Contract Specific Environmental Management Plan

January 2020

Project 47274-003

VIE: Secondary Green Cities Development Project
Ha Giang Subproject

Package: Phung Hung Road

Prepared by Provincial Peoples Committee of Ha Giang, for the Asian Development Bank. This is an updated version of the document originally posted in April 2017 available on https://www.adb.org/projects/47274-003/main#project-documents
ENVIRONMENTAL MANAGEMENT PLAN (EMP)

Phung Hung Road

Viet Nam: Secondary Green Cities Development Project
Ha Giang City Subproject
(Updated from Initial Environmental Examination – IEE and Environmental Management Plan-EMP)
ABBREVIATIONS

ADB - Asian Development Bank
PAH - Project Affected Household
BOD - Biological Oxygen Demand
COD - Chemical Oxygen Demand
CPC - City Peoples Committee
DOC - Department of Construction
DOLISA - Department of Labor, Invalids, and Social Assistance
DONRE - Department of Environment and Natural Resources
DPI - Department of Planning and Investment
EA - Executing Agency
EIA - Environment Impact Assessment
EMP - Environment Management Plan
EO - Environmental Officer IA - Implementing Agency
IEE - Initial Environmental Examination
IES - International Environment Specialist
NES - National Environment Specialist
PMU - Project Implementation Unit
GOV - Government of Viet Nam
PMCS - Project Management & Consultant Supervision Consultant
PPC - Provincial Peoples Committee
SO - Safeguards Officer
UXO - Unexploded Ordnance
WEIGHTS AND MEASURES

Km - kilometer
Kg - kilogram
Ha - hectare
m - meter
mm - millimeter
°C - degree Celsius

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

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CHAPTER I. INTRODUCTION

1.1 Project background

1. The project supports Viet Nam’s efforts towards achieving Sustainable Development Goal 11 to “Make cities inclusive, safe, resilient and sustainable”. The project will develop competitive, green and inclusive city in Hue, Vinh Yen and Ha Giang through: (i) strengthened city planning processes, (ii) enhanced green and climate resilient infrastructures, and (iii) improved institutional effectiveness and sustainability.

2. Viet Nam has made remarkable progress in transforming its economy, reducing poverty, and making a transition toward an industrialized and urbanized society. Urban population increased from 19.5% (12.8 million) in 1990 to 34.5% (31 million) in 2014 and is forecasted to reach 50% (52 million) by 2025. However, realizing the promise of urbanization requires cities to effectively plan and manage services and infrastructure to improve economic competitiveness, support inclusive growth, and tackle environmental degradation and vulnerability to climate change and natural disasters. The government adopted the National Urban Development Plan (NUDP) in 2012 to achieving the 2020 targets for urban services delivery.¹ ADB assisted a more equitable, economically competitive and environmentally sustainable version of urban development by facilitating a green city planning exercise that resulted in the development and adoption of the GrEEEn City Action Plans (GCAPs) in the three cities.²

3. In Vietnamese cities, urban population with access to improved water sources is officially 98%, but only 61% have connected to their houses.³ Less than 15% of urban wastewater is connected and treated by centralized treatment systems. Urban flooding stems from poor management of storm water, urbanization intensification and increasing recurrence of extreme weather events. Urban road network lacks its connectivity to accommodate increasing number of vehicles, while fails to promote greener mode of transportation (e.g. pedestrians, non-motorized vehicles).

4. The project directly supports the implementation of the Green City Action Plan (GCAPs) in Ha Giang, Hue and Vinh Yen, through: (i) provision of improved strategic infrastructure and access to basic urban services, (ii) development of effective planning, financing, implementation and monitoring systems and (iii) improved their financial and technical sustainability. The project will assist in establishing an effective urban planning and management system, and a sound implementation framework to continue basic infrastructure investments. It emphasizes the objectives of resilience and consultation and participation in the planning process.

5. The project will contribute to green, competitive and inclusive secondary city development in Viet Nam, thereby supporting all three pillars of ADB’s country partnership strategy (CPS) 2016–

¹ Prime Minister Decision 1659/2012
² GrEEEn adopts the 3Es approach: Economy (Competitiveness), Equity (Inclusiveness), and Environment (Green). Three cities approved the GCAPs.
2020 for Viet Nam, including: (i) innovative and productive economy; (ii) enhanced service delivery, and (iii) improved environmental sustainability and climate change adaptation. The project is consistent with ADB's urban operational plan that focuses on inclusive and environmentally sustainable growth, and improved quality of life for developing a livable city. The project design incorporates the lessons learned from ADB's urban sector projects in Viet Nam. These are (i) keeping impacts of land acquisition and resettlement to a manageable level, and (ii) rigorously reviewing technical designs to avoid oversized infrastructures.

1.2 Ha Giang City Subproject’s Components

1.2.1 Overview Ha Giang subproject

6. From the IEE the Ha Giang subproject of the SCDP consists of twelve (12) components (Table 1) which are grouped into the subproject themes of greenifying & improving urban climate change resilience, and urban road networks and tourism improvements. The 12 subproject components were further aggregated into three component types of similar activities and potential impacts (Table 2).

<table>
<thead>
<tr>
<th>Table 1 Ha Giang City subproject components</th>
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| Green and Climate Resilient Urban Development | • Rehabilitation of Main Drainage Lines in Minh Khai Ward  
• Rehabilitation of Main Drainage Lines in Tran Phu Ward  
• Rehabilitation of Main Drainage Lines in Quang Trung Ward  
• Rehabilitation of Main Drainage Lines in Nguyen Trai Ward  
• Rehabilitation of Street Lighting System of Ha Giang City |
| Drainage Channel Improvement and Environmental Rehabilitation |
| River Embankment Protection and Ecological Upgrading | • Western Embankment of Lo River  
• Embankment on each side of Mien River  
• Southern Embankment of Me Stream |
| Integrated Urban Road Network Development |
| Urban Road Improvement Connectivity | • New Road on the East bank of Mien River (Phung Hung Road)  
• Southern Ring Road  
• New Bridge from National Road No. 2 to Southern Ring Road  
• Upgrading of National Road No. 2 |

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<th>Table 2. Ha Giang subproject component types</th>
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| 1) Stream-drainage and street lighting Rehabilitation  
• Rehabilitation of Main Drainage Lines in Minh Khai Ward  
• Rehabilitation of Main Drainage Lines in Tran Phu Ward  
• Rehabilitation of Main Drainage Lines in Quang Trung Ward  
• Rehabilitation of Main Drainage Lines in Nguyen Trai Ward  
• Rehabilitation of Street Lighting System of Ha Giang City |
| 2) Embankment Developments  
• Western Embankment of Lo River |
1.2.2 Secondary City Development Project II - Green Cities” (SCDPII), in Ha Giang City, consists of 3 components as follows:

- **Component 1: Green city development and climate change resilience**
  
  (i) **Drainages Subprojects** will improve city drainage for Tran Phu and Nguyen Trai wards in the city core; for the areas T1, T2, T3 and T4 in Quang Trung and Minh Khai wards. A network of 14 streams flow from the surrounding mountains to Lo River and Mien River. The streams are combined sewers collecting storm water and wastewater, and have been encroached by houses, resulting in reduced width and flow capacity, and increasing flood frequency. Solid waste is dumped in the stream. These three subprojects involve cleaning and rehabilitating the primary storm drainage system and providing open space for the community.

  (ii) **Embankments rehabilitation.** Three embankment projects have been prioritized: i) western embankment of Lo River; section of Goc Gao to new Me Bridge; ii) embankment and roads on both sides of Mien River, section from Suoi Tien to Bridge 3/2; and iii) the southern embankment of Me Stream, from old Me bridge to Chang spillway. Rehabilitation of these embankments will result in better flood protection. Linear parks will also be incorporated on top of the embankments.

- **Component 2: development of road network**
  
  7. Rehabilitation of these embankments will result in better flood protection. Linear parks will also be incorporated on top of the embankments. Details of the works of the sub-component:

  (i) Bridge from National Road No 2 to Southern Ring Road
  (ii) Upgrading and expansion of National Road No 2 the start point at Kms85+995 of NH2; the end point at Me Moi bridge;
  (iii) Southern ring road, Start point at the quarter 1 of Minh Khai ward and the end point connects the road to Phu Linh;
  (iv) Phung Hung road, start point intersects the middle of Phung Hung and Suoi Tien Bridge; the end point cuts Ly Thuong Kiet road (quarter 2, Ngoc Ha ward, Ha Giang city).

- **Component 3: Green support**
  
  8. The component 3 is to replace nearly 1900 lights in the city center by energy saving lights (led light). This component funded by the non-refundable aid of the Global Environmental Fund (GEF).

  9. Out of 9 subproject’s items, 8 items will cause land acquisition impacts. This REMDP covers the 08 subprojects selected in Ha Giang City under the SCDP II. Table 1 presents a description of these subprojects:

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<tr>
<th>No</th>
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<td>No</td>
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</table>
| 1  | Drainages for Tran Phu, Nguyen Trai, Minh Khai and Quang Trung Wards | - Minh Khai ward, the following drains (streams) rehabilitation: T1: 1,701 m; T2: 501 m; T3: 708 m; T4: 407 m.  
- Drains to be rehabilitated Tran Phu Ward: T1: 436 m; T2: 438 m; T3: 127 m; T4: 544 m  
- Quang Trung ward, four (4) primary drains (streams) rehabilitation: T1: 208 m; T2: 346 m; T3: 441 m; T4: 215 m.  
- Nguyen Trai ward, 01 primary drains (streams) will be rehabilitated: T1: 1,384 m |
| 2  | Western Embankment of Lo River | - This sub-project involves the improvement of the embankment along route of the upgrading of National Road No.2 along the River Lo’s western bank for 950 m. The embankment at this section of Lo River is 8 to 10m high, while the water level varies by 5 to 8 m between the dry season and the flood season (when Chinese dams can release some extra flow).  
- The proposed embankments have a 1.5 to 2 slope. They consist with reinforced conventional concrete plates for the underwater part and two vegetated terraces on the top  
- A 6 meters-wide-linear park is included on top of the embankment. The park includes linear path for non-motorized vehicle, trees, plants, lighting, natural drainage (with gravel filtration) and seating |
| 3  | Embankment and roads on both sides of Mien River | - On the East bank of Mien river, the project consists of 2,132 m of embankment. This East embankment goes from the Mien river confluence all the way to Bridge 3/2.  
- This project consists of 905 m of embankment on the West side of Mien river, from Phung Hung Bridge to bridge 3/2. |
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<td>4</td>
<td>Southern Embankment of Me Stream</td>
<td>Embankment works along the eastern edge of Me River are proposed to extend from the old Me Bridge to the River Lo confluence to meet up with SP6 western embankment works (distance of 1,605 m). Part of the scheme will involve a linear park/landscape, pedestrian route on the top of the embankment that could feature existing tree growth in the northern section.</td>
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| 5  | Upgrading and expansion of National Road no.2 (NH2) | - The existing National Highway Number 2 (NH2) functions as the single access from the South to Ha Giang city. The section under review is in a poor condition and is in an unsuitable condition for traffic. There is currently no sidewalk on this road only extended road tarmac for pedestrians.  
- The proposed upgrading of NH2, for 1.23 km, will be a dual carriageway standard within a 25m corridor. This will include two 7.5m carriageways, separated by a 2m planted median strip, and 4.5m of sidewalk (pavement) area on either side. The pavements will incorporate tree planting areas and lighting columns. |
| 6  | Southern Ring Road (SRR) | - NH2 is the single southern entry to Ha Giang and connects directly to the western part of the city. Most of the traffic connecting the eastern part of the city via the bridges over the Lo river is leading to traffic congestion in the city center.  
- The proposed new ring road is a bypass around the southeastern side of the city centre from the River Lo Bridge, and NH2, to the southern edge of the city centre. The SRR is proposed to have a road carriageway of 9m width, with 3.75m pavements on either side, all within a 16.5m corridor. The total length of proposed section is 2.936 km.  
- **The sub-project’s objectives:**  
  - To enhance connectivity of the city and divert traffic from NH2 to the eastern part of city center.  
  - To strengthen urban and peri-urban road network in the south of the city, connecting with the NH2 to form a closed ring road.  
  - To prevent trucks from passing through the city center. Trucks should be banned from NH2, downtown section and use the... |
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<th>No</th>
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| 7  | Bridge from National Road no.2 to Southern Ring Road | - The bridge would be the third crossing of the Lo River in Ha Giang. It will have a width of 18m and a length of 150m and would connect National Highway No.2 (NH2) with the new Southern Ring Road (SRR). It will have pavements (sidewalks) on each side for improved pedestrian safety.  
- Project objectives:  
  • To enhance connectivity to the road network  
  • To have heavy traffic going towards North of city to avoid the center area of the city  
  • To strengthen urban and peri-urban road network in the south of the city, connecting the NH2 and the SRR to enhance connectivity of the north and south of the city |
| 8  | Phung Hung road | - Phung Hung road, start point intersects the middle of Phung Hung and Suoi Tien bridge; the end point cuts Ly Thuong Kiet road (quarter 2, Ngoc Ha ward, Ha Giang city). The total length of proposed section is 2.030 km  
- Scale of cross section is as follows:  
  • Carriage way: Bsurface: = 2x3.75 = 7.5m (including slab ditches)  
  • Horizontal slope of the road: 2%  
  • Width of sidewalk: B sidewalk= 2x3.5m = 7.00m  
  • Horizontal slope of sidewalk: 1.5 towards the road center line  
  • Total width of roadbase: Bn=14.50m Frontage road under the standard TCXDVN104-2007  
  • Designed speed: 50km/h |

2. Subproject Description

2.1 Introduction

10. Phung Hung road construction is one of the subprojects under the Viet Nam: Secondary Green Cities Development Project, Ha Giang City Subproject funded by the Asian Development Bank (ADB). The subproject will be implemented inner city of Ha Giang Province. The periodic operation activities of subproject are: investing in the construction of the ground; road surface, drainage works and road markings; improving traffic safety and protection facilities of the selected sections of the road; enhance the exploitation and life span of the project; contributing to the regional and regional socio-economic development, and especially to expand the city, and to create a township. These activities may cause negative impacts on the local environment and
12. An Environmental Management Plan (EMP) prepared for the Ha Giang City subproject of the Secondary Cities Development Program (SCDP). The original EMP for the subproject based on review missions conducted in January-February 2017 disclosed on the ADB public website (www.adb.org) and included in the Project Administration Manual (PAM). The EMP drew on the findings of the separate IEE, the Project Preparation Technical Assistance (PPTA) report, and government Feasibility Study and environmental impact assessment.

