLY FRIENDLY MANAGEMENT OF PCBs" The PCB Project uses the "Manual of procedures for handling PCBs in the Ecuadorian electricity sector", as the basic guide for training programs for various sectors, mainly the electric, which is main holder of equipment and oil with PCBs. The Manual is used to strengthen the operational capacity of the electric companies, for the proper management of the oil, including risks to human health, handling of equipment, characterization and sampling, use of personal protective equipment, transportation and storage of PCBs, among else. The strengthening of laboratory capacity from universities and polytechnics, which have chromatographs, is essential to strategically and geographically meet the demand of the analysis by gas chromatography, which is the definitive test for determining the concentration of PCBs in dielectric oils. The timetable for the implementation of the action plans for the final inventory of PCBs, which all power distribution companies have, should be updated because of a lack of funds that has prevented their timely execution. "ENVIRONMENTALLY SOUND MANAGEMENT (ESM) OF PCBs" The PCB Project has managed its resources to strengthen the Ministry of Electricity and Renewable Energyâ??s laboratory capacity in the use of gas chromatography, training personnel from different sectors, drafting of the Ministerial Agreement for sound management of PCBs, among other activities. To address the lack of resources of electric companies, because the State does not have enough funds due to the fall in oil prices and the co-financing contribution of the national counterparts (which made up 80%) is not being provided . It is considered necessary that the PCB Project supports the completion of the final inventory, by providing kits, EPP and laboratory tests for gas chromatography for the characterization of both the old equipment as those in operation. The PCB Project has implemented a process of identifying and characterizing soil contaminated with PCBs, at the temporary storage sites for PCB containing equipment and oils, with satisfactory results. "ENVIRONMENTALLY SOUND STORAGE AND DISPOSAL OF PCBs" Some electric companies have adequate facilities for the temporary storage of equipment and dielectric oils with and without PCBs, while others must adapt their facilities to store such equipment and oils, so it is essential that the project also supports the construction of warehouses or processes to improve storage facilities. The implementation of a pilot project for the elimination of dielectric oils with more than 50 ppm of PCBs, will serve to eliminate the amount of inventoried equipment and oils that are out of operation, and stored in the warehouses. The identification and characterization of contaminated soils in three electricity companies, has served as a pilot project to continue this activity in other utilities. "MONITORING, ADAPTIVE FEEDBACK AND EVALUATION" The PCB Project is reporting on a monthly basis, however I think it should be every six months, in order to evaluate activities which exceed the month horizon and goals which are not met.
UNDP Technical Advisor	Satisfactory	The implementation progress rating is satisfactory and is in line with the rating given by the country office and other local counterparts. The project shows good planing and executing rate of planned activities. Also, it has had good involvement of main stakeholders in the implementation of the activities both from public entities, such as Ministry of Environment, ARCONEL and SENESCYT, and private companies from the electrical sector. The project has advance in all its components and there are several examples that can illustrated its satisfactory implementation, either strengthening national capabilities for manage PCBs or looking for alternatives to their disposal. It is

		worth noting the advances made in strengthening the legal framework regarding the PCB management in the country with the regulation related to â□□Procedures for Integrated and Environmentally Sound Management of PCBs in Ecuadorâ□□, which was prepared by the project and it is under review before its publication. Also important, it is the work made regarding the technical guidelines related to the environmental sound management of PCB, which were already developed and under its final review. Similarly, the project has worked intensively in completing and updating the inventory of PCB oils and contaminated equipment. The inventory of out-of-use equipment was completed in the Galapagos Islands, an activity that gave notoriety to the project in the country. Likewise, it is important to mention the work done related to environmentally sound storage and disposal of PCB waste, the project worked with contaminated sites where 3 soil characterization were made and other 13 are under evaluation; also, it initiated actions related to disposal of PCB, contacting waste management companies to offer their services and evaluate countryâ□□ situation and conducting pilot test to evaluate disposal alternatives. Also, it is noted the advances achieve in strengthening the local analytical capabilities for testing PCB samples, training was made to laboratories and support was given to obtain their certification. Awareness rising has been a key part of projectâ□□s work during the reporting period, both for specialize and general public; it has conducted technical trainings in the three main cities (Quito, Guayaquil and Cuenca) and lectures at universities regarding the environmental sound management of PCBs. There has been good communication with the local UNDP office and an active participation of the steering committee of the project. From the budgetary point of view, the project has had an adequate disbursement rate of resources, considering that it is the first year of implementation. The project has made a good effort in maintain informed involved parts on its implementation, it has presented monthly reports and submitted its PIR in a complete and timely manner. There were minor delays related to administrative process that did not threat the overall work plan and that are common place for projectâ□□s initiation phases. Considering the implementation made, the rating for this reporting period is satisfactory.

