SFG1550

Socialist Republic of Vietnam

Ministry of Industry and Trade

VIETNAM NATIONAL ENERGY EFFICIENCY PROGRAME

Environmental and Social Management Framework

(Final Draft)

Hanoi, November of 2015

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Acronyms

AU	Administrative Unit
CEP	Commitment on Environmental Protection
CPC	Commune People Committee
CPEE	Clean Production and Energy Efficiency
DONRE	Department of Natural Resources and Environment
DPC	District People Committee
EE	Energy Efficiency
EIA	Environmental Impact Assessment
EFO	Externally Financed Output
EMDP	Ethnic Minority Development Plan
EMP	Environment Management Plan conforming to WB environmental safeguards
EPP	Environment Protection Plan according to Vietnamese Environmental regulations
ESCOs	Esco Corporation is a leader in the development of controlled environment, laboratory and pharmaceutical equipment solutions
FS	Feasibility Study
GDP	Gross Domestic Product
HQ	Headquarter
HCFC	Hydrochlorofluorocarbons compounds
IBRD	The International Bank for Reconstruction and Development
IDA	The International Development Association
IEs	Industrial Enterprises
IFC	The International Finance Corporation
MOF	Ministry of Finance
MOIT	Ministry of Industry and Trade
MONRE	Ministry of Natural Resources and Environment
MOU	Memorandum of Understanding
OM	Operation Manual
PB	Participating Bank
PFIs	Participating Financial Institutions
PMB	Project Management Board
PMU	Project Management Unit
PPC	Provincial People Committee
PV	Photovoltaic
QCVN	National Technical Regulation
RE	Renewable Energy
RP	Resettlement Plan

TA	Technical Assistance
UNIDO	The United Nations Industrial Development Organization
VNEEP	Vietnam National Energy Efficiency Program
VEEIEs	Vietnam Energy Efficiency for Industrial Enterprises Project
WB	World Bank

I. INTRODUCTION

Vietnam is one of the most energy intensive countries in East Asia. Its energy intensity of GDP is steadily increasing, and its energy elasticity of GDP is estimated at 2, compared to less than 1 for most countries. As a result, the final energy consumption tripled over the past decade. Industrial growth has been one of the key drivers of Vietnam's increasing energy intensity, accounting for 48 percent or almost half of the final energy use. Because industry is the most energy-intensive economic sector, this increase in the industrialization of Vietnam's economy by itself contributes to the increase in Vietnam's overall energy intensity.

The Government has passed the Law on Energy Efficiency (EE) and Conservation, issued a series of decrees to promote EE by the Prime Minister, and set a target of 5-8% for energy savings from 2012 to 2015 compared to the forecast energy demand. The Vietnam National Energy Efficiency Program (VNEEP) is a national target program, and the VEEIE-ever comprehensive plan to institute measures for improving energy efficiency and conservation in all sectors of the economy in Vietnam. VNEEP Phase I (VNEEP-I) from 2006–2010 aimed to start up actively all components of the program, and VNEEP Phase II (VNEEP-II) from 2011–2015 aims to expand each component, based on lessons learned from Phase I. In addition to the Government's national programs, a number of parallel efforts have been initiated in direct cooperation with donor agencies. For example, Ministry of Industry and Trade (MOIT) has a US$1 million EE Subsidy Fund, which provides up to 30% investment subsidies for EE projects with a subsidy ceiling of $250,000 for each project. The government also provides funding for energy auditing, technical assistance, training, and promotion for EE.

Despite these EE initiatives, significant barriers remain such that many energy saving opportunities remain unexploited. Specifically, the current Government programs have not achieved the intended results because (a) there is a lack of accountability to enforce the national-level EE targets, as EE is usually not a priority for industrial enterprises; (b) financial incentives offered by the government are insufficient; and (c) a lack of access to financing for EE.To address the above barriers and support obtaining the national target of energy savings, the Government and World Bank proceed the preparation of the Vietnam Energy Efficiency for Industrial Enterprises Project (VEEIEs). The VEEIEs will comply with applicable Vietnamese environmental legislations and the World Bank Safeguard Policies. For the Project's features, it is expected not to finance any activity which causes significant adverse environmental and social impacts. The Project potential impacts, if any, are expected to be site-specific, and localized at small to medium magnitudes and mitigated possibility through good design and appropriate mitigation measures.

A US$200 million IBRD loan will be on-lent by MOF to selected Participating Financial Institutions (PFIs). The PFIs in turn will lend the funds to IEs (Industrial Enterprises) and/or energy service companies for EE investment subprojects. In the preparation phase, these sub-projects have not yet been identified and the activities of the sub-projects may cause unknown impacts. Hence, an Environmental and Social Management Framework (ESMF) has been prepared by the MOIT to ensure that the subprojects would be implemented in an environmentally and socially sustainable manner. The ESMF sets out principles, rules, procedures and guidelines for assessing possible environmental and social impacts of the

financed subprojects. These procedures and guidelines contain mitigations and/or offset adverse impact measures and plans and enhance positive impacts as well as will help the implementing agency in screening sub-projects' eligibility; determining their environmental and social impacts; identifying appropriate mitigation measures to be incorporated into the subproject reports; and specifying institutional responsibilities for implementing preventive, mitigation and compensation measures, and monitoring and evaluation.

The ESMF will be an integrated part of the Project Implementation Manual to ensure that environmental and social issues will be considered together with other requirements during project implementation.

II. PROJECT DESCRIPTION

II.1. Project Objectives and Components

Project Development Objective (PDO): The PDO is to improve energy efficiency in the industrial sector and contribute to achieving the government's energy efficiency and GHG reduction objectives GHG reduction objectives.

Projects Components:

This is an integrated IBRD/IDA-funded project designed to help remove the principal barriers to investments in industrial EE projects. The technical assistance activities financed by IDA will address the knowledge, institutional and capacity building needs of the banking and industrial sectors, mitigate risk concerns of enterprises, and strengthen government supervision of industrial EE and energy conservation. Those efforts will be accompanied by an EE financial intermediary lending program, which will demonstrate viable mechanisms for financing industrial EE investments, in direct support of the Government's EE targets and green growth strategy. Detail of project components is described as follow:

Component 1 – Energy Efficiency Investment Lending (US$312 million, of which US$200 million from IBRD, US$50 million from PFIs, and US$62 million from IEs)

This component consists of an EE lending program of US$312 million over five years: (a) US$200 million in IBRD debt financing; (b) PFIs will co-finance project activities, financing 20 percent of the loan to IEs; and (c) sub-borrowers (i.e. IEs) will contribute 20 percent of investments as equity financing, which is common practice for loan applications in Vietnam.

A US$200 million IBRD loan will be on-lent by MOF to selected PFIs. The PFIs in turn will lend the funds to IEs and/or energy service companies for EE investment subprojects. Their lending rates will be determined based on market conditions and will adequately cover the financing and operating costs and provide for a reasonable profit margin for the PFIs.

The PFIs will be selected in accordance with financial and non-financial criteria. Non-financial criteria will include demonstrated EE lending strategy/commitment, experience and ability to generate a solid EE project pipeline. The selection of PFIs will fully comply with the Bank's OP 10.0 requirements. The IBRD funds will be allocated among the selected PFIs based on the demonstrated pipeline and remaining funds will be allocated on a VEEIE come, VEEIE served basis.

An Operational Manual (OM) will be developed which outlines selection criteria for sub-borrowers and subprojects, appraisal procedures and guidelines, roles and responsibilities of the PFIs and the government, PFIs' internal institutional arrangement for project implementation, technical evaluation, environmental and social, procurement and financial management frameworks that are consistent with the Bank and Vietnamese Government rules and procedures. During project implementation, the PFIs will be responsible for identifying, appraising, and financing subprojects that meet the criteria in the OM, and bear all associated risks.

Component 2 – Technical Assistance and Capacity Building for Improving Energy Efficiency (US$3million financed through IDA)

This TA and capacity building component will assist: (a) MOIT and relevant government agencies, which are responsible for EE policies and targets, to implement voluntary agreements with relevant industries, improve incentives for industry to carry out EE investments and develop mandatory EE standards and benchmarks in the energy-intensive industries; (b) PFIs to improve their knowledge, experience and expertise in identifying, appraising, and implementing EE lending projects in the industrial sector and business development to generate deal flows; and (c) IEs and EE service providers (such as ESCOs) to develop bankable projects. This component will be closely linked with the ongoing Clean Production and Energy Efficiency (CPEE) on developing EE policies and industry voluntary agreements.

IFC is providing advisory services to Vietinbank and is working with the Bank to identify a suitable support capacity mechanism once the PFIs are identified. Under the existing CPEE project, the Bank is providing TA to key energy consuming IEs to develop voluntary agreements, which could form a key part of the pipeline. The TA and capacity building for PFIs will include support to: (a) capacity building and training, particularly to staff at both the HQ and branches as well as risk assessment staff, including support for the development of necessary procedures, and the creation of an adequate knowledge base to evaluate and extend EE loans; (b) marketing and business development to generate a robust EE lending pipeline; (c) support to due diligence of eligible EE sub-loans, including financial, technical, social and environmental assessments; and (d) development of energy conservation-related financing instruments and risk management tools.

TA and capacity building to MOIT will support: (a) assessment of National EE target program period 2010-2015 and preparation for implementation of next phase EE target program period 2016-2020; (b) strengthen the policy and legal and regulatory framework for EE in IEs; (c) develop relevant energy use standards and establishment of EE industrial benchmarks; and (d) develop ESCOs, scale up and encourage EE voluntary agreement, and conduct a communication campaign to raise awareness on EE for IEs.

The TA and capacity building to the PFIs include: (i) business startup, including creation, organization, staffing, and initial business plan of the EE lending business unit (or team); (ii) capacity building and training, including support for the development of necessary financial instruments, procedures, and the creation of an adequate knowledge base to evaluate and extend energy efficiency loans; (iii) marketing and development of an EE subproject pipeline; (iv) support to due diligence of eligible EE sub-loans, including financial, technical, social and environmental assessments; and (v) development of energy conservation-related financing instruments and risk management tools.

The TA and capacity building for IEs will include support to: (a) identify EE projects and prepare relevant energy audits, technical design and EE project preparation; and (b) raise awareness through a communication campaign organized jointly with relevant industry

associations. Capacity building on safeguards for the PFIs, ESCOs, and IEs as well as on-the-job training will be provided. TA to ensure adequate capacity for the review and implementation of safeguard issues will also be considered.

A detailed TA and capacity building program and plan for MOIT, PFIs and IEs and associated procurement plan will be developed as a next stage of project preparation. A bank executed grant from the Canadian Externally Financed Output (EFO) will be used to conduct a strategic sector study for the food processing industry in Vietnam, including:

- Strategic sector work on energy savings and ozone/climate benefit potential and EE benchmarking resulting from EE policy and investments in the seafood processing sector. (This work will draw from an initial sector survey that was carried out under the Phase I HCFC Phase-out Project (P115762) in Vietnam as well as the IFC study from 2010);
- Workshops to inform industrial enterprises, financial institutions and government, as well as donors about opportunities for EE technologies and financing; and
- Pipeline preparation support, with specific energy audits, technical pre-FS.

The Bank discussed with the Government of Israel and UNIDO potential cooperation on the EE for IEs agenda. The Israeli Government has indicated its interest to support specific sectors and industries through targeted EE workshops and studies conducted in parallel to the VEEIEs project. Similar targeted activities are being discussed with UNIDO and are closely coordinated with MOIT.

II.2. Project target area

The project targeted to industrial enterprises (IEs) and participating financial institutions (PFIs) in nationwide scale. The IEs will benefit from adopting improved technologies and optimization of production thus reducing energy consumption and production costs, thereby increasing their overall competitiveness in the domestic and international markets. The PFIs benefit from creation of new loan product for industrial EE, building technical capacity for EE investment appraisal and monitoring, which will enable them to scale up EE lending to industries. Participating government agencies will be supported to strengthen capacity in the development of the regulatory framework, relevant EE standards and guidelines.

II.3. Anticipated subproject types

Energy efficiency and energy saving technologies vary by industrial sub-sectors but potential energy saving measures includes:

- *Energy systems:* upgrading boilers and switching fuels, using co-generation facilities and electric-driven systems, including compressed air systems, electric chillers, machinery and lighting;
- *Process technology:* upgrading and replacing equipment, machinery and facilities;
- *Waste heat and waste use*: use of waste heat (of hot/warm gases, liquids and solids) and burning combustible waste (gases, liquids, solids). Use of Renewable Energy

(RE) sources in order to decrease fuel and/or electricity consumption in IEs may also be considered. Investments may include: a) co-generation facilities, or process furnaces and stoves, and b) solar water heaters for sanitary hot/warm preparation.

- *Use of Renewable Energy (RE)* sources in order to decrease fuel and/or electricity consumption in IEs may also be considered.

The diagram below depicts the energy flows and investment in typical industrial enterprises:

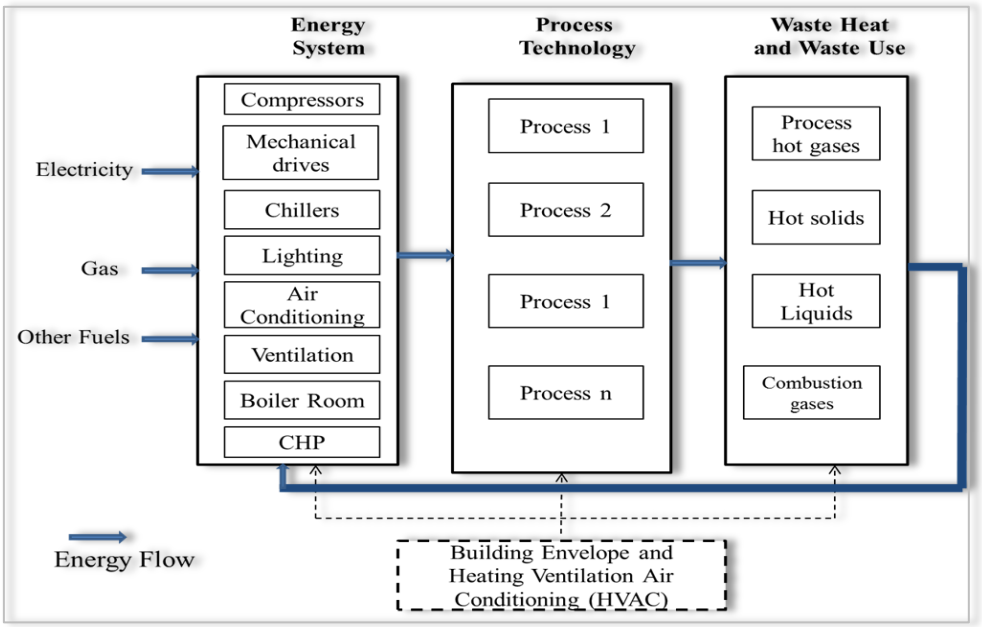


Figure 1. Potential EE Measures

Potential of Energy efficiency and energy saving is significant in intensive energy industrial sectors include cement, steel, textile, pulp and paper, food processing, bricks and ceramics, which are originated in targeted sub-projects.

Hereafter is listed some of potential energy efficiency and energy saving projects of three intensive energy industrial sectors include cement, steel, pulp and paper.

Energy saving and energy efficiency projects for cement industry include, but not limited as:

- Using roller mill for grinding raw material,
- Improving furnace fans and optimization of fans,
- Installation of variable speed drivers,
- Using waste fuel and waste heat recovery.
- Utilization of heat exhaust for power generation.

Energy saving and energy efficiency projects for steel and iron industry include, but not limited as:

- Oxy-fuel burners/lancing
- Construction of closed production lines
- Replacement of low performance air compressor,
- Installation of inverter for motor to operate at low or fluctuating load.
- Waste Heat Recovery utilizes the heat from flue gas (exhausted heat from electric arc furnaces, furnaces, kilns, etc.).
- Combustion air preheating for reheating furnace.

Energy saving and energy efficiency projects for Pulp and paper industry include, but not limited as:

- Investment of a new efficient boiler for cogeneration (heat and electricity),
- Replacement of motors,
- Switching biomass fuel technology,
- Chemical waste recovery for heating.

III. POLICY, LEGAL, AND ADMINISTRATIVE FRAMEWORK

III.1. Applicable National law and legal regulations

The following Vietnamese laws, decrees and standards are applicable to the Project:

- Law on Environmental Protection No 55/2014/QH13 dated June 23, 2014.
- Law on Cultural Heritage (2009) for supplementary and reformation.
- Decree 19/2015/NĐ-CP dated 14/02/2015 by the Government stipulated detail the implementation of a number of articles of the Law on Environmental Protection.
- Decree No.18/2015/NĐ-CP dated 14/2/2015 by the Government on environmental protection assessment, strategic environmental assessment, environmental impact assessment and environmental protection plans.
- Decree No.38/2015/NĐ-CP dated 24/4/2015 by the Government on Waste and scrap Management.
- Circular No.26/2015/TT-BTNMT dated 28/5/2015 by the Minister of Natural Resources and Environment promulgates the Circular providing for detailed environmental protection project, simple environmental protection project.
- Circular No.27/2015/TT-BTNMT dated 29/5/2015 by the Minister of Natural Resources and Environment on strategic environmental assessment, environmental impact assessment and environmental protection plans.
- Circular No.36/2015/TT-BTNMT dated 30/6/ 2015 by the Minister of Natural Resources and Environment on Hazardous Waste management.
- Decree No.80/2014/NĐ-CP dated 06/8/2014 by the Government on the drainage and treatment of wastewater.
- Decree No.59/2007/NĐ-CP dated 09/4/2007 by the Government regulating on Solid waste management.
- Decision No. 16/2015/QĐ-TTg dated 22/5/ 2015 by the Prime Minister stipulating on recovery and dealing with disposal material.
- National Technical Regulations comprise of but not limited as below:

+ QCVN 07: 2009/BTNMT - National Technical Regulation on Hazardous Waste Thresholds;
+ QCVN 23: 2009/BTNMT - National Technical Regulation on Emission of Cement Manufacturing Industry;
+ QCVN 22: 2009/BTNMT - National Technical Regulation on Emission of Thermal Power industry;
+ QCVN 19:2009/BTNMT - National Technical Regulation on Industrial Emission of Inorganic Substances and Dusts;

+ QCVN 12-MT:2015/BTNMT - National Technical Regulation on the effluent of pulp and paper mills;
+ QCVN 01-MT:2015/BTNMT - National technical regulation on the effluent of natural rubber processing industry;
+ QCVN 13-MT:2015/BTNMT - National technical regulation on the effluent of textile industry;
+ QCVN 08:2008/BTNMT - National technical regulation on surface water quality;
+ QCVN 09:2008/BTNMT - National technical regulation on underground water quality;
+ QCVN 10:2008/BTNMT - National technical regulation on Coastal water quality;
+ QCVN 11:2008/BTNMT - National technical Regulation on effluent of aquatic product processing industry;
+ QCVN 14:2008/BTNMT - National technical regulation on domestic wastewater;
+ QCVN 05:2013/BTNMT - National technical regulation on ambient air quality;
+ QCVN 06:2009/BTNMT - National technical regulation on hazardous substances in ambient air;
+ QCVN 40:2011/BTNMT - National Technical Regulation on Industrial wastewater;
+ QCVN 26:2010/BTNMT - National Technical Regulation on Noise;
+ QCVN30:2012/BTNMT - National Technical Regulation on Industrial Waste Incinerator;

III.2. World Bank Safeguard Policies Triggered

The World Bank's environmental and social safeguard policies are a cornerstone of its support to sustainable poverty reduction. The objective of these policies is to prevent and mitigate undue harm to people and their environment in the development process. These policies provide WB’s requirements to the borrowers in the identification, preparation, and implementation of programs and projects.

The World Bank environmental and social safeguards policies that are triggered by VEEIEs are listed in below:

Table 1. World Bank Safeguards Policies Triggered by the VEEIEs Project

World Bank Safeguard policies	Triggered
Environmental Assessment (OP/BP 4.01)	Yes
Natural Habitats (OP/BP 4.04)	No
Forests (OP/BP 4.36)	No
Pest Management (OP 4.09)	No
Physical Culture Resources (OP/BP 4.11)	Yes
Indigenous Peoples (OP/BP 4.10)	Yes
Involuntary Resettlement (OP/BP 4.12)	Yes
Safety of Dams (OP/BP 4.37)	No
Projects on International Waters (OP/BP 7.50)	No
Projects in Disputed Areas (OP/BP 7.60)	No

The World Bank definitions and requirements for environmental safeguards policies triggered are presented as the following paragraphs:

OP/BP 4.01 - Environmental Assessment

In World Bank operational policies, the purpose of Environmental Assessment is to improve decision making, to ensure that subproject options under consideration are sound and sustainable, and that potentially affected people have been properly consulted. To meet this objective, the World Bank policy defines procedures to: (a) identify the level of environmental risk (screening) that originated from a project, (b) assess the potential environmental impacts associated with the risk and how they should be reduced to acceptable levels (environmental assessment and management), (c) ensure the views of local groups that may be affected by the project are properly reflected in identifying the environmental risk and measures of mitigating and managing any impacts (public consultation), (d) make certain that the procedures followed in the environmental assessment process are adequately disclosed and transparent to the general public (disclosure), and (e) includes measures for implementation and supervision of commitments relating to findings and recommendations of the environmental assessment (environmental management plan).

According to the OP/BP 4.01, the WB classifies the projects based on the extent, location, sensitivity, and scale of the project and the nature and magnitude of the potential environmental impacts. A project which causes significant adverse environmental impacts that are diverse, irreversible and unprecedented is categorized as A and for this project, a full Environmental Assessment (EA) needs to be conducted. Category B projects are those with less significant adverse impacts which are site-specific, few if any of them are irreversible; and in most cases mitigation measures can be designed more readily than for Category A projects.

Category B project will require preparation of Environmental Management Plan (EMP) or an EIA with scope narrower than that of category A. The project that causes minimal or no adverse impact is categorized as C and beyond screening, no environmental assessment is

required.