13. The updates to the original EMP stem from the updating of the parent IEE that reflects the changes from the completed detailed design. In addition, the updates include a review of the
implementation of measures, which were required in the original EMP for the phase of detailed design.

14. The updates to the original EMP stem from the updating of the parent IEE that reflects the changes from the completed detailed design. In addition, the updates include a review of the implementation of measures that were required in the original EMP for the phase of detailed design.

15. Based on the updated EMP, contract-specific EMPs will be prepared to be included in the bidding documents for works contracts. Through the contract-specific EMPs, the contractors will be informed of their obligations to implement the EMP, and to include EMP implementation costs in their bids for project works.

16. The uEMP includes an environmental monitoring program. The results of monitoring will be used to evaluate: (i) the extent and severity of actual environmental impacts against predicted impacts; (ii) the performance of environmental protection measures and compliance with relevant Vietnamese laws and regulations as well as compliance with internationally accepted standards as defined in the IFC Environment, Health and Safety General Guidelines; (iii) trends of impacts; and (iv) overall effectiveness of the uEMP.

17. The bidding documents for construction contracts will be derived from standard ADB documents for international competitive bidding, and will include contract clauses requiring the contractor to implement the relevant clauses of the EMP. These standard Contractor Specifications will be included in the Bidding Documents for works contracts.

2.2. Objectives and structure of this report

2.2.1. Objectives of the report

18. Environmental management plan (EMP) for Phung Hung road construction of Ha Giang province in the Viet Nam: Secondary Green Cities Development Project Ha Giang City Subproject describes principles, procedures and methods which will be used to control and minimize impacts on environment and society of all implementation and operation activities relating to the project development. EMP also aims to supplement the project additional environmental and social impact assessment and ensure these committment of the Provincial Subproject Management Unit (PPMU) to minimize impacts on the environment and the society relating to the project were implemented through all the subproject stages.

19. In order to commit to ensure the highest social and environmental effectiveness, the subproject will ensure following content:

(i) Meeting all social and environmental requirements regarding the project approval;
(ii) Increase of construction workers and contractors’ awareness and knowledge of environment via training; clear determination of roles and responsibilities for social and environmental management as well as cooperation between the project effectiveness and general environmental one.
(iii) Stimulation of awareness increase in sensitive aspects of local community’s society and culture as well as importance of mitigation of the project impacts on local culture and lifestyle.
(iv) Monitoring effectiveness of social and environmental activities during the project period of time and implementation of proper management method to continual improve;
(v) Working with the local community and the project affected stakeholders to make sure they benefit from the project implementation and
(vi) Keep commitment in information disclosure and consultation with local stakeholders during all of the project stages.

2.2.2. Structure of the report

20. EMP was designed as an important material in controlling plan system and provides complete framework of environmental management principles which will be applied for the subproject. It directly relates to Environmental and social impact assessment report made for the subproject.

21. EMP includes principles and procedures instructing about the environment for communication, reporting, training, monitoring and checking plan with which all of officials of subproject Environment and Social Safeguard Unit (PESU), the contractors and subcontractors must comply before, during and after the subproject implementation period.

22. In addition, EMP must be considered as an overall framework material to build terms of reference for all of the subproject’s subplans about environment and society.

23. There are 8 chapters in EMP, namely
   Chapter I: Introduction.
   Chapter II: Policies, regulation and institutional framework.
   Chapter III: Subproject description.
   Chapter IV: The subproject environmental background.
   Chapter V: Potential impacts and mitigation measures.
   Chapter VI: Compliance monitoring program and Environmental quality.
   Chapter VII: Implementation organization.
   Chapter VIII: Public consultation and information disclosure.

CHAPTER II. POLICIES, REGULATIONS AND INSTITUTIONAL FRAMEWORKS

2.1. Policy and legal framework

24. The subproject shall comply with requirements of ADB SPS 2009 and the GOV’s Guidelines on Implementation of the Law on Environmental Protection 2015. Decree No. 18/2015/ND-CP has detailed information on strategic environmental assessment, environmental impact assessment and environmental protection plans. However, certain activities commonly associated with infrastructure subprojects such as quarry operations, extraction of gravel, etc., will also require permission from the relevant provincial level authorities. The construction of bridges and spillways that will be constructed or upgraded by the subproject are all in small scale and will not be required for separate environmental impact assessment (less than 500m in length).

2.1.1. ADB SPS Requirements

25. The ADB safeguard policy statement (SPS) 2009 imposes safeguard requirements for all its funded projects. The SPS 2009 clarifies the rationale, scope and contents of environmental requirements.
assessment. It emphasizes environmental and social sustainability in progress of economic growth and poverty reduction in Asia and the Pacific, with the following aims:

- Avoid adverse impacts of projects on the environment and affected people, where possible;
- Minimize/mitigate and/or compensate for adverse impacts on environment and affected people when avoidance is not possible; and
- Help borrowers/clients to strengthen their safeguard systems and develop the capacity to manage environmental and social risks

26. For environmental safeguards, the Subproject is initially categorized as ‘B’. A subproject that is classified as category A on environmental safeguards would be eligible as a BIIG I subproject.

2.1.2 Legal and Administrative Framework for Environmental Protection of the Vietnam Government

27. The subproject has to comply with the environmental legal framework of Vietnam, which is outlined in this section. The main components of the framework, if not, the more applicable showed:

1. Laws

- Law No. 55/2014/QH13 of 23 June 2014 by the National Assembly on environment protection
- Law No. 17/2012/QH13 of 21 June 2012 by the National Assembly on water resources
- Law No. 20/2008/QH12 of 13 November 2008 by the National Assembly on Biodiversity Conservation
- Law No. 68/2006/QH11 of 29 June 2006 by the National Assembly on standards and technical regulations
- Law No. 29/2004/QH11 of 03 December 2004 by the National Assembly on forest protection and development.

2. Decrees and Regulations

- Decree No. 18/2015/ND-CP dated February 14, 2015 on environmental protection planning, strategic environmental assessment, environmental impact assessment and environmental protection plans.
- Decree No. 197/2004/ND-CP dated December 03, 2004 by the Government on compensation, assistance and resettlement when land is recovered by the state;
- Decree No. 69/2009/ND-CP dated August 13, 2009 by the Government supplementing the planning of land use, land price, land withdrawal, compensation, support and resettlement.
- Decision No. 96/2006/QD-TTg dated May 04, 2006 by the Prime Minister on the Implementation of UXO clearance.
- Circular No. 36/2015/TT-BTNMT of 30 June 2015 by the Ministry of Natural Resources and Environment stipulating hazardous waste management
- Decision 07/2012/QD-TTg dated February 08, 2012 of the Prime Minister promulgating some regulations on intensified enforcement of forest protection
- Decision 186/2006/QD-TTg dated August 14, 2006 of the Prime Minister promulgating the Regulation on forest management
- Decree 09/2006/ND-CP dated 16th January, 2006 of the Government on forest fire prevention and control

3. Other legislation applicable to the subproject are the following:

- Law No. 27/2001/QH10 of 29 June 2001 by the National Assembly on fire prevention and fighting
- Law No. 40/2013/QH13 of 22 November 2013 by the National Assembly on amending and adding a number of articles of the Law No. 27/2001/QH10 of 29 June 2001 on fire prevention and fighting
- Decision No. 3733/2002/QD-BYT of 10 October 2002 by the Ministry of Health promulgating 21 labor hygiene standards, 5 principles and 7 labor hygiene measurements
- Law No. 50/2014/QH13 of 18 June 2014 by the National Assembly on construction
- Circular No. 22/2010/TT-BXD of 03 December 2010 by the Ministry of Construction on labor safety in work construction
- Law No. 10/2012/QH13 of 18 June 2012 by the National Assembly on labor code.

4. National Technical Regulations

- Air and noise quality
  - QCVN 05: 2013/BTNMT on ambient air quality
  - QCVN 26: 2010/BTNMT on noise
  - QCVN 27: 2010/BTNMT on vibration
- National Technical Regulations on water quality
  - QCVN 01: 2009/BYT on drinking water quality
  - QCVN 02: 2009/BYT on domestic water quality
  - QCVN 08-MT:2015/BTNMT on surface water quality
  - QCVN 09-MT:2015/BTNMT on underground water quality
  - QCVN 14: 2008/BTNMT on domestic wastewater
2.2 Institutional arrangement and Responsibilities

28. The Ha Giang Provincial Peoples Committee (PPC) is the Executing Agency (EA) of the subproject who will be responsible for the overall implementation and compliance with loan assurances including the successful implementation of the EMP. The PPC assigned the Ha Giang City Peoples Committee (CPC) as the subproject Implementation Agency (IA) who on behalf of the EA will, inter-alia, supervise all communications with the ADB for EMP implementation, and reporting on EMP implementation progress including environmental compliance monitoring.

29. The IA assigned a Project Management Unit (PMU) who will be responsible for day-today management of the EMP. The PMU will be responsible to supervise the implementation of environment mitigation and monitoring measures of the EMP, ensure contractors' compliance with environmental management requirements, coordinate the Grievance Redress Mechanism (GRM), and reporting to ADB. The PMU will engage and work with the Project Management and Construction Supervision consultants (see below) to ensure bidding documents include the EMP, and detailed instructions to bidders on required impact mitigation and monitoring requirements for construction package-specific contractor EMPs (CEMP). The PMU will appoint one full-time Safeguards Officer (SO) to coordinate the daily activities of EMP and to manage the implementation of the EMP.

30. The SO with logistical support from the PMU will: (i) supervise and provide guidance to contractors with compliance with the EMP and their own CEMPs; (ii) conduct regular site inspections; (iii) assist the PMU with their local entry point for the subproject GRM; (iv) lead disclosure activities & coordinate additional public consultation activities; (v) coordinate implementation of the capacity building and training program related to environment; (vi) prepare inputs to the quarterly project progress reports; (vii) coordinate the preparation and submission of semi-annual environment monitoring reports to ADB, and (viii) coordinate regulatory environmental monitoring activities of DONRE as needed.

31. The Project Management and Construction Supervision consultant (PMCS) will be recruited by the IA who will be responsible for advising the PMU and contractors on all aspects of environmental management and monitoring for the subproject. The PMCS will include an international (IES) and a national environment specialist (NES) who will: (i) assist the SO to ensure that the EMP provisions are included in the tender documents and civil works contracts; (ii) prior to implementation, review and clear the CEMPs prepared by contractors to ensure that these are consistent with the provisions of the updated EMP; (iii) supervise implementation of the mitigation measures specified in the EMP and the CEMPs through regular site visits and review of monthly reports of the contractors; (iv) coordinate environmental monitoring in accordance with the monitoring plan; (v) in conjunction with SO prepare semi-annual environment monitoring reports and submit them to ADB for review and disclosure; (vi) provide training to SO and contractors on ADB SPS 2009, the IFC Environmental, Health and Safety (EHS) Guideline, EMP implementation, and GRM in accordance with the training plan defined in the EMP; (vii) identify any environment-related issues and identify necessary corrective actions; (viii) if required, update the EMP to identify changes to subproject scope during implementation that would result in adverse environmental impacts not addressed within the approved EMP; (ix) assist SO finalize Grievance
Redress Mechanism (GRM) proposed in IEE and this uEMP, and provide orientation training for PMU, contractors, and other GRM access points; (x) provide support to SO with organizing public meetings in subproject areas as needed to address any concerns of APs; and (xi) prior to project completion assist SO gather information on EMP implementation performance for input to project completion report (PCR).

32. The contractors will be required to develop site-specific construction EMPs (CEMPs) in accordance with the IEE/uEMP, the contract-specific EMP included in the bidding document and environment safeguards requirements. These shall be reviewed, cleared and monitored by the PMCS and submitted to PMU for approval. The contractors will be responsible for implementing the impact mitigation measures of their respective CEMPs during the construction phase of the subproject under the supervision of the SO and the PMSC. The contractors will be required to assign an environmental officer (EO) responsible for CEMP implementation supervision and monitoring, and one qualified person responsible for construction and occupational health and safety officer (OHS). The OHS will ensure worker and public safety regulations prescribed by the department of Labour, Invalids, and Social Assistance (DOLISA) and the suitable EHS Guidelines of IFC. Contractors will conduct noise, air and surface water quality monitoring at construction site boundaries and nearby sensitive receptors to confirm compliance with relevant Vietnamese ambient quality standards as well as the IFC (2007) standard for noise and air quality. Each works contractor will submit monthly progress reports to the PMSC. These reports will include reporting on EMP implementation performance.

