

Environmental Assessment and Review Framework (EARF)

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VIE: Basic Infrastructure for Inclusive Growth in the Northeastern Provinces Sector Project

Prepared by the Provincial People's Committee of The Provinces of Bac Kan, Cao Bang, Ha Giang
and Lang Son for the Asian Development Bank.

CURRENCY EQUIVALENTS

(as of 27 April 2017)

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\$1.00	=	Đ 22,730

ABBREVIATIONS

ADB	–	Asian Development Bank
ARVC	–	Agricultural and rural value chain
CPC	–	Commune People's Committee
CSB	–	Commune Supervision Board
DARD	–	Department of Agriculture and Rural Development
DONRE	–	Department of Natural Resources and Environment
DPC	–	District People Committee
EIAR	–	Environmental Impact Assessment Report
EMP	–	Environmental Management Plan
EPP	–	Environmental Protection Plan
IEE	–	Initial Environmental Examination
IMC	–	Independent Monitoring Consultant
MONRE	–	Ministry of Natural Resources and Environment
PC	–	Peoples Committee
PPC	–	Provincial Peoples Committee
PMU	–	Project Management Unit
REA	–	Rapid Environmental Assessment
SST	–	Subproject Support Team
TOR	–	Terms of Reference
UXO	–	Unexploded Ordnance

NOTE

- (i) In this report, "\$" refers to US dollars.

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I. INTRODUCTION

A. The Project

1. The Basic Infrastructure for Inclusive Growth in the Northeastern Provinces Sector Project (BIIG 1) will invest in the recently completed Four Northeastern Provinces (FNEP) Overall Development Plan (2015). The project seeks to build the interrelationship between provinces as one of the foundations for accelerating growth in the more remote regions. As such the plan targets investment into outputs that build areas of comparative advantage in a manner that increases the competitiveness of economic activity in the sub-region. The expected impact is to improve socio-economic wellbeing of local communities through the improved financial returns and through lower costs of accessing public health services, education, water supply and markets.

2. The project has four outputs being (i) FNEP road network connectivity improved, (ii) rural water supply improved, (iii) ARVCs infrastructure in Lang Son improved, and (iv) decentralized public asset management processes implemented.

3. Given the limited environmental impacts expected from the subprojects, the Project has been categorized as 'B' for environment in accordance with the Safeguard Policy Statement (SPS, 2009)¹ of the Asian Development Bank (ADB). The project is being implemented using a sector modality. 08 representative subprojects to present for each type of subproject and each province have been selected during PPTA, which have used for detailed feasibility assessments including initial environmental examinations. The following environmental assessment review framework (EARF) provides the basis on which the additional subproject feasibility assessments will be prepared during implementation and provides a guide to the screening of subprojects, defines institutional arrangements, responsibilities and procedures in relation to environmental management and monitoring, and define environmental assessment requirements complying with the applicable laws and regulations of the Government and with ADB SPS (2009).

B. Subproject Types to be assessed

4. **Output 1:** In support of the strategy of the Government of Viet Nam (the government) and the FNEPs to improve their competitive advantage through increasing the efficiency of the transport network, subprojects will include upgrading and rehabilitating existing roads in the horizontal network enabling faster, safer and cheaper movement of freight, tourists and passenger services. The investment will provide connectivity at the district level and above including linkages between Lang Son - Bac Kan, Bac Kan - Cao Bang. Additional road subprojects will build linkages to border gates in Cao Bang will enable an improved circuit for travel to and around the Ha Giang Province Dong Van Geological Park, and connect community to district centers. A total of 15 road sections are under review for inclusion in the project, including 4 proposed representative subprojects (one per province) covering 276.5 km.

- (i) Eligible infrastructure may include: (i) lengths of road; (ii) bridges and other cross drainage structures; (iii) measures to stabilize the environment around the assets against climate change impacts such as landslides; and (iv) road and traffic safety interventions. Subprojects need to reflect the following criteria:
 - a. Contributes to the cross-provincial, common development plan and goal to be agreed during PPTA processing and inception;

¹ ADB. 2009. Safeguard Policy Statement. Manila.

- b. Involves cooperation with at least one neighboring province or with the PRC;
- c. Contributes to increased private sector participation, including improvement in the environment for private sector investment and development;
- d. Contributes to improved road safety outcomes in the district/province;
- e. Be consistent with medium and long-term sector and socio-economic development plans at the FNEP, provincial and district levels;
- f. Supports inclusive development by promoting engagement of rural communities as beneficiaries of subprojects;
- g. Be consistent with ADB safeguard category of B or C and specifically not category A for resettlement, and environmental safeguards.
- h. Include climate change considerations into the subproject detailed engineering design as per the climate change design guidelines prepared during the PPTA;
- i. Include road and traffic safety considerations into the design and for vulnerable road users; and
- j. Have investment levels estimated in the range of \$8 to \$15 million (with any exceptions specifically justified);

5. **Output 2:** The FNEPs receive substantial annual rainfall, however this is constrained by uneven annual distribution and difficulties with the use of stream water which typically features fast runoff resulting in high turbidity and high risk of contamination from livestock and other point and non-point source pollutants. Many schemes that have been built in recent decades have failed to deliver their design capacity due to water source limitations, water quality, scheme design shortcomings, weak operational and maintenance systems, and simply aging of infrastructure. The FNEPs have proposed 10 water supply scheme subprojects.