Last one is Category Financial Intermediary (FI) if it involves investment of Bank funds through a financial intermediary, in subprojects that may result in adverse environmental impacts.

VEEIEs is categorized as FI a project involving Financial Intermediaries which are called named as Participating Financial Institutions (PFIs). An Operational Manual (OM) will be developed which outlines selection criteria for sub-borrowers and subprojects, appraisal procedures and guidelines, roles and responsibilities of the PFIs and the government, PFIs' internal institutional arrangement for project implementation, technical evaluation, environmental and social, procurement and financial management frameworks that are consistent with the Bank and Vietnamese Government rules and procedures. During project implementation, the PFIs will be responsible for identifying, appraising, and financing subprojects that meet the criteria in the OM, and bear all associated risks. In addition, during the subproject implementation, PFIs and MOIT will be responsible for supervision and providing support for the safeguard implementation. PFIs and MOIT shall follow the procedures as pointed out in the ESMF to ensure the subproject comply with the Bank's safeguard policies and national and local requirements. The ESMF shall be incorporated in the project's OM.

By design, the VEEIEs Project involves the small construction activities for installation or replacement of energy efficient technologies and equipment under Component 1. The Project only triggers the WB safeguard policy on Environmental Assessment (OP/BP 4.01) and Physical Cultural Resources (OP/BP 4.11); Indigenous Peoples (OP/BP 4.10) Involuntary Resettlement (OP/BP 4.12). Any subproject triggering other safeguard policies will be excluded from Bank financing.

The Technical Assistant (TA) under component 2 mostly involve capacity building activities. These activities usually do not have potential adverse environmental and social impacts and risk. In fact, it would result in enhancement of safeguard performance of subproject under Component 1. For that, these TA are categorized as C and none safeguard instrument will need to be prepared for these activities.

Nevertheless, under Component 2, it is indicated that technical pre-feasibility studies will be carried out for pipeline support for the food processing industry under Canadian Externally Finance outputs. For these studies, the TOR for these pre-FS will include requirements on screening, analysis, and on environmental and social aspects so as to ensure that the proposed activities are in accordance to the Bank safeguard policies and the national regulations.

OP/BP 4.11 Physical Cultural Resources

The objective of this policy is to avoid, or mitigate adverse impacts on cultural resources from development projects that the World Bank finances. Physical cultural resources include movable or immovable objects, sites, structures and groups of structures, natural features, and landscapes that have archeological, paleontological, historical, architectural, religious, aesthetic or other cultural significance.

As a part of the subproject's environmental impact assessment process, the one that have impacts on physical cultural resources that are legally protected, and/or considered especially

important or sensitive particularly to local groups (e.g. gravesites), will not be eligible for financing under the VEEIEs.

The project would not involve significant excavations, demolition, moving of earth, flooding, or other environmental changes. It is not expected that the Project will affect any known PCR. However, there is a possibility that the some unknown PCR may be revealed during the subproject implementation as they include excavation activities. Therefore, the policy is triggered and a chance finds procedure has been prepared and included in the ESMF, site-specific subproject safeguards instruments, bidding, and contractual documents.

OP/BP 4.10: Indigenous Peoples

All sub-projects are expected to have overall positive social benefits because they promote EE and thus reduces greenhouse gas emissions and other pollutants into the atmosphere. They will also have positive impacts from the perspective of consumers, and workers who are employed by the participating IEs. This policy is triggered to make sure that ethnic minority communities will fully benefit from the project and that they will be fully informed and consulted about the project, its potential impact and mitigation measures. Ethnic Minority Planning Framework (EMPF) has been prepared by Appraisal to guide the compliance with the World Bank's OP 4.10 and where relevant the preparation of Ethnic Minority Development Plan during project implementation.

OP/BP 4.12: Involuntary resettlement

The types of EE projects to be financed under this project could include: (a) adoption of energy saving industrial technologies (e.g., efficient industrial boilers, kilns, and heat exchange systems); (b) recovery and utilization of wastes and waste heat; (c) installation of highly efficient mechanical and electrical equipment (e.g. motors, pumps, heating and ventilation equipment); and (d) industrial system optimization to reduce energy use. It will be likely that the EE subprojects financed under the proposed loan will be within the existing premises of industrial facilities. However, this policy is triggered to anticipate the potential need of land acquisition required for subprojects identified in implementation cycle. By appraisal, the resettlement policy framework (RPF) has been prepared to guide the compliance with the World Bank's OP 4.12 and where relevant the preparation of Resettlement Plan during project implementation.

The World Bank Group Environmental, Health & Safety (EHS) General Guidelines

The EHS Guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP), as defined in IFC's Performance Standard 3 on Pollution Prevention and Abatement.

The EHS Guidelines contain the performance levels and measures that are normally acceptable to The World Bank Group and are generally considered to be achievable in new facilities at reasonable costs by existing technology.

When host country regulations differ from the levels and measures presented in the EHS Guidelines, projects are expected to achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, a full and detailed justification for any proposed alternatives is needed as part of the site-specific

environmental assessment. This justification should demonstrate that the choice for any alternate performance levels is protective of human health and the environment.

III.3. Gap analysis

Outline of EA procedure of the investment project

For a project that is a World Bank-financed investment project, a EA standard procedure has prescribed and become a widely recognized tool used in development planning and in the World Bank's project cycle. The project cycle consist of the steps are illustrated in the Figure 2 below.

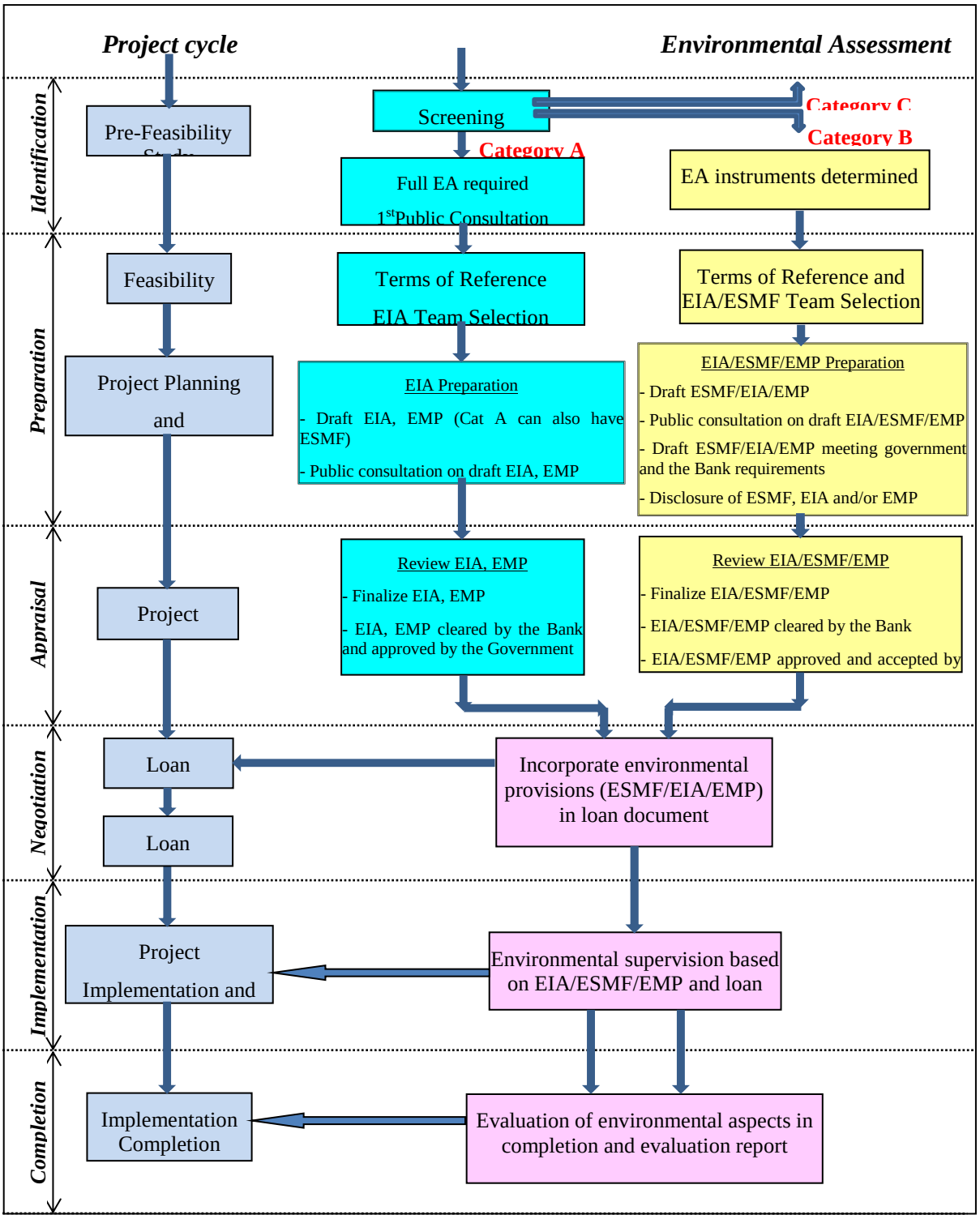


Figure 2. EA process in a World Bank project cycle

As defined in Article 8 (Decree 38/2013/ND-CP dated 23/4/2013 on management and utilization of official development assistance and concessional loans from donors), the process of mobilization, management and utilization of ODA and concessional loans contains five stages:

(i) Formulation and approval for the aid list

(ii) Preparation, appraisal, approval of program or project dossals

(iii) Signing International treaties on ODA and concessional loans

(iv) Organizing the implementation of programs or projects

(v) Supervision and evaluation of programs and projects

The EA process in relation to the ODA project cycle according to the Government of Vietnam (GoV) regulation is described in Table 2 below.

Table 2. EA activities and required outputs in an ODA project

GoV's Project stages **EA process**	**EA Activities**	**Outputs**
Formulation and approval of aid list *Screening*	- Identify potential environmental and social impacts potentially generated from proposed projects/programs. - Develop strategy/plan to address or mitigate the identified project-related impacts.	- Preliminary analysis of environmental and social impacts is included in a section of DPO* document.
Preparation, appraisal, approval *EIA preparation - EIA appraisal*	- Confirm the project category for EA preparation as guided in GoV Regulation (Decree 18/2015/ND-CP on Environmental Protection Planning, Strategic Environmental Assessment, Environmental Impact Assessment, and Environmental Protection Plans) and/or consult with relevant environmental authorities for guidance. - Prepare EIA report or EPP in accordance with Decree 18/2015/ND-CP and Circular 27/2015/TT-BTNMT on guiding implementation of Decree 18/2015/ND-CP. - Develop an Environmental Management and Monitoring Program (EMMP) as a part of an EIA.	- Detailed EIA and/or EPP approved. - Summary of EIA or EPP is presented as one chapter in Feasibility Study (FS)** report.
Negotiation and signing of concessional loans.	- No action required	- Not required
Implementation *Supervision of EIA or EPP compliance*	- Project owner and its representative (normally PMU) are responsible for implementing the project according to agreements derived from the EIA or EPP reports. - Environmental management agency is responsible for inspecting and supervising implementation of	- Report on implementation of EMMP/sampling program prepared (if required).

	commitments stated in the project EIA of EPP.	
Completion *Final evaluation*	- Before operation of a project can begin, the relevant state environment authority reviews/inspects the project to ensure that the project has implemented all requirements for environmental protection as laid out in its EIA and/or EPP.	- Certificate for completion of mitigation construction

** Detailed outline of a DPO is described in Annex II A- Decree 38/2013.*

*** Content of investment project documents (Feasibility study report) is referred to in Annex III A- Decree 38/2013*

The World Bank EA process in each investment lending stage and in relationship to requirements of the Government of Vietnam is described synthetically in Table 3.

Table 3. Environmental Assessment Process of the GoV and the World Bank

Indicative Timing of EA Process[1]	*World Bank Environmental Safeguards Requirements*	*Government Environmental Management Requirements*	*Responsibility of Government*	*Responsibility of the World Bank*
Identification (3 - 12 months)	- Shortlist of suitable investment proposals is requested from GoV for initial review. - Potential Safeguard Policy issues associated with the project identified. - Environmental category of the project assigned. - Safeguards instruments determined.	- Draft of detailed project outline (DPO), as required by the GoV on Official Development Assistance, which includes one section on summary of EA, is prepared.	- Assign environmental and social staff to work with the WB team. - Provide the WB team with all available information/data on the potential project/subprojects related to project location, scope, and type of investment, and sensitivity (including any pre-feasibility studies, EIAs, environmental protection plans [2](EPPs), etc.). - Conduct site visits and carry out meetings with stakeholder on potential environmental impacts.	Conduct and complete internal project concept note (PCN) stage safeguard review process that includes: - Screening project for (1) major potential environmental and social issues, (2) identifying Safeguard Policies to be triggered, and (3) categorizing the project; - Assessing safeguard capacity of the client; - Advising the Borrower on the World Bank's environmental procedures and requirements, including consultation and disclosure; and - Advising the Borrower on the type of EA report or safeguard instruments to be prepared (e.g. EIA, ESMF, EMP,

[1]This indicative timing of the EA process varies depending on the project complexity.

[2]Environmental Protection Programme (EPP) is a simplified EIA for small scale and low risk projects as per government EA regulation.

				etc.)
Preparation (10 months – three years)	- For Category A projects: i) TORs for full EIA reviewed and cleared by the World Bank; ii) at least two public consultations, one shortly after environmental screening and before the TORs is finalized and one when the draft EIA is prepared; iii) a separate Executive Summary of the EIA to be submitted to the Board. - For Category B projects: at least one public consultation. - EA instruments (EIA/ESMF/EMP) prepared meeting government and WB requirements. - Establish timeline and requirements for independent (e.g., expert panel for high	- Qualified consultant for preparing EA reports and other documents selected. - TOR for EA satisfactory to the World Bank. - Budget for the contracts (if paid by counterpart fund) is available. - EA (EIA, EPP) meeting the government and the WB requirements and approved by the government. - Feasibility study meeting both government and WB requirements. - Distribution of the EA summary (in English) to the Board of Executive Directors of the WB. - Clear of Borrower's	- For Category A project: Conduct at least 2 public consultations as required by the World Bank. - For Category B: Prepare TORs as appropriate for EIA/ESMF/EMP. - Ensure that the TORs are technically reviewed by the World Bank team. - Hire consultant for prepare EA reports, including consultation during the process. - Review and ensure quality of the draft EA reports. - Ensure that EA reports approved by relevant authorities. - Ensure that all relevant draft safeguard instruments are properly disclosed locally as required by WB. - Request WB to disclose the draft safeguards instruments in Vietnam at the InfoShop.	- Review, provide comments on, and clear the draft TORs for Category A projects. - Conduct site visits and join stakeholder meetings (if necessary) for addressing environmental issues/concerns. - Provide technical assistance during EA preparation, including guidance to Borrower on the EA content and public consultation. - Review, provide comments on, and ensure quality of the EA reports. - Consider the Borrower's institutional capacity to implement safeguards requirements and design project accordingly to enhance capacity where needed. - For a Category A and non-transferred project: Send EA reports to Regional Safeguard Secretariat (RSS) for review and final clearance. - For a Category A project: the Executive Summary (in English) of the EIA to the Board before the departure of the appraisal mission. - Help the Borrower to disclose the project draft and final safeguards

	risk Category A projects) or third-party monitoring (audits) when anticipated. - Disclosure of all relevant safeguards instruments locally and at the InfoShop before start of appraisal mission and 120 days[3] before the Board date. - World Bank clearance of all EA reports if they are acceptable to the World Bank before the departure of the appraisal mission. If improvement of EA reports is needed World Bank's conditional clearance is issued.	safeguards monitoring and reporting requirements in the Project Operations Manual.	- Officially submit all EA reports to WB for review and clearance. - Officially submit the EA reports to relevant agencies for appraisal and approval - Ministry of Natural Resources and Environment - (MONRE/ local authorities at provincial or district level). - Finalize the EAs reports taking into account the World Bank's comments and send back to the World Bank for its final review and clearance. - Make proper final disclosure of all EA reports locally in accordance with the World Bank requirements.	instruments at the InfoShop.
Appraisal (1 – 3 months)	- The EA reports finalized and acceptable to the World	- EA reports approved by relevant authorities (Ministry of Natural	- Finalize all EA reports based on the conditions of their conditional clearance by the	- Review the EA studies and provide comments (if any) to ensure that the instruments are consistent with WB

[3]According to the Pelosi Amendment, a US government requirement, the U.S. cannot vote in favor of actions that have significant impact(s) on the "human environment" unless an EA (including any relevant supporting documents such as EMP, RAP, IPP etc.) has been disclosed at least 120 days before the Board date: (a) in-country, and (b) at the Bank's InfoShop. This covers all projects with significant impact on the human environment, regardless of category assigned by the Bank.

	Bank before the end of the appraisal mission, if conditional clearance was issued to the Borrower before the appraisal. - Final EA studies properly disclosed locally at project sites (in Vietnamese),and at the InfoShop (in English) as required by the World Bank policy on Access to Information - Incorporation of safeguards requirements in the Project Operations Manual - Environmental management requirements (e.g., EIA/EMP/ESMP) covered in covenants of Financing Agreement	Resources and Environment (MONRE)/Local government) - Proper disclosure of final EAs reports in the project area	World Bank. - Ensure that all relevant final safeguard instruments are properly disclosed locally as required by WB. - Send the World Bank confirmation on disclosure of final EA reports. - Request WB to disclose the final safeguards instruments at the InfoShop. - Ensure that safeguards monitoring and reporting requirements included in the Project Operations Manual. - Establish a system for monitoring and supervision of environmental compliance during project implementation.	safeguard policies. - Ensure that EA reports are properly revised and finalized, and clear the EA reports if they are satisfactory. - Ensure that final EA reports are properly disclosed locally and at the InfoShop. - Ensure that safeguards monitoring and reporting requirements included in the Project Operations Manual. - Ensure that the Borrower's system for monitoring and supervision of environmental compliance is established. - Ensure that environmental management requirements (e.g., EIA/EMP/ESMP) are covered in covenants of Financing Agreement.
Negotiation and Board	- The Borrower's understanding and acceptance of the	- Review and agree on environmental management	- Understand environmental management requirements (e.g., EIA/EMP/ESMP)	- Revise the environmental management requirements in the Financing Agreement if needed and help the

Approval (3 – 6 months)	environmental management requirements covered in the Financing Agreement.	requirements (e.g., EIA/EMP/ESMP) covered in covenants of Financing Agreement.	covered in covenants of Financing Agreement.	Borrower understand them.
Implementation (5 – 6 years)	- Environmental management satisfactorily addressed. - A system for environmental monitoring and supervision established and functional. - EA report including EMP revised if there are changes in the project design.	- Compliance with the GoV environmental management regulations and requirements of the World Bank's related environmental safeguard policies.	- PMU ensures environmental management system of the project is properly functioning. - Satisfactory ongoing safeguard compliance in accord with EMP or ESMF.	- Provide technical support to the Borrower and supervise environmental compliance based on Financing Agreement, EIA, EMP, and ESMF.
Completion (3-6 months)	- Review of environmental safeguard implementation in the Implementation Completion Report (ICR) report submitted by the Borrower. The review will address (1) the key safeguards	- GoV project completion report.	- Prepare dossier of request for certifying the application of environmental protection works and measures for project operation. - Prepare ICR report meeting the GoV and the World Bank requirements. - Follow-up on any	- A separate WB task team leader to prepare an ICR. - The World Bank Task Team reviews final monitoring reports and manages the completion report process (ICR) to ensure (1), (2), (3), and (4) are adequately addressed in the ICR report and request the Borrower to resolve any outstanding safeguards issues.

	issues in operation, (2) compliance with the World Bank policy and procedural requirements, (3) any problems that arose and their resolution as applicable, and (4) any significant deviations.		outstanding safeguards issues until they are satisfactorily addressed.	

GAPs analyses of safeguard policies between the GoV and the World Bank

In Vietnam, the most important steps relate to EA in the project cycle are the preparation and approval stages. During preparation and approval stages, two principal aspects are related to EA documentation. The GoV system normally requires Feasibility Study (FS) reports (including basic design) and separate EIA or Environmental Protection Plan (EPP) documents (with structure and content as defined in Decree 18/2015/ND-CP). In addition, a required summary of the EIA report is presented in the FS report. The separate (and stand-alone) EIA or EPP is reviewed and approved by the competent agency, ie. Ministry of Natural Resources and Environment (MONRE), provincial Department of Natural Resources and Environment (DONRE), or district level-agency.

For the Law on Environmental Protection in 2014 and legal document under Law showed Vietnam's efforts directed to policy harmonization between GoV and donors. The application of environmental assessment policies in Vietnam has gradually narrowed the gap between the two systems. However, significant differences remain between GoV environmental safeguard policies and those of the World Bank. These differences are listed in Table 4 below:

Table 4. Gap analyses of environmental safeguard policies between the GoV and the World Bank

EA Process Stage	OP/BP 4.01 on Environmental Assessment	Decree 18/2015/ND-CP, Circular 27/2015/TT-BTNMT	Gap Filling Measures
Screening	Categories (A, B, C, FI) Non-prescriptive on a case by case basis for categorization, safeguards policies application, and EA instrument identification. + The World Bank will classify the project as category A, B, C, FI according to the nature and magnitude of potential environmental and social impacts. Category A: Full EA required Category B: EA, ESMF, or EMP required Category C, no EA required. Category FI: EA or ESMF required.	Categories: (I, II, and III) Prescriptive, fixed regulated in Annex I, II, III - List of projects subject to requirements of EIA report submittal and approval (Decree 18/2015/ND-CP). + Normally the project owners self-screen the project based on the categorization indicated in Decree 18/2015/TT-BTNMT and consult the Provincial Department of Natural Resources and Environment (DONRE) or Vietnam Environment Administration (VEA) for the appropriate classification and EA report requirement of the project. All the prescribed projects listed as per Decree 18 need to prepare EA. + All projects are not listed in Annex I, II, III Establish an Environmental Protection Plant to be submitted to Nature Resource and Environmental Division under district-level People Committee for appraisal and approval. And all entities are in listed in Annex IV that is not subject to requirements of EPP submittal and approval.	- Use the World Bank's discretionary (on a subproject-by-subproject basis) approaches in screening projects the significance of its impacts, and subsequently to ascertain the project's EA category. - Examine the magnitude and significance of the project impacts based on the project type and scale, project location, sensitivity of environmental and social issues, and nature and magnitude of potential impacts.