G. Project Planning

Key project milestone	Status	Original Planned Date (Month/Year)	Actual or Expected Date (Month/Year)	Comments
Inception Workshop	**on schedule**	**June - 2014**	**June - 2014**	**Two inception workshops were held, one in Quito (June 2014) and one in Galapagos (October 2014) as this last one is an important province for ESM of PCB for its endemic, sensitive and little resilient, fauna and flora.**
Mid-term Review	n/a	6 - 2016	6 - 2016	
Terminal Evaluation	n/a	June - 2017	June - 2017	Project closing date is the 31-Oct-2017 as established in the Prodoc and reported in ATLAS. The TE is planned for June-2017 three months before the closing date. At the moment the CO considers there is no need

				to change dates.

H. Critical Risk Management

Critical Risks Type(s)	Critical Risk Management Measures Undertaken in 2015
Financial	The biggest risk that the project is facing is the lack of fiscal funds that the PCB Project and the electric companies receive to comply with their PCB management plans, due to the low price of oil price. Electrical companies are currently assigned insufficient budget to meet their objectives of ESM of PCB. This represents a risk as it might delay project activities in particular the update of the inventories by electrical companies. In order to be able to free up financial resources, the Project achieved the highest performance in the shortest time possible, without losing quality of the products. In 2015, the project was initially allocated $ 100,000 and after we presented a claim based on the funds execution of 2014, we were given a budget increase of $ 70,000. With this budget the project has managed to implement two important activities, among which the characterization of contaminated sites (phase 1) and analysis of oil samples from Galapagos Islands (planned). To mitigate this risk and ensure that the activities of the project keep on track, the Project has worked with various institutions that facilitate or intervene in some areas where electric companies are not able to do so due to a lack of funds. In this sense, the Project has approached the academic sector and has developed an agreement with SENESCYT to evaluate projects proposed by Universities and financed by the SENESCYT and the PCB Project to conduct research and inventory of sites (mining, Galapagos, etc.) and to determine methods of treating PCBs. The Project has also entered into an agreement with the laboratory of MEER to reduce the costs of PCB analysis by gas chromatography by 35%. In addition, the Project is working with MICSE to get another cement company to perform PCB coprocessing and thus reduce the possible cost of treatment. Another activity that the Project is developing to mitigate this risk, is gathering data from all electric companies on equipment requirements (Tyvek gloves, masks, etc.) and supplies (colorimetric kits, sample bottles, L2000DX supplies, etc.). The intention is to make a single purchase of all this material and deliver it to companies so they update their inventory of equipment in use with their own workforce.

I. Environmental and Social Grievances

Related environmental or social issue	
Status	
Significance	
Detailed description	

J. Communicating Impact

Tell us the story of the project focusing on how the project has helped to improve people□s lives.
PCBs are toxic organochlorine compounds that stopped being produced and marketed in the late 70s. They are used in

