Environmental Assessment and Review Framework

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Socialist Republic of Viet Nam: Productive Rural Infrastructure Sector Project in the Central Highlands

Prepared by the Ministry of Agriculture and Rural Development for the Asian Development Bank.

ABBREVIATIONS

ADB	–	Asian Development Bank
CEP	–	core environment program
CHP	–	central highland provinces
CPMU	–	central project management unit
DONRE	–	Department of Natural Resources and the Environment
DPC	–	district people's committee
EIAR	–	environmental impact assessment report
EMP	–	environmental management plan
EPC	–	environmental protection commitment
IEE	–	initial environmental examinations
MARD	–	Ministry of Agriculture and Rural Development
PEA	–	provincial environment administration
PPC	–	provincial people's committee
PPMU	–	provincial project management unit
PRI	–	productive rural infrastructure

NOTE

In this report, "$" refers to US dollars.

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ENVIRONMENTAL ASSESSMENT AND REVIEW FRAMEWORK

I. INTRODUCTION

A. The Project

1. The proposed Productive Rural Infrastructure Development Project in the Central Highlands (the Project) aims to rehabilitate and upgrade existing but deteriorated critical productive rural infrastructure (PRI) in five central highland provinces (CHP) over a period of five years.[1] It directly supports the Government of Viet Nam's National Target Program for New Rural Development. The majority (84%) of the population of the CHP live in sparsely populated and dispersed villages where land is suitable for agriculture. The primary income source for nearly all rural CHP households is farming. The PRI has deteriorated because of limited funding available for new investment and a constrained capacity to sustainably develop, manage and use the assets. This contributes to CHP's poverty by constraining rural productivity.

2. The improved PRI is expected to enable communities to respond to market signals by: (i) increasing agricultural intensity and diversity; (ii) providing quicker and safer access to markets, employment opportunities, and social services; and (iii) reducing costs of rural production and marketing, as well as reducing food wastage. Improved PRI increases incomes from both on- and off-farm employment, decreases the burden of chores on women, and increases food availability even when yields are constant. This is pro-poor and will be increasingly important for climate change resilience.

3. This document sets out the responsibilities and procedures for the environmental assessment of subprojects of the Project. The procedures provide for the preparation of environmental assessments and environmental management plans for subprojects in an integrated manner that complies with the laws of Viet Nam and requirements of the Asian Development Bank (ADB). Initial environmental examinations (IEEs) have been carried out for each of the subprojects in Kon Tum, Gia Lai and Dak Lak provinces.

B. Subproject Types to be Assessed

4. In consultation with the relevant provincial government and field investigation the Central Project Management Unit (CPMU) identified a total list of 29 eligible subprojects based on 10 screening criteria which are focused on social economic development, safeguards, integrated development model, feasibility and sustainability. About 15 irrigation schemes and 130 kilometers of road will be rehabilitated during the implementation period. The types of subprojects will cover the following components: (i) small and medium-sized dam and reservoir improvements (e.g., spillways, head-works, reservoir walls, and leakage control); (ii) rehabilitation of primary and secondary irrigation canals and river bank stabilization; and (iii) rehabilitation of commune to district, and inter-commune roads to improve linkages between higher level alignments (provincial and national routes) and lower level commune to village and inter-village roads. In addressing key issues of sustainability, designs will take into account the increased intensity and frequency of climatic hazards anticipated to result from global climate change, the local geology and terrain, potential change in utilization patterns (type and volume

[1] The five project provinces are: Gia Lai, Kon Tum, Dac Lak, Dac Nong, and Lam Dong provinces.

of traffic), and the longer-term availability of recurrent expenditure for operations and maintenance.

II. ASSESSMENT OF LEGAL FRAMEWORK AND INSTITUTIONAL CAPACITY

A. Legal Framework

5. The principles and procedures for the environmental assessment of projects in Viet Nam are founded on the Law on Environment Protection (EP Law) that was first issued in 1993, revised in 2005 and put into effect in 2006. The EP Law provides the basis for the requirement for environmental assessment, key roles and responsibilities, and requirements for public consultation. Under EP Law, there is a decree and a circular that relate to environmental assessment and institutional arrangements for the approval of environmental assessments:

(i) Decree No. 29/2011/ND-CP (2011) on strategic environmental assessment, environmental impact assessment and environmental protection commitments and environmental protection planning. This decree specifies that environmental assessments are to be carried out at project feasibility stage, and the conditions under which a Environmental Protection Commitment (EPC) is required, or an Environmental Impact Assessment Report (EIAR); and

(ii) Circular No. 26/2011/TT-BTNMT provided the detail guideline for implementation of Decree 26.