EA instrument	- Depending on the project impact, a range of instruments are used to meet the World Bank's requirement, these include: ESMF, specific EA; EMPs, sectoral& regional EA; SEA; hazard or risk assessment; environmental audits. The World Bank provides general guidance for implementation of each instrument.	- The type of EA instruments such as SEA or EIA is decided based on Annex I, II, and III of Decree 18/2015/ND-CP.	- Follow the World Bank requirements on the type of EA instrument needed
Scope	- The World Bank helps Borrower draft the TOR for EA report and identify the scope of EA, procedures, schedule and outline of the EA report. - For Category A projects, EIA TORs is required and should be cleared by the Bank, and scoping and consultation are conducted for preparation of the TORs for the EA report.	- TORs for EA are not required. - Normally after consultation with the local DONRE or VEA for the EA category, the project owner will proceed with EA report preparation.	- TORs for SEA, ESMF, EIA, and EMP are a good practice to follow. - Follow the World Bank's TORs, scoping, and consultation requirements.

Public consultation	- During EA process, the Borrower consults project affected groups and local NGOs about the project's environmental aspects and takes their views into account. - For Category A projects, the Borrower consults these groups at least twice: (a) shortly after environmental screening and before the TORs for the EA are finalized; and (b) once a draft EA report is prepared. In addition, the Borrower consults with such groups throughout project implementation as necessary to address EA-related issues that affect them. For Category B project at least one public consultation needs to be conducted. - For meaningful consultations, the Borrower provides relevant project documents in a timely manner prior to consultation in a form and language that are understandable and accessible to the group being consulted. - Minutes of the public meetings are included in the reports.	- During EIA preparation, the project owner shall consult (i) The People's Committee of the commune, ward or township (below referred to as commune level) in which the project is to be implemented; and (ii) representatives of communities and organizations directly affected by the project by sending a written request for consultation together with EIA report /EPP. After 15 working days of receiving a written request for consultation, if a consulted agency fails to send a written reply to the project owner, it is regarded as agreeing with the project owner's investment plan. - For communities and organizations under directly affected of the project shall be carried out in the form of community meeting co-chaired by the commune People's Committee and the PO. The representatives of organizations and communities directly affected by the project shall be convened to. Results of the meeting shall be recorded in writing, and all discussed opinions, signatures of the project owner representative and representatives of involved parties.	- EA consultation as per government EA regulation is not enough and the Borrower and its consultant need to follow the World Bank's requirements on consultation and disclosure of information during EA process. - Good consultation bring benefits to the project design and contributes to project environmental outcomes

Disclosure	- Before the World Bank proceeds to project appraisal the EA report must be made available at public place accessible for project-affected groups and local NGOs. Once the World Bank officially receives the report, it will make the EA report in English available to the public through the Infoshop.	- After an EIA report is approved, the project owner shall formulate, approve and publicly display its environmental management plan at the office of the commune-level People's Committee of the locality in which consultation of the community is made for people's information, examination and oversight. (Article 16, Decree 18/2015/ND-CP).	- Follow the World Bank's Policy on Access to Information Policy in disclosure of project information, including EA instruments.
Independent Expert	- For category A project, the Borrower retains independent EA experts not affiliated with the project to carry out EA. - For category A projects of high risk or multi-dimensional environmental concerns, the Borrower should also engage an advisory panel of independent, internationally recognized environmental specialists to advise on aspects of the project relevant to EA. - Experts/consulting firm will be selected through bid process under strict observation of the World Bank.	- Not regulated in Vietnam policies. - Project owner shall make, or hire an institution meeting the conditions provided in Clause 1, Article 13 (Decree 18/2015/ND-CP) to prepare an EIA report. Project owner or consulting service provider must fully meet the following conditions: (i) Having staff specialized in environment with university or higher degrees; (ii) Having staff holding university or higher degrees and certificate on EIA in the fields relevant to the project; (iii) Having physical-technical foundations and special-use devices for measuring, taking, processing, and analyzing environmental samples, which meet technical requirements. In case of unavailability of qualified special-use devices, having a contract to hire a capable institution.	- Follow the World Bank requirements to avoid conflict of interest

Clearance procedure	- Review responsibility is internal to the World Bank. If the EA report is satisfactory, the World Bank will issue its clearance memo. If the EA report needs to be improved the World Bank will issue a conditional clearance with the understanding that the Borrower will revise the EA to satisfy the World Bank for the final clearance.	- Environmental impact assessment reports shall be appraised by appraisal councils or appraisal service providers (only applied in Category-A project). - Delegates review responsibility to MONRE and DONRE depending on kind and scale of project as prescribed in annex II of Decree 18/2015/ND-CP - The appraisal will take place no later than 60 days at MONRE level and 45 days at DONRE level and 30 days at other levels for after receipt of a full eligible EIA or EPP.	- In addition to the Government requirements, follow the World Bank's review and clearance procedures.
Number and language of EIA required for appraisal	- Number of copies not specified. - Language requirement: English for Vietnam with an Executive Summary in English for a Category A project. - No requirement for feasibility survey: the World Bank does not advance discussions on any investments without the preparation by the Borrower of the minimum required technical studies that prove the investments are feasible from socio-economical and technical point of view.	- The project owner has to submit at least seven copies of EIA report (depend on the number of appraisal council members) and one copy of the Feasibility Study or the Economic-Technical argument for the proposed project.	- Follow the World Bank's guidance and the Government requirements

Content of EIA report	Category A project contains the following major contents: - Should be in line with OP 4.01, Annex B - Content of an Environmental Assessment Report for a Category A Project. - Category B EIA reports typically follow similar table of contents as Category A.	Category II and III Projects contain the following major contents: - Should be in line with Circular 27/2015/TT-BTNMT	- For Category B projects, follow the government EA regulation. - For Category A projects, two options exist: i) follow two separate EIA outlines of the World Bank and the Government; ii) follow then government EIA format with incorporation of the World Bank requirements in alternative analysis, cumulative impact assessment, public consultation and disclosure, and EMP requirements.
EA supervision	- During project implementation, the World Bank supervises the project's environmental aspects on the basis of the environmental provisions and the Borrower's reporting arrangement agreed in the loan agreement and described in the other project documentation, to determine whether the Borrower's compliance with environmental covenant (primarily with EMP) is satisfactory. If compliance is not satisfactory, the World Bank will discuss with the Borrower action necessary to comply.	- The local DONRE is entrusted to supervise the environmental compliance of the project. - By the end of project construction stage, the Environmental Management Agencies will coordinate with Construction Management Agencies to supervise the compliance of environmental management activities stated in EA study.	- Project environmental management system needs to be established to monitor and supervise safeguards compliance during implementation. - Follow requirements in project Loan Agreement, EMP, and contract with contractor to monitor and supervise safeguards compliance.

As a result, gaps as analyzed above, this ESMF shall consist of the World Bank's guidance and the Government requirements to set out the principles, rules, guidelines and procedures to assess the environmental and social impacts of the VEEIEs Project to ensure the EA process is carried out in compliance with national legislation and OP/BP 4.01. It provides an environmental and social screening process to allow for identification, assessment and mitigation of potential impacts by proposed subprojects/activities under the VEEIEs Project at the time the detailed aspects are known in provision V hereafter. It also serves as guidelines for the development of sub-project/site-specific Environmental Management Plans (EMPs), Environmental Assessments (EAs), due diligence reports. The ESMF will be used to screen and manage potential environmental and social impacts arising from the VEEIEs's subprojects implementation.

IV. POTENTIAL PROJECT IMPACTS AND MITIGATION MEASURES

Potential Impacts

Overall this project brings benefits to industries and the environment by contributing to reduction of GHGs and pollutants, increases energy savings and encourages the promotion of the environmentally good industry practices.

The sub-project may involves the small construction for installation or replacement of energy efficient technologies and equipment. The possible environmental impacts associated with the sub-projects during construction/installation could be noise, dust, labor safety, and disposal of wastes during the installation of new equipment, waste management for the inefficient equipment being removed; and in some case, the oil excluded from transformer which may contain PCB. The possible impacts during operation period of new equipment and facilities may include safety issues; air emission, solid waste, and wastewater which are considered as at a lower amount or lesser polluted than those arisen from old technologies and equipment. It is anticipated that most the sub-projects under VEEIEs are category B with the above noted typical impacts which are assessed as localized, varying from small to moderate scale and mitigation measures could be readily designed. In any case, all subprojects will be screened carefully case by case, to determine the appropriate category and environmental safeguard instruments to manage the potential impacts.

Mitigation measures

Given that most of the key impacts will occur due to small civil works, many of the potential negative impacts on physical, biological, and social environment could be mitigated through a set of general measures that are typically applied to most of construction projects to minimize impacts such as noise, dust, water, waste, etc. As part of the Environmental Management Plan (EMP) for the project these general measures have been translated into a standard environmental specification namely the Environmental Codes of Practice (ECOPs) (Annex 4) and it will be applied to mitigate typical impacts of small civil works.

The ECOP which is part of the EMP describes typical requirements to be undertaken by the contractors and supervised by the construction supervision engineer during construction. They have been designed for this project to be applicable to the range of small to medium sized civil works. Relevant clause of the ECOPs will be included as an annex in the bidding and contract documents during detailed design stage. Scope and content of the ECOPs is as follows:

Scope: Construction and installation activities for small works governed by these ECOPs are those whose impacts are of limited extent, temporary and reversible, and readily managed with good construction practices.

The typical mitigation measures have been identified for the following aspects:

- Dust generation
- Air pollution
- Impacts from noise and vibration
- Water pollution

- Drainage and sedimentation control
- Management of stockpiles, quarries, and borrow pits
- Solid waste
- Management of dredged materials
- Disruption of vegetative covers and ecological resources
- Traffic management
- Interruption of utility services
- Restoration of affected areas
- Worker and public safety
- Communication with local communities
- Chance findings

However, there may be site-specific impacts that require site-specific measures both during construction and operation stages such as site-specific mitigation measures for UXO clearance; disposal of oil containing PCB during the replacement of new technology; management of air emission, solid waste and wastewater from the operation of facilities during the operation period. These measures are to be identified and incorporated into the subproject EMPs.

The potential environmental impacts and mitigation measures for certain specific EE investments are described in Table 5 below.

Table 5: The typical environmental and social impacts and mitigation measures of energy efficiency improvement subprojects

Energy efficiency improvement project	Environmental and social impacts	Mitigation measures
Projects related to energy systems		
Replace the conventional lighting system by energy efficiency lighting system (ex: energy saving lamp, LED, etc.)	In construction phase: - Safety issues during the installation of new equipment i.e. work at height, electricity shock, etc. - Disposal of hazardous waste (light tubes); and solid waste during the installation of new lighting system In operation phase - Discharge hazardous waste (fluorescent tubes) - Save in energy consumption during production process resulting in lessen natural resource save and conservation and reduce total annual GHG.	In construction phase: - Waste management, safety measures as described in the ECOPs. - Hazardous waste should be identified, labeled and stored in a safe place, then transferred to licensed organization for treatment according to hazardous management requirement. In construction phase: - Issue Operation manual and safety procedures. - Waste management procedures shall be in place.
Replace the conventional cooling system by the system that apply inverter	In construction phase: - Electrical waste. - Discharge refrigerant (HCFC) from replaced air-conditional equipment. - Safety issues during the installation of new equipment In operation phase - Electrical waste;	In construction phase: - Waste management, safety measures as described in the ECOPs. - Hazardous waste should be identified, labeled and stored in a safe place, then transferred to licensed organization for treatment according to hazardous management requirement. In operation phase: - Waste management measures and procedure shall be in place. Hazardous waste should be

Energy efficiency improvement project	Environmental and social impacts	Mitigation measures
	- Save in energy consumption during production process resulting in lessen natural resource save and conservation and reduce total annual GHG and HCFC. - Safety issues during the operation of new equipment	identified, labeled and stored in a safe place, then transferred to licensed organization for treatment according to hazardous management requirement. - The subproject operation shall include appropriate measures on labor safety.
Improve the boiler efficiency by some solutions such as burner improvement, flue gas recirculation, air divide in stages, so on	In construction phase: - Risks of labor safety. - Solid waste from waste materials In operation phase - Reduce pollutants discharge - Save energy for heating process and reduce heat loss. - Promote the initiatives and technical and technological improvements during production.	In construction phase: - Safety measures as described in the ECOPs. - Waste management measures and procedure shall be in place In operation phase: - Boiler operation from fuel combustion, itself generate air pollutants such as NOx, SOx, and particulate, CO2, and solid waste i.e. ash and slag. - Generated air emission will be collected and treated via air treatment system. Frequent maintenance of air treatment system and monitoring to ensure emission will complied with application regulation. - Ash and slag will be transferred to permitted ash-pond. - However, the improved boiler after the project will lead to lesser fuel consumption and the emission load of pollutant.
Replace insulation materials	In construction phase: - Risks of labour safety.	In construction phase: - Mitigation measures as described in the

Energy efficiency improvement project	Environmental and social impacts	Mitigation measures
	- Disposal of wastes during the installation of new equipment, waste management for the inefficient equipment being removed; In operation phase - Save energy for heating process and reduce heat loss.	ECOPs - Waste management measures and procedure shall be in place - In operation phase: - Insulation material to help heating insulation to lessen heating loss. Replacement of the insulation material will retain efficiency, save energy resulting emission reduction in.
Improve the insulation for steam pipeline	In construction phase: - Risks of labour safety. - Solid waste from waste materials. In operation phase - Lessen steam loss and improve efficiency. - Save energy for heating process.	In construction phase: - Mitigation measures as described in the ECOPs - Waste management measures and procedure shall be in place In operation phase: - The same to above, improve the insulation for steam pipeline will lessen heating loss to retain efficiency and save energy resulting emission reduction in.
Improve the quality of water feeding for boiler by changing the 91 phan nho trong he thong xu li nuoc0	In construction phase: - Risks of labour safety. In operation phase - Reduce generated non-contaminated sludge/solid waste from supply water treatment. - Reduce chemical usage for water	In construction phase: - Mitigation measures as described in the ECOPs In operation phase - Residual non-contaminated solid waste/sludge will be periodical disposed appropriately - Chemical safety procedure shall be in place to

Energy efficiency improvement project	Environmental and social impacts	Mitigation measures
	treatment. - Periodical Waste water discharge from the boiler - Chemical hazard.	prevent from chemical accident. - Waste water will be collected and treated by the treatment system of the company
Install the steam trap of boiler	In construction phase: - Risks of labour safety. In operation phase - Reduce waste water which is periodically discharged from condensers and pipes. - Save fuel and energy during production process.	In construction phase: - Mitigation measures as described in the ECOPs In operation phase: - Waste water will be periodically collected and treated in the wastewater system of IE. - The steam trap is a device to respond to fluctuations in condensate load, condensate that should be discharged will instead pool inside the equipment/pipe to retain heating efficiency. The steam trap are to reduce condensate load, steam leakage cause steam will be wasted. Generally, these traps will help to save energy via reduced the source of consumed material and therefore reduce the air emission. - Generated air emission will be collected and treated via air treatment system. Frequent maintenance of air treatment system and monitoring to ensure emission will complied with application regulation.

Energy efficiency improvement project	**Environmental and social impacts**	**Mitigation measures**
Use high efficiency compressor/install inverter	In construction phase: - Risks of labour safety - Solid waste discharge from waste equipment, lubricant, waste from oil filter, etc. In operation phase - Reduce electrical consumption. - Ensure the stability of control system, transporting system -	In construction phase: - Mitigation measures as described in the ECOPs - Safety procedure and measures shall be in placed In operation phase: - The high efficiency compressor/ inverter are installed for air-pressured generation or electricity equipment to respond to fluctuations in operation condition/load to reduce or save energy resulting emission reduction in.
Replace the air leakage pipeline to reduce energy loss.	In construction phase: - Risks of labour safety - Solid waste from waste materials. In operation phase - Save fuel and energy during production process. - Reduce energy loss	In construction phase: - Mitigation measures as described in the ECOPs In operation phase: - The tight pipeline is replaced to reduce air loss and save energy resulting emission reduction in. There is no negative impacts in operation phase
Use energy efficiency fan system.	In construction phase: - Risks of labour safety - Discharge solid waste including waste material, noise emission during dismount	In construction phase: - Mitigation measures as described in the ECOPs - Waste management measures and procedures

Energy efficiency improvement project	Environmental and social impacts	Mitigation measures
	old and install new equipment. In operation phase - Save energy.	shall be in place - Safety procedure shall be in place. In operation phase: - The new fans will consume less of energy (for example electricity), therefore, it will save energy and emission reduction of the whole system. There is no negative impacts in operation phase.
Install inverter equipment for engine system.	In construction phase: - Risks of labour safety - Discharge solid waste, noise emission during dismount old equipment and install new equipment. In operation phase - Save energy.	In construction phase: - Mitigation measures as described in the ECOPs In operation phase - The inverters are installed for electricity equipment to respond to fluctuations in operation condition/load to reduce or save energy resulting in emission reduction of the whole system
Apply automatic control system to improve production control ability, improve equipment operation and energy usage.	In construction phase: - Risks of labour safety - Discharge solid waste, noise emission during dismount old and install new equipment	In construction phase: - Mitigation measures as described in the ECOPs

Energy efficiency improvement project	Environmental and social impacts	Mitigation measures
	In operation phase - Save energy and fuel. - Reduce pollutants in air emission and solid waste	In operation phase - The automatic control system will adjust automatically to consist to realistic operation condition/load to reduce energy consumption and save energy for emission reduction. - Air emission will be collected via treatment devices. - Solid waste will be collected, and transferred to permitted ash pond or recycle in the clinker production line
Projects related to process technology		
Use amorphous magnetic core transformer to reduce electrical loss	In construction phase: - Risks of labour safety - Solid waste and hazardous waste (possibly including transformer oil. In operation phase	In construction phase: - Waste management measures as described in the ECOPs. - Hazardous waste should be identified, labeled and stored in a safe place, then transferred to licensed organization for treatment according to hazardous management requirement. - The oil disposed from transformers shall be tested on PCB content. In case the oil is confirmed as PCB contaminated, then specific PCB management procedures shall be applied. (see Annex 5). In operation phase:

Energy efficiency improvement project	Environmental and social impacts	Mitigation measures
	- - Risk of fire explosion and impacts from high electro-magnetic	- The amorphous magnetic core transformer will lessens electrical loss so that save energy and emission reduction. There would still occur risks of flame or blast but less than conventional transformers. Comply with technical specification and safety measures for transformers.
Apply energy efficiency technology replace for conventional technology (ex: replace roller mill by vertical grinding system in cement industry, supercritical or ultra-supercritical in power generation)	In construction phase: - Risks of labor safety - Discharge solid waste including replaced equipment, noise emission during dismount old and install new equipment. In operation phase - Reduce generated noise, solid waste, and air emission. - Save fuel and energy during production process.	In construction phase: - Mitigated measures as described in the ECOPs In operation phase - Boiler operation from fuel combustion, itself generate gaseous pollutants such as NOx, SOx, Particulate, CO2, and solid waste of ash and slag. .However, the replacement oi energy efficiency technology led to lessen of fuel consumption and the emission load of pollutant for conforming environmental protection regulations. - Generated air pollutants will be collected and treated via air treatment system. Frequent maintenance of air treatment system and monitoring to ensure emission will complied with application regulation. - Ash and slag will be transferred to permitted ash-

Energy efficiency improvement project	Environmental and social impacts	Mitigation measures
		pond.
Use advance technology burner to improve burning efficiency and save energy (ex: oxygen – fuel burner technology replace for electricity in steel industry, extract oxygen from air to supply directly for coal burner in thermal power industry, etc.)	In construction phase: - Risks of labour safety - Discharge solid waste, noise emission during dismount old and install new equipment. In operation phase - Save energy and fuel. - Reduce pollutants in exhausted gas. - Labor safety	In construction phase: - Mitigation measures as described in the ECOPs. In operation phase - Positive impacts, no mitigation measures are required - Boiler operation from fuel combustion, itself generate gaseous pollutants such as NOx, SOx, Particulate, CO2, and solid waste i.e. ash and slag. However, the replacement oi energy efficiency technology led to lessen of fuel consumption and the emission load of pollutant for conforming environmental protection regulations. - Generated air pollutants will be collected and treated via air treatment system. Frequent maintenance of air treatment system and monitoring to ensure emission will complied with application regulation. - Ash and slag will be transferred to permitted ash-pond. - Comply with labor safety procedures in O&M.