33. The Ha Giang Department of Natural Resources and Environment (DONRE) will implement their following mandated duties during project implementation: (i) periodically monitor (compliance) the implementation of mitigation measures identified in the domestic EIA and IEE to ensure subproject impacts during the construction and operation phases are minimized; (ii) investigate environmental incidents (e.g., pollution and damages to natural resources); (iii) resolve environmental issues generated by the subproject as part of the GRM established for the project.

34. The provincial Department of Labour, Invalids and Social Assistance (DOLISA) prescribes regulations and guidelines governing worker and public safety in the workplace. The directives of DOLISA must be implemented by the contractor OHS throughout the construction and operational phases of the subproject. To supplement the DoLISA the IFC/World Bank Environment, Health, and Safety Guidelines (2007) should be consulted when necessary.

35. ADB will review and supervise project performance against the commitments of the EA, as described in the legal agreements. Project review missions will visit project sites to ascertain the status of implementing the EMP. ADB will review periodic environment monitoring reports submitted by the EA/IA. If any of the safeguard requirements that are coved in the legal agreements are found not to be satisfactorily met, ADB will require the EA/IA to develop and implement an appropriate corrective action plan (CAP) agreed upon with ADB to rectify unsatisfactory safeguard compliance. ADB may also consider exercising its legal remedies, including suspension, cancellation, or acceleration of maturity, specified in the legal agreements. If any unanticipated environmental impacts become apparent during project implementation, ADB
will advise and require the EA and IA to (i) assess the significance of such unanticipated impacts; (ii) evaluate the options available to address them; and (iii) prepare or update the IEE and EMP.

Table 2. Summary of key roles and responsibilities for EMP

<table>
<thead>
<tr>
<th>Party</th>
<th>Role</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provincial Peoples Committee (PPC)</td>
<td>Executing agency</td>
<td>Ultimate successful implementation of uEMP, &amp; liaison with ADB</td>
</tr>
<tr>
<td>City Peoples Committee (CPC)</td>
<td>Implementing agency</td>
<td>Implement subproject for EA, including communicate &amp; report on subproject to EA</td>
</tr>
<tr>
<td>Project Management Unit (PMU)</td>
<td>management</td>
<td>Day to day management of subproject, and coordinating office for GRM for subproject</td>
</tr>
<tr>
<td>Safeguards Officer (SO) of PMU</td>
<td>safeguards</td>
<td>Manage implementation of uEMP, coordinate with PMCS and contractors</td>
</tr>
<tr>
<td>Project Management &amp; Consultant Supervisor (PMCS)</td>
<td>management support</td>
<td>Support PMU for implementation of uEMP, conduct environmental effects monitoring, and training plan</td>
</tr>
<tr>
<td>International (IES) &amp; national (NES) environment consultants of PMCS</td>
<td>Safeguards support to PMCS</td>
<td>Lead PMSC role in effects monitoring, training plan implementation, and implementation and monitoring of uEMP</td>
</tr>
<tr>
<td>Contractors</td>
<td>CEMP implementation</td>
<td>Implement and report on contractor CEMP derived from uEMP</td>
</tr>
<tr>
<td>Environment officers (EO) of Contractors</td>
<td>Safeguards support to contractors</td>
<td>Lead implementation of all mitigation and monitoring contractor responsibilities for uEMP</td>
</tr>
<tr>
<td>Department of Natural Resources &amp; Environment (DONRE)</td>
<td>regulatory</td>
<td>Periodically verify that subproject is meeting government environmental protection regulations &amp; standards, provide technical expertise for GRM when necessary</td>
</tr>
<tr>
<td>Department Labour, Invalids, and Social Assistance (DOLISA)</td>
<td>regulatory</td>
<td>Ensure worker and public safety regulations are not violated during subproject construction</td>
</tr>
</tbody>
</table>
CHAPTER III. SUBPROJECT DESCRIPTION PHUNG HUNG ROAD CONSTRUCTION

3.1 Subproject objectives and scale

3.1.1. Subproject objectives

- Orientating for development and support for the concretization of the general planning of Ha Giang city.

- Contributing sustainable socio-economic development, creating a typical intervention model that can be applied in other localities.

- Developing urban infrastructure to create conditions for the development of: Trade, services, tourism, etc. Ensuring environment protection, improving the standard of living of resident in the areas; upgrading urban infrastructure to cope with climate change.

- Meeting the general development needs of the province, creating more jobs for city resident and other connecting areas in the province.

3.1.2. Subproject scale

- **Project location:**

36. The Phung Hung road which is located opposite the section of the northern embankment of the Mien River that will be rehabilitated will be upgraded. Approximately 2.05 km of the existing single dirt track will be upgraded and extended to include two carriageways of 3.5m and 3m sidewalks, lighting, and bioswales for drainage. A sidewalk and bicycle path will be integrated within a linear park between the river and the road. The expected road surface is double bituminous surface treatment or asphalt. An important transport route of Ha Giang city in the strategy of expanding the city, reducing the traffic on the main routes in the city, facilitating the development of infrastructure construction on both sides of the route.

37. At present, Phung Hung road from the beginning of Suoi Tien bridge to the end of the route has not been invested to widen the route, mainly is the earth road built by local people, the vertical and horizontal drainage works are not available, so it is very muddy in the rainy season, traffic through this area is almost impossible to circulate.
- **Main components of the Subproject**

38. The whole route will be improved to secure the level-4 road standard according to the Vietnamese standard TCVN 4054-05.

39. The following measures expect to implement:

1. Strengthen Phung Hung road pavement and repair road bed and pavement at damaged and downgraded sections

2. Repair and add the system of works serving the route (drainage and traffic security system and protective works) as follows: Repairing 20 positions of box culverts and pipe culverts (Dredging mud, sediment in culvert, reinforcing apron and manhole)
   - Adding 19 positions of side ditches made by reinforced concrete with a total length of 6,587m;
   - Arranging gabion walls of three landslide locations of negative talus, reinforcing slope by mortared stone with
   - Re-paint the lines after surfacing the road, adding guard posts, traffic signs, guard rails for damaged and un-arranged sections.

3. Elaborate maintenance plans according to the contract based on results and execution quality.
   - Maintenance will be performed on the entire site during five years. The maintenance includes the following items: Pavement maintenance, maintenance of drainage system, maintenance of road corridor, maintenance of traffic signs and roadside works, protection works and maintenance of works on the road.
   - In addition, emergency repair sliding locations, repairing ditches, slope protection and support works, and repair pavement layers.
### Table 3. Road Subproject Summary

<table>
<thead>
<tr>
<th>Name Representative</th>
<th>Phung Hung Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length Representative (km)</td>
<td>1.98km</td>
</tr>
<tr>
<td>Investment Representative $mill</td>
<td>51.138.000</td>
</tr>
<tr>
<td>Affected household</td>
<td>46 households/184 persons (33 agricultural household)</td>
</tr>
</tbody>
</table>

Total areas permanent or temporally acquisition
- Agriculture land: 1808 m²
- Resident land: 593 m²
- Aquatic cultural and garden areas: 433

### 3.2 Work volume

40. The Subproject will conduct the following work items: Buckled offsetting construction, reinforcing the old pavement etc. to ensure the standards. Design longitudinal grooves at the flooding sections, reinforcing the slopes at non-stability section to stabilize the roadbed. Adding and supplementing the paint mark system, milestones, etc. on the all of road.

### Table 4. Volume of Materials for the Subproject

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Total Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digging the soil drain C3</td>
<td>m³</td>
<td>543.64</td>
</tr>
<tr>
<td>Break down stone to concrete build</td>
<td>m³</td>
<td>22.09</td>
</tr>
<tr>
<td>Breaking concrete buffer</td>
<td>m³</td>
<td>1.57</td>
</tr>
<tr>
<td>Fill the foundation</td>
<td>m³</td>
<td>97.02</td>
</tr>
<tr>
<td>Construction of stone culverts (Foundation + reinforcement yard)</td>
<td>m³</td>
<td>140.22</td>
</tr>
<tr>
<td>Sluice gate (Body + wing wall)</td>
<td>m³</td>
<td>113.25</td>
</tr>
<tr>
<td>Concrete grade 200 (abutment caps)</td>
<td>m³</td>
<td>22.77</td>
</tr>
<tr>
<td>Reinforcement cap abutment All-D = 6-8</td>
<td>kg</td>
<td>600.88</td>
</tr>
<tr>
<td>Reinforcement cap abutment All-D = 10-12</td>
<td>kg</td>
<td>85.25</td>
</tr>
<tr>
<td>Abutment caps</td>
<td>m²</td>
<td>146.11</td>
</tr>
<tr>
<td>Concrete grade 250 (Sluice)</td>
<td>m³</td>
<td>20.75</td>
</tr>
<tr>
<td>Number of assembled sluice gates</td>
<td>part</td>
<td>43.00</td>
</tr>
<tr>
<td>Drainage of sluice gates All-D = 6-8</td>
<td>kg</td>
<td>1093.88</td>
</tr>
<tr>
<td>Reinforcement of sluice gate All-D = 10-12</td>
<td>kg</td>
<td>1406.67</td>
</tr>
<tr>
<td>Slab formwork</td>
<td>m²</td>
<td>71.71</td>
</tr>
<tr>
<td>Concrete grade 200 (padding on the sidewalk)</td>
<td>m³</td>
<td>3.48</td>
</tr>
<tr>
<td>Formed mattress formwork</td>
<td>m²</td>
<td>38.70</td>
</tr>
<tr>
<td>Concrete grade 200 (on the sidewalk)</td>
<td>m³</td>
<td>4.05</td>
</tr>
<tr>
<td>Number of the sidewalk covers</td>
<td>cover</td>
<td>40.00</td>
</tr>
<tr>
<td>Reinforcing steel plate All-D = 6-8</td>
<td>kg</td>
<td>280.79</td>
</tr>
<tr>
<td>Molded formwork</td>
<td>m²</td>
<td>15.21</td>
</tr>
</tbody>
</table>

### Table 5. Earthwork of Phung Hung Road construction

<table>
<thead>
<tr>
<th>Routine</th>
<th>Km0-Km1</th>
<th>Km1-Km2</th>
<th>Total volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excavation C3 (m3)</td>
<td>3065.257</td>
<td>3355.725</td>
<td>6420.983</td>
</tr>
<tr>
<td>Rock digging C2 (m3)</td>
<td>1204.826</td>
<td>0</td>
<td>1204.826</td>
</tr>
<tr>
<td>Soil filling K95 (m3)</td>
<td>3802.815</td>
<td>5109.224</td>
<td>8912.039</td>
</tr>
<tr>
<td>Soil filling K98 (m3)</td>
<td>3148.6</td>
<td>3398.992</td>
<td>6547.592</td>
</tr>
<tr>
<td>Shape making (m3)</td>
<td>3965.492</td>
<td>3398.992</td>
<td>7364.484</td>
</tr>
<tr>
<td>Organic excavation (m3)</td>
<td>3488.726</td>
<td>2776.297</td>
<td>6265.023</td>
</tr>
<tr>
<td>Canal excavation C3 (m3)</td>
<td>1159.382</td>
<td>1188.936</td>
<td>2348.318</td>
</tr>
</tbody>
</table>

### Table 6. Estimation number and kind of working machine
<table>
<thead>
<tr>
<th>Name</th>
<th>Number requirement</th>
<th>Tech /Spec</th>
<th>Working condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck load 5 tons</td>
<td>20</td>
<td>HUYNDAI, 5T,</td>
<td>Good</td>
</tr>
<tr>
<td>Truck load 15 tone</td>
<td>30</td>
<td>HUYNDAI, 15T</td>
<td>Good</td>
</tr>
<tr>
<td>KOMATSU excavator</td>
<td>4</td>
<td>0,75-1,4m³</td>
<td>Good</td>
</tr>
<tr>
<td>HATACHI excavator long arm</td>
<td>4</td>
<td>0,45m³</td>
<td>Good</td>
</tr>
<tr>
<td>KOMATSU D65 Bulldose</td>
<td>12</td>
<td>180 CV</td>
<td>Good</td>
</tr>
<tr>
<td>Combined roller SAKAI</td>
<td>10</td>
<td>10-18T</td>
<td>Good</td>
</tr>
<tr>
<td>Vibrating rammer</td>
<td>8</td>
<td>Japan</td>
<td>Good</td>
</tr>
<tr>
<td>Air compressor</td>
<td>2</td>
<td>China, 10-25m³/minute</td>
<td>Good</td>
</tr>
<tr>
<td>Rock hand drill</td>
<td>10</td>
<td>DK fi 42</td>
<td>Good</td>
</tr>
<tr>
<td>Concreet mixer</td>
<td>3</td>
<td>China, 80-150L</td>
<td>Good</td>
</tr>
<tr>
<td>Concreet cutter</td>
<td>3</td>
<td>Japan</td>
<td>Good</td>
</tr>
<tr>
<td>Vibrating plate compactor</td>
<td>5</td>
<td>China</td>
<td>Good</td>
</tr>
<tr>
<td>Stick vibrator</td>
<td>2</td>
<td>China</td>
<td>Good</td>
</tr>
<tr>
<td>Power generator</td>
<td>2</td>
<td>Japan, 2005, 20-75KVA</td>
<td>Good</td>
</tr>
<tr>
<td>Dwelling 6-12KVH</td>
<td>3</td>
<td>Viet Nam</td>
<td>Good</td>
</tr>
<tr>
<td>Water pumping</td>
<td>3</td>
<td>Japan, Italia, 5-15m³/h</td>
<td>Good</td>
</tr>
<tr>
<td>Crane 25T</td>
<td>3</td>
<td>Japan</td>
<td>Good</td>
</tr>
<tr>
<td>Hydraulic hoist</td>
<td>1</td>
<td>1-5T, 2003</td>
<td>Good</td>
</tr>
</tbody>
</table>

Table 7. Material supplies for the subproject

<table>
<thead>
<tr>
<th>Material</th>
<th>unit</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Sand</td>
<td>m³</td>
<td>200000</td>
</tr>
<tr>
<td>3 Steel</td>
<td>Kg</td>
<td>201000</td>
</tr>
<tr>
<td>5 Rock</td>
<td>m³</td>
<td>28</td>
</tr>
<tr>
<td>12 wood</td>
<td>m³</td>
<td>5.0331</td>
</tr>
<tr>
<td>21 Cement PC30</td>
<td>kg</td>
<td>127669.476</td>
</tr>
</tbody>
</table>

41. Material for the subproject will supply by a local Company. Water demand includes two types of water: water for domestic activity and for construction:

- Water for domestic activity: due to a road construction, water need for 20 workers on camping site, water demand about 100 liter per person or 3 m³/day and the sources of fresh water comes from a fresh water system of the city.