B. Level and Process of Environmental Assessment

6. Environmental Assessment reports are required for all subprojects. Two types of environmental assessment reports are used, an EIAR or an EPC. In broad terms, an EIAR is required for projects of the type and scale listed in the Decree No. 29/2010/ND-CP. These relate to projects deemed to have the potential to cause adverse impacts, and include those located in protected areas or other areas that are environmentally sensitive (including proposed protected areas). EIAR is not necessarily equivalent to the category A according to the ADB's Safeguard Policy. A subproject which requires EIAR may be classified as environmental category B according to the ADB's Safeguard Policy if the proposed type and scale of interventions match with those listed in the Decree No. 29/2010/ND-CP.

7. Once EIARs are prepared, it will be submitted to the Provincial Environment Administration (PEA) that provides certification on approval. The Provincial Project Management Units (PPMU) submits copies of the approved EIAR and certification to the Commune Peoples' Committees. The PPMU also prepares a summary of the report for public display at the relevant Commune People's Committee office. During the course of subproject implementation, the PPMU is required to submit details of construction and reports on compliance with mitigation and monitoring requirements in the EIAR, to the Department of Agriculture and Rural Development. The essential differences between preparation processes for an EPC and an EIAR are: (i) the level of investigation, analysis and reporting required; and (ii) the requirement for formalized consultation within the EIAR. The scope and level of safeguard investigation required for the ADB's IEE can be sufficient to prepare for an EIAR.

8. Smaller projects without the potential for significant adverse impacts will be subject to a lesser level of assessment in the form of EPC. EPCs are required to be submitted for appraisal at the time of Subproject Investment Report preparation. Chapter of Circular No. 26/2011/TT-

BTNMT details the procedures for EPCs. Under the article in this chapter, the authority that receives and certifies the EPC is the District People's Committee of the locality in which the subproject is situated. Decree No. 29/2011/ND-CP regulates that for the projects are implemented in two districts or more, the project owners can register EPC at one of the district people's committee where the most convenient for the owners**.** The content and format of the EPC are presented in the appendix to Circular No. 26/2011/TT-BTNMT. The EPC must include information on mitigation measures that will be taken. The EPC obliges the Provincial People's Committees (PPC) to ensure that the specified mitigation is carried out during project implementation. On receipt of the EPC, it is registered by the Commune People's Committee.

9. In each province the Department of Natural Resources and the Environment (DONRE) establishes a new agency called Provincial Environment Administration (PEA) which supersedes the former provincial Environment Management Division. The PEA has an EIA Division which is specifically in charge of EIA related matters at provincial level and also provides guidance to district and commune level on these matters.

III. ANTICIPATED ENVIRONMENTAL IMPACTS

10. Potential environmental concerns include (i) dam safety issues including soil erosion and reservoir sedimentation; (ii) construction impacts such as water pollution due to soil erosion, solid and liquid wastes from worker camps, public nuisance and safety; (iii) the effects of intensification of agriculture, such as increased use of pesticides and fertilizers; and (iv) risks associated with poor scheme operation, such as inadequate regulation of water flows, leading to uneven distribution among users and soil inundation. Engineering design for all civil engineering structures will need to accommodate greater severity and frequency of extreme environmental events. Design for 1:100 probabilities is no longer appropriate and a more risk-averse (and expensive) set of design choices needs to be factored into all facets of this programme. No adverse effects on protected areas or archeologically significant structures are expected as there are no such areas. The increased availability of water during the dry season reduces risks of environmental damage to aquatic and riparian ecosystems.

11. The Project has a strong capacity building support for the government, community, and academic institutions to build their technical knowledge and capacity to sustain the project benefits and consequently minimize potential environmental impact during construction and operation stages. First, it will strengthen the capacity of the local government officials, Irrigation and Drainage Management Companies and the Ministry of Agriculture and Rural Development (MARD) by: (i) preparing productive rural infrastructure condition inventories and a program to update them; (ii) using whole asset life analysis with realistic maintenance assumptions as the basis for design and sustainable management; and (iii) delivering the formal and non-formal training to upgrade their qualifications and improve their knowledge on productive rural infrastructure.