Energy efficiency improvement project	Environmental and social impacts	Mitigation measures
Use new sources of energy that less pollution (ex: replace LNG, LPG for coal, use mixed coal, mixture of bitum with antraxit coal for thermal power industry, etc)	Pre-construction: - Occupy land for LNG port, storage, gas pipeline system. - Land expanded acquisition for storage, fuel handling and other facilities; In construction phase: - Risks of labor safety and fuel handling process; - Cause air, water, soil quality change, noise emission during dismount old, construction, and install new equipment. In operation phase - Reduce emission of pollutants and greenhouse gases. - Increase burning efficiency, save energy for production process. - Reduce discharge solid waste (ash) - Water pollution ability due to liquefied and gasified process, the transportation of	Pre-construction: - The selected is far from significant industrial underground facilities, residential area and sensitive ecosystem. - Make compensation and resettlement action plans conformed to National relevant regulations and WB's OP/BP 4.10, 4.12 with adequate budget for conducting necessary activities. - Site selection shall be carried out including sufficiency of land area for the necessary works of the project. In construction period - Mitigation measures as described in the ECOPs and site-specific measures. In operation - Residual air emission will be collected and treated via air treatment system. Frequent maintenance of air treatment system and monitoring to ensure emission will complied with applicable regulation. - Waste management procedure should be in place

Energy efficiency improvement project	Environmental and social impacts	Mitigation measures
	LNG, imported coal by ship activity. - Increase fire, gas leakage risk.	- Emergency response for chemical leakage should be in place - Procedure of loading and un-loading material should be in place. - Generated wastewater shall not be discharge directly in the water course, it shall be collected and treated appropriately. - Emergency response for explosion should be in place
Projects related to reuse waste heat and waste reuse		
Utilize the waste steam for heating water for boiler	In construction phase: - Risks of labour safety; - Generation of solid waste In operation phase - Save fuel and energy during production process. -	In construction phase: - Mitigation measures as described in the ECOPs In operation phase - Positive impacts, no mitigation measures are required
Apply co-generator to utilize waste heat, bio-fuel.	In construction phase: - Risks of labor safety; - Discharge solid waste from used equipment. In operation phase - Reduce generated solid waste (ash) - Reduce air pollutants emission. - Save fuel and energy during production	During construction period - Mitigation measures as described in the ECOPs In operation period - Ash should be collected and transferred permitted disposal site. - Install the air pollution treatment system.

Energy efficiency improvement project	Environmental and social impacts	Mitigation measures
	process.	- Monitor the air quality to ensure emission does not exceed national permitted threshold - Regularly maintain the air pollution treatment
Reuse waste heat (ex: waste heat from clinker kiln, waste heat from refine steel furnace, from boiler, from blast furnace, etc) for other activities (power generation, pre-heat materials, etc.) in industries.	In construction phase: - Risks of labour safety; - Discharge solid waste, noise emission during dismount old and install new equipment. In operation phase - Save energy and fuel. - Reduce pollutants in exhausted gas. - Labor safety issues	In construction - Mitigation measures as described in the ECOPs In operation phase - Waste management procedure should be in placed - Residual air emission shall be collected and monitored to ensure the emission levels is below the permitted threshold. Monitor and mitigation measures the air quality, noise heating should be carried out. - Safety working procedure should be in place.
Projects related to use of Renewable Energy		
Replace the input chemical, materials in the regards of energy saving (ex: use enzyme in dye industry; use by-product from agriculture and the bio-products as the decomposition agent in pulp and paper industry, solar, wind etc).	Pre-construction - Land expanded acquisition for storage, fuel handling and other facilities; In construction phase: - Risks of labour safety;	Pre-construction - Make compensation and resettlement action plans conformed to National relevant regulations and WB's OP/BP 4.10, 4.12 with adequate budget for conducting necessary activities. In construction phase: - Mitigation measures as described in the

Energy efficiency improvement project	Environmental and social impacts	Mitigation measures
	- Discharge solid waste, noise emission, chemicals during dismount old, construction and install new equipment. In operation phase - Reduce pollutants in air emission - Discharge of chemicals which are less polluted and less toxic than the original technology – - Increases fire and explosive and chemical leakage risk. - Reduce quantity of input materials. - Save energy for heating process and reduce heat loss. - Promote the initiatives and technical and technological improvements during production.	ECOPs In operation - Install waste treatment system for the new type of air pollutant. Frequent maintenance of air treatment system and monitoring to ensure emission will complied with application regulation. - Safety measures, Emergency response for explosion, chemical leakage situation shall be in place. - Solid waste shall be collected and disposed appropriately
Adjust the product quality with the energy saving purpose (ex: adjust the white level of paper to reduce energy consumption, etc)	In operation phase - Reduce quantity of input materials. - Reduce amount of solid waste and discharged chemicals. Discharge solid waste/chemical that less polluted and less toxic.	In operation phase Solid waste and discharge chemicals shall be collected and disposed appropriately
Replace fossil fuel by renewable energy	Pre-construction	Pre-construction

Energy efficiency improvement project	Environmental and social impacts	Mitigation measures
sources (ex: solar energy, bio-fuel, waste oil for clinker kiln, coal-additives energy for thermal power industry, etc.)	- Land expanded acquisition for storage, fuel handling and other facilities; In construction phase: - Risks of labour safety; - Discharge solid waste, noise emission, chemicals during dismount old, construction and install new equipment. In operation phase - Reduce pollutants emission (air and waste water) - Discharge solid waste/chemicals that are less polluted and toxic - Reduce quantity of input materials. - Increases fire and explosive and chemical leakage risk. - Save energy for heating process and reduce heat loss. - Promote the initiatives and technical and technological improvements during production.	- Make compensation and resettlement action plans conformed to National relevant regulations and WB's OP/BP 4.10, 4.12 with adequate budget for conducting necessary activities. In construction phase: - Mitigation measures as described in the ECOPs In operation - Install waste treatment (system for the new type of pollution. Frequent maintenance of treatment system and monitoring to ensure emission/discharge will comply with application regulation. - Solid waste and chemicals are collected and disposed appropriately. - Safety measures, Emergency response for explosion, chemical leakage situation shall be in place

V. PROCEDURES FOR SCREENING, REVIEW, CLEARANCE AND IMPLEMENTATION OF SUBPROJECT SAFEGUARD INSTRUMENTS

V.1. Safeguard Screening

The purpose of screening is to determine the sub-project's eligibility for World Bank funding and to identify, whether the subproject would have the potential to cause significant adverse impacts on the environment and society, consequently the appropriate safeguard instruments and mitigation measures to manage those impacts. Environmental screening will be carried out at the stage of identification and selection of subprojects.

V.1.1. Eligibility Screening

The purpose of eligibility screening is to avoid adverse social and environmental impacts that cannot be adequately mitigated by project or that are prohibited by a World Bank policy, or by international conventions.

Ineligibility criteria, (i) prohibition under a World Bank policy, e.g., significant degradation or conversion of critical natural habitats, critical natural forests, etc.; (ii) contravention of the country obligations under relevant international environmental treaties, e.g., Montreal Protocol or Stockholm Convention, etc; and (iii) environment and social impacts so complex and adverse that are beyond the capacity of the PMU to manage. A subproject that falls under one of the ineligibility criteria will not be eligible for project financing.

The PFIs will also carry out environmental due diligence on operation of existing IEs to ensure that the operation of PFIs complies with the national regulations on environmental protection and environmental assessment.

Application and initial screening of project eligibility including environmental and social safeguard of IEs will be submitted to PFIs. The PFIs environmental staffs will check and appraise the completed filling up the Annex 1 for the initial screening.

Eligible projects are:

- If the subprojects only bring about positive impacts and/or causing minimal or no adverse impact, it is appraised as environmental eligible and beyond screening; no environmental assessment action is needed.
- The VEEIEs Project only triggers the WB safeguard policy on Environmental Assessment (OP/BP 4.01) and OP/BP 4.11 on Physical Cultural Resources; Involuntary Resettlement (OP/BP 4.12), and Indigenous People (OP4/BP 4.10). Any subproject triggering other safeguard policies will be excluded from Bank financing or has to be prior consult with the World Bank.

If the subproject is determined as eligible, the impact screening will be carried out to determine the category of the subproject and the safeguard instrument that the need to be prepared in accordance with the national regulation and the WB's safeguard policies. The impact screening process is described in detailed in section V.1.2.

The impacts screening regarding OP/BP 4.01 Environmental Assessment and OP/BP 4.11 will be covered under this ESMF. For the subproject triggering safeguard policies on

Involuntary Resettlement (OP/BP 4.12), and Indigenous People (OP/BP 4.10); the requirements on EMPF will be followed.

V.1.2. Impact screening to determine sub-project category and safeguard instrument

Subproject classification criteria

World Bank's categorization

According to the OP/BP 4.01, the WB classifies the projects based on the extent and potential magnitude of the impacts.

(a) Category A project which can cause significant adverse environmental impacts that are diverse, irreversible and unprecedented is categorized as A and for this project, a full Environmental Assessment (EA) needs to be conducted.

(b) Category B projects are those with less significant adverse impacts which are site-specific, few if any of them are irreversible; and in most cases mitigation measures can be designed more readily than for Category A projects. Category B project will require preparation of Environmental Management Plan (EMP) or an EIA with scope narrower than that of category A.

(c) Category C: The project that causes minimal or no adverse impact is categorized as C and beyond screening, no environmental assessment is required.

GoV legal requirements

The GoV legal documents, i.e. Decree No 18/2015/ND-CP, use a list of Project type to classify projects as presented below:

a) All the project listed in Appendix II of Decree 18/2015/ND-CP requires the preparation of an EIA

b) The subprojects/activities subject to prepare and register for an Environmental Protection Plan include:

i) New investment projects, project for extension of scope or capacity of business facilities other than entities prescribed in Appendix II Decree 18/2015/ND-CP;

ii) Plans for business investment, projects for extension of scope or capacity of business facilities other than entities prescribed above and not included in Appendix II of this Decree;

iii) Entities that are exempt from registration of EPP prescribed in Appendix IV of this Decree.

c) Appendix III lists the projects of which EIAs are subjected to MONRE appraisal and approval as they could cause potential high adverse impacts. Below are most relevant to the proposed projects:

(i) Projects that use land of national parks, wildlife sanctuary; projects that use at least 1 hectares of land of national historical-cultural monument; at least 5 hectares of land of world heritage sites or national scenic beauties; or at least 10 hectares of land of biosphere reserves;

(ii) Construction projects for at least 600 MW power plants; construction projects for hydroelectric power plants, irrigation works with a capacity of at least 100.000.000 m^3 of water;

(iii) Construction projects for sea encroachment at least 20 hectares; project that use at least 20 hectares of protection forests or specialized forests, at least 100 hectares of natural forests; projects using at least 10 hectares of paddy land.

(iv) Construction projects for recycling and processing of ordinary solid waste with capacity of at least 250 metric tons per day and night; projects for recycling and processing of hazardous waste; construction projects for concentrated sewage treatment systems with capacity of at least 5,000 m^3 per day and night regarding industrial wastewater, or at least 50,000 m^3 per day and night regarding domestic wastewater.

(v) Projects for extension, upgrade, or capacity expansion of business facilities up to capacity equivalent to projects of this Appendix.

(vi) Projects implemented in areas covering more than one province.

d) In addition, according to Article 15 of the Decree 18/2015/ND-CP on the re-preparation of the EIA reports.

1. If a project whose EIA report is approved has one of following changes during their implementation, its EIA report shall be re-compiled:

a) There are changes prescribed in Point a and b Clause 1 of Article 20 of the Law on Environment protection;

b) Supplement the portfolios whose size and capacity are equivalent to entities prescribed in Appendix II of this Decree;

c) There are changes in size, capacity, technology or other changes that make the environmental protection works unable to solve new environmental problems;

d) At the request of the project owner.

2. The project owner may only apply changes prescribed in Point a, b, c and Clause 1 of this Article after the competent agency approves the re-compilation of EIA report.

3. The re-compilation of EIA report, re-assessment and re-approval for EIA report shall comply with regulations in Article 12, Article 13 and Article 14 of this Decree.

The decree has a new stipulation remarkably on Responsibility of project owners/industrial enterprise (IE) pertaining to the approved EIA reports that the IEs will set up a plan for environment management (EMP) of project on the basis of program for management and observation of environment suggested in the EIA report and posted at the premises of the People's Committee of the commune where the consultation is taken place when implementing EIA according to guidance of the Ministry of Natural Resources and Environment (MONRE).

Impact Screening Procedure

The environmental screening procedure for subprojects under VEEIEs is described in Figure 3 below.

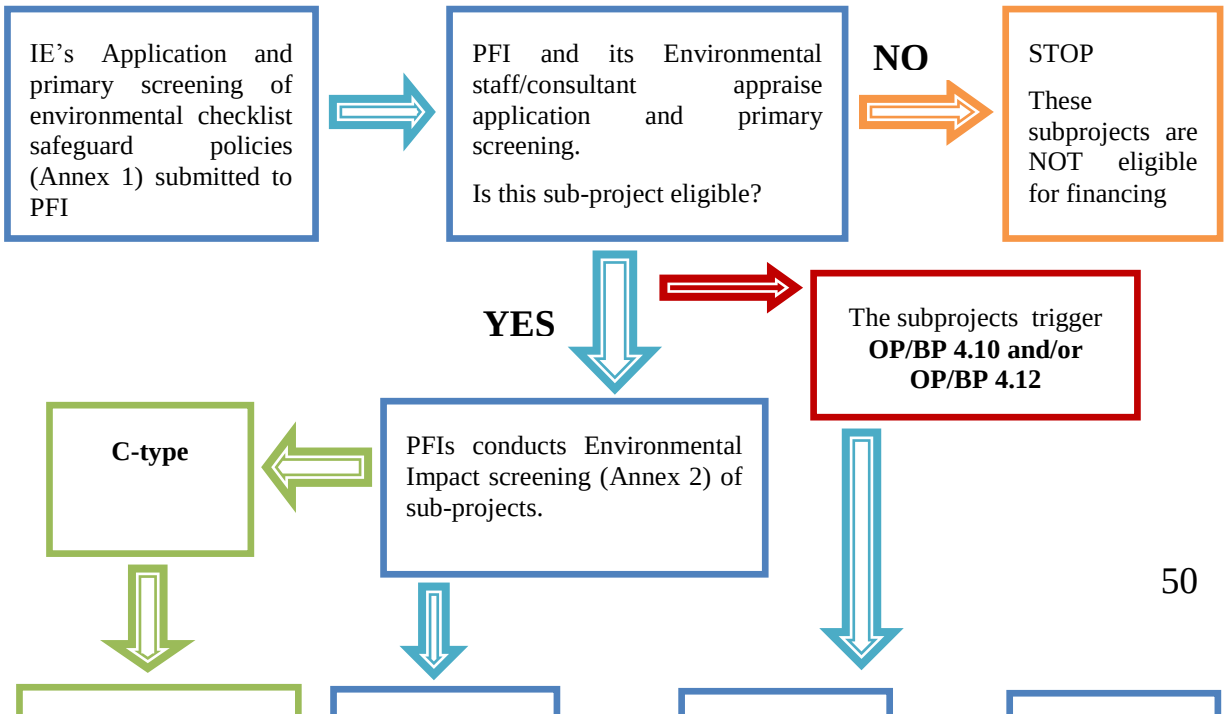


Figure 3. Environmental screening procedure

During the VEEI implementation, the PFIs, in line with the World Bank safeguards policies, conducts environmental and social screening of subprojects for their categorization (A, B or C) and determines the type of safeguards instruments a subproject needs to prepare. Please see Annex 2 for guidance on screening on environmental and social impact screening. The PFIs is advised to consult with the World Bank on complex subprojects to reach agreement on the category, the type of safeguards instrument, and the key impacts before embarking upon major studies.

The PFIs must send to the WB the list of selected proposed subprojects and screening results at two screening levels as specified in Annex 1 and Annex 2.

If the WB does not satisfy with capacity of PFIs in screening process, the PFIs shall provide additional strengthening measures to enhance capacity. A Project Management Board (PMB) set up under MOIT will provide support to enhance capacity for PFIs staff on safeguard screening and management via TA activities. The WB will associate with PMB to provide technical support to enhance capacity of PFIs as needed.

V.2. Development of Subproject Safeguard Documents

The subproject under VEEIs shall comply national regulations on environmental assessment and protection and the World Bank's safeguard policies.

The IEs, when proposing subproject will have to prepare requiring environmental document (an EIA/EPP) under prevailing Vietnamese Environment Protection regulations. IEs will prepare an EIA/EPP for each subproject at preparation phase, i.e. in parallel with the preparation of Economic-Technical Report (ETR) or Feasibility Study (FS) and conduct public consultations and information disclosure as guided in section 5.3. The content and

format of EIA and EPP will follow the guide in Circular No. 27/2015/TT-BTNMT dated 29 May 2015. The content and format of RP and EMDP will follow the requirement set out in the Resettlement Policy Framework (RPF) and Ethnic Minority Development Framework (EMDF).

In addition, in accordance to the World Bank's safeguard policies, based on the impact screening, (i) for a category C subproject, the IE does not have to prepare any environmental safeguard document; (ii) for a category B subproject, the IEs should prepare one Environmental Management Plan (EMP); and (iii) for a category A subproject, the IEs shall hire consulting firm to prepare an full EIA meeting the WB's requirements. Specifically, for category A subproject, before preparing EIA report, the IEs shall prepare TOR for the EIA report and send to World Bank for prior reviewing and clearance.

For a category B sub-project of which an EIA or EPP has already been approved by GoV authorities, the PFI's environment staff/consultant may consider to make a due diligence to assess the adequacy of these reports. If any insufficiency is identified, the subproject owner will have to prepare one EMP with supplementary measures, submit to PFIs for eligible screening and impact evaluation prior transferred to review and approval by World Bank.

The ESMP consists of a set of mitigation, monitoring and institutional measures to be taken during construction and operation in order to minimize, reduce and/or eliminate any potential adverse environmental impacts to acceptable levels. It includes the entire subproject scope and impacts. The guidance for EMP preparation is provided in Annex 3**.**

The EMP consists of the following elements are as follows:

- Introduction
- Subproject Description
- Applicable Environmental legislations
- Environmental and Social Impacts
- Mitigation and Management Measures
- Institutional Arrangement for safeguard implementation
- Supervision, Monitoring and Reporting
- Budget for EMP implementation
- Public Consultation and Disclosure

Environmental Management Procedures for subproject under components can be summarized as below

Table 6. Summary of environmental management procedures for subprojects under VEEIEs

Steps	**Environmental Action Required**	**Implemented by**	**Monitored/check By**
1. Sub-project identification	1.1. Prepare basic information and submit to PFI for primary screening	Industrial Enterprises (IEs)	PFIs
	1.2. Environmental eligible screening	PFIs	WB will review the

Steps	Environmental Action Required	Implemented by	Monitored/check By
			screening result
	1.3. Screen to categorize sub-project as A, B or C subprojects according to the World Bank's safeguard policies For sub-projects that are classified as C-type: no further action required. For subprojects of other categories, carry out subsequent steps.	PFIs	WB will review the screening result
2. Sub-project preparation	2.1. Provide guidance to selected Environmental consultancy in preparing necessary environmental documents, collecting and recording required licenses/permits that comply with approved ESMF	IEs or IEs environmental consultant	PFIs check and appraise the Sub-project dossier eligibly. PMB will also provide all technical assistance activities under VEEIEs. WB will do random checks
	2.2. For category B sub-projects that present an approved EIA/EPP which is still effective, conduct an environmental due diligence and request the IE to prepare an supplementary EMP if necessary	PFIs and IE	Reviewed PFIs and WB
	2.3. For category A subprojects, prepare the report on institutional capacity to carry out environmental safeguard and TOR for EIA preparation	IEs	Monitored by PFIs and cleared by WB.
	2.4. Prepare draft EIA/EMP/EPP Carry out public consultations with potential affected people and local authorities about the content of EIA/EMP/EPP prepare meeting minutes and list of participants Include solutions to address community concerns into final EIA/EMP/EPP. Consultation records are filed for submission when required. Submit draft EIA/EMP/EPP to PFIs and WB (if required) for review	IE or IE's environmental consultancy	Monitored by PFIs
	2.5. Review the final EIA/EMP/EPP prior to submit for approval	PFIs	WB will do selectively check environmental document of

Steps	Environmental Action Required	Implemented by	Monitored/check By
			category B subprojects (30%) The WB will conduct prior review of EIA for all category A subprojects.
	2.6. EIA/EMP/EPP (if any) approval/clearance	EIA/EMP cleared by PFIs and/or WB EIA/EPP approved by appropriate local authorities	WB will clear the EIA report of all category A subproject. WB will selectively provide clearance for EMPs of certain category B subprojects Local authorities Monitored by PFI for EIA/EPP/RP approval
3. Sub-project bidding	3.1. Include mitigation measures and/or requirements in approved EIA/EMP/EPP into bidding document - Include mitigation measures and requirements into rehabilitation document and contract (if any) - Include mitigation measures/requirements into equipment supplier contract (if any) - Include mitigation measures/requirements into construction supervision bidding document and contract (if any)	IEs	Monitored by PFIs, PMB Random check by WB
4. Implementation phase	Implement mitigation measures	Contractor/IEs	Monitored by PFIs, local authorities, PMB Internal monitored by environmental consultancy and construction supervision consultant (CSC) IEs Random check by

Steps	Environmental Action Required	Implemented by	Monitored/check By
			WB
	Carry out internal environmental monitoring and supervision on daily basis	IEs and CSC	Monitored by PFIs
	Carry out external periodic environmental monitoring	PMB, PFIs, independent consultant of IEs on periodic basis	Periodically check by WB
	Collect and record environmental licenses and permits necessary	IEs	Monitored by PFIs, PMB Random check by WB
	Report on sub-project environmental compliance to PFIs for review.	Environmental consultancy of IEs	Reviewed by PFIs, Random check by WB
	Report on whole project environmental compliance to WB and PMB for review	PFIs	Reviewed by WB and PMB

V.3. Review, Approval, and Clearance of Subproject Safeguards Instruments

V.3.1. Review and approval of safeguards instruments

Government's review and approval: If a subproject requires review and approval according to the government EA regulation, IEs will prepare and submit the EA report as required for review and secure the approval by relevant government authorities before subproject approval. The guidelines for appraisal and approval of an EIA or EPP are included in the respective government regulation (namely, Circular 27/2015/TT-BTNMT). Evidence of the approval will be provided to the World Bank for information.

PFI review and clearance: The PFIs will be responsible for prior review the environmental documents of proposed subprojects to ensure it complies with national regulations as well as World Bank safeguard policies.

World Bank review and clearance: The Bank will review screening results and selectively review environmental documents of about 30% of total subprojects. The Bank will review and clear the environmental reports of all the subprojects defined as category A in line with the WB's safeguard policies. In addition, for the category A subproject, before preparing EIA, the subproject owner shall prepare TOR for the EIA report and send to the WB for prior review

and clearance.