- Water use for construction: from natural water sources, and the city’s water sources. Moreover, the amount of water use for concrete mixing and water injection is small. Therefore, impact of the project to water environment can be negligible.

3.3 Disposal for earth works and construction

42. Following the proposal paper of PPMU on requesting appraisal from Ha Giang PPC on disposal areas. The disposal sites have been select with capacity more than 1 million cubic meters (it includes 4-disposal site), are:

- No.7 of Quang Trung Ward, total areas 14.528m²; capacity (dumping material handling): 58.112m³, ground leveling 4m height, distance from center 5km.
- Ban Tuy village, Ngoc Duong commune, total areas: 16,360m²; capacity (dumping material handling): 65,440m³, ground leveling 4m height, distance from center 5m.
- No. 16, 17 of Nguyen Trai ward, total areas 14,224m²; capacity (dumping material handling): 113,792m³, ground leveling 8m height
- Lúp and Chang villages- Phuong Do commune: total areas 119,173.3m²; capacity (dumping material handling): 1,191,733m³, ground leveling, distance from center 5m. see more detail in annex 4.

3.4 UXO clerance

43. UXO clearance: UXO have been completed work to all sub-project following by the Decision of Ha Giang PPC no. 3386/QD-UB on date 14 October 2018; Circular no. 670/UBND-BQL on date 19 May 2017 about the areas of UXO clearance (80ha) and the certificate of work completing of by Lung Lo Co.Ltd of Viet Nam Ministry of Defense on date 24 October 2018 ( in accordance with the minute meeting of UXO clearance complete) between Ha Giang PPC and Lung Lo Co.Ltd)- See more detail in Annex 5.
CHAPTER IV: THE SUBPROJECT ENVIRONMENT BACKGROUND

4.1. Environmental condition

4.1.1. Geographic and morphology

- Geography

44. Hà Giang is a province in the Northeast region of Vietnam. It is located in the far north of the country, and contains Vietnam's northernmost point. It shares a 270 km long border with Yunnan province of southern China, and thus is known as Vietnam's final frontier. The province covers an area of 7,945.8 square kilometres and as of 2008 it had a population of 705,100 people.

45. The provincial capital, also called Hà Giang, is connected by Highway 2 and is 320 km away from Hanoi. The border crossing is at Thanh Thủy, 25 km from the capital, Hà Giang city. It is one of the poorest provinces of Vietnam as it has mountainous topography with the least potential for agricultural development.

46. Hà Giang is bounded by Cao Bằng, Tuyên Quang, Lào Cai, and Yên Bái provinces and has common international border with China in the north. Hà Giang has many high rocky mountains, limestone formations and springs; the important mountains are the Cam and Mo Neo. The major rivers of the region are the Lô River (Hà Giang town is located on its left bank) and Mien River.

47. The topography of the province of Hà Giang is fairly complex with “temperate, but highly localized mountain weather patterns create variable conditions among different regions”. It has impressive limestone and granite peaks and outcrops. It has three regions. Climatically, it has two seasons, dry and monsoon, dependent on the altitude of the region. The two northern Indochinese climatic zones on the border influence the climate in that part of the province. The lower areas in the province comprise low hills, the Lô River Valley and the town of Hà Giang. In Cao Bồ district, dry season lasts from mid-September until the end of May, and the balance period of the year is the rainy season. However, in Du Già district the wet season sets in one month earlier. The average annual temperature in the provincial capital of Hà Giang is 22.78 °C (73.00 °F); the monthly averages range from a low of 15.48 °C (59.86 °F) in January to a high of 27.88 °C (82.18 °F) in July. The annual rainfall in Hà Giang town is 2,430.1 millimeters (95.67 in); the monthly average varies from a low of 31.5 millimeters (1.24 in) in December to a high of 515.6 millimeters (20.30 in) in July. The average annual humidity level is 84%.

48. Hà Giang has many mountains, including the two highest peaks, namely, the Tây Côn Lĩnh (2,419 metres (7,936 ft)) and the Kiềу Liêu Ti (2,402 metres (7,881 ft)) and forests that provide lumber. It has about 1,000 species of herbal plants. Fauna include tigers, peafowl, pheasants, and pangolin.[3] The town of Hà Giang was heavily damaged during the 1979 war with China but has since been rebuilt.
49. Ha Giang city has a total natural areas of 135.3 km², of which:

- City areas 27.97 km²;
- Rural areas 107.34 km²

50. Ha Giang city is founded on relatively flat terrain at the foot of high hills, the terrain is much divided by streams Lo and Mien rivers. The main topography of Ha Giang City: slope direction is from North to South.

- Slope of terrain from 0.5% - 15%.
- Altitude: + 101.5 m to + 170.0 m
- Average altitude: + 105.0 m
- The city submerged by high mountain with the highest elevation + 323.0 m, the lowest elevation + 178.0 m.

51. Particularly, the city is separated rock mountain towards East-West direction, as follows:

- Hilly topography: mainly in the western region (Phuong Do and Phuong Thien communes), a part is in Ngoc Duong commune and Quang Trung ward. This terrain has elevation ranging from 100 - 700 m.

- Valley: along Lo and Mien Rivers. Types of soil on this terrain are formed from fluvian. The terrain is quite flat, therefore most of the land has been exploited to grow rice and crops. This terrain is found mainly in Phuong Do and Phuong Thien communes and the area adjacent to Ngoc Ha and Ngoc Duong communes.

4.1.2. Climate condition
52. The project area is located in Ha Giang province, so it has similar weather characteristics of the province. Ha Giang's climate basically carries the characteristics of the Viet Bac - Hoang Lien Son mountains, but also has its own characteristics.

53. The annual average temperature is about 21°C - 23°C, the temperature fluctuates above 10°C in average and from 6-7°C in the day. The highest temperature up to 40°C (June and July); in contrast, in the winter season, temperature dropped to 2.2°C (January).

54. Rainy regime in Ha Giang is quite abundant, averaging about 2,300 - 2,400 mm annually, and rainfall volume is more than 4,000mm in the North. Ha Giang is one of the high humidity areas (85%) and maintains almost all seasons in a year. During the year, there are 4,427 hours of sunny day.

55. The wind regime and wind directions in Ha Giang are different from terrain and valley. Wind direction on Lo river valley is normally follow southeast direction with a frequency exceeding 50%.

4.1.3. Hydrological

56. Ha Giang city is mainly influenced by the hydrological regime of the system of Lo and Mien rivers:

- **Lo River**: Origine from Yunnan China at a height of over 1,000m, entering Ha Giang territory in Thanh Thuy, runs through to Viet Tri and Phu Tho to the Red River. Total length of Lo river in Ha Giang is 155 km long, the section runs through Ha Giang city is nearly 12 km. At monitoring monitor from hydrological station measurement of Ha Giang City in dry season: 96.74m, flood season: 101m-104m. The average flow of 156m³/s, the highest flow in the flood season is 1,760m³/s, the lowest flow in the dry season is 105m³/s. The maximum flow rate in the flood season is 1.29m/s, the lowest flow rate in the dry season is 0.17m/s. Specific parameters are as follows: P1% = 104.07m; P5% = 101.74m; P20% = 99.81m; P90% = 96.72m.

- **Mien River**: origine from Bat Dai Son, has a great meandering, sloppy, from Quan Ba district, across Dai Son and Can Ty mountain ranges (on both sides of a very steep cliff, deep streambed), from Quan Ba town, of riverbeds is slightly flat, but easily eroded on both sides of the bank of river. The river length in Ha Giang City has about 58km, the basin area is about 1,173km².

4.2. Existing natural environmental condition of surface water and air quality of Ha Giang City

4.2.1 Results of measuring water quality

4.2.1.1. Surface water quality

57. Methods of sampling and analyzing surface water quality of the project area are as follows:

58. Number and location of sampling: take 10 points in the following areas:

<p>| II | Location of the monitoring stations |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NM1</td>
<td>Water at the outlet of Lo River is near T4 Tran Phu stream</td>
</tr>
<tr>
<td>2</td>
<td>NM2</td>
<td>Water at the Spillway of the embankment of the south bank of Mo stream from Me bridge to the spillway at Chang village</td>
</tr>
<tr>
<td>3</td>
<td>NM3</td>
<td>Surface water near Phong Quang bridge to Hoa Phuong water park group 9</td>
</tr>
<tr>
<td>4</td>
<td>NM4</td>
<td>Surface water of Nam Thau stream</td>
</tr>
<tr>
<td>5</td>
<td>NM5</td>
<td>Surface water of Mien River (near the raw water pumping station of Ha Giang Water Supply Company)</td>
</tr>
<tr>
<td>6</td>
<td>NM6</td>
<td>Surface water of the West Bank of Lo River</td>
</tr>
<tr>
<td>7</td>
<td>NM7</td>
<td>Surface water of Me Stream (near Le Quy Don school)</td>
</tr>
<tr>
<td>8</td>
<td>NM8</td>
<td>Surface water of Yen Bien 1 bridge</td>
</tr>
<tr>
<td>9</td>
<td>NM9</td>
<td>Surface water of Mien River bridge (Phong Quang bridge)</td>
</tr>
<tr>
<td>10</td>
<td>NM10</td>
<td>Surface water of Phong Quang bridge to Ha Phuong Economic Zone</td>
</tr>
</tbody>
</table>

59. Analysis parameters: 19 indicators as in the results table.
60. Applicable standard: QCVN 08: 2008 / BTNMT (column B1: Surface water used for irrigation purposes or other uses with similar water quality requirements).
61. Measurement results:
Table 1: Results of surface water quality measurement at the project site