6. The subprojects may be bundled into infrastructure packages that cover the entire system from water source to user. The packages could include all, or some, of the elements such as: wells, pumps, reservoirs, tanks, treatment units, meters, pipes, control systems. To the extent possible, water supply schemes will be developed to support use beyond domestic purposes, such as livestock, gardening and even irrigation. Climate change considerations will be included into the subproject detailed engineering designs as per the climate change design paper prepared during the PPTA. This subproject must be consistent with ADB safeguard category of B or C and specifically not category A for resettlement, and environmental safeguards.

7. **Output 3:** This will support agricultural and rural value chains (ARVCs) infrastructure in Lang Son province, informed by support to ARVCs taking place in neighboring FNEPs. Specific value chains will be supported, based on an understanding of links between production, transport and processing within a value chain. Working within horticultural crop supply chains support will target market driven value addition such as processing facilities including collection and drying technologies, storage facilities, support for quality control and traceability systems to build information and knowledge linkages along supply chains, and improved contracting methods for suppliers and service providers including agents and traders. Further support will be target increased production efficiency through support for feeder roads, water saving irrigation, greenhouse systems, collection and grading systems.

8. The support will seek to institutionalize support for small fragmented supply chains in the horticultural crops including vegetables, fruits, spices and herbs based on (i) detailed market

assessments, (ii) enterprise or farmer group business plans, and (iii) producer group viability. Representative value chains for Star anise and Safe Vegetables have been assessed as feasible.

9. Additional value chains are limited to horticultural crops with proven market demand, institutional coordination and value addition opportunities. The subproject must incorporate actors along (vertical linkages) of the value chain including value addition, aggregation, and marketing by ensuring the vertical and horizontal linkages between actors are developed and maintained. Further value chains need to incorporate horizontal coordination of small holders that are subsequently linked to market demand. All value chain investments must be consistent with ADB safeguard categories B or C and specifically not category A for resettlement, and environmental safeguards. Subproject proposals will include climate change considerations in the designs as per the climate change design paper prepared during the PPTA. The packages could include elements such as: feeder roads, small scale water use-efficient irrigation technology, shade houses, value addition technologies, market improvements, post-harvest facilities or waste management systems.

II. ASSESSMENT OF LEGAL FRAMEWORK AND INSTITUTIONAL CAPACITY

A. Legal Framework

10. The principles and procedures for the environmental assessment of projects in Viet Nam are founded on the Law on Environment Protection (LEP) No.55/2014/QH13 which came into effect from 1 January 2015, (superseding the previous LEP of 1993, revised in 2005). The LEP provides the basis of the requirement for environmental assessment, key roles and responsibilities, and for public consultation. Under the LEP, the following decree and circular on environmental assessment and institutional arrangements for the approval of environmental assessments apply:

- (i) Decree No. 18/2015/ND-CP dated February 14th 2015 on regulation of Environmental Protection Planning, Strategic Environmental Assessment and Environmental Protection Plans: requires environmental assessments to be prepared concurrently with project Feasibility Studies/ Investment Reports; sets out the required degree of environmental assessment and establishes requirements for appraisal of environmental assessment documents by the Government (i.e. a Strategic Environmental Assessment (SEA), an Environmental Impact Assessment Report (EIAR) or an Environmental Protection Plan (EPP); and
- (ii) Circular No. 27/2015/TT-BTNMT dated 29 May 2015 of the Ministry of Natural Resources and Environment for guidelines on SEA, EIA and EPPs. This provides the required structure and content of these reports and provides further details of the required public consultation activities.

B. Level and Process of Environmental Assessment and Public Disclosure

11. In accordance with Decree No. 18/2015/ND-CP, environmental assessment is required for all development projects, either in form of an EIAR or an EPP. In broad terms, an EIAR is required for projects of the type and scale listed in Annex II or Annex III of the Decree No. 18/2015/ND-CP which are deemed to have the potential to cause significant adverse impacts. This includes projects located in or adjoining protected areas or other areas that are environmentally sensitive (including proposed protected areas). A project that requires an EIAR is not necessarily equivalent to a category A project in the meaning of the ADB's safeguard policy.

12. Once EIARs are prepared, they are submitted to the Ministry of Natural Resources and Environment (MONRE) or Department of Natural Resources and Environment (DONRE) that provides certification on approval.² The project owner submits copies of the approved EIAR and certification to the Commune Peoples' Committees. The project owner also prepares a summary of the report for public display at the relevant Commune People's Committee office. During the course of project implementation, the project owner is required to submit details of construction and reports on compliance with mitigation and monitoring requirements in the EIAR.