If the EA report is satisfactory, the World Bank will issue its clearance memo. If the EA report needs to be improved, the World Bank will request IE to revise or issue a conditional clearance with the understanding that IE will revise the EA to satisfy the World Bank for the final clearance.

The PFIs review and clearance: The PFIs shall review and provide clearance for the environmental documents of other category B subprojects, which is not selected to be reviewed by the World Bank.

PFIs and IEs are responsible to record and keep all safeguard documentation (Environmental screening forms, EIA/EPP/EMP consultation records, confirmation on public disclosure, environmental monitoring records, and waste collection contracts etc.) related to sub-projects. Safeguard implementation is a part of progress implementation report that PFIs will submit to the World Bank prior to supervision mission.

V.3.2. Public consultation and disclosure of safeguard instruments

During preparation of EIA/EMP/EPP, IEs will conduct public consultations to take the view of relevant stakeholders into account as required by national regulations and the WB's safeguard policies.

Regarding the national regulation, the requirements on public consultation are prescribed at Decree 18/2015/ND-CP and Circular 27/2015/TT-BTNMT. Concretely, during EIA preparation, IEs will consult commune-level People Committee and representatives of residential community and organization which is directly affected by the subproject. During EMP/EPP preparation, IEs will consult with the potential affected people.

The Bank's safeguard policies require that for all category A and B project, during the EA process, the IEs to consult with project affected people (PAPs) and local nongovernmental organizations (NGOs). For Category A subprojects, the IEs consults these groups at least twice: (a) shortly after environmental screening and before the terms of reference for the EA are finalized; and (b) once a draft EA report is prepared. In addition, the IEs consults with such groups throughout project implementation as necessary to address EA-related issues that affect them.

During the preparation of EIA/EPP/EMP document, public consultation must be carried out in a form convenient to the local people (e.g. survey, meeting, leaflet, signboard etc.) and information on the main findings of environmental impacts and proposed mitigation measures must be provided in the local language understandable for the majority of the affected people. The public consultation activities - including date, location, and publication form, comment from consulted people and response from subproject owner (IEs) - shall be documented and taken into account into finalization of EIA/EMP/EPP report.

V.3.3. Disclosure of EA documents

During subproject preparation, all EIA/EMP/EPP for subprojects must be disclosed in a timely manner, in an accessible place, in a form and language understandable to stakeholders.

The PFIs should confirm with the Bank that hard copies of draft EMP/EIA (in Vietnamese) are disclosed locally at the subproject area, at the PFI office and websites, and Commune

People Committee's office, and accessible to the public and the time for such disclosure. Information disclosure of all subprojects will be done before the appraisal of the Economic-Technical Report or Feasibility Study of the subprojects.

For category A subproject, the IE must send the EIA report in English language to the WB to disclose in the Infoshop. An Executive Summary of the EIA should also be prepared and disclosed in both English and local language.

V.4. Implementation, Supervision, Monitoring, and Reporting

V.4.1. Implementation

During the subproject implementation, the IEs will have the overall responsibility to ensure the effective implementation of safeguard requirements as set out in the approved/cleared environmental documents (EIA/EMP/EPP).

Concretely, IEs shall incorporate EMPs/ECOPs into included in bidding and contractual documents. Pursuant to the contract, the construction Contractor is responsible for carry out mitigation measures as described in EMP/ during the subproject implementation.

V.4.2. Supervision and Monitoring

During subproject implementation, the mitigation measures outlined in the EIA/EMP/EPP should be monitored to ensure that they are implemented in a timely and adequately manner. In some cases, it is necessary to take additional measures to ensure that all arising impacts are adequately addressed.

Internal monitoring

In additional, IEs will assign a staff or hire construction supervision consultant (CSC) to assist IEs in supervising the contractor's implementation of mitigation measures set out in approved/cleared EIA/EMP/EPP. The CSC will assist IE to supervise the contractors safeguard performance on daily basis.

IEs will contract with an independent environmental consultant to carry out environmental quality monitoring on the soil, air and water quality, as set out in approved EIA/EMP/EPP. The results will be reported in document to IE. IE shall submit the periodic monitoring reports to PFIs, functional authorities and stakeholders (if required).

External monitoring

- Local authorities (DONRE/MONRE) are responsible inspection for compliance with approved EIA/PP by IEs.

- PFIs will periodically conduct monitoring safeguard compliance of IEs during the subproject implementation and 1st year of operation.

- The PMB will also hire consultant to carry out independent monitoring on safeguard implementation of IEs and PFIs. Generally, it will be at least twice per year category A subproject and at least one per year for category B subproject. The monitoring on IEs performance shall be conducted during subproject implementation and 1st year of subproject operation phase.

- Local communities are encouraged to participate supervision. If there are complaints from local subproject-affected groups, IE should send staffs in a timely fashion to assess the validity of complaints and take any necessary actions to remedy the situation. Reporting on the implementation of the EMP should be sent to the PFIs as part of the progress reports.

- WB will provide technical guidance if necessary to PFIs to enable them fulfill their supervision responsibilities and related reporting and documentation requirements.

V.4.3. Reporting

The enterprises (IE) will prepare periodic reports on implementation of mitigation measures and internal monitoring as scheduled in EIA/EMP/EPP reports. These reports shall be sent to PFIs every 06 month during the subproject implementation and first year of operation.

The PFIs shall submit the biannually environmental monitoring reports on its financed subprojects to PMB about 04 weeks before the WB's implementation support mission.

The PMB will incorporates its monitoring results (every 06 month) and the results from PFIs and submit one integrated monitoring reports to the WB before each implementation support mission.

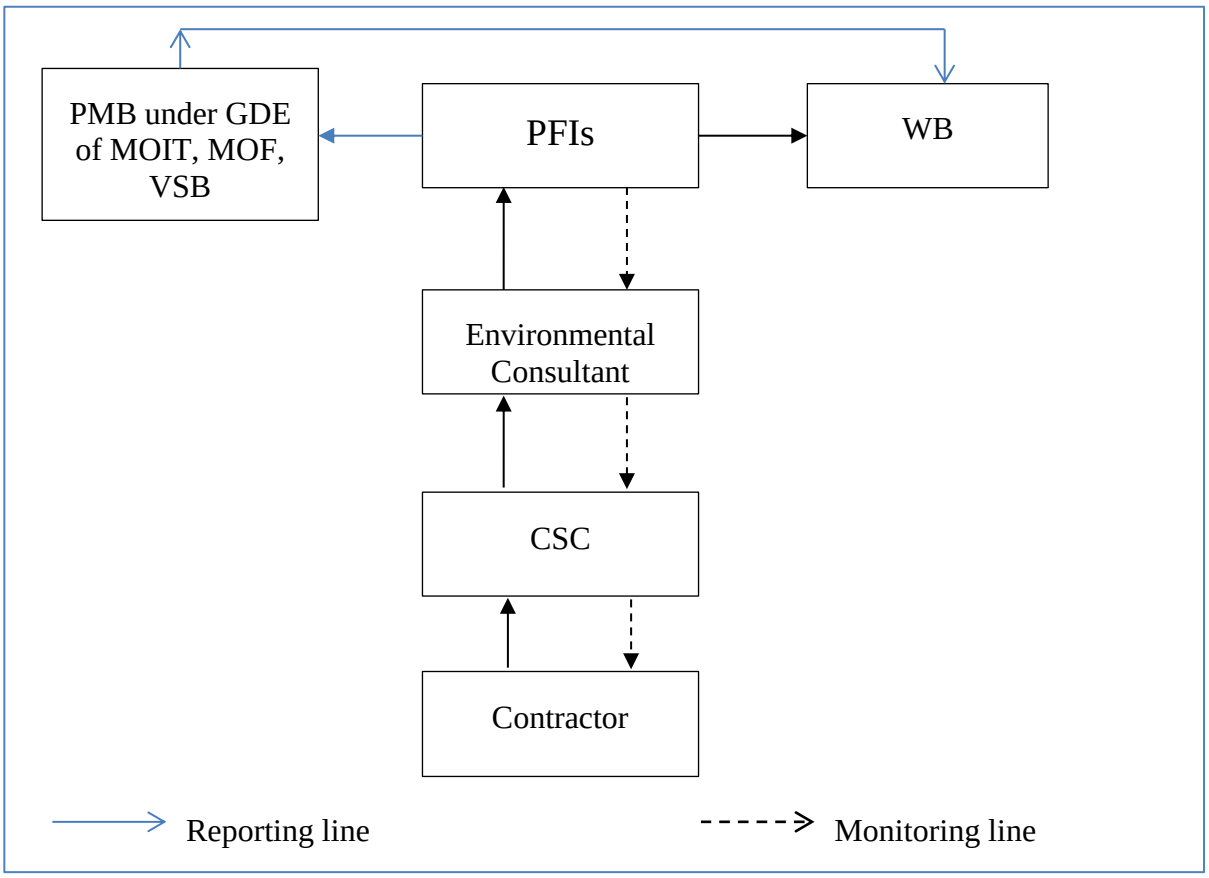


Figure 4. Reporting system

V.5. Safeguard requirements for activities under project component 2

By design, the VEEIEs Project involves the small construction activities for installation or

replacement of energy efficient technologies and equipment under Component 1. The Project only triggers the WB safeguard policy on Environmental Assessment (OP/BP 4.01) and Physical Cultural Resources (OP/BP 4.11); Indigenous Peoples (OP/BP 4.10) Involuntary Resettlement (OP/BP 4.12). Any subproject triggering other safeguard policies will be excluded from Bank financing.

The Technical Assistant (TA) under component 2 mostly involve capacity building activities. These activities usually do not have potential adverse environmental and social impacts and risk. In fact, it would result in enhancement of safeguard performance of subproject under Component 1. For that, these TA are categorized as C and none safeguard instrument will need to be prepared for these activities.

Nevertheless, under Component 2, it is indicated that technical pre-feasibility studies will be carried out for pipeline support for the food processing industry under Canadian Externally Finance outputs. For these studies, the TOR for these pre-FS will include requirements on screening, analysis, and on environmental and social aspects so as to ensure that the proposed activities are in accordance to the Bank safeguard policies and the national regulations

VI. IMPLEMENTATION ARRANGEMENT

VI.1. Responsibility for ESMF Implementation

The executing agency will be the General Directorate of Energy (GDE) of the Ministry of Industry and Trade (MoIT) with a central Project Management Board (PMB), which is the current Project Management Board (PMB) for Clean production and Energy Efficiency (CPEE) under General Directorate of Energy, will coordinate and supervise VEEIEs implementation its.

The PMB will be responsible for managing and supervising overall VEEIEs, monitoring VEEIEs progress, including safeguard compliance and reporting regularly to MOIT and WB. The PMB will also manage all technical assistance activities under VEEIEs and will make requests to MOF to make the TA-related payments from the special accounts established under VEEIEs.

Selected PFIs will be responsible to implement the credit line component and have full responsibility for the EE lending process and approvals, following the agreed OM and bear all associated credit risks. Each PFI will form a Project Implementation Unit (PIU) with dedicated teams, supported by technical, safeguard and procurement experts. The PIU will implement the sub-lending activities and act as the PFI's focal point to interact with the Bank, MOIT, MOF and other stakeholders. The PIU is also responsible for primary screening for eligibility of the project.

PFIs are responsible for appraisal and evaluation of subprojects and bear all associated risks regarding the loans to IEs. The PFIs will supervise/monitor all subloans to ensure they are implemented according to Vietnamese and Bank requirements and guidelines, and provide periodic reports including fiduciary and safeguards reports to MOIT, MOF and the Bank. Independent auditors will be selected to conduct annual project audit on PFIs and IEs performance.

A detailed project OM, covering technical, fiduciary, safeguards and management requirements and procedures will be prepared. The ESMF will be incorporated in the OM.The OM will define the detailed eligibility criteria for sub-projects.

Industrial Enterprises will approach participating banks with subprojects for which all requisite approvals have been secured. The participating industrial enterprises (IEs) will be accountable for implementing safeguard requirements of specified activities under VEEIEs. The responsibility of PMB, PFIs, IEs as well as other stakeholders for ESMF implementation is described in below figure and the Table 7.

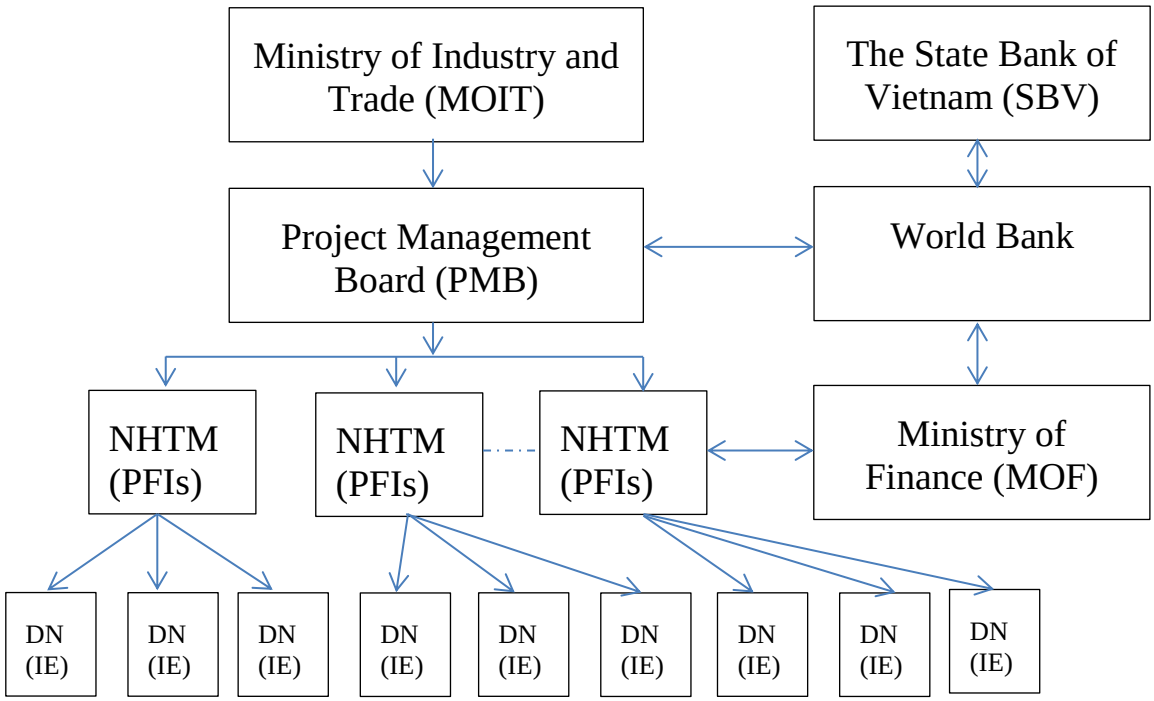


Figure 5. Implementation organization structure of VEEIEs

Table 7. Stakeholders' responsibilities for ESMF implementation

Community/agencies	**Responsibilities**
Ministry of Industry and Trade (MOIT)	- Overall supervision of project implementation, coordination with line ministries; - Enable the PMB to carry out all necessary work required for the successful implementation of VEEIES; - Where required, provide the required reviews and approvals in a timely manner; - Participate in WB supervision/evaluation missions; - Assist the PMB in solving problems which might occur during implementation; - Coordinate with other line ministries for project restructuring, if needed.
Project Management Board (PMB) under GDE of MOIT	- Responsible for day-today overall management and coordination of VEEIES, - Hire consultant to carry out safeguard capacity building for PFIs - Monitoring the safeguard implementation of PFIs and IEs

Community/agencies	Responsibilities
	- Review safeguard monitoring reports submitted to the PMB by PFIs, IEs; - Reporting to MOIT and the WB on overall safeguard performance of VEEIs
World Bank	- Conduct project safeguard supervision and provide guidance, capacity to the PMB/PFIs in project implementation including safeguard execution. - Review and clear the TOR for category A subprojects - Conduct prior review and provide clearance of safeguard documents for all category A and selected category B subprojects.
Participating Finance Institution (PFIs)	- Each PFI will set up one Project Implementing Unit (PIU) and assign one environmental and social designated staff responsible for safeguard evaluation and monitoring of subproject during the implementation - Screening, reviewing and appraisal of Environmental Documents (during preparation) and monitoring reports (during implementation) from IEs - Monitoring the implementation of environment and safety compliance by contractor/equipment supplier during implementation and during 1st year of operation by - Report on implementation including environmental compliance to WB and PMB for review
Industrial Enterprises (IEs)	- Preparing appropriate environmental documents required by Vietnamese law and WB - Obtain approval and clearance of the safeguard document in line with the national regulation and the WB's safeguard policies - Carrying out mitigation measures to mitigate impacts as specified in approved environmental safeguard documents - Internal monitoring the implementation of mitigation measures by contractors - Report on sub-project environmental compliance to PFIs
Environmental Consultant (EC)	- During the preparation period, the EC is hired by IEs as necessary to prepare the Environmental Monitoring Reports as required by the sub-project. - For all the subproject determined as category A subproject, the environmental documents should be prepared by competent firms. - The TOR for consultant prepare the category A subproject has to be submitted to the Bank for prior review - During the operation period, the IEs shall hire consultant to conduct internal monitoring as described in the approved/cleared EA documents.
Contractor	- Responsible for carrying out mitigation measures and self-monitoring during construction. It is required that the

Community/agencies	Responsibilities
	contractor get all permissions for construction (waste disposal, traffic control and diversion, excavation, labor safety, etc. before civil works) following current regulations.
Construction Supervision Consultant (CSC)	- The CSC will be responsible for routine supervising and monitoring all construction activities and for ensuring that Contractors comply with the requirements of the contracts and the EMP/ECOP. - Assists IE in reporting and maintaining close coordination with the local community.
Local authorities including DONRE	- Approving environmental reports (EIA/EPP) and carry out environmental monitoring as mandated by GoV regulations.
Local communities	- According to Vietnamese practice, the community has the right and responsibility to routinely monitor environmental performance during construction to ensure that their rights and safety are adequately protected and that the mitigation measures are effectively implemented by contractors and the IA. If unexpected problems occur, they will report to the CSC/IE.
Social organizations, NGOs and civil society groups	- These organizations could be a bridge between the PPC/DPC, communities, contractors, and the PMB by assisting in community monitoring. - Mobilizing communities' participation in the subproject, providing training to communities. - Participating in solving environmental problems, if any.

VI.2. Incorporation of ESMF into Project Operational Manual

It is imperative to look at Project Operational Manual (POM) with frameworks. The POM should have sections on environmental issues/procedures. These sections should provide links to: (i) subproject screening; (ii) appropriate mitigation actions and/or checklists; (iii) practical pre-tested safeguard forms used at field subproject level; (iv) development of supplemental tools/guidance; (v) details on how monitoring and evaluation for safeguards will be undertaken; and (vi) definition and role of third party auditing.

VII. CAPACITY BUILDING, TRAINING AND TECHNICAL ASSISSTANCE

VII.1. Institutional Capacity Assessment

The potential PFIs include Vietcombank, BIDV, Vietinbank, HSB, Techcombank. Among those, the BIDV and Vietinbank have respectively participated in Rural Finance 3 Project (RF3) and Renewable Energy Project , support by the Bank. As such, they are quite familiar with safeguard requirements of the World Bank. Still, other potential PFIs have not experienced with the WB's safeguard policies. The MOIT has engaged in several WB's funded project. However, it is unlikely that the environmental staff assigned for previous project could be participated in the VEEIEs project. The IEs are also new to the Bank's safeguard policies. Overall, knowledge and experience of relevant stakeholders i.e. PFIs, PMB and IEs on WB's safeguard requirements are considered limited and thus close support and capacity building especially during the first year of the project implementation is needed.

VII.2. Training

Given that most of the key mitigation measures are good engineering practices, the safeguard training should focus on increasing knowledge on (a) safeguard policy and procedures to implement the safeguard instruments (EMP/ESMF) designed for the Project and subproject (b) specific training on supervision and monitoring Contractor and EC on environmental protection performance, including forms and reporting process, and (c) general knowledge on good construction practices for mitigating potential impacts on local environment and safety aspects.

Based on actual demands in ESMF implementation, a capacity building and training program for relevant agencies is established as shown in Table 8 below. The cost for capacity building program is included in cost for safeguard implementation.

Table 8. Proposed programs on capacity building on environmental management

Training content	Subject to be trained	No of trainees	Training time	Organization unit	Budget
Training on the safeguard implementation	PMB staffs; Environmental consultancy, IEs, PFIs	200	In sub-project's preparation stage.	PMB in coordination with Environmental Consultant	A part of environmental consultant contract

VII.3. Technical Assistance

Given the number of the subprojects and its nature/locations, it is anticipated that at least 2 safeguard training courses should be provided during the first two years of VEEIE project implementation. The training should focus on the screening and appraisal of environmental document during the subproject preparation; knowledge, policies, and procedures related to environment issues could be completed before construction start; monitoring the

environmental compliance of IEs during subproject implementation. All key staff responsible for the activities should participate in the training. The supervision of contractor training should be conducted at least 1 month before the construction. The key participants should include PFI environmental staff, IEs and its environmental consultant, and representatives from local agencies, local communities, and/or mass organizations, responsible for supervision of contractor.

VIII. ESMF IMPLEMENTATION BUDGET

Estimated budget and financial source for ESMF implementation

Activities	Financial Source
PMB's capacity building for PFIs, IE PMB monitoring on PFIs, IEs' safeguard performance	IBRD, part of technical assistant cost under component 3
Safeguard designated staff under PIU of each PFI	PFIs banking
Development of subproject environmental documents	IEs
Implementation of mitigation measures	As part of construction/installation contracts
Internal monitoring by CSC, IEs during subproject implementation	IBRD, as part of the subproject investment

IX. GRIEVANCE AND REDRESS MECHANISM

This grievance and redress mechanism mentioned bellow is applied not only this framework but also in RPF and EMPF.