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>NM1</th>
<th>NM2</th>
<th>NM3</th>
<th>NM4</th>
<th>NM5</th>
<th>NM6</th>
<th>NM7</th>
<th>NM8</th>
<th>NM9</th>
<th>NM0</th>
<th>QCVN 08:2008/BT NMT (B1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Temperature</td>
<td>°C</td>
<td>28.5</td>
<td>28.3</td>
<td>28.5</td>
<td>28.2</td>
<td>28.3</td>
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<td>28.4</td>
<td>28.3</td>
<td>28.1</td>
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<tr>
<td>2 pH</td>
<td></td>
<td>7.27</td>
<td>7.02</td>
<td>7.19</td>
<td>7.25</td>
<td>7.18</td>
<td>7.21</td>
<td>7.08</td>
<td>7.12</td>
<td>7.22</td>
<td>7.19</td>
<td>5.5 to 9</td>
</tr>
<tr>
<td>3 TSS</td>
<td>mg/l</td>
<td>15</td>
<td>18.6</td>
<td>22.0</td>
<td>22.6</td>
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<td>21.2</td>
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<td>18.8</td>
<td>21.0</td>
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</tr>
<tr>
<td>4 Colifom</td>
<td>MPN/10 0ml</td>
<td>3800</td>
<td>6500</td>
<td>4180</td>
<td>4100</td>
<td>3850</td>
<td>3210</td>
<td>3300</td>
<td>3960</td>
<td>3150</td>
<td>3200</td>
<td>7500</td>
</tr>
<tr>
<td>5 BOD₅</td>
<td>mg/l</td>
<td>25.7</td>
<td>18.0</td>
<td>18.5</td>
<td>17.8</td>
<td>14.6</td>
<td>13.8</td>
<td>12.2</td>
<td>15</td>
<td>12.9</td>
<td>14.1</td>
<td>15</td>
</tr>
<tr>
<td>6 COD</td>
<td>mg/l</td>
<td>36</td>
<td>24.0</td>
<td>24.5</td>
<td>29.5</td>
<td>27</td>
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<td>27.8</td>
<td>25.6</td>
<td>26.5</td>
<td>30</td>
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<tr>
<td>7 Total Fe</td>
<td>mg/l</td>
<td>0.18</td>
<td>0.21</td>
<td>0.22</td>
<td>0.15</td>
<td>0.12</td>
<td>0.13</td>
<td>0.21</td>
<td>0.17</td>
<td>0.15</td>
<td>0.16</td>
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<tr>
<td>8 DO</td>
<td>mg/l</td>
<td>5.67</td>
<td>5.44</td>
<td>4.88</td>
<td>4.25</td>
<td>4.68</td>
<td>4.55</td>
<td>5.01</td>
<td>4.98</td>
<td>5.12</td>
<td>5.24</td>
<td>&gt; 4</td>
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<tr>
<td>9 Phosphat (PO₄⁻)</td>
<td>mg/l</td>
<td>0.13</td>
<td>0.12</td>
<td>0.08</td>
<td>0.09</td>
<td>0.12</td>
<td>0.10</td>
<td>0.14</td>
<td>0.11</td>
<td>0.15</td>
<td>0.19</td>
<td>0.3</td>
</tr>
<tr>
<td>10 NO₂</td>
<td>mg/l</td>
<td>0.026</td>
<td>0.018</td>
<td>0.012</td>
<td>0.012</td>
<td>0.017</td>
<td>0.015</td>
<td>0.019</td>
<td>0.016</td>
<td>0.017</td>
<td>0.021</td>
<td>0.04</td>
</tr>
<tr>
<td>11 NO₃</td>
<td>mg/l</td>
<td>1.9</td>
<td>1.28</td>
<td>0.96</td>
<td>1.01</td>
<td>1.18</td>
<td>1.22</td>
<td>1.20</td>
<td>1.23</td>
<td>1.17</td>
<td>1.22</td>
<td>10</td>
</tr>
<tr>
<td>12 As</td>
<td>mg/l</td>
<td>0.017</td>
<td>0.021</td>
<td>0.019</td>
<td>0.011</td>
<td>0.023</td>
<td>0.018</td>
<td>0.016</td>
<td>0.02</td>
<td>0.016</td>
<td>0.021</td>
<td>0.05</td>
</tr>
<tr>
<td>13 Cu</td>
<td>mg/l</td>
<td>0.15</td>
<td>0.18</td>
<td>0.14</td>
<td>0.28</td>
<td>0.31</td>
<td>0.206</td>
<td>0.221</td>
<td>0.024</td>
<td>0.214</td>
<td>0.233</td>
<td>0.5</td>
</tr>
<tr>
<td>14 Zn</td>
<td>mg/l</td>
<td>0.245</td>
<td>0.21</td>
<td>0.220</td>
<td>0.21</td>
<td>0.26</td>
<td>0.167</td>
<td>0.2</td>
<td>0.25</td>
<td>0.241</td>
<td>0.221</td>
<td>1.5</td>
</tr>
<tr>
<td>15 Amoni (NH₄⁺)</td>
<td>mg/l</td>
<td>0.46</td>
<td>0.98</td>
<td>0.65</td>
<td>0.62</td>
<td>0.32</td>
<td>0.25</td>
<td>0.32</td>
<td>0.41</td>
<td>0.21</td>
<td>0.26</td>
<td>0.5</td>
</tr>
<tr>
<td>16 Pb</td>
<td>mg/l</td>
<td>0.004</td>
<td>9</td>
<td>0.004</td>
<td>1</td>
<td>0.004</td>
<td>9</td>
<td>0.004</td>
<td>1</td>
<td>0.004</td>
<td>7</td>
<td>0.004</td>
</tr>
<tr>
<td>17 Zn</td>
<td>mg/l</td>
<td>0.061</td>
<td>0.072</td>
<td>0.046</td>
<td>0.032</td>
<td>0.025</td>
<td>0.045</td>
<td>0.051</td>
<td>0.028</td>
<td>0.043</td>
<td>0.047</td>
<td>1.5</td>
</tr>
<tr>
<td>18 Solution</td>
<td>mg/l</td>
<td>0.014</td>
<td>3</td>
<td>0.012</td>
<td>0.011</td>
<td>0.012</td>
<td>0.010</td>
<td>0.012</td>
<td>0.012</td>
<td>0.011</td>
<td>0.010</td>
<td>0.013</td>
</tr>
<tr>
<td>19 Oil, gease, lubricant</td>
<td>mg/l</td>
<td>0.038</td>
<td>0.029</td>
<td>0.024</td>
<td>0.031</td>
<td>0.025</td>
<td>0.028</td>
<td>0.022</td>
<td>0.024</td>
<td>0.020</td>
<td>0.032</td>
<td>0.1</td>
</tr>
</tbody>
</table>
62. Evaluation of analytical results:
- Compared with Vietnam Standards on surface water quality, QCVN08: 2008 / BTNMT (Column B1: surface water is used for irrigation purposes or other uses with similar water quality requirements). Evaluation results are as follows:

63. Physical indicators:
- All physical parameters such as pH, Total suspended solids (TSS), .. in all 03 areas sampled for the survey were lower and within the permitted limits compared to the pressure standard use.

64. The criteria of chemistry:
- Through the current status of the survey together with the results of analyzing the collected sample data, the investigators assessed the criteria of surface water chemistry in the three sampling areas as follows:
- BOD5 (mg / l): BOD5 content in all positions is within the allowable limits, particularly in 04 locations exceeding the permissible limit compared with QCVN 08: 2008 / BTNMT (column B1). At NM1, BOD5 measured the highest value compared to the other two positions, 1.71 times higher than the QCCP, followed by NM3 with the BOD5 value of 18.5 mg / l, 1.23 times higher. At NM2, the value of 18mg / l is 1.2 times higher and at NM4, 17.8 mg / l is 1.19 times higher than the standard. BOD5 content is one of the indicators reflecting the quality of the water environment, so compared to the current analysis results, all four sampling areas have begun to show signs of pollution.

65. COD (mg / l): Among 10 areas selected for sampling, only NM1 area had COD content in excess of the permitted level. The COD value measured at NM1 is 36 mg / l, 1.2 times higher than the applied standard. In the NM2 and NM3 areas, the values of 24 mg / l and 24.5 mg / l, respectively, were lower than the permissible limits.
66. Ammonium (mg / l): Ammonium concentration (NH4 +) in NM1 area and other areas is still within permitted limits compared with QCCP, particularly in NM2, NM3 and NM4 areas, the measured ammonium values are exceeded. Excessive limits are 1.96 times, 1.3 times and 1.2 times respectively. Ammonium content in surface water exceeding the permissible standards does not affect health much, but it is an indication that the water is polluted by animal origin waste and may contain pathogenic bacteria. The cause of this pollution is because in the heavy rains, rainwater seeps into the city's landfill, resulting in sewage mixed with the rainwater system running down the surrounding streams, rivers and lakes. Pollution not only reduces the quality of surface water, but also greatly affects the groundwater resources here.

- The remaining parameters such as pH, Coliform, Ammonium, Pb, Zn, ... are still within the permitted limits compared to the standard.
2.1.4.1. Results of measurement of air quality, noise and vibration

67. Number and location of sample measurement: observation at 15 points in the construction areas of the project's works with the following location:

<table>
<thead>
<tr>
<th>No.</th>
<th>Location of sample collections</th>
<th>Position</th>
<th>KY HIỆU</th>
<th>Coordinators</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Southern ring road</td>
<td>Hà Giang</td>
<td>KK3</td>
<td>22°83’ 74° N, 105° 01’ 26° E</td>
</tr>
<tr>
<td>4</td>
<td>Landfill</td>
<td>Hà Giang</td>
<td>KK4</td>
<td>22°83’ 74° N, 105° 01’ 26° E</td>
</tr>
<tr>
<td>5</td>
<td>T2 Minh Khai Stream</td>
<td>Hà Giang</td>
<td>KK5</td>
<td>22°83’ 74° N, 105° 01’ 26° E</td>
</tr>
<tr>
<td>6</td>
<td>T3 Tố 20,21,22 Stream</td>
<td>Hà Giang</td>
<td>KK6</td>
<td>22°83’ 74° N, 105° 01’ 26° E</td>
</tr>
<tr>
<td>7</td>
<td>T4 Minh Khai Tố 20,21,22 Stream</td>
<td>Hà Giang</td>
<td>KK7</td>
<td>22°83’ 74° N, 105° 01’ 26° E</td>
</tr>
<tr>
<td>8</td>
<td>T4 Trần Phú Tố 14,15,9,16,17 Stream</td>
<td>Hà Giang</td>
<td>KK8</td>
<td>22°83’ 74° N, 105° 01’ 26° E</td>
</tr>
<tr>
<td>9</td>
<td>Phong Khoang Bridge head</td>
<td>Hà Giang</td>
<td>KK9</td>
<td>22°83’ 74° N, 105° 01’ 26° E</td>
</tr>
<tr>
<td>10</td>
<td>T1 Quang Trung Tố 6 Stream</td>
<td>Hà Giang</td>
<td>KK10</td>
<td>22°83’ 74° N, 105° 01’ 26° E</td>
</tr>
<tr>
<td>11</td>
<td>Embankment of the West Bank of Lo River</td>
<td>Hà Giang</td>
<td>KK11</td>
<td>22°83’ 74° N, 105° 01’ 26° E</td>
</tr>
<tr>
<td>13</td>
<td>Xuân Thủy road</td>
<td>Hà Giang</td>
<td>KK13</td>
<td>22°83’ 74° N, 105° 01’ 26° E</td>
</tr>
<tr>
<td>14</td>
<td>Phùng Hưng road</td>
<td>Hà Giang</td>
<td>KK14</td>
<td>22°83’ 74° N, 105° 01’ 26° E</td>
</tr>
<tr>
<td>15</td>
<td>Quyet Thang - Son Ha crossroads intersection with National Road 34</td>
<td>Hà Giang</td>
<td>KK15</td>
<td>22°83’ 74° N, 105° 01’ 26° E</td>
</tr>
</tbody>
</table>

68. These are the most typical locations for background air quality and relatively accurately reflect the status quo of the project preparation area and locations that have a spillover effect on the air environment. The measurement method is implemented according to the current standard methods.

4.2.1 Air quality, noise and vibrant

Table 8. Results of Air quality, noise and vibrant

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>KK1</th>
<th>KK2</th>
<th>KK3</th>
<th>KK4</th>
<th>KK5</th>
<th>KK6</th>
<th>KK7</th>
<th>KK8</th>
<th>QCVN05/2 013, 06 :</th>
</tr>
</thead>
</table>

Environmental Management Plan

<table>
<thead>
<tr>
<th></th>
<th>Temperature °C</th>
<th>Humidity %</th>
<th>Wind velocity m/s</th>
<th>Particulates μg/m³</th>
<th>PM10 μg/m³</th>
<th>PB dust μg/m³</th>
<th>CO μg/m³</th>
<th>NO2 μg/m³</th>
<th>SO2 μg/m³</th>
<th>CxHy μg/m³</th>
<th>Instant noise dB</th>
<th>Leq dB</th>
<th>Maximum noise dB</th>
<th>Accelerate vibrant dB</th>
<th>2013/BTN MT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>28.2</td>
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<td>28.2</td>
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<td>28.3</td>
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</tr>
<tr>
<td>Temperature °C</td>
<td>28.1</td>
<td>28.0</td>
<td>28.3</td>
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<td>28.2</td>
<td>28.4</td>
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</tr>
<tr>
<td>Humidity %</td>
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<td>65.0</td>
<td>66.0</td>
<td>66.1</td>
<td>66.5</td>
<td>66.4</td>
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<td>66.2</td>
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<td>-</td>
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</tr>
<tr>
<td>Wind velocity m/s</td>
<td>0.19</td>
<td>0.23</td>
<td>0.26</td>
<td>0.21</td>
<td>0.33</td>
<td>0.41</td>
<td>0.86</td>
<td>0.71</td>
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<tr>
<td>Particulates μg/m³</td>
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<td>96.7</td>
<td>123</td>
<td>138</td>
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</tr>
<tr>
<td>PM10 μg/m³</td>
<td>31.2</td>
<td>31.4</td>
<td>35.6</td>
<td>35.1</td>
<td>34.2</td>
<td>15.7</td>
<td>15.6</td>
<td>15.0</td>
<td>150</td>
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<td>-</td>
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<tr>
<td>PB dust μg/m³</td>
<td>0.38</td>
<td>0.39</td>
<td>0.45</td>
<td>0.41</td>
<td>0.43</td>
<td>0.25</td>
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<td>-</td>
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<tr>
<td>CO μg/m³</td>
<td>260</td>
<td>280</td>
<td>325</td>
<td>3380</td>
<td>209</td>
<td>245</td>
<td>30000</td>
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<td>-</td>
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</tr>
<tr>
<td>NO2 μg/m³</td>
<td>29</td>
<td>31</td>
<td>36.7</td>
<td>39.0</td>
<td>28.5</td>
<td>29.0</td>
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<td>27.9</td>
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<tr>
<td>SO2 μg/m³</td>
<td>22.3</td>
<td>22.5</td>
<td>28.4</td>
<td>23.0</td>
<td>23.5</td>
<td>22.7</td>
<td>22.3</td>
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<tr>
<td>CxHy μg/m³</td>
<td>312</td>
<td>326</td>
<td>389</td>
<td>608</td>
<td>401</td>
<td>412</td>
<td>396</td>
<td>425</td>
<td>5000</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Instant noise dB</td>
<td>61.2</td>
<td>62.5</td>
<td>76.9</td>
<td>60.5</td>
<td>61.7</td>
<td>63.8</td>
<td>60.7</td>
<td>59.0</td>
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</tr>
<tr>
<td>Leq dB</td>
<td>58.4</td>
<td>58.9</td>
<td>67.8</td>
<td>58.3</td>
<td>59.6</td>
<td>58.0</td>
<td>56.6</td>
<td>70</td>
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<td>-</td>
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<td>-</td>
</tr>
<tr>
<td>Maximum noise dB</td>
<td>68</td>
<td>69</td>
<td>82</td>
<td>67</td>
<td>67,5</td>
<td>73.4</td>
<td>66.6</td>
<td>65.8</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Accelerate vibrant dB</td>
<td>42</td>
<td>43</td>
<td>55</td>
<td>45</td>
<td>40</td>
<td>42.3</td>
<td>39.0</td>
<td>39.8</td>
<td>70</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
</tbody>
</table>

69. It shows that, the source of dust and emissions causes deterioration of air environment quality mainly from means of transport activities, operation of local infrastructure construction. However, the results of air quality evaluation meets QCCP compared with QCVN05: 2013/BTNMT; Noise and vibration measured at 15 locations in the project area all met natural technical regulation. Through the results, the air quality in the project area is relatively good and there is no sign of pollution.

