

**PROJECT INFORMATION DOCUMENT (PID)  
CONCEPT STAGE**

Report No.: AB2608

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| <b>Project Name</b>                              | Demonstration of PCB management and disposal  |
| <b>Region</b>                                    | EAST ASIA AND PACIFIC   |
| <b>Sector</b>                                    | Health (70%); Power (30%)   |
| <b>Project ID</b>                                | P099460   |
| <b>GEF Focal Area</b>                            | Persistent Organic Pollutants   |
| <b>Borrower(s)</b>                               | Ministry of Natural Resources and Environment (MONRE) & Ministry of Industry (MOI)  |
| <b>Implementing Agency</b>                       | Vietnam Environmental Protection Agency (VEPA) and Electricity of Vietnam (EVN)   |
| <b>Environment Category</b>                      | <input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> TBD (to be determined) |
| <b>Date PID Prepared</b>                         | October 16, 2006  |
| <b>Estimated Date of Appraisal Authorization</b> | April 15, 2008  |
| <b>Estimated Date of Board Approval</b>          | October 9, 2008   |

1. Key development issues and rationale for Bank involvement

Vietnam doubled its economic output and halved the incidence of poverty over the last decade. However, it is still a poor country and faces serious problems of industrial pollution. An important part of its pollution problems date from the past, when it imported industrial equipment that contained poly-chloryl biphenyls (PCBs), which are now known to adversely affect the health of humans and ecosystems when they are not properly handled, stored, treated and disposed. Vietnam has never produced PCBs, but imported PCB-containing oils within transformers, capacitors and other electrical equipment, and used them in industrial products such as lubricants, hydraulic fluids and plasticizers. Official data indicate that about 18,000 tons were imported through 1998.

Vietnam does not have a functioning system or facilities to safely transport and store PCB-containing materials and adequate treatment and disposal is not undertaken. After use, PCBs containing oils are stored inadequately, recycled by individuals and small businesses for use as fuel oil, disposed in dumps or landfills with municipal waste or released directly into the environment. There is limited knowledge of dangers to human health and ecosystems of PCBs and the location and extent of environmental contamination as programs for monitoring, tracking and inventories are very limited in coverage.

Vietnam has established a series of laws that directly or indirectly relate to PCB management including most significantly those that cover monitoring and inventories of POPs and their importation and regulations on management of hazardous waste. The responsibilities for implementation fall under six different ministries and operationalization has been hampered by unclear and overlapping mandates, limited human resources, lack of incentives for Stet Owned Enterprises and the private sector, and lack of enforcement and monitoring capacity.

The Government of Vietnam, especially the Ministry of Environment and Natural Resources, the Ministry of Industry, and Electricity Vietnam (EVN) are seeking assistance to find cost effective ways to sequester PCB stores and treat PCBs from existing used and unused equipment to reduce their adverse impacts. The outcomes of the project will further Vietnam's efforts to reduce national risks, and meet its requirements under the Stockholm Convention, by facilitating the collection, management, treatment and disposal of PCBs.

The project would span two CASs – the current one ('03-'06) and a new CAS that is early in preparation now (to cover the period '06-'10). Vietnam's national and sectoral plans and strategies identify dealing with the country's serious hazardous waste problems, including PCBs, as national priorities. Improving the management of hazardous wastes is part of Government's recent national plans and strategies, including the National Strategy for Environmental Protection Until 2010 and 2020 (approved by the Prime Minister in 2003), the Ministry of Environment and Natural Resource's Five Year Plan 2006-2010, and the Government's draft Socioeconomic Development Plan (SEDP) for 2006-2010. The Bank's next CAS, now under preparation, is being designed to support implementation of the SEDP.

The project fits well within the sustainable development theme of the current CAS and the environment pillar of the SEDP. The Bank has been assisting Vietnam in two key areas: (i) environmental management, including hazardous waste and pollution control, through policy dialogue under the Poverty Reduction Strategy Credits and under the Vietnam Environment Monitor (VEM) publication series, and through capacity building investments for pollution management and environmental management, and (ii) improvements in electrification of rural areas, through investments in transmission and distribution systems. The next project in this area will be to rehabilitate medium voltage networks in 35 provinces, parts of which will contain PCBs in their aged transformers and capacitors. The project will also benefit from collaboration with bilateral donors, which includes a Swiss-financed project on PCB management that is scheduled to start in 2007. This project will provide much needed technical assistance on PCB management, in collaboration with the Bank project.

## 2. Proposed objective(s)

The project's objective is to reduce the risks to Vietnam's ecosystems and human population posed by unmanaged PCBs. This will be done through policy and institutional strengthening for PCB management, and by demonstrating and establishing a systematic approach for safe management and disposal of PCBs in key sectors. The project's impact on policy and institutional development will include a strengthened and more operational policy framework, better rationalized institutional roles and responsibilities, and improved awareness and capacity to implement public sector mandates in PCB management and the Stockholm convention. The demonstration of environmentally sound PCB management will result in improved handling, transport, collection, storage and final treatment and disposal of PCBs both in demonstration areas and nationally.