13. Smaller projects without the potential for significant adverse impacts will be subject to a lesser level of assessment in the form of an EPP. EPPs are required to be submitted for appraisal at the time of Subproject Investment Report preparation. Chapter V of Decree No. 18/2015/ND-CP and Chapter VI of Circular No. 27/2015/TT-BTNMT details the procedures for EPPs. Under the article in these chapters, the authority that receives and certifies the EPP is the District People's Committee of the locality in which the subproject is situated. Decree No. 18/2015/ND-CP regulates that for the projects are implemented in two districts or more but within one province, the project owners should register EPP at DONRE. The content and format of the EPP are presented in the Annex 5.5 and 5.6 to Circular No. 27/2015/TT-BTNMT. The EPP must include information on mitigation measures that will be taken. The EPP obliges the Provincial People's Committee to ensure that the specified mitigation is carried out during project implementation. On receipt of the EPP, it is registered by the Commune People's Committee.

14. The essential differences between preparation processes for an EPP and an EIAR are: (i) the structure and content of the report; (ii) the level of investigation, analysis and reporting required; and (iii) the requirement for formalized consultation within the EIAR. Once EPPs are required under Circular No. 27/2015/TT-BTNMT, public consultation and disclosure are not compulsory.³ However, public consultation and disclosure is required by ADB.⁴

III. ANTICIPATED ENVIRONMENTAL IMPACTS

15. Initial environmental examinations (IEEs) are prepared for eight representative subprojects, and for subprojects associated with ARVCs. The IEEs will identify potential impacts, appropriate mitigation measures, and monitoring mechanisms. Serious negative environmental impacts are unlikely since subprojects will primarily involve upgrading of road infrastructure mainly within the existing right of way which will minimize land clearance and slope cutting, while improvements to drainage and slope integrity will mitigate existing environmental risks. Water supply improvements comprise mainly the upgrading of existing water control facilities, installation or expansion of treatment plant, construction of transmission mains and of distribution networks. The construction of a dam for storage and thereby improved supply during the dry season may be included. The following issues require detailed examination during the IEE preparation process:

- (i) Ensuring sufficient environmental flow after abstraction for the water supply facilities (where dams are to be constructed, reservoir storage must suffice to ensure environmental flow during projected dry periods);

² Annex III of the Decree No. 18/2015/ND-CP provides a list of projects requiring an EIAR, which are to be reviewed, approved and certified by MONRE; for projects of types listed in Annex II but not Annex III, the relevant DONRE will review, and certify on approval.

³ In the public consultation is required for SEA and EIAR only.

⁴ ADB. 2009. *Safeguard Policy Statement*. Manila. Under this policy, the "Information Disclosure, Consultation, and Participation" is required for all environment category A and B projects.

- (ii) Examination of construction impacts including secondary impacts of materials extraction, impedance of traffic during construction, severance of utilities, safety to workers and the public, and noise and dust nuisance.
- (iii) Operational issues with improved roads including safety risks to motorists, pedestrians and roadside residents, effects on slope stability and management of drainage flows.
- (iv) Operational issues associated water supply systems include adequacy of operation and maintenance of intakes, treatment plant, transmission and distribution systems to ensure supply of clean, safe water.

16. The type, scale and operating arrangements for technologies introduced to support ARVCs will depend on the market assessments, business plans and producer group viability assessments and as such safeguards assessments will be determined on a case by case basis as part of the detailed design approvals.

17. The Project will strengthen the capacities of provincial and district authorities in operation and maintenance of the improved road links and water supply schemes.

IV. ENVIRONMENTAL ASSESSMENT FOR SUBPROJECTS

A. Responsibilities and Authorities

18. The Executing Agency (EA) is the PPC in each province, who will establish a Project Management Unit (PMU). The PMU will retain responsibilities for central level project management and coordination. The PMUs will be responsible for carrying out the feasibility studies, detailed design, day-to-day management of subproject implementation, and for arranging environmental assessment and review of the subprojects. Commune Supervision Boards (CSBs) will be engaged to monitor construction activities. Each PMU will recruit a safeguards specialist to support the preparation and implementation of environmental and social safeguards.

19. Subproject Screening and Categorization. Subproject selection and screening ensures that only subprojects ranked as Category B or C to follow ADB SPS 2009 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. Additional subprojects will be screened by carrying out initial site visits to view local conditions, identify potential negative impacts, and complete Rapid Environmental Assessment (REA) Checklists to ensure that the potential range of impacts has been considered and the categorization confirmed. Subprojects located in protected areas or that involve significant involuntary resettlement (i.e. more than 200 affected persons will be resettled or lose 10% or more of their productive assets), will automatically be excluded. Safeguard consultants appointed by the PMU will carry out the safeguard screening and determine the need for IEE/EPP or IEE/EIAR.

20. IEE/EPP Preparation. An IEE/EPP needs to be prepared if a subproject is classified as environmental category B following ADB SPS 2009. The IEE needs to include an environmental management plan (EMP). The PMU will select an appropriate national consulting firm to prepare the IEE/EPP with support from PMU/LIC environment specialist and update the representative IEE/EMP prepared by the PPTA Consultants if needed to reflect any change in the subproject detailed design. The IEE/EPP should include the 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 should satisfy the

requirements of both ADB and the Government of Viet Nam (EPP)⁵. Adequate public consultation needs to be carried out to share and get feedback on the initial findings of the IEE.