The IE shall establish a complaints and grievances mechanism to receive and resolve the resettlement issues of project-affected communities/person. The mechanism shall be based on principles as (i) proportionality; (ii) accessibility; (iii) transparency; and (iv) cultural appropriateness as follows.

(i) Proportionality means scaling the mechanism to the project needs. In a project with low potential adverse impacts, simple and direct mechanisms for problem solving is preferred for addressing and resolving complaints such as public meetings, telephone hotline, existing media, brochures, and a community liaison officer;

(ii) Accessibility means establishing a mechanism which is clear, free of charge and easy to access for all segments of the affected communities and other potential stakeholders. The best way of achieving this is to localize the point of contact. This is valid both for the owner and its construction contractor. Related to that, staff with the appropriate skills, training and familiarity with community liaison work should be employed in the field as quickly as possible. Accessibility enables owner to build more constructive

relationships with local communities. This will also help intervene quickly in any dispute or environmental issues and in an appropriate manner because maintaining a regular presence of a familiar face in the field greatly helps engendering trust and thus, constructive and closer relations;

(iii) Transparency means that members of the affected communities know who is responsible for handling the complaints and communicating the outcomes of corrective actions to be taken about the complaints. This will be helpful in that people have confidence in the grievance mechanism to be used both by project owner and the construction contractor;

(iv) Culturally appropriateness means having cultural sensitiveness while designing and executing the grievance mechanism.

To implement these principles, the IE will be accessible to its stakeholders and should respond to their complaints in the shortest possible time. The critical issue for responding to complaints is to ensure that all received complaints are recorded; relevant division of the IE is responsive to complaints; and that corrective actions are mutually acceptable. Thus, responses to complaints will be satisfactory for both parties, actions are followed up, and the complainants will be informed about the outcomes of the corrective actions (see Figure 6).

In case, there is no agreement between the parties and the project affected communities/person, complaints and grievances shall be submitted to local and state government justice system with responsibilities as follows.

VEEIE level - At Commune People's Committee (CPC)

An aggrieved affected household may bring his/her complaint before the receiving department of a Commune People's Committee to be received and guided for necessary procedures. The CPC will meet personally with the aggrieved affected household and will have 5 days following the lodging of the complaint to resolve it (Note: in remote and mountainous areas, the complaint should be resolved within 15 days. The CPC secretariat is responsible for documenting and keeping file of all complaints that it handles. Upon issuance of decision of CPC, the complainants can make an appeal within 30 days. If the second decision has been issued and the household is still not satisfied with the decision, the household can elevate his/her complaint to the DPC.

Second level - At District People's Committee (DPC)

Upon receipt of a complaint from a household, the DPC will have 15 days (or 45 days in remote and mountainous areas) following the lodging of the complaint to resolve the case. The DPC is responsible for documenting and keeping file of all complaints that it handles. Upon issuance of decision of DPC, the complainants can make an appeal within 30 days. If the second decision has been issued and the household is still not satisfied with the decision, the household can elevate his/her complaint to the PPC.

Third level - At Provincial People's Committee (PPC)

Upon receipt of complaint from the household, the PPC will have 30 days (or 45 days in remote and mountainous areas) following the lodging of the complaint to resolve the case. The PPC is responsible for documenting and keeping file of all complaints. Upon issuance of

decision of PPC, the household can make an appeal within 45 days. If the second decision has been issued and the household is still not satisfied with the decision, the household can elevate his/her complaint to the court within 45 days.

Final level - Court of Law Decides

Should the complainant file his/her case to the court and the court rule in favor of the complainant, then provincial government agency will have to increase the compensation at a level to be decided by the court. In case the court will rule in favor of PPC, the complainant will have to receive compensation as described in the approved compensation plan and comply with all requirements of land clearance.

To assure that the mechanism described above is pragmatic and acceptable to affected communities/persons, consultations with local authorities and affected communities about this mechanism is in need, particularly consultations with vulnerable groups.

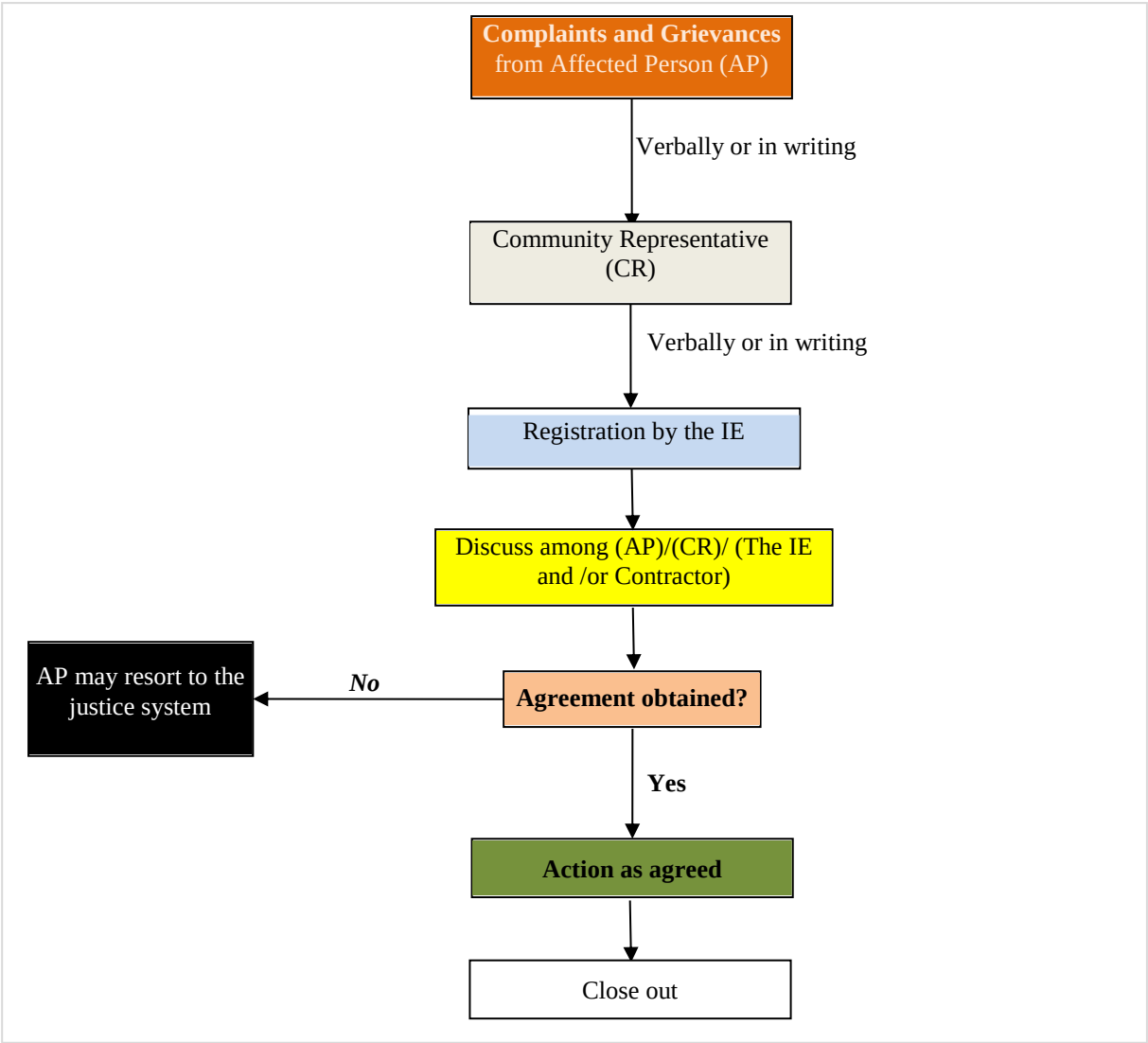


Figure 6. Basic Complaints and Grievances Mechanism of the Project

X. ESMF CONSULTATION AND DISCLOSURE

Public consultation and disclosure of the VEEIE phase subproject EIAs and EMPs will be

carried during project preparation. Consultation with people and households directly or indirectly affected by the project, local authorities, central and local state agencies, and mass organizations will be conducted at the subproject level.

In the process of preparing this ESMF, a consultation workshop on the ESMF was held in 9th Octorber 2015. One week before the public consultation, the invitation to the consultation workshop and draft ESMF were sent to relevant stakeholders including PMB, representatives of MOIT, local consultant and potential participating PFIs.

Key participants included staff of implementing PMBs, representatives of MoIT, and local consultants. The consultations aimed to explore the potential social and environmental impacts of the project so as to, on the basis of the findings, inform project design/intervention strategy, as well as develop appropriate safeguards instruments. The draft ESMF has been circulated to concerned ministries and project provinces to receive additional comments before finalization. Opinions and concerns provided during the consultations were taken into account in the preparation and finalization of the ESMF.

The result of the public consultation focused on some points as below:

- To clarify the scope of these frameworks (available projects or potential projects, inside or outside of plants' boundaries, environment safeguard and social assessment etc.) and so that it is simple and easy to apply by IE;
- To clarify responsibilities on approving these policy frameworks.
- To update new policies on environmental protection and clean technologies of MOIT;
- The social sections (gender, occupations etc.) should be assessed more detailed;
- To facilitate projects' public consultations and monitoring to be more effectively and strictly.

The draft ESMF in Vietnamese has been properly disclosed locally at the MOIT office on 01 October before the public consultation. The final draft ESMF in Vietnamese language will be disclosed at MOIT website and the draft ESMF in English language will be disclosed at the Bank Infoshop prior to the appraisal mission.

XI. ANNEXES

The following annexes have been prepared to assist IEs and the PFI in the implementation of the VEEIEs Environmental Safeguards Framework. A description of each Annex follows:

- **Annex 1**: Environmental and Social Safeguard Checklist
- **Annex 2:** Environmental and Social Impact Screening
- **Annex 3**: Guidance for Preparation of an Environmental Management Plan
- **nex 4:** Environmental Codes of Practice (ECOPs).
- **Annex 5**: PCB Management Procedure
- **Annex 6**: Minutes of Public consultation

Annex 1. Environmental and social safeguards checklist

With all sub-project/activities under Component 1 of VEEIE project, the PFI environmental staff/consultant will do screening to determine the eligibility of subprojects.

The PFI environmental staff or/and consultant will complete the checklist. The VEEI will finance the subproject which

By indicating "Yes" to any safeguard policy other than OP4.01,OP/BP 4.1, OP/BP4.10 and OP/BP4.12 the sub-project will be considered.

Note: if any policy is triggered by the sub-project, the project's owner must indicate the severity of the potential impact as instructed in the Table below. If not, the sub-project will be considered as environmentally non-eligible.

Environmental Assessment	Does the project have the potential for adverse environmental or social risks and impacts in its area of influence	No	Yes *If Yes, indicate here the potential severity for the impact and proposed project design elements that will help prevent potential adverse impacts*	
Natural Habitats	The Bank does not finance projects that degrade or convert critical habitats (protected areas or sites important for biodiversity). Do the project activities have the potential to cause significant conversion (loss) or degradation of non-critical natural habitats? (The loss can occur either directly e.g. construction activities) or indirectly (through human activities induced by the project)	No	Yes *If Yes, indicate here either proposed alternative sites(s) or if no alternative sites are available proposed project design elements that will help prevent potential adverse impacts*	
Pest management	Are any pesticides or procurement of pesticide equipment being financed by the project	No	Yes *If Yes, indicate here proposed project design elements (integrated Pest management) that will help prevent potential adverse impacts*	
	Does the project introduce new pest management practices or expand or alter existing pest management practices	No		
	Are there other project activates that may lead to substantially increased pesticide use	No		

	Does the project include the manufacture or disposal of environmentally significant quantities of pest control products?	No		
Forests	Does the project have the potential to have an impact on the health and quality of forests or the rights and welfare of people and their level of dependence upon or interaction with forests?	No	Yes *If Yes, indicate here proposed project design elements that will help prevent potential adverse impacts*	
	Does the project aim to bring about changes in the management, protection, or utilization of natural forests or plantations	No	*Yes* *If Yes, indicate whether the management will ensure sustainability of the forest resources*	
Safety of Dams	Are any project activities related to the construction for a large-scale dam?	No	Yes	
Cultural property	Would project activities likely adversely affect physical cultural resources? These could be temples, burial sites, or archeological sites	No	Yes *If Yes, indicate here proposed project design elements that will help prevent potential adverse impacts*	
Projects in international Waterways	Are project activities being conducted in international waterway	No	*Yes* *If Yes, please contact to the Bank for further information*	
Involuntary Resettlement	Is there any possibility that project activities would displace persons involuntarily? Please note that loss of land or other assets caused by: (i) relocation or loss of shelter; (ii) loss access to assets in protected areas resulting in adverse impacts on livelihoods; (iii) loss of income sources or means of livelihood, whether or not the affected people must move to another location. If Land is acquired and no person is involuntarily displaced, the policy is not triggered.		Yes *If Yes, refer to Resettlement Plan Framework*	

Indigenous peoples (ethnic minorities)	Would the project likely have negative impacts on ethnic minorities or have the potential to bring positive benefits to ethnic minorities		Yes *If Yes, refer to Ethnic Minority Plan Framework*	

Date	Screened by (full name and signature)	Verified by (Sign and stamp by the PFIs director)

Annex 2. Subproject Environmental and Social Impact Screening Checklist

This subproject screening checklist is intended for the use of PFIs so that they can determine the appropriate type of safeguards documentation that will be required by the World Bank for the subproject, in conformance with the ESMF for the Project.

The PFI is encouraged to send this checklist to the Task Team Leader (TTL) to ensure that the World Bank agrees with the results of the screening prior to the Borrower's hiring of consultants to prepare safeguard documents.

NAME OF PROJECT

Subproject Name:

Subproject Location: *(e.g. region, district, etc.)*

Type of activity: *(e.g. new construction, rehabilitation, periodic maintenance)*

Subproject Owner and Address:

Environmental Category of the Main Project: (e.g., A or B)

1. Eligibility Screening

Eligibility screening is conducted to determine if a subproject is eligible for funding under the project. To avoid significant adverse environmental and social impacts, some projects may include criteria for ineligibility or have an ineligible activity list to screen out subprojects. .These criteria or the ineligible list are included in the ESMF and during the project implementation subprojects are screened against these criteria.

In addition, there are certain types of projects that the World Bank does not fund at all (consult the World Banksafeguards policies).Please note that the owner of the subproject is expected to comply with all national legislation and standards and with obligations (standards, restrictions or similar) of the country under international conventions, treaties, agreements and protocols.

2. Environmental and Social Impact Screening

The impact environmental screening of each proposed subproject is to determine the appropriate extent and type of Environmental Assessment. The outcome of this screening is used to classify the subprojects into one of three categories, depending on the type, location, sensitivity, and scale of the subproject and the nature and magnitude of its potential environmental impacts (OP 4.01, paragraph 8).

(a) Category A: A proposed project is classified as Category A if it is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works.

(b) Category B: A proposed project is classified as Category B if its potential adverse environmental impacts on human populations or environmentally important areas - including wetlands, forests, grasslands, and other natural habitats - are less adverse than those of Category A projects. These impacts are site-specific; few if any of

them are irreversible; and in most cases mitigatory measures can be designed more readily than for Category A projects.

(c) Category C: A proposed project is classified as Category C if it is likely to have minimal or no adverse environmental impacts. Beyond screening, no further EA action is required for a Category C project.

2.1 Category A Screening Criteria

The following set of screening questions is intended to determine if the subproject has the potential to cause significant adverse impacts (i.e., is the subproject a Category A).

Table 1.Category A Screening Criteria			
Screening Questions	**Yes**	**No**	**Remarks**
1. Does the subproject have the potential to cause significant adverse impacts to natural or critical natural habitats?			
Leads to loss or degradation of sensitive Natural Habitats defined as: land and water areas where (i) the ecosystems' bio-logical communities are formed largely by native plant and animal species, and (ii) human activity has not essentially modified the area's primary ecological functions. Important natural habitats may occur in tropical humid, dry, and cloud forests; temperate and boreal forests; Mediterranean-type shrub lands; natural arid and semi-arid lands; mangrove swamps, coastal marshes, and other wetlands; estuaries; sea grass beds; coral reefs; freshwater lakes and rivers; alpine and sub alpine environments, including herb fields, grasslands, and paramos; and tropical and temperate grasslands.			Indicate location and type of natural habitat and the kind of impacts that could occur, e.g., loss of habitat and how much, loss of ecosystem services, effects on the quality of the habitat. State why these impacts are or are not significant. Note that the World Bank does not support projects involving the significant conversion of natural habitats unless there are no feasible alternatives for the project and its siting, and comprehensive analysis demonstrates that overall benefits from the project substantially outweigh the environmental costs.
Leads to loss or degradation of Critical natural habitat, i.e., habitat that is legally protected, officially proposed for protection, or unprotected but of known high conservation value. Critical habitats include existing protected areas and areas officially proposed by governments as protected areas (e.g., reserves that meet the criteria of the World Conservation Union [IUCN] classifications, areas initially recognized as protected by traditional local communities (e.g., sacred groves), and sites that maintain conditions vital for the viability of these protected areas. Sites may include areas with known high suitability for bio-diversity conservation; and sites that are critical for rare, vulnerable, migratory, or endangered species.			Note that the World Bank cannot fund any projects that result in significant conversion or degradation of critical natural habitats. Indicate location and type of critical natural habitat and state why they are or are not significant.

2. Does the subproject have the potential to cause significant adverse impacts to physical cultural resources?			
Leads to loss or degradation of physical cultural resources, defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. They may be located in urban or rural settings, above or below ground, or under water. Their cultural interest may be at the local, provincial or national level, or within the international community.			Describe location and type of cultural resources and the kind of impacts that could occur. State the level of protection (local, provincial, national or international).Are any of these sites considered important to preserve in situ, meaning that the resources should not be removed from their current location? State why impacts are or are not significant.
Potentially results in a contravention of national legislation, or national obligations under relevant international environmental treaties and agreements, including the UNESCO World Heritage Convention or affect sites with known and important tourism or scientific interest.			Describe any impacts that might contravene national or international legislation concerning cultural resources. If considered not significant, explain why.
3. Does the subproject have the potential to cause significant adverse impacts on the lands and related natural resources used by ethnic minorities?			
Potentially result in impacts on lands or territories that are traditionally owned, or customarily used or occupied, and where access to natural resources is vital to the sustainability of cultures and livelihoods of minority peoples. Potentially impact the cultural and spiritual values attributed to such lands and resources or impact natural resources management and the long-term sustainability of the affected resources.			Describe the type and extent of impacts and the significance of alterations to the resources of the affected minorities. Note that an Ethnic Minority Development Plan will also be required in accordance with World Bank OP 4.10.
4. Does the subproject have the potential to cause significant adverse effects to populations subject to physical displacement?			
Leads to physical displacement of populations dependent upon lands or use of specific use of resources that would be difficult to replace or restore? Otherwise lead to difficult issues in the ability of the subproject to restore livelihoods?			Indicate the numbers of households affected and the resources that will be difficult to replace in order to achieve livelihood restoration. Note that a Resettlement Action Plan will need to be prepared in accordance with World Bank OP 4.12.
5. Does the subproject entail the construction of a large dam?			
Does the subproject require construction of a dam that is: • 15 meters or more in height • between 10 and 15 meters in height with special design complexities--for example, an unusually large flood-handling requirement, location in a zone of high seismicity, foundations that are complex and difficult to			Describe the issues and note the requirements of OP 4.37 concerning the appointment of an Independent Panel of Experts.

prepare, or retention of toxic materials. • under 10 meters in height but expected to become large dams during the operation of the subproject?			
Does the operation of the subproject rely on the performance of: • an existing dam or a dam under construction (DUC); • power stations or water supply systems that draw directly from a reservoir controlled by an existing dam or a DUC; • diversion dams or hydraulic structures downstream from an existing dam or a DUC, where failure of the upstream dam could cause extensive damage to or failure of the new World Bank-financed structure and irrigation or water supply projects that will depend on the storage and operation of an existing dam or a DUC for their supply of water and could not function if the dam failed.			If yes, this may not always mean that a Category A EIA is required, but special care must be taken, because the World Bank has specific requirements to ensure the safety of the performance of the existing dam or dam under construction. World Bank requires inspection and evaluation of dam or DUC, its performance and operation and maintenance procedures, and recommendations for any remedial work or safety-related measures; previous assessments can also evaluated.
6. Does the subproject entail the procurement or use of pesticides?			
Do the formulations of the products fall in World Health Organization classes IA and IB, or are there formulations of products in Class II?,			If yes, this may not always mean that a Category A EIA is required, but special care must be taken. The World Bank will not finance such products, if (a) the country lacks restrictions on their distribution and use; or (b) they are likely to be used by, or be accessible to, lay personnel, farmers, or others without training, equipment, and facilities to handle, store, and apply these products properly.
7. Does the subproject have the potential to cause irreversible impacts or impacts that are not easily mitigated?			
Leads to loss of aquifer recharge areas, affects the quality of water storage and catchments responsible for potable water supply to major population centers.			Name the water bodies affected and describe magnitude of impacts.
Leads to any impacts such that the duration of the impacts is relatively permanent, affects an extensive geographic area or impacts have a high intensity.			Describe any impacts considered to be permanent, affecting a large geographic area (define) and high intensity impacts.
8. Does the subproject have the potential to result in a broad diversity of significant adverse impacts?			
Multiple sites in different locations affected each of which could cause significant losses of habitat, resources, land or deterioration of the quality of resources.			Identify and describe all affected locations.

Potential, significant adverse impacts likely to extend beyond the sites or facilities for the physical works.			Identify and describe the types of impacts extending beyond the sites or facilities of the physical works.
Transboundary impacts (other than minor alterations to an ongoing waterway activity).			Describe the magnitude of the transboundary impacts.
Need for new access roads, tunnels, canals, power transmission corridors, pipelines, or borrow and disposal areas in currently undeveloped areas.			Describe all activities that are new that are required for the main activity to function.
Interruption of migratory patterns of wildlife, animal herds or pastoralists, nomads or semi-nomads.			Describe how migrations of people and animals are affected.
9. Is the subproject unprecedented?			
Unprecedented at the national level?			Describe why and what aspects are unprecedented.
Unprecedented at the provincial level?			Describe why and what aspects are unprecedented.
10. Is the project highly contentious and likely to attract the attention of NGOs or civil society nationally or internationally?			
Considered risky or likely to have highly controversial aspects.			Describe perceived risks and controversial aspects
Likely to lead to protests or people wanting to demonstrate or prevent its construction.			Describe the reasons that subproject is highly unwelcome.