## 3. Preliminary description

The preliminary project description responds to this request and fits Vietnam's needs. The project would work closely with the proposed Rural Distribution Project (\$150M preliminary IDA cost),

which will finance rehabilitation of aging medium voltage distribution lines in 35 provinces. In principle, IDA would finance replacements of the distribution lines along with their transformers and capacitors (which contain PCBs) and the GEF project would finance the incremental costs of PCB management, including treatment and disposal. The GEF project would also be co-financed by the Swiss Development Corporation's project Environmentally Sound Management and Decontamination of PCB in Electrical Systems, a Pilot Project for PCB Elimination in Vietnam", which is planned to start implementation in 2007.

The GEF project components and activities would be as follows:

**Component A. Policy and Institutional Development (US\$ 0.58M).** The objective of this component is to develop an adequate policy and institutional framework for PCB management in Vietnam. The project would support:

- a. Improvements to the policy framework, through amendments laws and regulations on PCB management;
- b. Rationalizing the institutional responsibilities for PCB policy development and its implementation through adjustments to the existing framework;
- c. Training for provinces and key ministries on implementation of PCB-related provisions of the Stockholm Convention

**Component B. Demonstration of environmentally sound PCB management (US\$ 21.85 M).** The objective of this component is to demonstrate all aspects of PCB management from analytical testing, handling and transport to collection, storage, and disposal in the power sector in selected provinces in the country. The component would support:

- a. PCB capacity building, improvement of protocols and procedures for PCB testing;
- b. Establishment of inventory capabilities and inventories, and site surveys where equipment containing PCBs are stored to determine levels of contamination;
- c. Improvement of maintenance standards and management of existing PCB transformers and capacitors under EVN's power grid rehabilitation. Many transformers and capacitors that contain PCBs are in use throughout the country in the power grid and within industrial facilities. Through this rehabilitation program, leaking or damaged PCB equipment will need to be replaced or retrofitted/refilled with non-PCB oils. PCB oils from this equipment must be properly handled and treated.
- d. One or more methods for treatment and disposal of PCBs, based on a feasibility analysis of the best available technique not entailing excessive cost (BETNEC). The treatment options to be considered include chemical treatment, other emerging technologies, and export to other countries in the region that possess the technology.
- e. Improvements to existing storage facilities (or construct new ones if upgrading of existing facilities are not financial viable) that contain old PCB-containing transformers and capacitors to meet environmental protection needs, and provision of protective equipment and training for workers.
- f. Pilot remediation of contaminated sites if appropriate. If sites identified in (e) are found to be contaminated with PCBs and if they pose significant risk to human health or ecosystems, the project will consider piloting remediation measures based on the most

- cost effective methodology to minimize their existing and potential impacts to human health and the ecosystem;
- g. Training for provincial authorities, line ministries, and State Owned Enterprises, customs authorities, and companies dealing with hazardous wastes for the activities listed above, and for worker safety training, emergency planning and preparedness, particularly for the those installations in populated areas, including schools and hospitals;
  - h. Public awareness and information campaigns targeting communities around PCB storage sites; and
  - i. Design of a replication strategy for the Vietnam PCB management program which would address PCB oils and equipment in other sectors, measures and options to minimize environmental and health risk in contaminated areas including dump sites, old brick factories using PCB oils as fuel.

**Component C. Project Management** (US\$ 2.8 M). This component would provide incremental financing for implementation of the project, incremental operating cost of the PMU for technical services, procurement, financial management, and audit, and monitoring and evaluation. The PMU would also develop and implement the replication strategy.

#### 4. Safeguard policies that might apply

*[Guideline: Refer to section 5 of the PCN. Which safeguard policies might apply to the project and in what ways? What actions might be needed during project preparation to assess safeguard issues and prepare to mitigate them?]*

##### *Environmental Assessment (OP/BP 4.01)*

An Environmental Assessment will be developed to assess potential adverse and beneficial environmental impacts of the project. An Environmental Management Plan will summarize the measures to mitigate adverse impacts, the institutional responsibilities for mitigation, and the costs. The EA and EMP will be prepared in accordance with World Bank requirements.

If rehabilitation of storage sites is determined as a part of the project, separate site rehabilitation plans for each site will be prepared based on the guidance of the EIA and EMP.

An environmental and economic analysis of PCB disposal alternatives will be carried out to inform decision-making on the appropriate PCB disposal methods.

##### *Involuntary Resettlement (OP/BP 4.12)*

The project would finance improvements to storage facilities that are currently owned and operated by EVN. During project preparation, the team will determine whether improvements to storage facilities would involve land acquisition.

#### 5. Tentative financing

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| Source:                     | (\$m.) |
| BORROWER/RECIPIENT          | 11.26  |
| GLOBAL ENVIRONMENT FACILITY | 13.39  |

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| SWITZERLAND: SWISS AGENCY FOR DEV. & COOP. (SDC) | .6    |
| Total  | 25.25 |

6. Contact point

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