12. The Project also meets the community and local needs by: (i) concentrating a critical mass of productive rural infrastructure investments in selected productive areas; (ii) having the communities prioritize the productive rural infrastructure improvements in and around the selected irrigation schemes; (iii) improving trails and paths within the irrigation systems thus separating pedestrians and cyclists who are often women and children from motorized traffic and reducing the loss of productive land; and (iv) incorporating bio-engineering for soil and water conservation in the design thus stabilizing the local ecosystems and improving climate change resilience. Systematically providing support based on local needs and condition,

together with awareness raising and stakeholder training, will enhance community's incentive to sustain the improved assets and improve their use and management.

IV. ENVIRONMENTAL ASSESSMENT FOR SUBPROJECTS

A. Responsibilities and Authorities

13. The executing agency will be MARD. Overall project coordination will be delegated to MARD's Agriculture Projects Management Board. An established CPMU retains responsibilities for central level project management and coordination. The five CHP's PPC will be the implementing agencies. The PPCs will assign Provincial Departments to establish PPMUs. The PPMUs will be responsible for carrying out the remaining feasibility studies and the day-to-day management of subproject implementation. The agency responsible for arranging environmental assessment and review for the subprojects is the PPMU. Commune Supervision Board will be engaged to monitor construction activities. The CPMU has two assigned safeguard staff, one each for environment and social safeguards. The CPMU has gained project management and safeguard capacity through implementing the ongoing ADB financed similar projects. The CPMU has developed and been using the IEE template for the ongoing irrigation projects. They have sufficient knowledge on the environmental safeguard requirements in terms of scope and approval procedures. The understanding of the environmental safeguard requirements at the provincial level is limited except Kontum province that is implementing the Loan 2357:VIE-Integrated Rural Development Sector Project in the Central Provinces (IRDSP). CPMU will conduct sensitization workshops to ensure that PPMUs understand the environmental safeguard preparation and procedures for conducting environmental assessment of Subprojects

14. **Subproject Screening and Categorization.** Subproject selection and screening ensures that only subprojects categorized as ADB Category B or C will be included in the list of eligible subprojects for possible funding under the proposed Project. It is anticipated that all eligible subprojects will fall into Category B, whereby some adverse environmental impacts are expected, but of a lesser. Subprojects that will comply with environmental category B under the ADB's classification system will be eligible. Subprojects located in the protected areas or involve significant involuntary resettlement (i.e. more than 200 affected persons will be physically removed from their housing or lose 10% or more of their productive assets), were automatically excluded. Safeguard consultants appointed by the CPMU need to carry out the safeguard screening and determine the appropriate categorization and need for IEE/core environment program (CEP) or IEE/EIAR.

15. **IEE Preparation.** An IEE needs to be prepared if a subproject is classified as environmental category B. IEE needs to include Environmental Management Plans (EMP). PPMU needs to prepare the IEE and CEP with a support from a consultant and by consulting with relevant stakeholders. PPMU will follow the IEE template developed and utilized under the IRDSP. The IEE template covers a subproject scope, baseline information, materials to be used construction techniques, impact assessment, mitigation and environmental monitoring, and a minute of public consultation. The content and format of the IEE report will satisfy the requirements of both ADB and the government (CEP or EIAR). Adequate public consultation needs to be carried out to share and get feedback on the initial findings of the IEE.

16. **Review of IEEs.** Upon completion, IEE/CEP reports will be reviewed initially by the PPMU and if satisfactory, forwarded to the CPMU for review (with the assistance of national safeguard review consultants). Once found satisfactory by the CPMU, IEE/CEP reports will be

forwarded to relevant District People's Committee (DPC) for approval. In the case where an EIAR is required, the IEE/EIAR report will be forwarded to the relevant DONRE or VEA for approval. The environmental assessment and review procedures are as follows:

IEE/CEP

(i) PPMU reviews IEE/CEP report and if satisfactory, forwards to relevant District PC for its endorsement;
(ii) Once relevant DPC endorses, PPMU forwards the IEE/CEP to CPMU for its review and endorsement; and
(iii) Once the IEE/CEP is satisfactory to CPMU, CPMU will forward to ADB for its endorsement.