If the answer is yes to any of the above screening questions, the subproject is likely to be considered a Category A and an EIA meeting World Bank standards, including an EMP, will be required. The PMU is advised to discuss the results of this screening with the TTL, before starting environmental and social studies of the subproject. There are some differences in the World Bank and the government requirements for a World Bank category A project in terms of preparation of TORs, consultation, content and structures of the EIA report. Two separate EIAs to satisfy the World Bank and the government requirements will be needed.

Note: If the main project has not been categorized as a Category A, then any subproject where the answer is "yes" to the screening questions cannot be done.

2.2. Category C Screening Criteria

The following set of screening questions is intended to determine if the subproject has the potential to cause minimal or no adverse impacts (i.e., is a Category C).

Table 2.Category C Screening Criteria			
Screening Questions	**Y**	**N**	**Remarks**
1. Subproject activities are limited to training, technical assistance and capacity building.			Describe activities.
2. Training and capacity building do not require use of chemicals, biological agents, pesticides.			Support this statement.

3. There is no infrastructure to be demolished or built.			Support this statement.
4. There are no interventions that would affect land, water, air, flora, fauna or humans.			Support this statement.
5. If scientific research is being performed, the research is of such a nature that no hazardous or toxic wastes are created and the research does not involve recombinant DNA or other research that would create dangerous agents should they be released from contained, laboratory conditions			If yes, discuss with the World Bank environmental specialists.

2.3 Category B Screening

Many of the subprojects to be proposed will be Category B. They may have similar types of impacts to Category A, but the impacts are not irreversible and they are less extensive, less intensive, less adverse, more easily mitigated, not likely controversial and not unprecedented.

After the screening for Category A and Category C is applied and if the conclusion is reached that the subproject is not A and is not C, then the subproject should be categorized as B.

Category B also requires an EIA or other EA instrument in accordance with the World Bank OP 4.01.The PMU will apply the criteria of the Vietnamese regulation to determine whether to prepare an EIA or an EPC in according with the Law on Environmental Protection and associated EA Decree and Circular. In most cases, an EMP consistent with World Bank policy will be required (see Annex 4). For other case, a simplified EMP or an ECOP should suffice.

The issues that may need to be addressed in a Category B safeguards document are variable and will depend upon the type of subproject, its location and surrounding land uses and the kinds of construction and operational procedures that will be used.

2.4 Environmental and Social Impact Checklist

Table 3 presents a checklist, the purpose of which is to assist the Borrower in preparing the EA instrument, including the EMP.

Table 3.Potential Environmental and Social Impacts to be Addressed							
	Does the subproject entail these environmental impacts?	**No**	**Low**	**Medium**	**High**	**Not known**	***Remarks***
1.	Encroachment on historical/cultural areas						
2.	Encroachment on an ecosystem (e.g. natural habitat sensitive or protected area, national park, nature reserve etc....)						*Describe and briefly assess impact's level*
3.	Disfiguration of landscape and increased waste generation						
4.	Removal of vegetation cover or cutting down of trees during clearance for construction						
5.	Change of surface water quality or water flows (e.g. Increase water turbidity due to run- off, waste water from camp sites and erosion, and construction waste) or long-term.						*Indicate how and when this occurs.*
6.	Increased dust level or add pollutants to the air during construction						*Indicate how and when this occurs*
7.	Increased noise and/or vibration						*Indicate how and when this occurs*
8.	Resettlement of households? If yes, how many households?						
9.	Use of resettlement site that is environmentally and/or culturally sensitive						*Briefly describe the potential impacts*
10.	Risk of disease dissemination from construction workers to the local peoples (and vice versa)?						*Note estimated number of workers to be hired for project construction in the commune/district and what kind of diseases they might introduce or acquire.*
11.	Potential for conflict between construction workers and local peoples (and vice versa)?						
12.	Use of explosive and hazardous chemicals						
13.	Use of sites where, in the past,						

	there were accidents incurred due to landmines or explosive materials remaining from the war						
14.	Construction that could cause disturbance to the transportation, traffic routes, or waterway transport?						
15.	Construction that could cause any damage to the existing local roads, bridges or other rural infrastructures?						
16.	Soil excavation during subproject's construction so as to cause soil erosion						
17.	Need to open new, temporary or permanent, access roads?						*Estimate number of and length of temporary or permanent access roads and their locations*
18.	Separation or fragmentation of habitats of flora and fauna?						*Describe how.*
19.	Long-term impacts on air quality						
20.	Accident risks for workers and community during construction phase						
21.	Use of hazardous or toxic materials and generation of hazardous wastes						
22.	Risks to safety and human health						*Describe how.*
Does the subproject entail land acquisition or restriction of access to resources?							
23.	Acquisition (temporarily or permanently) of land (public or private) for its development						*List land areas for permanent and temporary land acquisition, type of soils, duration and purpose of acquisition*
24.	Use land that is currently occupied or regularly used for productive purposes (e.g., gardening, farming, pasture, fishing locations, forests)						
25..	Displacement of individuals, families or businesses						
26.	Temporary or permanent loss of crops, fruit trees or household infrastructure						
27.	Involuntary restriction of access by people to legally designated parks and protected areas						
If the answer to any of the questions 23-27 is "Yes", please consult the ESMF; preparation of a Resettlement Plan (RP) is likely required.							
A. Are ethnic minority peoples present in the subproject area?							

28.	Ethnic minority groups are living within the boundaries of, or nearby, the subproject.						
29.	Members of these ethnic minority groups in the area potentially could benefit or be harmed from the project.						
	If the answer to questions 28 or 29 is "Yes", please consult the ESMF; and preparation of an Ethnic Minority Development Plan (EMDP is likely required.						
	Does the subproject entail construction of or depend upon a dam?						
30.	Involve the construction of a large dam?						*See Table 1 for definition of a large dam.*
31.	Depend on water supplied from an existing dam or weir or a dam under construction?						*Describe the functional relationship between the subproject and the existing dam or a dam under construction.*
	If the answer to question 30 or 31 is "Yes", please consult the ESMF; a Dam Safety Report (DSR) will likely be required.						
	Does the subproject entail procurement or use of pesticides?						
32.	*What is the World Health Organization's classification of the formulation of the specific pesticides to be used?*						*See Table 1 for additional information on pesticides. To deal with this issue, one must know the types of pesticides proposed.*
	If the answer to question 32 is yes, please consult the ESMF; a Pest Management Plan (PMP) will likely be required.						

3. Next Steps

Describe here what the IEs needs to do. Highly recommend that they submit the screening report for review regarding the categorization

Date

Verified and Screened by

Full name and signature of PFI staff

Annex 3. Guidance for preparation of an Environmental Management Plan

1. Introduction

An Environmental Management Plan (EMP) is a part of the Environmental Assessment (EA) process in World Bank-financed projects. The procedures in OP 4.01, Annex C, which describes the EMP, are mandatory. The definition of an EMP is:

> "A project's environmental management plan (EMP) consists of the set of **mitigation, monitoring, and institutional** measures to be taken during implementation and operation to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels. The plan also includes the actions needed to implement these measures."

The EMP provides an essential link to different instruments in conjunction with EIAs for category A, B, and FI projects, or the ESMF when subprojects are not known in advance; the link between the impacts predicted and mitigation measures specified within an EIA and construction and operational activities. The EMP outlines the anticipated environmental impacts of projects, the measures to be undertaken to mitigate these impacts, responsibilities for mitigation, timescales, costs of mitigation, and sources of funding. Furthermore, EMP lays the framework for continued assessment of potential impacts through the application of monitoring and auditing and consideration of the institutional measures appropriate to accomplish the EMP.

This guidance aims to provide a reference for preparing EMPs for a range of types and scales of development projects/subprojects in different biophysical, social, economic and governance contexts. This guidance identifies the policy framework for preparing EMPs for World Bank-financed activities, outlines the main components of EMPs, and discusses means to ensure that commitments within the EMP are carried through to implementation and operation. This guidance is not intended to replace any World Bank safeguards policy or government regulation.

This guidance is directed at project implementing agencies including project PMUs, environmental impacts assessment consultants, environmental specialists, project proponents, financial institutions and other parties interested in or affected by EMP processes.

2. When an EMP is needed (Category A, B, FI)

The government EIA regulation does not require project proponents to prepare a separate EMP but an Environmental Management and Monitoring Program (EMMP) as a part of an EIA. The EMMP includes project implementation phases, project activities, associated environmental impacts, mitigation measures, cost for mitigation measures, and timeline for implementation measures, implementation arrangement, and responsibility for supervision. The EMMP also includes a monitoring program for monitoring of waste emission, ambient environment quality, and other impacts caused by project. An EMMP is not specifically required for an environmental protection commitment (EPC), but a set mitigation measures, waste treatment facilities, and an environmental monitoring program are required.

The World Bank's Environmental management plan (EMP) is an instrument that details: a) all anticipated adverse environmental impacts (including those involving indigenous people or

involuntary resettlement); b) the mitigation measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental impacts, or to reduce them to acceptable levels; c) monitoring objectives and type of monitoring with linkages to the impacts assessed in the EA report and the mitigation measures described in the EMP; d)the actions needed including institutional arrangements to implement these measures; e) capacity development and training to support timely and effective implementation of environmental project components and mitigation measures; and f) implementation schedule and cost estimates for implementing the EMP, and g) integration of the EMP with project. In comparison with the government EMMP, components of EMP are expressed in more detail; include capacity building, and forging EMP integration into the project's overall planning, design, budget, and implementation.

The EMP is an integral part of Category A EAs (irrespective of other instruments used). EAs for Category B projects may also result in an EMP. The EMP is a valuable tool to: i) define details of who, what, where and when environmental management and mitigation measures are to be implemented; ii) provide government agencies and their contractors, developers and other stakeholders better on-site environmental management control over the life of a project; iii) allow a proponent to ensure their contractors fulfill environmental obligations on their behalf, and; iv) demonstrate due diligence. In addition, the EMP is often required as part of tendering for projects.

Typically, use of an EMP only applies to smaller projects not affecting environmentally sensitive areas, which present issues that are narrow in scope, well defined, and well understood. For small and very small subprojects with very limited and narrow environmental impacts, using simple general mitigation measures such as an environmental code of practice (ECOP) (see Annex 5 for such a kind of ECOP) alone should suffice for addressing environmental impacts. ECOP can also be used in conjunction with EMP for addressing general limited construction impacts.

Examples of projects in the Vietnam portfolio that required EMPs for subprojects (with no World Bank EIA) are: Coastal Resources for Sustainable Development Projects, Rural Distribution Projects, Rural Distribution Project, Red Delta Rural Water Supply and Sanitation Project. Within these projects some subprojects requires only ECOPs. A project of the Human Development Sector, the School Readiness Promotion Project, only requires ECOPs.

The EMP is a “living document” that should be focused on continual improvement and should be updated when there are changes in project design or emerging environmental issues.

3. Objectives of EMP

The EMP outlines the mitigation, monitoring, and institutional measures to be taken during project implementation and operation to avoid or control adverse environmental impacts, and the actions needed to implement these measures. It provides the link between alternative mitigation measures evaluated and described within the EIA/EPC report, and ensuring that such measures are implemented. While project design should incorporate environmental sustainability to the extent possible, the EMP deals with environmental issues that cannot be avoided through design. Therefore, the objectives of an EMP should include:

- Ensuring compliance with the applicable provincial, national, laws, regulations, standards, and guidelines
- Ensuring that there is sufficient allocation of resources on the project budget for implementation of EMP-related activities
- Ensuring that environmental risks associated with a project property managed
- Responding to emerging and unforeseen environmental issues not identified in the project EIA
- Providing feedback for continual improvement in environmental performance.

The EMP is a basis for negotiation and reaching agreement between the World Bank and Borrowers on a project's key social and environmental performance. Its implementation becomes a legal obligation of the Borrower (in Loan Agreement) and contractors (in contracts).

An EMP can be a site or project-specific plan developed to ensure that appropriate environmental management practices are followed during a project construction or operation phase. A project EMP is developed by the Borrower, while a site-specific EMP or a construction EMP is usually prepared by contractors, in accordance with requirements of bidding documents (to which it is good practice to attach the project EMP). This guidance covers project EMP.

4. Who Should Prepare an EMP?

A project proponent retains primary responsibility for the environmental performance of its projects. As such, the proponent is responsible for ensuring the preparation and implementation of an acceptable project EMP whether for construction or operation. In most cases, during the project preparation, the World Bank would provide both the PMU and an EMP consultant with technical assistance for preparation of the EMP. During appraisal, the World Bank reviews the EMP with the Borrower, to assess the adequacy of the institutions responsible for environmental management, to ensure that the EMP is adequately budgeted, and to determine whether the mitigation measures are properly addressed in project design and economic analysis.

During project implementation, subproject EMPs or ECOPs will be prepared in accordance with the guidelines and requires of the project ESMF. The project ESMF details and explains the role and necessity of preparing a subproject EMP during implementation.

During a project construction and/or operation, implementation of a project or subproject EMP is often passed on to contractor by a contract specification or a requirement. While an EMP may be implemented by a contractor, the responsibility for implementing the conditions of approval of the project (i.e., the EIA needs to be approved by relevant authority as a condition for approval of the project) lies with the proponent.

During project implementation, the World Bank bases supervision of the project's environmental aspects on the findings and recommendations of the EA, including measures set out in the loan agreement, the EMP, and other project documents. For low-risk projects, the World Bank may conduct post review of subproject EMPs during implementation.

5. Components of EMP

In order to achieve the above objectives, the generic scope of an EMP should include the following:

- Definition of the environmental management objectives to be realized during the life of a project (i.e. pre-construction, construction, operation and/or decommissioning phases) in order to enhance benefits and minimize adverse environmental impacts.
- Description of the detailed actions needed to achieve these objectives, including how they will be achieved, by whom, by when, with what resources, with what monitoring/verification, and to what target or performance level. Mechanisms must also be provided to address changes in the project implementation, emergencies or unexpected events, and the associated approval processes.
- Clarification of institutional structures, roles, communication and reporting processes required as part of the implementation of the EMP.
- Description of the link between the EMP and associated legislated requirements.
- Description of requirements for record keeping, reporting, review, auditing and updating of the EMP.

There is no standard format for EMPs. The format needs to fit the circumstances in which the EMP is being developed and the requirements which it is designed to meet. For each mitigate measure, it can often be useful to summarize these in a table that shows for each who is responsible, the location or part of project to which the measure applies, the timing, the budget and the monitoring to verify that the measure is achieving its intended target. There are also additional monitoring needs (unrelated to whether mitigate measures are working as intended).These also can be put into a summary table showing who is responsible, the reason for the measure and part of project to which it applies, the timing, the reporting related to the monitoring and the costs. The level of detail in the EMP may vary from a few pages for a project with low environmental risks, to a substantial document for a large-scale complex Category A project with potentially high environmental risks.

The EMP should be formulated in such a way that it is easy to use. References within the plan should be clearly and readily identifiable. Also, the main text of the EMP needs to be kept as clear and concise as possible, with detailed information relegated to annexes. The EMP should identify linkages to other relevant plans relating to the project, such as plans dealing with resettlement or indigenous peoples issues.

Although the scope and content of an EMP will be a function of both the significance of a project's potential impacts and also a project's site, there are common elements that should be included in all EMPs. These elements, which are suggested for a medium to high risk project, are described in detailed below:

6. Common Elements of an EMP and its Contents

Introduction

This should provide brief but concise information on

(i) *the EMP context*: describe how the EMP fits into the overall planning process of the project, listing project/subproject environmental studies such as EIA/EPC, approval documentation.

(ii) *the EMP's connection with the ESMF (if relevant) and the project.*

(iii) *the objectives of the EMP*: describe what the EMP is trying to achieve. The objective should be project specific, not broad policy statements. The project-specific EMP shall form part of the project contract specifications.

Policy, legal and administrative framework

- GOV's regulations: provide brief description of GoV regulations related to EIA and technical regulations and standards applied to the subproject.
- World Bank's safeguard policy: list World Bank safeguard policies triggered.

Project description

The project/subproject objective and description should be provided in sufficient detail to define the nature and scope of the project. These should include:

(i) *project location*: site location should be described with location of the activities provided including location maps showing location in the project area as well as details at the subproject level.

(ii) *construction/operation activities*: the description may include a brief description of construction and operation processes; working or operating hours, including details of any activities required to be undertaken outside the hours; employment numbers and type; the plant and equipment to be used; the location and site facilities and worker camps; bill of quantities for civil works.

(iii) *timing and scheduling*: anticipated commencement and completion dates should be indicated. If the project is to be completed in stages then separate dates for each stage should be provided.

Baseline data

This should provide key information on the environmental background of the subproject as well as its connection with the project area, including maps. Focus should be given to provide clear data on topography, major land use and water uses, soil types, flow of water, and water quality/pollution. Brief description on socioeconomic condition and EM (if relevant) should also be provided. Photos showing existing conditions of project sites should be included.

Potential impacts and mitigation measures

This section summarizes the predicted positive and negative impacts associated with the proposed project/subproject, particularly those presenting impacts of medium to high significance. A summary should be provided of the predicted positive and negative impacts associated with the proposed project that require management actions (i.e. mitigation of negative impacts or enhancement of positive impacts). The necessary information for this section should be obtained from the EIA process, including the EIA and EPC reports.

The impacts should be described for pre-construction, construction, and operation phases. Using a matrix format could help understanding connection between the impacts and mitigation better. Cross-referencing to the EIA/EPCs reports or other documentation is recommended, so that additional detail can readily be referenced. While commonly-known social and environmental impacts and risks of construction activities can be addressed through Environmental Codes of Practices (ECOP), specific mitigation measures should also be proposed to addressed sub-project specific impacts predicted based on site-specific conditions and typology of investments. Some measures can be proposed for incorporation into engineering design to address potential impacts/risks and/or bring about added values of the

works provided (e.g. road/access path improvement combined with canal lining). Mitigation measures should include a communication program and grievance redress mechanism to address social impacts. It is necessary to ensure that this section responds to appropriate suggestions and adequately addresses the issues and concerns raised by communities as recorded in the consultation summary presented in Section 8. (See Table 1 for a sample mitigation measures matrix.)

Table 1: Example of a Mitigation measure matrix

Phase	*Issue*	*Mitigation Measure*	*Locations for mitigation measures*	*Applicable Standard (e.g. country, WB, EU)*	*Cost of Mitigation*	*Responsible party*	*Verification* *Required to determine effectiveness of measures*
Design/Pre-Construction							
Construction							
Operation							
Decommissioning							

Depending on impacts of a project, Physical Cultural Resources (OP 4.11) or Pest Management (OP 4.09) may be triggered and physical cultural resources may need to be developed and included in the EMP.

Monitoring

Monitoring of EMP implementation would encompass environmental compliance monitoring and environmental monitoring during project implementation as described in details below:

(i) Environmental compliance monitoring includes a system for tracking environmental compliance of contractors such as checking the performance of contractors or government institutions against commitments expressed in formal documents, such as contract specifications or loan agreements.

(ii) The objectives of environmental monitoring is: a) to measure the effectiveness of mitigating actions (e.g. if there is a mitigating action to control noise during construction, the monitoring plan should include noise measurements during construction); b) To meet Borrower's environmental requirement; and c) to respond to concerns which may arise during public consultation (e.g. noise, heat, odor, etc.), even if the monitoring is not associated with a real environmental issue (it would show good faith by the Borrower). The monitoring program should clearly indicate the linkages between impacts identified in the EA report, indicators to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions, and so forth. The cost of environmental monitoring should be estimated and included in sub-project's total investment costs. It is crucial to monitor and collect data that is useful and will actually be used. There is no value in spending money to collect data that is not properly analyzed, that is not reported or even if reported, no actions can or will be

taken. It is useful to know the kinds of analysis to which the data will be subjected before collecting the data to ensure that one can do the anticipated analyses.

Table 2 provides an example of how monitoring is structured.

Table 2: An example of monitoring plan

Phase	**What** parameter is to be monitored? (Note if it is against a set standard)	**Where** is the parameter to be monitored?	**How** is parameter to be monitored/ type of monitoring equipment?	**When** is parameter to be monitored/ frequency of measurement or continuous?	**Responsible Party**
Pre-construction					
Construction					
Operation					
Decommissioning					

EMP Implementation arrangements*:* The following subsections are recommended.

(i) *Responsibility for EMP implementation*: This describes how the implementing agency plans to assign responsibilities to assure proper flow and use of environmental information for efficient and effective environmental management. For a World Bank-financed project, the stakeholders involved in EMP implementation and monitoring usually include the project implementing agency, the PMU, construction contractors, construction supervision consultant (CSC), independent environmental monitoring consultant (IEMC), local environmental management authorities, NGOs, and communities. Each player should be assigned with practical responsibilities. Good coordination among these actors ensures effective implementation of the EMP. Responsibilities of the CSC and IEMC for monitoring and supervision of EMP compliance during construction and supervision should be indicated in some detail. Generic Terms of Reference for CSC and IEMC should be included in the EMP as annexes.

(ii) *Incorporation of EMP into detailed technical design and bidding and contractual document*: The bidding and contractual documents should include EMP requirements documents to ensure that obligations are clearly communicated to contractors. The bidding documents might also include environmental criteria as part of the basis for selecting contractors. Contractors should also be obliged to follow appropriate environmental, health, and safety standards to reduce associated risks during construction and operation. Therefore, this section should also elaborate on how PMU and its staff will incorporate EMP into the project detailed design and tendering documents.