4.2.2. Surface water quality

70. Comparison with Vietnam technical regulation QCVN08:2008/BTNMT (Column B1) on surface water quality: all physical parameters such as pH, Total suspended solids (TSS) are lower than limitation.

71. BOD₅ (mg/l): the result of BOD₅ shows, in all tested positions, BOD₅ is within the limitation of QCVN 08: 2008/BTNMT (column B1). However, in specific tested location, such as NM1, NM3, NM2, the measures show this parameter higher than limitation 1.2-1.9 times, so that included BOD5 in water shows signs of pollution.
CHAPTER V: POTENTIAL IMPACTS AND MITIGATION MEASURES

5.1. Environmental potential Impacts

72. The Phung Hung road construction Subproject will be implemented on an existing roadbed, thus land acquisition activities will not be required. Environmental impacts during pre-construction phase are considered small. Most environmental impacts will take place during the construction phase and are described along with mitigation measures below. Table 9 describes potential environmental and impacts in three phases including (1) Strengthen pavement, Repair and add the system of works serving on the route and (2) Maintenance according to PBC contracts.

<table>
<thead>
<tr>
<th>Table 9. Potential Environmental of subproject</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Activities</strong></td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>1. Preparation phase</td>
</tr>
<tr>
<td>Land clearance</td>
</tr>
<tr>
<td>Mine clearance</td>
</tr>
<tr>
<td>2. Construction phase</td>
</tr>
<tr>
<td>Construction activities: excavation, landfill, wasted earth and rock disposal, concrete work, etc.</td>
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</tbody>
</table>
# Environmental Management Plan

<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Solid waste from construction</strong></td>
<td>Amount of solid waste from earthworks is estimated as 39063 m³ (1% of total earthworks); materials loss during construction (calculation according to Material loss norm – 1784/BXD-VP) such as scattered cement, rock and sand, and steel. Other solid waste such as containers, wood fines, damaged tools and equipment etc., if not collected, will affect water and soil environment.</td>
</tr>
<tr>
<td><strong>Hazardous substances</strong></td>
<td>Amount of wasted oil and grease from machines during construction phase. The amount if not collected and treated, will affect water and soil environment. Hazardous solid waste as battery container, tank, grease and oil container, paint boxes, bottles, nylon cover, chemical container. Total waste can be expected as 5 tons.</td>
</tr>
<tr>
<td><strong>Labor safety</strong></td>
<td>Working accidents might occur during the construction phase such as electric shock, accident in machine operation, accidents due to no protective tools and clothes. Injure workers, and locals living near the construction site.</td>
</tr>
<tr>
<td><strong>Erosion, sedimentation and landscape</strong></td>
<td>Earth works; camp building and construction of items will change the landscape of construction area and increase risk of erosion.</td>
</tr>
<tr>
<td><strong>Fire and exploitation risks</strong></td>
<td>Fire and explosion during construction phase might be happed due fire, electrical short-circuit, firing in fuel stocks. Cause human casualties, air pollution, and economic losses.</td>
</tr>
<tr>
<td><strong>Chance finding</strong></td>
<td>Damaging or destroying the exposed of cultural, historical and grave while excavation. Affecting construction progress and increasing the clearance cost.</td>
</tr>
<tr>
<td><strong>Traffic activities : Transporting material, soil embankment and spoiled earth</strong></td>
<td>Increase contents of NO₂, CO, CO₂ that cause air pollution in the construction area. Impact radius is predicted about 5 ÷ 50 m from sources. Affect workers and surrounding locals.</td>
</tr>
<tr>
<td><strong>Emission gases</strong></td>
<td>Noise degree on the construction site is predicted as 80 dBA and at the distance of 50m as 70 dBA. Affect workers and surrounding locals.</td>
</tr>
<tr>
<td><strong>Dust</strong></td>
<td>Impact radius is predicted about 85 ÷ 100 m from sources for earth road and 10-15 m for asphalted road. Affect the locals on the both side of the road and travelers. Decrease tree's photosynthetic capacity.</td>
</tr>
<tr>
<td><strong>Hazardous waste</strong></td>
<td>The amount of wasted oil and grease from transporting vehicles during the construction phase should be collected following the regulation, if not collected, will pollute the water and soil environment.</td>
</tr>
<tr>
<td><strong>Local traffic</strong></td>
<td>Increase the traffic density. Increase safe risk for the locals. Degrade of the road system Affect agricultural activities such as land preparation, harvesting of the people.</td>
</tr>
<tr>
<td><strong>Worker living at the camp</strong></td>
<td>Wastewater amount from one camp is expected as 4 m³/day (20 persons)</td>
</tr>
</tbody>
</table>
Environmental Management Plan

<table>
<thead>
<tr>
<th>(estimating 20 people/camp)</th>
<th>The wastewater containing organic substance and bacterial, which cause stink, polluting water source and soil, at a result, worker’s health will be affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic waste</td>
<td>The domestic solid waste from the camp is expected as 20 kg/day (20 person), of which, the organic waste account about 65 %. The waste cause stink, polluting the water and soil, and facilitate the living environment of insect, fly, and mosquito that affect the human health.</td>
</tr>
<tr>
<td>Culture/social of commune</td>
<td>Cause the social evils, and diseases; Cultural/social conflicts that make difficulties for controlling order and security at the locality.</td>
</tr>
<tr>
<td>Use of natural resources</td>
<td>Illegal wildlife hunting and natural resources exploitation activities would cause degradation of the ecosystem.</td>
</tr>
</tbody>
</table>

3. Operation phase

| Traffic and road safety | Minimize road accident | Undertake road safety awareness campaigns for local residents and other road users Phung Hung Road Install and maintain road warning signs and markings. Monitor road accidents and implement necessary preventive measures (awareness campaigns, provision of appropriate road furniture to enhance road safety and control traffic) |

5.2 Mitigation Measures

73. To mitigate the potential impacts on water, air, noise, and other aspects during construction, mitigation measures will be included in the construction contract. Addition, PPMU/CSC will regularly monitor the compliance of contractors and evaluate the effectiveness of mitigation measures proposed.

74. The main mitigation activities are described in Table 10. Since this is a road maintenance subproject good practice and standard mitigation measures are required along the road. Mostly waste, noise, dust, and traffic safety mitigation measures are required. The specific impacts, location and proposed mitigation measures for each route segment are also described.
## Table 10. Mitigation measures for negative impacts of subproject

<table>
<thead>
<tr>
<th>Issues/ Risks</th>
<th>Impacts</th>
<th>Mitigation measures</th>
<th>Budget</th>
<th>Time of implement</th>
<th>Implementer</th>
<th>Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Preparation phase</strong></td>
<td></td>
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</tr>
<tr>
<td>Land occupancy</td>
<td>Total permanent or temporary acquired areas are 2834 m². Impact to 46 households/184 persons</td>
<td>Provide the compensation satisfactorily and timely, which is presented in the approved RAP.</td>
<td>Cost for activities under subproject owner responsibility will be included as part of the subproject cost.</td>
<td>Compensation shall be completed before implementing the construction. Temporarily acquired area shall be returned after completing construction.</td>
<td>PPMU coordinates with DPCs to ensure the compliance with the regulations of GoV of Vietnam, and WB policies.</td>
<td>CPMU will conduct periodical monitoring, at which, an independent consultant will be hire for monitoring.</td>
</tr>
<tr>
<td>Dismantling old irrigation works</td>
<td>Amount of solid waste from dismantling old works if not collected, will affect water and soil environment</td>
<td>Dismantling material such as bricks, concrete can be taken advantage to embank waterlogged and hollow areas. The dumping areas must be poured in the stipulated location of sites that approved by local government</td>
<td>Cost for activities under contractor responsibility will be included as part of the construction cost.</td>
<td>Before implementing the construction</td>
<td>The contractor will prepare a plan to minimize and/or manage potential impact. The plan will be part of the CEMP and submit for approval by the PPMU.</td>
<td>PPMU/CSC</td>
</tr>
<tr>
<td><strong>2. Construction phase</strong></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Emission gases, dust</td>
<td>Increase contents of NO₂, CO, CO₂, Noise, The traffic vehicles, machines, construction equipment’s must be</td>
<td>Cost for activities under contractor</td>
<td>During construction</td>
<td>The contractor will prepare a plan to minimize and/or manage potential impact. The plan will be part of the CEMP and submit for approval by the PPMU.</td>
<td>PPMU/CSC</td>
<td></td>
</tr>
</tbody>
</table>
## Environmental Management Plan

<table>
<thead>
<tr>
<th>Issues/ Risks</th>
<th>Impacts</th>
<th>Mitigation measures</th>
<th>Budget</th>
<th>Time of implement</th>
<th>Implementer</th>
<th>Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>and noise</td>
<td>and Dust that cause air pollution in the construction area. Impact radius is predicted about 5 ÷ 20 m from sources of construction activities and 5 ÷ 50 m from sources of traffic activities. Affect workers and surrounding locals and roads.</td>
<td>thoroughly and regularly inspected for periodic maintenance. No burning of waste materials on site. Cover all trucks carrying loose or potentially dusty materials (soil, mud, sand, etc.). Watering or sprinkle the construction areas periodically. Regulations on the speed of the vehicle on site. Provide personal protective equipment and clothing. Announce about the noise level and duration of noise for people</td>
<td>responsibility will be included as part of the construction cost.</td>
<td>phase</td>
<td>plan to minimize and/or manage potential impact. The plan will be part of the CEMP and submit for approval by the PPMU.</td>
<td>PPMU/CSC</td>
</tr>
<tr>
<td>Construction solid waste</td>
<td>Amount of solid waste from earthworks is estimated as 39063 m³ (1% of total earthworks); materials loss during construction (calculation according to Material loss norm – 1784/BXD-VP) such as scattered cement, rock and sand, and steel. Other spoils as containers, wood fines, etc., if not collected, will affect water environment.</td>
<td>The solid waste such as wood, metal, paper box, cartons are collected to recycle; broken bricks, pebble, and sand can be taken advantage to embank waterlogged and hollow areas. The dumping areas must be poured in the stipulated location of sites that approved by local government. Dig and embank surrounding the sand material site, dumping site to limit the solid waste and sediment washed by rain</td>
<td>Cost for activities under contractor responsibility will be included as part of the construction cost.</td>
<td>During construction phase</td>
<td>The contractor will prepare a plan to minimize and/or manage potential impact. The plan will be part of the CEMP and submit for approval by the PPMU.</td>
<td>PPMU/CSC</td>
</tr>
<tr>
<td>Issues/ Risks</td>
<td>Impacts</td>
<td>Mitigation measures</td>
<td>Budget</td>
<td>Time of implement</td>
<td>Implementer</td>
<td>Supervisor</td>
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</tr>
<tr>
<td>Hazardous substance</td>
<td>Amount of wasted oil and grease from machines, hazardous solid waste as battery container, tank, grease and oil container, paint boxes, bottles, nylon cover, damaged tools and equipment during construction phase. The amount if not collected and treated, will affect water and soil environment.</td>
<td>Hazardous waste must be labeled and stored in separate containers with appropriate labeling. Containers are located away from riverbank and domestic water source in order to avoid making bad affects on water quality. The vehicles need being to maintain or change oil must be taken into the designated area. Change the oil at the construction site is not allowed. Prepare a companion Emergency Response Plan outlining all procedures to be undertaken in the event of a spilled or unplanned release. Contract with the local Environment. Company for collection and disposal of solid waste.</td>
<td>Cost for activities under contractor responsibility will be included as part of the construction cost.</td>
<td>During construction phase</td>
<td>PPMU/CSC</td>
<td>PPMU/CSC</td>
</tr>
<tr>
<td>Domestic and construction wastewater</td>
<td>Wastewater amount from one camp is expected as 4 m³/day. The wastewater containing organic substance and bacterial, which cause stink, polluting water source and soil, at a result, worker’s health will be impacted. Wastewater from construction activities is estimated at</td>
<td>Use local labour force in manual labour force to reduce household wastes. Install collection and treatment system domestic wastewater that meet discharge criteria. Supply enough clean water for workers. Provide adequate lavatory facilities.</td>
<td>The contractor will prepare a plan to minimize and/or manage potential impact. The plan will be part of the and submit for approval by the PPMU.</td>
<td>PPMU/CSC</td>
<td>PPMU/CSC</td>
<td>PPMU/CSC</td>
</tr>
<tr>
<td>Issues/ Risks</td>
<td>Impacts</td>
<td>Mitigation measures</td>
<td>Budget</td>
<td>Time of implement</td>
<td>Implementer</td>
<td>Supervisor</td>
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</tr>
<tr>
<td>Domestic solid waste</td>
<td>The domestic solid waste from the camp is expected as 20 kg/day, of which, the organic waste account about 65 %. The waste cause stink, polluting the water and soil, and facilitate the living environment of insect, fly, and mosquito that affect the human health.</td>
<td>Collect and separate solid waste in containers with a lid. Solid wastes need to be reused if possible Contract with the local Environment Company for collection and disposal of solid waste</td>
<td></td>
<td></td>
<td>PPMU/CSC</td>
<td></td>
</tr>
<tr>
<td>Erosion, sedimentation and landscape</td>
<td>Earth works; camp building and construction of items will change the landscape of construction area and increase risk of erosion.</td>
<td>The solid waste of construction shall be collected for reuse or buried at dumping site. Out of capacity dumping site shall to grade, compact surface and plant grass. Contractor will clear away and remove all materials and rubbish and temporary works after complete construction.</td>
<td></td>
<td></td>
<td>PPMU/CSC</td>
<td></td>
</tr>
<tr>
<td>Issues/ Risks</td>
<td>Impacts</td>
<td>Mitigation measures</td>
<td>Budget</td>
<td>Time of implement</td>
<td>Implementer</td>
<td>Supervisor</td>
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</tr>
<tr>
<td>Local traffic</td>
<td>Increase the traffic density. Increase safe risk for the locals. Degrade of the road system.</td>
<td>Limit the traffic activity in rush traffic hours. Install fully signs, warnings, speed limits, barrier on the construction site and roads. Repair of damaged roads. Building bypass road, temporary roads for transportation of people</td>
<td>Cost for activities under contractor responsibility will be included as part of the construction cost.</td>
<td>During construction phase</td>
<td>The contractor will prepare a plan to minimize and/or manage potential impact. The plan will be part of the CEMP and submit for approval by the PMU.</td>
<td>PPMU/CSC</td>
</tr>
<tr>
<td>Culture/social of commune</td>
<td>Cause the social evils, and diseases. Cultural/social conflicts that make difficulties for controlling order and security at the locality.</td>
<td>Location of the camp and must be approved by local authorities. Providing living facilities, clean water and recreational facilities for workers. Provide adequate medicines and periodical medical examination for workers. Building Rules of living and the Code of Conduct for workers.</td>
<td></td>
<td></td>
<td>PPMU/CSC Local community</td>
<td></td>
</tr>
</tbody>
</table>
# Environmental Management Plan