21. Review of IEE/EPPs: On completion, IEE/EPP reports will be reviewed initially by the PMU and if satisfactory, IEE/EPP reports will be forwarded to relevant PPC for approval. The environmental assessment and review procedures for IEE/EPP are as follows:

- (i) PMU reviews IEE/EPP reports;
- (ii) If found satisfactory, the PMU will forward to relevant PPC for approval and submit the IEE/EPP for each subproject to ADB for review, endorsement and uploading on the ADB website.

B. Environmental Monitoring Requirements

22. Environmental monitoring consists of environmental effects and compliance monitoring (Attachment 2). Environmental effects monitoring includes air and water quality monitoring parameters.

23. An Environmental Management Plan (EMP) needs to be included in all IEE reports. The EMP summarizes all mitigation measures (in the pre-construction, construction and operations phases) that have been identified in respect of potential environmental impacts. 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 representative subproject.

24. The EMP is used in the preparation of bidding documents for the construction works, ensuring that bidders are aware of the environmental mitigation 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.

V. PUBLIC CONSULTATION, INFORMATION DISCLOSURE AND GRIEVANCE

25. Public Consultation and Disclosure. Public consultation shall include discussions with members of project beneficiary groups, affected persons and commune officials, as a part of IEE preparation, to ascertain any concerns that may need to be addressed. Consultation commences during subproject feasibility study and continues throughout the project cycle. The draft IEE and updated IEE, which incorporates the GRM, will be disclosed. The consultation procedures shall be conducted as set out in the ADB's SPS (2009):

- (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 impacts in design, construction and operation phases for engaging stakeholders, including information disclosure and consultation with affected people and other stakeholders;

⁵ Most of the subprojects will involve rehabilitation or update of existing infrastructure. Under Decision 18/2015/ND-CP, subprojects to be financed under the Project are unlikely to be failed in appendix II or IV, corresponding to environmental category "B" or "C" under ADB's policy. Therefore, a simplified assessment –Environmental Protection Plan (EPP) will be required.

- (iii) Invitation for feedback in respect of any areas of concern that the public may have, and suggested means of implementation; A summary will be prepared of comments and concerns received from affected people and other stakeholders and how these comments have been addressed in project design and mitigation measures, with special attention paid to the needs and concerns of vulnerable groups, including women, the poor, and Indigenous Peoples;
- (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 and facilitating participation of affected people during project implementation.

26. 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 translated into the local languages and distributed to the CPCs/DPCs, and made available for public review. All IEEs will be submitted to ADB for disclosure on the ADB website.

27. Grievance Redress Mechanism. The grievance redress mechanism (GRM) has been developed (attachment 3) to ensure that any complaint raised by the community related to adverse environmental impacts will be addressed in a timely manner. In each subproject communes, Community Supervision Board will be set up and facilitate the timely facilitation and mediation of the grievance process. The GRM will be disclosed with the IEE and other safeguard documents to ensure that potentially affected persons are aware of it and their entitlement to raise complaints. During construction, the Contractor will appoint a member of his staff to act as the focal point, who will liaise with the Community Supervision Board and, if appropriate, the complainant(s) to address and seek solutions to any grievance that relates to the Contractor's actions.

28. The local government will closely coordinate with the PMU to solve the problems in a timely manner during the subproject implementation, as well as during the operation and maintenance period.

VI. INSTITUTIONAL ARRANGEMENT AND RESPONSIBILITIES

29. National environmental specialists (24 person months) for each provincial PMU LIC team that each project owner will contract. The specialist will assist PMUs to monitor and report the implementation of environmental measures. The proposed terms of reference are provided in the PAM.

VII. MONITORING AND REPORTING

A. Environmental Monitoring Programs

30. General environmental safeguard monitoring with associated grievance mechanisms is undertaken by the construction supervision consultant and the environmental specialist on the LIC team during construction phase and by DOT or any Operating Company during the operation phase, to ensure that the required policies and procedures and plans for minimization of negative environmental impacts. Typical environmental monitoring programs have been developed for road and for water subprojects. Environmental monitoring programs have been developed in terms of environmental effects monitoring and environmental compliance monitoring;

31. Environmental effects monitoring is carried out to examine impacts of the subproject in relation to ambient environmental conditions e.g. ambient air, noise, sensitive water bodies, soil and groundwater and sensitive ecosystems.

32. Environmental compliance monitoring is carried out to review compliance with operating procedures and technical standards and/or contractor specifications in the EMP e.g. the safety during construction, construction worker camp sanitation and hygiene conditions, wastes including hazardous disposal practices during construction, erosion control etc.