IEE/EIAR

(i) PPMU reviews IEE/EIAR report and if satisfactory, forwards to VEA/DONRE for approval;
(ii) PPMU forwards the IEE/EIAR approved by VEA/DONRE to CPMU for its review and endorsement;
(iii) Once the IEE/CEP is satisfactory to CPMU, CPMU will forward to ADB for its endorsement;
(iv) CPMU will forward the first IEE/CEP or IEE/EIAR prepared by each of the PPMU for ADB's review. If the quality of the first IEE is satisfactory to ADB, only IEEs of the subsequent subprojects with estimated costs of $3.0 million or more will be forwarded to ADB for its review;
(v) CPMU ensures that EMPs (which are incorporated into the IEE/CEP reports) are incorporated into contract documentation; and
(vi) ADB will conduct a post evaluation of the IEEs and their implementation for those subprojects with the estimated costs of less than $3.0 million.

B. Environmental Monitoring Requirements

17. Environmental monitoring consists of environmental effects and compliance monitoring (Attachment 1). Environmental effects monitoring includes water quality monitoring parameters.

18. An EMP needs to be included in all IEE reports and summarizes all mitigation measures that have been identified in respect of potential environmental impacts. Mitigation measures are summarized according to when they must be implemented (namely, the pre-construction, construction and operation phases of the subproject). For each mitigation measure, the EMP must list the impact to be mitigated, describe the mitigation measure, and estimate the cost or allocate responsibility for meeting the cost, and state the agency responsible for implementation of each mitigation measure. For guidance, an EMP is included with the IEE for each core subproject.

19. EMP is used in the preparation of bidding documents for the construction works, ensuring that bidders are aware of the environmental mitigation that is to be undertaken during construction, and to enable them to price their bids accordingly. The EMP also serves to guide the agencies responsible for project operation in exercising required mitigation measures. The EMP template being used by the CPMU for the similar ongoing project will be utilized.

V. PUBLIC CONSULTATION, INFORMATION DISCLOSURE AND GRIEVANCE

20. **Public Consultation and Disclosure.** Public consultation shall include discussions with members of project beneficiary groups and commune officials as part of IEE preparation in order to obtain opinion from affected persons about the subproject and in particular, any concerns that may need to be addressed. For subprojects, the consultation procedures set out in Circular No. 05/2008/TT-BTNMT will be followed.

21. The following agenda may be used for public consultations:

(i) A summary of the proposed works under the subproject;
(ii) A summary of subproject objectives and likely positive and negative environmental impacts, covering the construction phase and operational impacts;
(iii) Invitation for feedback in respect of any areas of concern that the public may have, and suggested means of implementation;
(iv) Acceptability of the proposed works to the public; and
(v) Request for information on the known occurrence of unexploded ordinance in the area where the scheme components will be built.

22. For the consultations, dates, attendees, topics covered and conclusions should be recorded and included with the IEE report. Once the IEE is completed, it should be made available to the public for a period of at least 30 days. For this purpose, the IEEs should be prepared in English and in Vietnamese and distributed to the District or Commune People's Committees and made available for public review.

23. **Grievance Redress Mechanism.** The CPMU has developed the Grievance Redress Mechanism in place (Attachment 2) to ensure that any complains raised by the community related to adverse environmental impacts will be addressed in a timely manner. In each subproject commune, Community Supervision Board will be set up and facilitate the timely facilitation and mediation of the grievance process.

24. The local government will closely coordinate with the Work Operation and Maintenance Unit in order to timely solve the rising problems during the subproject implementation, as well as during the operation and maintenance period.

VI. STAFFING REQUIREMENTS AND BUDGET

25. A national firm will be recruited to provide safeguard review services, which will include advisory and review services to PPMUs for the procurement of services, supervision and review of IEE reports for all subprojects. The national team will include a national environmental specialist (44 person months, intermittent) during the project implementation. A total cost of remuneration and travel cost is included in the budget for recruiting the safeguard review and assurance firm while the proposed Terms of Reference is provided in Attachment 3.