various applications, however, its main use is as a component of the cooling oil in electrical equipment such as transformers and capacitors. PCB can still be found in some of this equipment. Because of their harmful impact on the environment and human health, PCB equipment must be inventoried to be removed from use until 2025 and properly treated/eliminated until 2028, in line with international requirements set out by the Stockholm Convention on POPs. The PCB Project aims to support primarily the electric companies, but also other industries, to perform environmentally sound management (ESM) of their stocks of equipment, oil and PCB contaminated waste. To accomplish this, the project implements three components; i) strengthening institutional capacity, ii) the adequate management of PCBs and ii) the elimination of PCB containing equipment and waste. The Project began its activity in 2014, and has already achieved good results that brings closer the ultimate objectives. One of the achievements of the Project is the development of a regulation for the proper management of PCBs; this Regulation has already been reviewed by the authorities and society in general in search of different views and relevant observations and is now in the final phase of legal review, prior to be officially published. We are sure the Regulation will serve not only as a legal body of obligatory compliance, but also as a reference guide for the ESM of PCB for all owners. Thus, the project helps to improve the quality of life of the entire population, since these wastes are poorly degradable and bioaccumulative. The Project is giving lectures on the proper management of PCBs aimed at students and teachers of universities. These lectures have enabled the project to connect with researchers and students and see firsthand the reality of knowledge on POPs in the country. With this background, the PCB Project has organized many workshops to explain the ESM of PCBs and raise awareness and responsibility of PCB holders. The Project has also created an alliance with the National Secretariat of Education to finance university projects related to PCBs. By creating awareness, the project aims to strengthen the capacity of people to demand for a proper management of PCBs. Keeping constant contact with the environmental representatives of companies in the power sector, other sectors involved and authorities of environment, health and trade, allows the project to have a broad perspective of the management of PCB and its limitations in accordance with the realities of the country. All Project activities are agreed with key sectors to ensure they will have the greatest effect in achieving the goals of the country and the Project. A good example of how the Project supports the management of PCBs and improves the quality of life of the population is the activity of characterization and removal of PCB-contaminated soil. Sites are investigated to determine the contamination level of a particular site and to determine the volume of soil contaminated, once this is done; the soil is excavated, collected and stored in appropriate warehouses, ready for possible treatment or elimination. This prevents PCBs from entering water sources and spreading further, polluting a larger area and living things. The ultimate objective of the Project is the elimination of 750 metric tons of PCBs. To achieve this goal various activities have been proposed, particularly efforts to develop an inventory of the quantity and location of equipment, oil and waste contaminated with PCBs, which is the basic information to determine the most appropriate and economical methods for disposal of these stocks.

What is the most significant change that has resulted from the project this reporting period?

The project has raised the awareness and interest in improving human health and environmental conservation of many people and institutions, including the Ministry of Coordination of Strategic Sector (MICSE), Ministry of Education Science and Technology (SENESCYT) Ministry of Electricity and renewable Energy (MEER) and the Ecuadorian Accreditation Service (SAE). The PCB Project has developed various activities in collaboration with these institutions and intends to continue working collaboratively to achieve the main objectives and goals. Project.

Describe how the project supported South-South Cooperation and Triangular Cooperation efforts in the reporting year.

In October 2014, the Project Coordinator, along with the Sub-Secretariat of Environmental Quality from the Ministry of Environment and two representatives of ARCONEL (former CONELEC), travelled to Cali-Colombia for a PCB workshop to share the experiences of all PCB Projects from the region. This was of great help to EcuadorÂ´s Project to learn firsthand what other countries, in which the environmentally sound management of PCBs started earlier, were doing to achieve their goals. In July 2015, the PCB Project in Ecuador will also be hosting a workshop on the environmentally sound management of PCB, which will be led by an international expert with more than 30 years of experience on POPs, PCB and Asbestos. PCB Project Coordinators from other countries of South America will be invited.

K. Partnerships

Partners	Innovation and Work with Partners
Civil Society Organisations/NGOs	Laboratories from: - Universidad Central del Ecuador (UCE), - Escuela PolitÃ©cnica del Litoral (ESPOL), - Escuela PolitÃ©cnica del Chimborazo (ESPOCH). The PCB Project has entered into agreements with all of these