33. The environmental monitoring programs have been developed to reflect the generally low level of environmental impact expected to arise from subproject implementation. Moreover, monitoring methods have been developed in recognition of existing human and technical resource levels and focus on observation based methods with quantitative monitoring recommended for key environmental issues only. For each specific subproject, the PMU will determine the appropriate level of environmental monitoring that best suits local conditions and the predicted level of environmental impact.

B. Environmental Reporting System

34. Table 1 describes the reporting system that will apply to environmental management activities for each subproject.

Table 1: Environmental Reporting System

Project Phase	Type of Report	Frequency	Responsibility	Submitted To Whom
Construction	Site Environmental Performance Report indicating compliance with Site EMP and monitoring results	Monthly	Construction supervision consultant	LIC/PMU
	EMP Compliance Report indicating compliance with all subproject's EMPs and monitoring results	Quarterly	LIC	PMU
	EMP Compliance Report indicating compliance with all subproject's EMPs and monitoring results	Bi-annually or twice during construction depending on construction duration	PMU	ADB/DPC or DONRE
	Subproject Environmental Report indicating overall subproject environmental performance and EMP compliance	At completion of subproject	PMU	ADB/DPC or DONRE
Operation	EMP Compliance Report: Operation indicating compliance with subproject EMP commitments during operation	01 year for first two years of operation. Ongoing frequency to be determined based on review after 2 years.	DOT and/or Operating Company	ADB

Attachment 1: Monitoring of IEE/EPP Implementation

Monitoring Parameter	Monitoring Method	Frequency of Monitoring	Responsibility for Monitoring
Verification of IEE/EPP preparation and approval before commencement of subproject construction	Verification of:	For all subprojects	PMU
	(i) IEE/EPP document produced, (ii) GOV certificate issued, (iii) ADB no-objection issued	For all subprojects	PMU
Adequacy of IEE/EPP documentation to meet GOV requirements and ADB safeguard requirements	Review of IEE/EPP content to meet GOV	For all subprojects	PMU
	safeguard requirements	For all subprojects	PMU
Budget and human resources expended on IEE/EPP preparation	Collection of data on (i) consultants fees, (ii) data acquisition and collection fees, (iii) PMU human resources	Cumulative and average data for all subprojects	PMU
Adequacy of public consultation / disclosure activities to meet GOV requirements and ADB safeguard requirements	Number and type of public consultation and disclosure events and key issues raised	For all subprojects	PMU

Attachment 2: Environmental Monitoring

Table 2.1: Environmental Monitoring Program for Rural Road Subprojects

A. ENVIRONMENTAL EFFECTS MONITORING

Target compartment	Parameters	Location	Methods	Frequency	Responsibility
Construction Stage					
Noise	Noise levels	Sensitive location (s)	Observation, use of noise meter to measure	In response to community complaints	Construction supervision consultant
Ambient air	Dust levels	Sensitive location (s)	Observation; Sampling and analysis	Weekly or during windy conditions	Construction supervision consultant
Water and Soil environment	Sediment loads, rubbish, oil or other visible pollutants	Water bodies identified in the IEE as being potentially affected by the subproject	Observation, Sampling and analysis	Weekly and after large rain events	Construction supervision consultant
Operation Stage					
Surface water quality	Turbidity, general condition.	Representative water bodies receiving road runoff	Observation and public consultation	2 times per year for first 2 years (1 time in wet season, 1 time in dry season)	DOT and/or Operating Company
Air quality	TPM or PM ₁₀ ; NO _x ; SO _x ; CO compared to QCVN 05: 2013/BTNMT ⁶	At representative receivers along road alignment	TCVN methods	1 time per year for first 2 years	DOT and/or Operating Company
Noise levels	Day time and night time dB(A) compared to QCVN 26:2010/BTNMT ⁷	At representative receivers along road alignment	TCVN methods	1 time per year for first 2 years	DOT and/or Operating Company
Road safety	Number of road accidents and causes and severity of accidents	Along road alignment	Discussions with local authorities	1 time per year for first 2 years	DOT and/or Operating Company

⁶ QCVN 05: 2013/BTNMT, National technical regulation on ambient air quality

⁷ QCVN 26:2010/BTNMT National Technical Regulation on Noise

B. ENVIRONMENTAL COMPLIANCE MONITORING

Mitigation Measure	Parameters/ indicator	Location	Methods	Frequency	Responsibility
<i>Pre-Construction Stage</i>					
UXO clearance	Certification of clearance	Affected areas	Observation	Prior to commencement of site works	PMU
<i>Construction Stage</i>					
Erosion and sediment controls	Condition and capacity of controls	Throughout construction site	Throughout construction site	After large rain events	Construction supervision consultant
Materials storage	Condition of materials storage areas	Throughout construction site	Observation	Weekly	Construction supervision consultant
Construction equipment and vehicles	Noise and exhaust generation; covering of trucks; oil/fuel leaks	Throughout construction site	Observation	Random	Construction supervision consultant
Construction camp conditions	Cleanliness; waste disposal facilities; general condition	All construction camps	Observation	Weekly	Construction supervision consultant
Vegetation clearing	Boundaries of vegetation clearing	Areas of sensitive vegetation	Observation	Weekly during clearing works	Construction supervision consultant
Property access	Reinstatement of temporary and permanent accesses	Affected properties	Observation	Once during and once following construction	Construction supervision consultant
Waste disposal	Site cleanliness and condition; temporary waste storage area	Throughout construction area	Observation	Weekly	Construction supervision consultant
Avoidance of heritage items	Boundaries of works in vicinity of heritage items	At affected items	Observation	Once during construction works	Construction supervision consultant
Areas of standing water	Ponded or undrained water	Throughout construction area	Observation	Weekly during rainy season	Construction supervision consultant
Development	Relevant	Throughout	Review of	Before	PMU