Attachment 1: Environmental Monitoring

a. Environmental Effects Monitoring

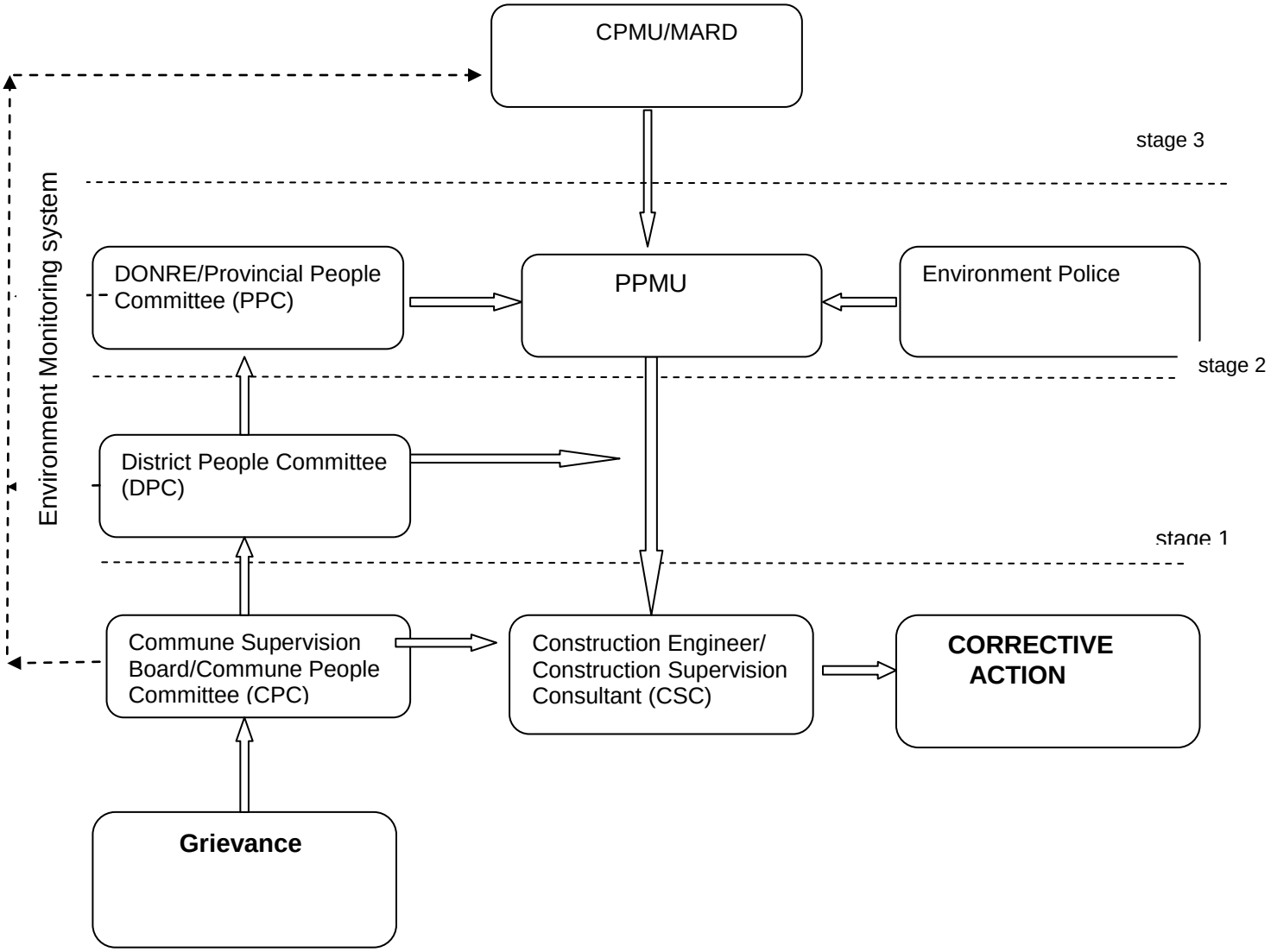
Mitigation Measure	Parameters	Location	Methods	Frequency	Responsibility	Cost
Construction Stage						
Control of water quality	Sediment loads, rubbish, oil or other visible pollutants	Significant water bodies crossed by canals	Observation	Weekly and after large rain evens	Contractor	To be determined by contractor or responsible authority.
Operation Stage						
Surface water quality	BOD, COD, pH, TSS, salinity, Total P, E. coli, coliform, Total N compared to TCVN 5942:1995	Major Streams from which off-take to irrigation canals is sourced.	TCVN methods	2 times per year for first 2 years (1 time in wet season and 1 time in dry season)	Subproject owner	
Soil quality	Evidence of salinity or acidification	At 3 representative locations in each subproject irrigated area	Observation	2 times per year for first 2 years (1 time in wet season and 1 time in dry season)	Subproject owner	

b. Environmental Compliance Monitoring

Mitigation Measure	Parameters	Location	Methods	Frequency	Responsibility	Cost
Construction Stage						
Erosion and sediment controls	Condition and capacity of controls	Throughout construction site	Observation	After large rain events	Contractor/Construction supervision consultant (CSC)	Included in the Contract with the contractor
Materials storage	Condition of materials storage areas	Throughout construction site	Observation	Weekly	Contractor/CPC	
Construction equipment and vehicles	Noise and exhaust generation; covering of trucks; oil/fuel leaks	Throughout construction site	Observation	Random	Contractor/CPC	
Construction camp conditions	Cleanliness; waste disposal facilities; general condition	All construction camps	Observation	Weekly	Contractor/CPC	