	laboratories to conduct capacity building for PCB analysis and create sufficient laboratory capacity to service the entire electric sector in Ecuador and to strengthen the investigation on POPs and PCBs.
Indigenous Peoples	Not applicable
Private Sector	HOLCIM and UNACEM cement plants: The Project is creating work spaces to develop the capacity of co-processing of dielectric oil with more than 50 ppm of PCBs. As the regulation - Procedures for Integrated and Environmentally Sound Management of Polychlorinated Biphenyls (PCBs) in Ecuador â€“ is applicable for all PCB holders (public and private), the project held public consultations with the participation of major industry sectors such as the oil and mining, food industry, shipping, etc. Some collaborative activities are been planned with some of these sectors, especially to perform inventory of PCB equipment.
GEF Small Grants Programme	Not applicable
Other Partners	Ministry for Coordination of Strategic Sector s (MICSE): The PCB Project is developing joint activities with the MICSE for the development of alternative disposal of PCBs, specifically the co-processing of dielectric oil in cement kilns. Ministry of Electricity and Renewable Energy (MEER): The project has an agreement with MEER, whereby a gas chromatography equipment was donated to its laboratory and, they have reduced the price for oil samples analysis for the electricity sector, from 45 to 30 US dollars. Quito Electric Public Company (EEQ): The electric company provides personnel, equipment and supplies (Clor-N-Oil Kits) for the training workshops that the PCB Project performs. National Secretariat of Education, Science and Technology (SENESCYT): The Project has an agreement with this institution, in order to strengthen the level of investigation of Universities, related to POPs and PCBs. SENESCYT will finance with up to two million dollars research investigations is these areas. Ecuador Accreditation Service (SAE): SAE has agreed to help the Project with personnel for training laboratories on ISO 17025 and to work directly with the laboratories chosen by the Project to help them get their accreditation for PCB analysis. CFC Control and Elimination Project: With this project of UNIDO and the Ministry of Production (MIPRO) we share information and some outputs because both projects are interested in helping the cement kilns develop good practices to perform coprocessing of hazardous wastes.

General Comments

With some of this institutions we have official agreements as is the case of MEER and SENESCYT, however, with the other institutions the work is coordinated without an official agreement as cooperation among public organizations is a National Policy.

L. Progress toward Gender Equality

Has a gender or social assessment been carried out this reporting period?	No
If a gender or social assessment has been carried out what where the findings?	No assessment has been carried out this reporting period. However, in the UNDP Environmental and Social Screening Template, included in the PRODOC, it is stated that the project "is not likely to significantly impact gender equality and women's empowerment". Furthermore, it is also noted that the project " will not have variable impacts on women and men, different ethnic groups, social classes".
Does this project	No

specifically target woman or girls as direct beneficiaries?	
Please specify results achieved this reporting period that focus on increasing gender equality and improving the empowerment of women.	The effects of PCBs on women and men are different but the project does not address them separately. The Project has organized meetings with UN Women Program in Ecuador to plan a possible inclusion of gender equality topics on PCB training workshops; however, this is still being discussed. The Project has included gender equality comments on some of its products (e.g., notebook with information on PCBs (attached) that was developed by the project) with the intention of disseminate this information among PCB holders.

M. Annex 1 - Ratings Definitions

Development Objective Progress Ratings Definitions

Highly Satisfactory (HS): Project is expected to achieve or exceed all its major global environmental objectives, and yield substantial global environmental benefits, without major shortcomings. The project can be presented as 'good practice'.

Satisfactory (S): Project is expected to achieve most of its major global environmental objectives, and yield satisfactory global environmental benefits, with only minor shortcomings.

Moderately Satisfactory (MS): Project is expected to achieve most of its major relevant objectives but with either significant shortcomings or modest overall relevance. Project is expected not to achieve some of its major global environmental objectives or yield some of the expected global environment benefits.

Moderately Unsatisfactory (MU): Project is expected to achieve of its major global environmental objectives with major shortcomings or is expected to achieve only some of its major global environmental objectives.

Unsatisfactory (U): Project is expected not to achieve most of its major global environment objectives or to yield any satisfactory global environmental benefits.

Highly Unsatisfactory (HU): The project has failed to achieve, and is not expected to achieve, any of its major global environment objectives with no worthwhile benefits.

Implementation Progress Ratings Definitions

Highly Satisfactory (HS): Implementation of all components is in substantial compliance with the original/formally revised implementation plan for the project. The project can be presented as 'good practice'.

Satisfactory (S): Implementation of most components is in substantial compliance with the original/formally revised plan except for only few that are subject to remedial action.

Moderately Satisfactory (MS): Implementation of some components is in substantial compliance with the original/formally revised plan with some components requiring remedial action.

Moderately Unsatisfactory (MU): Implementation of some components is not in substantial compliance with the original/formally revised plan with most components requiring remedial action.

Unsatisfactory (U): Implementation of most components is not in substantial compliance with the original/formally revised plan.

Highly Unsatisfactory (HU): Implementation of none of the components is in substantial compliance with the original/formally revised plan.