Mitigation Measure	Parameters/ indicator	Location	Methods	Frequency	Responsibility
of borrow areas	Environmental approvals obtained for new sites	construction area	relevant documentation	commencement of resource extraction	
Operation Stage					
Erosion or scouring of waterways, areas of cut and fill	Condition of landscaping; stability of cut/fills	At representative sections along road alignment	Observation	6 monthly for first 2 years of operation	DOT and/or Operating Company
Drainage and flooding	Condition of drains, culverts and evidence of flooding of adjacent land use	At representative sections along road alignment	Observation	6 monthly for first 2 years of operation	DOT and/or Operating Company
Ponding of water on road alignment	Evidence of areas of ponded water	At representative sections along road alignment	Observation	During rainy season for first 2 years of operation	DOT and/or Operating Company
Waste management	Site cleanliness and condition	Throughout subproject area	Observation	6 monthly for first 5 years of operation	DOT and/or Operating Company

Table 2. 2: Environmental Monitoring Program for Irrigation & Water Supply Subprojects

A. ENVIRONMENTAL EFFECTS MONITORING

Target compartment	Parameters	Location	Methods	Frequency	Responsibility
Construction Stage					
Noise	Noise levels	At nearest residence(s)	Observation, use of noise meter to measure	In response to community complaints	Construction supervision consultant
Ambient air	Dust levels	At nearest residence(s)	Observation; Sampling and analysis	Weekly or during windy conditions	Construction supervision consultant
Water and Soil environment	Sediment loads, rubbish, oil or other visible	Water bodies identified in the IEE as being potentially	Observation; Sampling and analysis	Weekly and after large rain events	Construction supervision consultant

Target compartment	Parameters	Location	Methods	Frequency	Responsibility
	pollutants	affected by the subproject			
Operation Stage					
Domestic water supply quality	Parameters identified in Drinking Water Hygienic Standards QCVN 01:2009/BYT ⁸ / QCVN 02: 2009/BYT ⁹	Communities in vicinity of subproject	Observation; Sampling and analysis	6 monthly for first 2 years of operation	DARD District Office and/or Operating Company
Public health	Reported incidence of waterborne diseases	Communities in vicinity of subproject	Interview	6 monthly for first 2 years of operation	DARD District Office and/or Operating Company
Water use conflicts	Reported conflicts in access to water resources	Communities in vicinity of subproject	Direct interview	6 monthly for first 2 years of operation	DARD District Office and/or Operating Company
Surface water quality	BOD, COD, pH, TSS, salinity, Total P, E. coli, coliform, Total N compared to QCVN 08-MT: 2015/BTNMT	Representative water bodies receiving agricultural runoff from subproject	TCVN methods	6 monthly for first 2 years of operation	DARD District Office and/or Operating Company
Soil quality	Evidence of salinity or acidification	At representative locations in irrigated area	Observation	2 times per year for first 2 years (1 time in wet season, 1 time in dry season)	DARD District Office and/or Operating Company

B. ENVIRONMENTAL COMPLIANCE MONITORING

Mitigation Measure	Parameters/ Indicator	Location	Methods	Frequency	Responsibility
Pre-Construction Stage					
UXO clearance	Certification of clearance	Affected areas	Observation	Prior to commencement of site works	Construction supervision consultant

⁸ QCVN 01:2009/BYT National technical regulation on drinking water quality by the Minister for Health

⁹ QCVN 02: 2009/BYT National technical regulation on domestic water quality by the Minister for Health

Mitigation Measure	Parameters/ Indicator	Location	Methods	Frequency	Responsibility
Construction Stage					
Erosion and sediment controls	Condition and capacity of controls	Throughout construction site	Observation	After large rain events	Construction supervision consultant
Materials storage	Condition of materials storage areas	Throughout construction site	Observation	Weekly	Construction supervision consultant
Construction equipment and vehicles	Noise and exhaust generation; covering of trucks; oil/fuel leaks	Throughout construction site	Observation	Random	Construction supervision consultant
Construction camp conditions	Cleanliness; waste disposal facilities; general condition	All construction camps	Observation	Weekly	Construction supervision consultant
Vegetation clearing	Boundaries of vegetation clearing	Areas of sensitive vegetation	Observation	Weekly during clearing works	Construction supervision consultant
Property access	Reinstatement of temporary and permanent accesses	Affected properties	Observation	Once during and once following construction	Construction supervision consultant
Waste disposal	Site cleanliness and condition; temporary waste storage area	Throughout construction site	Observation	Weekly	Construction supervision consultant
Avoidance of heritage items	Boundaries of works in vicinity of heritage items	At affected items	Observation	Once during construction works	Construction supervision consultant
Operation Stage					
Use of irrigation water for domestic use	Water usage/allocation	Households in vicinity of irrigation canals	Observation and consultation	6 monthly for first 5 years of operation	DARD District Office and/or Operating Company
Condition of water storage	Condition of water storage facilities	Water storage areas	Observation	6 monthly for first 2 years of operation	DARD District Office and/or Operating Company
Protection of	Presence of	In populated	Observation	6 monthly for	DARD District