Mitigation Measure	Parameters	Location	Methods	Frequency	Responsibility	Cost
Vegetation clearing	Boundaries of vegetation clearing	Areas of sensitive vegetation	Observation	Weekly during clearing works	Contractor/CPC	
Waste disposal	Site cleanliness and condition; temporary waste storage area	Throughout construction site	Observation	Weekly	Contractor/CPC	
Operation Stage						
Use of irrigation water for domestic use	Water usage	Households in vicinity of irrigation canals	Observation and consultation	6 monthly for first 5 years of operation	Subproject owner	Included in operation stage budget
Condition of water storage	Condition of water storage facilities	Water storage areas	Observation	6 monthly for first 2 years of operation	Subproject owner	
Protection of public safety	Presence of signage and measures to avoid accidents	In populated areas	Observation and consultation	6 monthly for first 2 years of operation	Subproject owner	
Erosion or scouring of canals	Condition of canals; sediment loads in water	In unlined sections	Observation	6 monthly for first 2 years of operation	Subproject owner	
Prevention of slumping or erosion of canal banks	Bank condition	Representative locations in sub-project	Observation	6 monthly for first 5 years of operation	Subproject owner	
Waste management	Site cleanliness and condition; temporary waste storage areas	Throughout sub-project area	Observation	6 monthly for first 5 years of operation	Subproject owner	

Attachment 2: Grievance Redress Mechanism



Attachment 3: **Terms of Reference for National Environment Safeguard Specialists**

The specialists will have appropriate tertiary qualifications in environmental science or natural resource management from recognized institutions and will have at least five years experience working in the field of environmental management and monitoring for internationally funded development projects in Viet Nam. Both national environmental specialists need to work closely with the Central Project management Unit (CPMU) and Provincial Project Management Units (PPMUs) in the target five provinces.

Training skills would also be an advantage to the national specialists. Duties of the specialists will include the following:

1. For Safeguard Consultant Package (xxx person months, intermittent)

(i) Review the project documents including Environmental Assessment and Review Framework (EARF) and Initial Environmental Examinations (IEEs) prepared for the sample subprojects;
(ii) Assess the capacity building needs and develop and conduct environmental safeguard training for the CPMU and PPMUs based on any available training materials developed by the other similar ongoing projects;
(iii) Review and update the draft IEEs for the sample subprojects based on the detail design and assist the PPMUs to obtain the necessary endorsement from District Peoples' Committee (DPC) and/or Provincial Environment Administration (PEA);
(iv) Review the list of the remaining identified subprojects and visit the sites to screen and classify the environmental categorization and determine the need for Environmental Protection Commitment (EPC) or Environmental Impact Assessment Report (EIAR);
(v) Prepare the IEE/EPC or IEE/EAIR by collecting data and assessing and developing appropriate mitigation and monitoring measures by reviewing the detail design, conducting discussion with relevant government and beneficiaries, conducting public consultation on the potential impacts and proposed measures and finalize the draft IEEs for PPMUs' review;
(vi) Assist PPMUs in obtaining necessary endorsement from DPC and PEA; and
(vii) Review bidding documents and contracts to ensure that appropriate environmental clauses are included.

2. For Loan Implementation Consultant Package (32 person months, intermittent)

(i) Review the project documents including EARF and IEEs prepared for the sample subprojects;
(ii) Review and provide comments on the initial list of environmental categorization of subprojects to ensure that the screening was conducted based on the requirements set forth in the EARF and appropriate an IEE format (IEE/CEP or IEE/EAIR) was identified according to the environmental assessment regulations in Viet Nam;
(iii) Review and comments the draft IEEs;
(iv) Visit random subprojects sites during the subproject preparation to verify and check the adequacy of EMP;
(v) Liaise with the safeguards officers in each PPMU and make spot checks during implementation to ensure that environmental plans are being properly implemented;

(vi) Work with environmental safeguard officer to develop and carry out training activities with regard to the environmental aspects of the Project;
(vii) Work with environmental officer to support for the design and operation of project environmental monitoring; and
(viii) Prepare the safeguard section of the quarterly progress reports to document the progress and semi-annual environment monitoring reports to be submitted to ADB for reviewing.