<table>
<thead>
<tr>
<th>Issues/ Risks</th>
<th>Impacts</th>
<th>Mitigation measures</th>
<th>Budget</th>
<th>Time of implement</th>
<th>Implementer</th>
<th>Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of natural resources</td>
<td>Illegal wildlife hunting and natural resources exploitation activities would cause degradation of the ecosystem.</td>
<td>Contractor must (i) well-managed workers and (ii) provide awareness of environment and natural resources protection to workers. Worker is prohibited from (i) cutting down of trees for any reason outside the approved construction area; (ii) hunting, fishing, wildlife capture, or plant collection; (iii) buying of wild animals for food; and (iv) caged wild animals (especially birds) in camps.</td>
<td>Cost for activities under contractor responsibility will be included as part of the construction cost.</td>
<td>During construction phase</td>
<td>PPMU/CSC Local community</td>
<td></td>
</tr>
<tr>
<td>Fire and explosion risks and Labor safety</td>
<td>Fire and explosion during construction phase might be due fire, electrical short-circuit, firing in fuel stocks. Accidents due to no protective tools and clothes Cause human casualties, air pollution, and economic losses.</td>
<td>Implement electrical safety and fire safety on construction sites. Provide adequate firefighting equipment. Established rescue teams and equipment to provide first aid on site. Raise awareness of workers about safety and training of first aid measures. Provide personal protective equipment and clothing. Check carefully equipment and machines before using.</td>
<td></td>
<td></td>
<td>PPMU/CSC PPMU requires contractors to compensate any damages in case of incident.</td>
<td></td>
</tr>
<tr>
<td>Chance finding</td>
<td>Damaging or destroying the exposed of cultural, historical and grave while excavation. Affecting construction</td>
<td>Immediately stop construction activities at the site discovered. Immediately establish safety zones and warning signs placed and appointed supervisors.</td>
<td>Cost for activities under contractor responsibility will be included as a part of the</td>
<td>During construction phase</td>
<td>PPMU shall coordinate with local governments and functional</td>
<td>Department of Culture, Sports and Tourism of Ha Giang</td>
</tr>
</tbody>
</table>
## Environmental Management Plan

<table>
<thead>
<tr>
<th>Issues/ Risks</th>
<th>Impacts</th>
<th>Mitigation measures</th>
<th>Budget</th>
<th>Time of implement</th>
<th>Implementer</th>
<th>Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>progress and increasing the clearance cost</td>
<td>Immediately inform local authorities in order to receive protection coordination. Immediately inform the Department of Culture, Sports and Tourism of Ha Giang province for processing.</td>
<td>The contractor will prepare a plan to minimize and/or manage potential impacts and submit for approval by the PPMU.</td>
<td>construction cost.</td>
<td>agencies to handle.</td>
<td>Local community</td>
<td>province</td>
</tr>
</tbody>
</table>

3. Operation phase
<table>
<thead>
<tr>
<th>Issues/ Risks</th>
<th>Impacts</th>
<th>Mitigation measures</th>
<th>Budget</th>
<th>Time of implement</th>
<th>Implementer</th>
<th>Supervisor</th>
</tr>
</thead>
</table>
| Traffic flow activities  | Air and noise pollution       | - All vehicles must comply with the national regulations controlling allowable emission limits of exhaust gases. Vehicles in must undergo a regular emissions check and get certified as required under Decision No. 35/2005/QD-BGT.  
- Material loads shall be suitably transportation to prevent the scattering of soil, sand, material or dust.  
- Vehicle owners are required to follow the national regulation on traffic and traffic safety. Relevant traffic signs need to be put at the right places and critical sections of the road. | Operation phase |                   | Ha Giang PPC |            |
Table 11. Site-specific Mitigation Measures along the road
(Will be completed after road design confirm and site investigation)

<table>
<thead>
<tr>
<th>Location</th>
<th>Sensitive Area or Activity</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Route passes through sparsely residential area, mainly agricultural land.</td>
<td>- When construction passes through residential areas particularly areas near schools, office buildings, should apply traffic safety, dust and noise restrictions. - During construction stage, collecting and not dumping waste into agricultural land will be implemented. - During construction phase, the construction site located nearby river, waste should collect and not dumping waste into open space water will be required.</td>
<td></td>
</tr>
<tr>
<td>- Route passes through sparsely residential areas, mainly agricultural land with normal tree and crops.</td>
<td>- During construction phase, collecting waste, especially oil is not allowed to dump into open space water course around construction site; it will be followed up and applied.</td>
<td></td>
</tr>
<tr>
<td>- Route pass through some roads (inter-district road, civil road in residential area). - Residential interspersed agriculture land and garden land. - Route cross some rivers and streams.</td>
<td>- Arrangement of construction machinery should logically, ensured the circulation of vehicles on the road, especially at market gateway and way into residential area. - Construction machines does not influence to residential area and market (by dust and noise). - Hazardous waste prevention issue (waste oil, oil-containing cloth) in water source area (river, stream). - Conflict between workers and residents at market area - Flooding issue in area nearby Lo River and streams during construction stage - Whendredging of drainage culverts, it should be note waste treatment issue from dredging of drainage culvert and reinforced</td>
<td></td>
</tr>
</tbody>
</table>
### Environmental Management Plan

<table>
<thead>
<tr>
<th>Mitigation measures during operation</th>
<th>All location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Along the road Private businesses and utility companies that will be affected.</td>
<td>- High risk sections of the road, especially the turn-around sections.</td>
</tr>
</tbody>
</table>

- Planned and unplanned interruptions to water, gas, power, and internet services: the Contractor must undertake prior consultation and contingency planning with local authorities about the consequences of a particular service failure or disconnection.  
  - Coordinate with relevant utility providers to establish appropriate construction schedules.  
  - Provide information to affected households on working schedules as well as planned disruptions (at least 5 days in advance).  
  - The contractor should ensure alternative water supply to affected residents in the event of disruptions lasting more than one day.  
  - Any damages to existing utility systems of cable shall be reported to authorities and repaired.

- **Chance Find Procedures**

  75. If the Contractor discovers archeological sites, historical sites, remains and 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 Vietnam (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.
CHAPTER VI: COMPLIANCE MONITORING PROGRAMME AND ENVIRONMENTAL QUALITY

76. Content of the environmental monitoring program includes the followings:
   • Monitoring of the compliance with implementing mitigation measures of the contractors;
   • Monitoring and evaluating quality of environmental air, water and soil;
   Environmental monitoring program is conducted continuously during the subproject construction and two years after the project starts operating.

6.1. EMP Monitoring

77. Monitoring by subproject owner: PPMU will monitor safeguard performance of contractor throughout the construction phase. PPMU will assign the construction supervision consultant (CSC) to carry out the day-to-day monitoring base on approved ESMP and pay attention to also mitigate potential negative impacts local environment and local people. PPMU will also assign the PESU and its provincial environmental management consultant (PEMC) to conduct monthly monitoring of the contractor performance. Addition, PPMU will hire a group of national consultant to conduct periodical monitoring in line with the detailed design and the construction plan and schedule, including locations of dredge materials disposal areas.

78. Monitoring by community: Committee monitoring of local community shall be founded by Decision 80/2005/QD-CP dated 18 January 04, 2005 by Prime Minister about Investment Supervision Regulations of the community to monitor the impact activity in the construction process. Committee monitoring of local community shall have the right and responsibility to supervise the negative impact on the environment due to the construction activities and ensure the mitigation potential negative impacts are effective implementation by contractors. In cases arising environmental issues affecting the community, they will report to the CSC or PPMU through hotline.

6.2. Effective monitoring of the proposed mitigation measures

79. At the subproject level, the subproject Environment Safeguard Officer (ESO) will periodically monitor performance of the proposed mitigation measures during the detailed design/bidding and construction stages in close consultation with local authorities and communities. If needed the mitigation measures could be modified in line with the actual impacts on the ground and/or agreements of key stakeholders. Results/records should be properly kept in the subproject file for possible review PPMU, also report the progress of the CEMP implementation in the subproject progress report. Cost for the monitoring of the proposed mitigation measures will be part of the subproject supervision cost. In parallel to this monitoring, the PPMU will also ensure compliance with the Government approval
conditions according to the EIA regulation. At the project level, the ESO of PPMU will also conduct a six-month monitoring of the proposed mitigation measures for the subproject

6.3. Monitoring of environmental quality

80. In order to make sure of the effectiveness of mitigation measures and the subproject sustainability, an ambient environmental quality monitoring program is expected to be implemented during the construction (3 years) and will be done by the PPMU through its independent environmental consultants. Schematic diagram and location of the sample monitoring is presented.
<table>
<thead>
<tr>
<th>No.</th>
<th>Content</th>
<th>Location</th>
<th>Parameters</th>
<th>Frequency</th>
<th>Method</th>
<th>Being monitored by</th>
<th>Comparable standards</th>
<th>Cost (million VND)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Construction phases</strong></td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>Domestic wastewater</td>
<td>2 locations in total; one location per construction site; one at mixer station</td>
<td>pH, TDS, TSS, BOD₅, NH₄⁺, NO₃⁻, PO₄³⁻, oil</td>
<td>1 times/year during road constructio n period</td>
<td>Field survey and measurement Analysis in the laboratory</td>
<td>PPMU (ESO) Contractor</td>
<td>QCVN 14:2008/ BTNMT</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td><strong>Air</strong></td>
<td>2 locations in total; one location per construction site; one at mixer station</td>
<td>Dust, noise, SO₂, CO, NO₂, Pb</td>
<td>1 times/year during road constructio n period</td>
<td>Field survey and measurement Analysis in the laboratory</td>
<td>PPMU (ESO) Contractor</td>
<td>QCVN 05:2009/ BTNMT QCVN 06:2009/ BTNMT</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td><strong>Surface water</strong></td>
<td>2 locations around construction site in total</td>
<td>pH, DO, COD, BOD₅, NH₄⁺, NO₃⁻, PO₄³⁻, oil</td>
<td>1 times/year</td>
<td>Field survey and measurement Analysis in the laboratory</td>
<td>PPMU (ESO) Contractor</td>
<td>QCVN 08:2008/ BTNMT (Column B1)</td>
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<tr>
<td>4</td>
<td><strong>Labor Safety and Sanitation</strong></td>
<td>Construction site</td>
<td>Implementation of labor safety</td>
<td>2 times/year</td>
<td>Field survey and</td>
<td>PPMU EMC</td>
<td>The standard of health and</td>
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<td>labor safety</td>
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<td>- Monitoring the implementation of health care, water supply and environmental sanitation</td>
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<th>measurements</th>
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<tr>
<td>Condition of health care, water supply and environmental sanitation</td>
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<th>assessment</th>
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| labor safety |

## II O&M phase

### Dust and traffic safety

- Monitoring the water and dust quality around the subproject.

<table>
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<tr>
<th>5 locations in total dust and traffic safety monitoring</th>
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<th>PM 5 and PM 2.5</th>
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<th>Once every 06 months</th>
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<tr>
<th>Field measurement Analysis in the laboratory</th>
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<th>Ha Giang PPC</th>
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<th>QCVN 05:2013/BTN MT</th>
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CHAPTER VII. INSTITUTIONAL ARRANGEMENTS AND RESPONSIBILITIES

7.1 Agencies and Responsibilities

81. The Ha Giang Provincial Peoples Committee (PPC) is the Executing Agency (EA) of the subproject who will be responsible for the overall implementation and compliance with loan assurances including the successful implementation of the EMP. The PPC assigned the Ha Giang City Peoples Committee (CPC) as the subproject Implementation Agency (IA) who on behalf of the EA will, inter alia, supervise all communications with the ADB for EMP implementation, and reporting on EMP implementation progress including environmental compliance monitoring.

82. The IA assigned a Project Management Unit (PMU) who will be responsible for day-today management of the EMP. The PMU will be responsible to supervise the implementation of environment mitigation and monitoring measures of the EMP, ensure contractors' compliance with environmental management requirements, and coordinate the Grievance Redress Mechanism (GRM), and reporting to ADB. The PMU will engage and work with the Project Management and Construction Supervision consultants (see below) to ensure bidding documents include the EMP, and detailed instructions to bidders on required impact mitigation and monitoring requirements for construction package-specific contractor EMPs (CEMP). The PMU will appoint one full-time Safeguards Officer (SO) to coordinate the daily activities of EMP and to manage the implementation of the EMP.