Mitigation Measure	Parameters/ Indicator	Location	Methods	Frequency	Responsibility
public safety	signage and measures to avoid accidents	areas	and consultation	first 2 years of operation	Office and/or Operating Company
Erosion or scouring of canals	Condition of canals; sediment loads in water	In unlined sections	Observation	6 monthly for first 2 years of operation	DARD District Office and/or Operating Company
Prevention of slumping or erosion of canal banks	Bank condition	Representative locations in subproject	Observation	6 monthly for first 5 years of operation	DARD District Office and/or Operating Company
Waste management	Site cleanliness and condition; temporary waste storage areas	Throughout subproject area	Observation	6 monthly for first 5 years of operation	DARD District Office and/or Operating Company

Attachment 3: Grievance Redress Mechanism

1. In order to ensure that all APs' grievances and complaints on any aspect of land acquisition, compensation and resettlement are addressed in a timely and satisfactory manner, and that all possible avenues are available to APs to air their grievances, a well-defined grievance redress mechanism needs to be established and disclosed to DPs and communities. All APs can send any questions to implementation agencies about their rights in relation with entitlement of compensation, compensation policy, rates, land acquisition, resettlement, allowance and income restoration. Furthermore, APs will not be ordered to pay any fee for the grievance and complaints at any level of trial and court. Efforts will be made to resolve complaints at the commune level. If not resolved, a complaint will be referred to the district and provincial level. If still not resolved, the complaint will be referred to the court for resolution. The project will shoulder all administrative and legal fees that might be incurred in the resolution of grievance and complaints.

2. The following stages for grievance redress are established based on Complaint Law no. 02/2011/QH13, dated 11 November 2011:

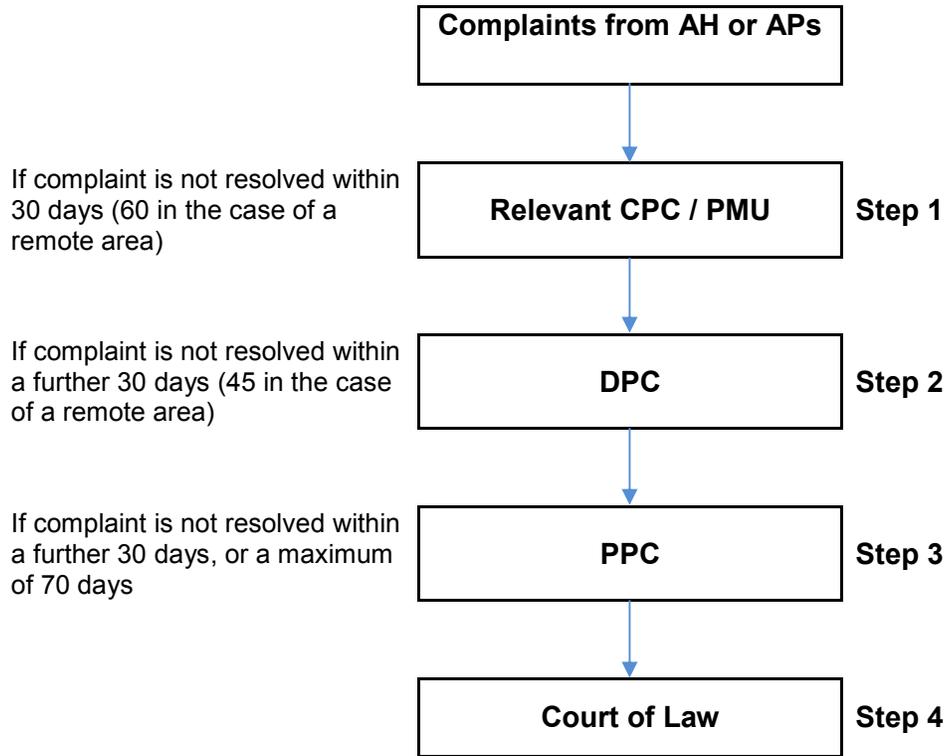
3. There are three steps to address complaints received from stakeholders:

Stage 1: If a household or individual has any complaint he/she can submit a complaint in written or verbal form to the representative of the CPC-community monitoring board (usually the Deputy Chairman of the commune/town). The CPC will work with PMU to solve complaints and a representative PMU will respond in written form to the complainant. During construction, the Contractor will appoint a member of the management team as focal point to liaise with the community monitoring board and, if appropriate, the complainant(s) to address any grievance that relates to the Contractor's actions. The CPC, as a whole body will meet personally with the aggrieved affected household and will have 30 days and a maximum of 60 days after the lodging of the complaint to resolve the complaint, however, depending upon whether it is a complicated case or case comes from a remote area. The CPC secretariat is responsible for documenting and keeping file of all complaints that it handles.