(iii) *Environmental compliance framework*: During project implementation, the Borrower reports on compliance with environmental commitments, the status of mitigative measures, and the findings of monitoring programs as specified in the

project documents. The World Bank bases supervision of the project's environmental aspects on the EMP as set out in the legal agreements for the project. This subsection elaborates on the environmental duties of the contractor and its safety and environment officer, compliance with legal and contractual requirements, and environmental supervision during construction supervision, and a penalty framework.

(iv) *Reporting procedures*: Procedures to provide information on the progress and results of mitigation and monitoring measures should be clearly specified. As a minimum, the recipients of such information should include those with responsibility for ensuring timely implementation of mitigation measures, and for undertaking remedial actions in response to breaches of monitoring thresholds. In addition, the structure, content and timing of reporting to the World Bank should be designed to facilitate supervision. Responsibility of different actors for reporting and the type of reports should also be clearly indicated.

Institutional Strengthening Plan

This section describes institutional needs to assure successful implementation of the mitigation and monitoring plans. This may include equipment purchases, training, consultant services, and special studies. Most projects would mainly require capacity strengthening in EMP implementation through training for different stakeholders.

All relevant stakeholders should undergo general environmental awareness training and training about their responsibilities under the EMP. The training should ensure that they understand their obligation to exercise proper environmental management during project implementation. Environmental training should include: a site induction, familiarization with the requirements of the EMP; environmental emergency response training; familiarization with site environmental control; targeted environmental training for specific personnel such as environmental staff of PMU, safety and environment officer of the contractor, construction supervision engineer.

The need for additional or revised training should be identified and implemented from the outputs of monitoring and reviewing the EMP. Records of all training should be maintained and include: who was trained; when the person was trained; the name of the trainer; and a general description of the training content.

Estimated Budget for EMP Implementation

These should be specified for both the initial investment and recurring expenses for implementing all measures contained in the EMP, integrated into the total project costs, and factored into loan negotiations. It is important to capture all costs, including administrative, training, environmental monitoring and supervision, costs for mitigation measures to be implemented by contractors, costs for additional environmental studies, and operational and maintenance costs. The aim is to satisfactorily mitigate adverse impacts at least cost. The costs of preparing an EMP, which are borne by the Borrower, vary depending on factors such as the complexity of potential impacts, the extent to which international consultants are used, and the need to prepare separate EMPs for subprojects.

Consultation

The EMP should clearly describe and justify the proposed mitigation measures to facilitate public consultation. Consultation with affected people and NGOs should be integral to all Category A and B projects in order to understand the acceptability of proposed mitigation measures to affected groups. In some situations, the development of environmental awareness amongst stakeholders is important to ensure effective consultation on the EMP. Where projects involve land acquisition or resettlement, these issues should be fully addressed in

resettlement action plan (RAP), and where appropriate in ethnic minority development plan (EMDP).

The consultation process can also be used help to design achievable mitigation measures. This process is particularly important when it depends on the buy-in of the affected people. Where appropriate, this may be supported by including formal requirements within the TOR for public participation in developing the EMP.

Public consultation of EMP should be an integral part of EIA/EPC consultation. If consultation has not been conducted or not adequately carried out during EIA/EPC preparation process, it must be undertaken to capture the feedbacks of the affected people and communities.

This section provides summary on consultation activities to stakeholders, particularly affected households, on the final draft EMP at project/subproject level. This summary should indicate the date and location where consultation meeting took place, the number of participants from affected households, the numbers of female and ethnic minority participants, and suggestions, and concerns raised and responses. Locations and dates of EMP to be disclosed should be provided.

Disclosure of the EMP

Information disclosure: According to the World Bank's policy on access to information, all draft safeguard instruments, including the EMP, are disclosed locally in an accessible place and in a form and language understandable to key stakeholders and in English at the InfoShop before the appraisal mission.

Annex 4. Environmental Code of Practice (ECOPs)

(Adapted for VEEIE from standardized ECOPs for World Bank – funded small work project in Vietnam)

Part 1: Construction contractor's responsibility

ISSUES/RISKS	MITIGATION MEASURE
1. **Dust generation/ Air pollution**	• The Contractor implement dust control measures to ensure that the generation of dust is minimized and is not perceived as a nuisance by local residents, maintain a safe working environment, such as: - water dusty roads and construction sites; - covering of material stockpiles; - Material loads covered and secured during transportation to prevent the scattering of soil, sand, materials, or dust; - Exposed soil and material stockpiles shall be protected against wind erosion.
2. **Noise and vibration**	• All vehicles must have appropriate "*Certificate of conformity from inspection of quality, technical safety and environmental protection"* following Decision No. 35/2005/QD-BGTVT; to avoid exceeding noise emission from poorly maintained machines.
3. **Water pollution**	• Portable or constructed toilets must be provided on site for construction workers. Wastewater from toilets as well as kitchens, showers, sinks, etc. shall be discharged into a conservancy tank for removal from the site or discharged into municipal sewerage systems; there should be no direct discharges to any water body. • Wastewater over permissible values set by relevant Vietnam technical standards/regulations must be collected in a conservancy tank and removed from site by licensed waste collectors. • At completion of construction works, water collection tanks and septic tanks shall be covered and effectively sealed off. • Do not allow waste, litter, oils or foreign materials into water sources • Do not wash cars or machinery in natural water sources • A comprehensive listing of sources and location of wastewater discharge will be prepared and maintained • Appropriate operating procedure will be undertaken for minimization of wastewater (such as neutralizing predisposal treatment, etc.)
4. **Drainage and sedimentation**	• The Contractor shall follow the detailed drainage design included in the construction plans, to ensure drainage system is always maintained cleared of mud and other obstructions. • Areas of the site not disturbed by construction activities shall be maintained in their existing conditions.
5. **Solid waste**	• At all places of work, the Contractor shall provide litter bins, containers and refuse collection facilities. • Solid waste may be temporarily stored on site in a designated area approved by the Construction Supervision Consultant and relevant local authorities prior to collection and disposal. • Waste storage containers shall be covered, tip-proof, weatherproof and scavenger proof.

	• No burning, on-site burying or dumping of solid waste shall occur. • Recyclable materials such as wooden plates for trench works, steel, scaffolding material, site holding, packaging material, etc shall be collected and separated on-site from other waste sources for reuse, for use as fill, or for sale. • If not removed off site, solid waste or construction debris shall be disposed of only at sites identified and approved by the Construction Supervision Consultant and included in the solid waste plan. Under no circumstances shall the contractor dispose of any material in environmentally sensitive areas, such as in areas of natural habitat or in watercourses.
6. **Chemical or hazardous wastes**	• Used oil and grease shall be removed from site and sold to an approved used oil recycling company. • Used oil, lubricants, cleaning materials, etc. from the maintenance of vehicles and machinery shall be collected in holding tanks and removed from site by a specialized oil recycling company for disposal at an approved hazardous waste site. • Store chemicals in safe manner, such as roofing, fenced and appropriate labeling. • Do not use unapproved toxic materials, including lead-based paints
7. **Disruption of vegetative cover and ecological resources**	• Areas to be cleared should be minimized as much as possible. • The Contractor shall remove topsoil from all areas where topsoil will be impacted on by rehabilitation activities, including temporary activities such as storage and stockpiling, etc; the stripped topsoil shall be stockpiled in areas agreed with the Construction Supervision Consultant for later use in re-vegetation and shall be adequately protected. • The application of chemicals for vegetation clearing is not permitted. • Prohibit cutting of any tree unless explicitly authorized in the vegetation clearing plan. • When needed, erect temporary protective fencing to efficiently protect the preserved trees before commencement of any works within the site. • The Contractor shall ensure that no hunting, trapping shooting, poisoning of fauna takes place.
8. **Traffic management**	• Before construction, carry out consultations with local government and community and with traffic police. • Significant increases in number of vehicle trips must be covered in a construction plan previously approved. Routing, especially of heavy vehicles, needs to take into account sensitive sites such as schools, hospitals, and markets. • Installation of lighting at night must be done if this is necessary to ensure safe traffic circulation. • Place signs around the construction areas to facilitate traffic movement, provide directions to various components of the works, and provide safety advice and warning. • Employing safe traffic control measures, including road/rivers/canal signs and flag persons to warn of dangerous conditions. • Avoid material transportation for construction during rush hour. • Signpost shall be installed appropriately in both water-ways and roads

	where necessary.
9. **Interruption of utility services**	• Provide information to affected households on working schedules as well as planned disruptions of water/power at least 2 days in advance. • Any damages to existing utility systems of cable shall be reported to authorities and repaired as soon as possible.
10. **Restoration of affected areas**	• Cleared areas such as disposal areas, site facilities, workers' camps, stockpiles areas, working platforms and any areas temporarily occupied during construction of the project works shall be restored using landscaping, adequate drainage and revegetation. • Soil contaminated with chemicals or hazardous substances shall be removed and transported and buried in waste disposal areas.
11. **Worker and public Safety**	• Training workers on occupational safety regulations and provide sufficient protective clothing for workers in accordance with applicable Vietnamese laws. • Install fences, barriers, dangerous warning/prohibition site around the construction area which showing potential danger to public people. • The contractor shall provide safety measures as installation of fences, barriers warning signs, lighting system against traffic accidents as well as other risk to people and sensitive areas. • If previous assessments indicate there could be unexploded ordnance (UXO), clearance must be done by qualified personnel and as per detailed plans approved by the Construction Engineer. • Do not use of alcohol by workers during work hours • Do not work without safety equipment (including boots and helmets)
12. **Communication with local communities**	• The contractor shall coordinate with local authorities (leaders of local communes, leader of villages) for agreed schedules of construction activities at areas nearby sensitive places or at sensitive times (e.g., religious festival days). • Copies in Vietnamese of these ECOPs and of other relevant environmental safeguard documents shall be made available to local communities and to workers at the site. • Disseminate project information to affected parties (for example local authority, enterprises and affected households, etc) through community meetings before construction commencement. • Provide a community relations contact from whom interested parties can receive information on site activities, project status and project implementation results. • Inform local residents about construction and work schedules, interruption of services, traffic detour routes and provisional bus routes, blasting and demolition, as appropriate. • Notification boards shall be erected at all construction sites providing information about the project, as well as contact information about the site managers, environmental staff, health and safety staff, telephone numbers and other contact information so that any affected people can have the channel to voice their concerns and suggestions. • Do not create nuisances and disturbances in or near communities
13. **Chance find**	If the Contractor discovers archeological sites, historical sites, remains and

procedures	objects, including graveyards and/or individual graves during excavation or construction, the Contractor shall: • Stop the construction activities in the area of the chance find; • Delineate the discovered site or area; • Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities or the Department of Culture and Information takes over; • Notify the Construction Supervision Consultant who in turn will notify responsible local or national authorities in charge of the Cultural Property of Viet Nam (within 24 hours or less); • Relevant local or national authorities would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values; • Decisions on how to handle the finding shall be taken by the responsible authorities. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage; • If the cultural sites and/or relics are of high value and site preservation is recommended by the professionals and required by the cultural relics authority, the Project's Owner will need to make necessary design changes to accommodate the request and preserve the site; • Decisions concerning the management of the finding shall be communicated in writing by relevant authorities; • Construction works could resume only after permission is granted from the responsible local authorities concerning safeguard of the heritage.

Annex 5. PCB management procedure

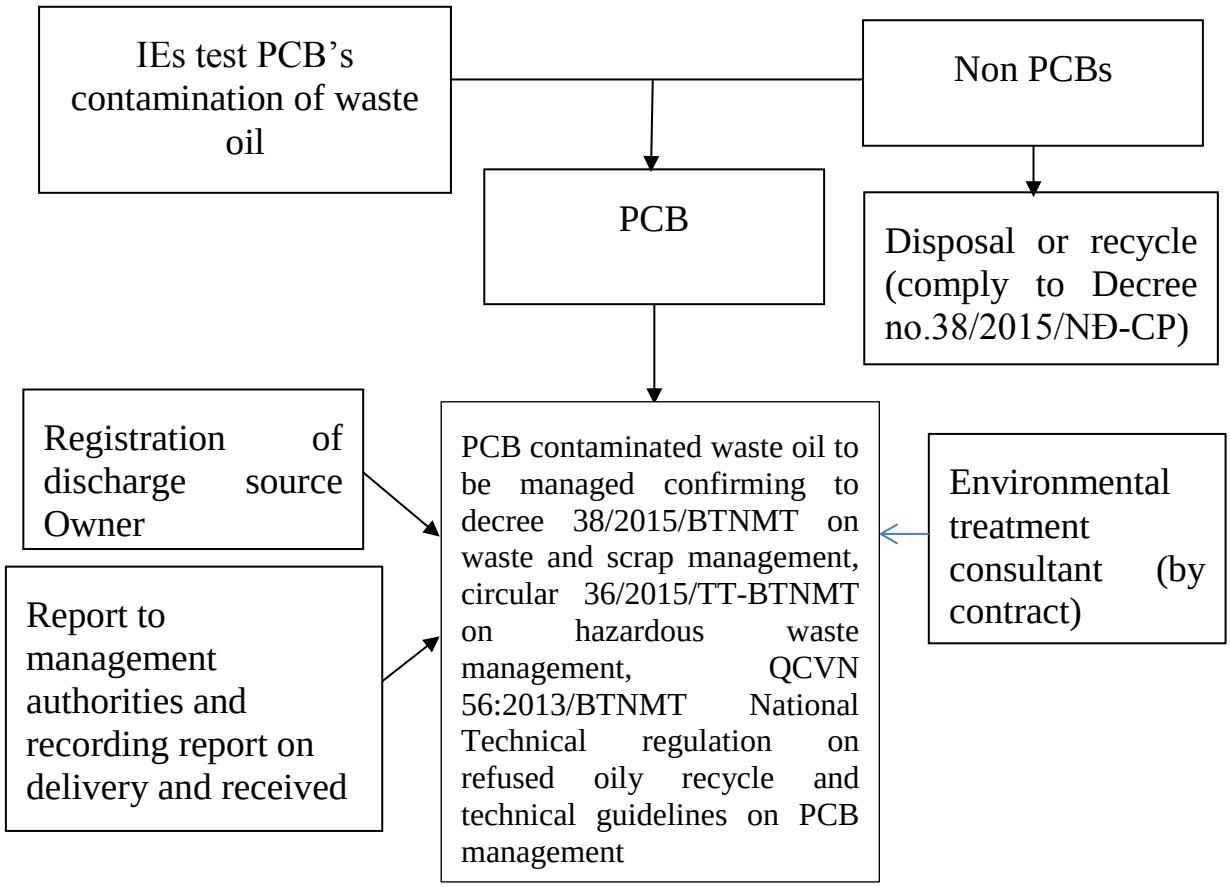
The oil disposed from transformers shall be tested on PCB content.

In case the oil is confirmed as PCB contaminated, it would be disposed or recycled in compliance with decree 38/2015/BTNMT on waste and scrap management, circular 36/2015/TT-BTNMT on hazardous waste management, QCVN 56:2013/BTNMT National Technical regulation on refused oily recycle.

PCB management procedure are implemented in below steps:

1. Assignment. specify code, classification and storage PCB contaminated waste oil.
2. Registration on the Owner of discharged source.
3. Planning a temporary storage location for PCB contaminated waste oil . The storage shall be comply to decree 38/2015/BTNMT on waste and scrap management, circular 36/2015/TT-BTNMT on hazardous waste management and technical guidelines
    - Guideline No. 1 on identification of PCBs containing oils, equipment, materials, and waste (issued at document No. 2299/TCMT-KSON by VEA dated November 20, 2014);
    - Guideline No. 2 on registration of PCB containing oil, equipment, materials, and waste (issued by VEA dated November 20, 2014);
    - Guideline No. 3 on packing and labeling PCB containing oils, equipment, materials, and waste (issued by VEA dated November 20, 2014);
    - Guideline No. 4 on storage of PCBs containing oils, equipment, materials, and waste (issued by VEA dated November 20, 2014);
    - Guideline No. 5 on transportation of PCBs containing oils, equipment, materials, and waste (issued by VEA dated November 20, 2014);
    - Guideline No. 6 on Decontamination and disposal of PCBs containing oils, equipment, materials, and waste (issued by VEA dated November 20, 2014);
    - Guideline No. 7 on response and contingency plan development regarding PCBs (issued by VEA dated November 20, 2014);
    - Guideline No. 8 on prevention and response to PCB incidents (issued by VEA dated November 20, 2014);
    - Guideline No. 9 on inspection of PCB management (issued by VEA dated November 20, 2014)
4. Contract to a permitted functional unit to collect and transport and treat the hazardous waste included PCB contaminated oil refused.

Below diagram is expressed the PCB management procedure would be used for subprojects under VEIEEs :


IEs test PCB's contamination of waste oil
Non PCBs
PCB
Disposal or recycle (comply to Decree no.38/2015/NĐ-CP)
Registration of discharge source Owner
Report to management authorities and recording report on delivery and received
PCB contaminated waste oil to be managed confirming to decree 38/2015/BTNMT on waste and scrap management, circular 36/2015/TT-BTNMT on hazardous waste management, QCVN 56:2013/BTNMT National Technical regulation on refused oily recycle and technical guidelines on PCB management
Environmental treatment consultant (by contract)

Annex 6 Minute of Public Consultation Meeting

SUMMARY

MINUTE OF MEETING

Consultancy on finalizing policy frameworks on Environmental safeguard, Resettlement plan and Ethnic minorities

On 09/10/2015, at the Meeting room No. 101 of the Ministry of Industry and Trade, 25 Ngo Quyen Street, Hoan Kiem District, Hanoi, the General Directorate of Energy held a stakeholder consultation workshop on the Policy frameworks on Environmental safeguard, Resettlement plan and Ethnic minorities.

1. **Participants**

3 representatives of the General Directorate of Energy;

1 representatives of the World Bank;

3 representatives of independent consultants;

14 participants from relevant institutions and organizations.

2. **Purposes of the workshop**

To receive comments and opinions from stakeholders to finalize 3 policy frameworks, guidelines for implementing energy saving projects with the aims of achieving the national targets on environmental protection and social security pursuant to the policy frameworks of the World Bank and regulations of Vietnam:

- Policy framework on environmental safeguard
- Policy framework on resettlement plan
- Policy framework on ethnic minorities

3. **Key points of the workshop**

3.1. About "Policy framework on environmental safeguard"

Comments and opinions from participants forced on 5 main contents:

- The social sections (gender, occupations etc.) should be assessed more detailed;
- The project should clarify the scope of these frameworks (available projects or potential projects, inside or outside of plants' boundaries, environment safeguard and social assessment etc.);
- The project should update new regulations on environmental protection and clean technologies;
- The World Bank should facilitate projects' public consultations and monitoring to be more effectively and strictly. For example: budget for public consultation, independent monitoring consultants;

- It should be clarify responsibilities on approving these policy frameworks.

Explanations and feedbacks from the independent consultants and World Bank:

- After discussion with World Bank and General Directorate of Energy about scope of works, the consultant will assess social impacts more detailed;
- The scope of these frameworks is for potential projects. These projects would be screened pursuant to Vietnamese regulations and World Bank's Guidelines. Procedures for eligible projects were shown in the Appendix of the frameworks. Moreover, the assessment of environmental safeguard would follow Vietnamese regulations and World Bank's Guidelines.
- New environmental regulations would be updated to the frameworks;
- The World Bank would consider the comments and opinions about public consultations and monitoring;
- The policy framework on environmental safeguard is under the approval responsibility of Ministry of Industry and Trade; the Policy framework on resettlement plan and Policy framework on ethnic minorities are under the approval responsibility of the Prime Minister.

3.2. About "Policy framework on resettlement plan" and "Policy framework on ethnic minorities"

Comments and opinions from participants forced on 2 main contents:

- These frameworks should focus on gender rather than resettlement plan and ethnic minorities. These issues should be applied on screening procedures;
- Some sensitive terms on indigenous people should be translated and written correctly.

Explanations and feedbacks from consultant and World Bank:

- "Policy framework on resettlement plan" and "Policy framework on ethnic minorities" are prepared for potential projects in the future. Moreover, all loan projects must have specific gender assessment reports;
- Sensitive terms on indigenous people would be corrected and revised in the reports by the independent consultants.

4. Conclusion

The workshop was closed at 11:00 a.m of the same day. The consultant will revise the frameworks and report based on the comments and opinions of stakeholders.

DANH SÁCH ĐẠI BIỂU THAM DỰ

HỘI THẢO HOÀN THIỆN KHUNG CHÍNH SÁCH VỀ AN TOÀN MÔI TRƯỜNG, TÁI ĐỊNH CƯ VÀ DÂN TỘC THIỂU SỐ

Thời gian: 9h00 ngày 9 tháng 10 năm 2015

Địa điểm: Phòng 101 Bộ Công Thương, 25 Ngô Quyền, Hoàn Kiếm, Hà Nội

TT	Họ và tên	Cơ quan, chức vụ	Chữ ký
1	Trần Thanh Thủy	PanNature	[signature]
2	Phạm Trường Sơn	Vụ KHCN Bộ Công Thương	[signature]
3	Lê Hoàng Anh	Viện Năng lượng	[signature]
4	Ngô Thị Kim Cân	WB	[signature]
5	Ngô Sao Mai	NHNN	[signature]
6	Phạm T. Ngọc Hải	Chuyên viên Cục KT PT cây đất	[signature]
7	Mai Văn Huyện	CV – ECC – HCM	[signature]
8	Nguyễn mai Ngọc	CVP – Cục kiểm tra hoạt động với PTNT – Bộ NN – PTNT	[signature]
9	Trương Việt Trường	Cục ATMT, BCT	
10	Lê T. T. Lan	Ban KHCN & MT – EVN	[signature]

TT	Họ và tên	Cơ quan, chức vụ	Chữ ký
11	Nguyễn Văn Dần	Tập đoàn Dầu khí PP. Ban xây dựng	
12	Đặng Nguyên Anh	Viện Dầu khí	
13	Lê Diệu Hương	EPC	
14	Lê Văn Nhân	EVN	
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