Stage 2: If after 30 days or 45 days (in remote areas) the aggrieved affected household does not hear from the CPC, or if the affected household is not satisfied with the decision taken on his/her complaint, the affected household may bring the case, either in writing, to any member of the DPC. The DPC in turn will have 30 days or a maximum of 70 days after the lodging of the complaint to resolve the case, however, depending on whether the case is complicated or in remote area. The DPC is responsible for documenting and keeping file of all complaints that it handles and will inform the District Resettlement Committee (DRC) of any decision made and the DRC is responsible for supporting DPC to resolve AH's complaint. The DPC must ensure that the complainant is notified of the decision made

Stage 3: If after 30 days or 45 days (in remote area) the aggrieved affected household does not hear from the DPC, or if the affected household is not satisfied with the decision made on his/her complaint, the affected household may bring the case, either in writing, to any member of the PPC. The PPC has 30 days or a maximum of 70 days to resolve the complaint to the satisfaction of all concerned. However, depending if the case is complicated or from a remote area The PPC is responsible for maintaining records of complaints received, action taken and outcomes.

Stage 4: If efforts to resolve disputes using the grievance procedures remain unresolved or unsatisfactory, after a period of thirty days, complainants have the right to bring the case to a Court of law for adjudication. The decision of the Court is binding on all parties.



Attachment 4: Staffing Requirements & Budget for EARF Implementation

Environmental Management Activity	Staffing Requirements per Subproject		Marginal Cost Estimate per Subproject ¹⁰
	PMU Safeguards / Environment Officer		
Application of environmental criteria to subproject selection	Approximately 0.5 weeks		Included in project personnel salaries
Environmental categorization	Approximately 0.25 Weeks		Included in project personnel salaries
Preparation of environmental assessment documents: - Preparation of IEE/EPP	Approximately 2 weeks for IEE/EPP for TOR preparation, engagement of consultants, supervision of preparation, review and submission to PMU		\$9,000 per IEE/EPP for consultant fees, data collection, site visits etc.
Public consultation and disclosure	Approximately 1 week		Included in budget for subproject management
Review of environmental assessment documents by GOV and issuance of no-objection by ADB	Approximately 1 week for liaison with ADB/GOV as required		Included in project personnel salaries
Monitoring and reporting of EMP implementation	Approximately 1 week		Included in project

Indicative budget¹¹ for environmental safeguards component of LIC team per province

Item	Unit Cost	Quantity	Cost
National Environment Safeguards Specialist	\$3,000	24 months	\$72,000
Per Diem	\$1,050	12 months	\$12,600
Water Testing: Water Supply subprojects (Collection, delivery and analysis of samples)	\$150	48 (4 tests per subproject for assumed max of 8 subprojects)	\$7,200
EMP Miscellaneous costs	Depends on requirements of additional subprojects		\$83,000
Total			\$174,800

¹⁰ Marginal cost estimates include those costs above and beyond salary costs for key project financed staff involved in EARF implementation

¹¹ Budget requirement will be determined by the final subproject designs

Terms of Reference for LIC Environmental Safeguards Specialist

Environment Specialists (24 p-m national)

1. The specialist will have an appropriate tertiary qualification in environmental science or natural resource management from a recognized institution and will have more than 10 years' experience working in the field of environmental management of development projects, including at least two internationally funded projects. The experience will include environmental monitoring and the specialist will be familiar with the laws and regulations of Viet Nam associated with the environment. Training skills would also be an advantage.
2. Duties of the specialists will include the following:
 - (i) Review the environmental recommendations of the PPTA Final Report and the formats for environmental examinations contained therein;
 - (ii) Assist with the screening of subprojects, completing REA checklists for candidate subprojects;
 - (iii) Brief the staff of the PMUs in participating provinces on environmental procedures and requirements for subproject preparation;
 - (iv) Visit each subproject during the subproject preparation to ensure environmental safeguards are being properly conducted providing advice and support for IEE preparation;
 - (v) Assist the PPCs with the internal review of the initial environmental examinations and associated environmental management plans prepared for each subproject and assist with updating the draft IEEs in response to comments received;
 - (vi) Assist the PMUs to ensure that EMP is adequately integrated in bidding document and civil contract;
 - (vii) Assist PMU in establishment and operation of environment management system described in EMP;
 - (viii) Undertake regular supervision of the contractor's environmental performance and carry out environment sampling program for surface/ground water quality, dust and noise as required in the EMP and, prepare semiannual monitoring report for submission to ADB and government environment authority and;
 - (ix) Assist in the preparation and implementation of training activities with regard to the environmental aspects of the Project.