83. The SO with logistical support from the PMU will: (i) supervise and provide guidance to contractors with compliance with the EMP and their own CEMPs; (ii) conduct regular site inspections; (iii) assist the PMU with their local entry point for the subproject GRM; (iv) lead disclosure activities & coordinate additional public consultation activities; (v) coordinate implementation of the capacity building and training program related to environment; (vi) prepare inputs to the quarterly project progress reports; (vii) coordinate the preparation and submission of semi-annual environment monitoring reports to ADB, and (viii) coordinate regulatory environmental monitoring activities of DONRE as needed.

84. The Project Management and Construction Supervision consultant (PMCS) will be recruited by the IA who will be responsible for advising the PMU and contractors on all aspects of environmental management and monitoring for the subproject. The PMCS will include an international (IES) and a national environment specialist (NES) who will: (i) lead updating of environmental mitigation & monitoring programs of the EMP as needed to meet the detailed designs of the subproject; (ii) assist the SO to ensure that the EMP provisions are included in the tender documents and civil works contracts; (iii) prior to implementation, review and clear the CEMPs prepared by contractors to ensure that these are consistent with the provisions of the updated EMP; (iv) supervise implementation of the mitigation measures specified in the EMP and the CEMPs through regular site visits and review of monthly reports of the contractors; (v) coordinate environmental monitoring in accordance
with the monitoring plan; (vi) in conjunction with SO prepare semi-annual environment monitoring reports in English and Vietnamese and submit them to ADB for review and disclosure; (vii) provide training to SO and contractors on ADB SPS 2009, the IFC Environmental, Health and Safety (EHS) Guideline, EMP implementation, and GRM in accordance with the training plan defined in the EMP; (viii) identify any environment-related issues and identify necessary corrective actions; (ix) if required, update the EMP to identify changes to subproject scope during implementation that would result in adverse environmental impacts not addressed within the approved EMP; (x) assist SO finalize Grievance Redress Mechanism (GRM) proposed in IEE and this EMP, and provide orientation training for PMU, contractors, and other GRM access points; (xi) provide support to SO with organizing public meetings in subproject areas as needed to address any concerns of APs; and (xii) prior to project completion assist SO gather information on EMP implementation performance for input to project completion report (PCR).

85. The contractors will be required to develop site-specific construction EMPs (CEMP) in accordance with the IEE/EMP, the contract-specific EMP included in the bidding document and environment safeguards requirements. These shall be reviewed, cleared and monitored by the project implementation consultants and submitted to ADB for appraisal and disclosure. The contractors will be responsible for implementing the impact mitigation measures of their respective CEMPs during the construction phase of the subproject under the supervision of the SO and the PMSC. In their bids, contractors will be required to develop site specific construction EMPs (CEMP) from the contract-specific EMP, and will assign an environmental officer (EO) responsible for CEMP implementation supervision and monitoring, and one qualified person responsible for construction and occupational health and safety officer (OHS). The OHS will ensure worker and public safety regulations prescribed by the department of Labour, Invalids, and Social Assistance (DOLISA). Contractors will conduct noise, air and surface water quality monitoring at construction site boundaries and nearby sensitive receptors to confirm compliance with relevant Vietnamese ambient quality standards as well as the IFC (2007) standard for noise and air quality. Each works contractor will submit monthly progress reports to the PMSC. These reports will include reporting on EMP implementation performance.

86. The Ha Giang Department of Natural Resources and Environment (DONRE) will implement their following mandated duties during project implementation: (i) periodically monitor (compliance) the implementation of mitigation measures identified in the domestic EIA and IEE to ensure subproject impacts during the construction and operation phases are minimized; (ii) investigate environmental incidents (e.g., pollution and damages to natural resources); (iii) resolve environmental issues generated by the subproject as part of the GRM established for the project.

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4 The PMSC may contract a licensed entity to conduct the environmental effect monitoring as defined in the EMP.
5 The need to comply with the EMP and to develop a construction EMP shall be defined in the bidding documents for all works packages.
87. The provincial Department of Labour, Invalids and Social Assistance (DOLISA) prescribes regulations and guidelines governing worker and public safety in the workplace. The directives of DOLISA must be implemented by the contractor OHS throughout the construction and operational phases of the subproject. To supplement the DoLISA the IFC/World Bank Environment, Health, and Safety Guidelines (2007) should be consulted when necessary.

88. ADB will review and supervise project performance against the commitments of the EA, as described in the legal agreements. Project review missions will visit project sites to ascertain the status of implementing the EMP. ADB will review periodic environment monitoring reports submitted by the EA/IA. If any of the safeguard requirements that are covenanted in the legal agreements are found not to be satisfactorily met, ADB will require the EA/IA to develop and implement an appropriate corrective action plan (CAP) agreed upon with ADB to rectify unsatisfactory safeguard compliance. ADB may also consider exercising its legal remedies, including suspension, cancellation, or acceleration of maturity, specified in the legal agreements. If any unanticipated environmental impacts become apparent during project implementation, ADB will advise and require the EA and IA to (i) assess the significance of such unanticipated impacts; (ii) evaluate the options available to address them; and (iii) prepare or update the IEE and EMP.

### Summary of key roles and responsibilities for EMP

<table>
<thead>
<tr>
<th>Parties</th>
<th>Roles</th>
<th>Responsibilities</th>
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</thead>
<tbody>
<tr>
<td>Provincial Peoples Committee (PPC)</td>
<td>Executing agency</td>
<td>Ultimate successful implementation of uEMP, &amp; liaison with ADB</td>
</tr>
<tr>
<td>City Peoples Committee (CPC)</td>
<td>Implementing agency</td>
<td>Implement subproject for EA, including communicate &amp; report on subproject to EA</td>
</tr>
<tr>
<td>Project Management Unit (PMU)</td>
<td>Management</td>
<td>Day to day management of subproject, and coordinating office for GRM for subproject</td>
</tr>
<tr>
<td>Safeguards Officer (SO) of PMU</td>
<td>safeguards</td>
<td>Manage implementation of uEMP, coordinate with PMCS and contractors</td>
</tr>
<tr>
<td>Project Management &amp; Consultant Supervisor (PMCS)</td>
<td>Management support</td>
<td>Support PMU for implementation of uEMP, conduct environmental effects monitoring, and training plan</td>
</tr>
<tr>
<td>National (NES) environment consultants of PMCS</td>
<td>Safeguards support to PMCS</td>
<td>Lead PMSC role in effects monitoring, training plan implementation, and monitoring of uEMP</td>
</tr>
<tr>
<td>Contractors</td>
<td>CEMP Implementation</td>
<td>Implement and report on contractor CEMP derived</td>
</tr>
<tr>
<td>Environment officers (EO) of Contractors</td>
<td>Safeguards support to contractors</td>
<td>Lead implementation of all mitigation and monitoring contractor responsibilities for uEMP</td>
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<td>----------------------------------------</td>
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<tr>
<td>Department of Natural Resources &amp; Environment (DONRE)</td>
<td>Regulatory</td>
<td>Periodically verify that subproject is meeting government environmental protection regulations &amp; standards, provide technical expertise for GRM when necessary</td>
</tr>
<tr>
<td>Department Labour, Invalids, and Social Assistance (DOLISA)</td>
<td>Regulatory</td>
<td>Ensure worker and public safety regulations are not violated during subproject construction</td>
</tr>
</tbody>
</table>

### 7.2 Mechanism of environmental complaints and grievances redress

89. **DONRE** is responsible for checking and handling any violation caused by Contractors and PPMU.

90. **CSB** is responsible for daily monitoring of compliance with environmental and social safeguards during construction and reflects with Local Authority/PPMU about the incident, or via telephone 'hotline' for timely addressing. Local authority and social organizations will also monitor the performance of contractors, and monitor environmental impacts in all phases of the project. If there are any complaints and grievances from locally-affected people about for example land acquisition, compensation, issues related to environment, etc., then local authority will have to collaborate with contractor and PPMU to address.

### 7.3. Reporting

<table>
<thead>
<tr>
<th>Report</th>
<th>Responsibility for Preparation</th>
<th>Frequency</th>
<th>Submission to</th>
</tr>
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<tbody>
<tr>
<td>Reports Prepared Once During EMP Implementation</td>
<td></td>
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<tr>
<td>Update the Environmental Management Plans of Sub-Projects (EMP update)</td>
<td>Environmental Consultant, supported by PPMU, CPMU</td>
<td>Once, during first year of implementation, prior to commencement of construction</td>
<td>PMU, ADB, PPC, PPMU, Loan Authorities</td>
</tr>
<tr>
<td>Contract Specific Environmental Management Plan (CEMP)</td>
<td>Contractor</td>
<td>Once, during first year of implementation, prior to initiation of construction</td>
<td>PMU, ADB, PPC, PPMU, Loan Authorities</td>
</tr>
<tr>
<td>Road Schedule and Detailed Implementation Plans</td>
<td>PPMU, Contractor</td>
<td>Once, before stop providing water</td>
<td>CPMU, PPMU, Contractors, Loan Authorities</td>
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</table>

Table 13. Reporting Requirements for EMP
Environmental Management Plan

<table>
<thead>
<tr>
<th>Report</th>
<th>Responsibility for Preparation</th>
<th>Frequency</th>
<th>Submission to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report on UXO survey and Treatment</td>
<td>Ministry of the Military Commander in Ha Giang province</td>
<td>Once, during first year of implementation, prior to initiation of construction</td>
<td>PMU, ADB, PPC, PPMU,</td>
</tr>
<tr>
<td>Environment Codes of Practice (ECOP),</td>
<td>PPMU supported by Environmental Consultant</td>
<td>Once, during first year of implementation, prior to initiation of construction, included in bidding document</td>
<td>PMU, ADB, PPC, PPMU,</td>
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**Monitoring Reports**

<table>
<thead>
<tr>
<th>Report on contractor's compliance with environmental covenants</th>
<th>CSC</th>
<th>Monthly</th>
<th>PPMU, Contractors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report on project environmental safeguards performance</td>
<td>Environment Consultant supported by CPMU and PPMU</td>
<td>Every 6 months, during construction</td>
<td>PMU, ADB, PPC, PPMU,</td>
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### 7.4. Cost estimation for the implementation of the environmental monitoring program

91. Ha Giang PPMU had announced a bidding package (CV19) for environmental monitoring and sample analysis to access the change of environment due to impact of Phung Hung road construction (for more detail, please refer to CV19 bidding package)

92. Budget of safety measures and environmental management will be allocated as follows:

(i) Cost for implementation of mitigation measures during construction, consultation with local communities, environmental quality monitoring, and compensation to land occupancy will be a part of the subproject construction cost;

(ii) Cost for the day-to-day supervision of contractor performance as well as cost for periodical monitoring at subproject level will be part of the subproject supervision cost while cost for periodic monitoring at the project level will be a part of the project management of PMU;

(iii) Cost for capacity building and increasing awareness on environmental protection will be a part of the subproject cost;
CHAPTER VIII: PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

93. A public consultation will be carried out in order to disclose information about the subproject, impacts, mitigation measures, collecting concerns as well as further identifying and eliminating the impacts and potential risks. If there are any specific issues, areas and/or issues related to land and water use and/or potential conflicts in the subproject area by the subproject implementation, mitigation measures will be proposed.

8.1 The process of consultation and information disclosure


Content of consultation:
- Summary of subproject information;
- Environmental protection policies made by Vietnamese government and ADB;
- Possible impacts and mitigation measures;
- Environmental management plan and environmental monitoring program
- Commitment by subproject owner/PPMU.
- Discussion and opinions and feedback of subproject owner/PPMU.

Participants: 53

95. At district level: Participants are representatives of People’s Committees, Agriculture division, Environment division, Fatherland Front, Farmer Union, and Women Union.

96. At commune level: Participants are representatives of People’s Committees, Fatherland Front Committees, Women’s Union, Farmers, Youth Unions, cadastral-irrigation officials of communes; and other representatives of households affected, households benefited in communes in the subproject area.

8.2. Result of consultations

97. Summary of consultation output:

(i) The participants are well aware of the importance of the subproject and agreed with the implementation of the subproject. The communes will facilitate implementation of the subproject.

(ii) The impact of subprojects in the construction process as waste, dust, noise, workers only for a short time, and less affecting residential because most of the construction site are far residential areas. However, PPMU shall require the contractor to implement mitigation measures.

(iii) During the design and construction time of the subproject, PPMU should work closely with local authorities to arrange for structures in accordance with planned transportation-irrigation system at field in building new rural of localities.

(iv) Improve the capacity of pest management and raise awareness about environmental protection in the irrigation system is necessary.
(v) The transport activities of the subproject shall be ensured safety and minimize impacts to traffic operations people. Need plans and funds to repair the transportation work that damaged by the activities of the subproject.

(vi) Prioritize the use of local labor to create employment opportunities and raise awareness of the irrigation protection.

(vii) During the construction period, ensure water supply for irrigation and do not affect the crop harvested.

(viii) Community representatives should supervise the implementation of the compensation. Committee monitoring of local community shall be founded.

(ix) Cost for environmental monitoring in construction phase will be a part of the subproject cost.

(x) Cost for environmental monitoring in O&M phase will be a part of the subproject cost.
Annex

Annex 1. Environmental standard and regulations

Standards and regulations on water environment
QCVN 09: 2008 / BTNMT - National technical regulation on underground water quality;
QCVN 08: 2008 / BTNMT - National technical regulation on surface water quality;

Standards and regulations on air environment
QCVN05: 2009 / BTNMT. National technical regulation on ambient air quality; QCVN06: 2009 / BTNMT. National technical regulation on hazardous substance in ambient air.

Standards on solid waste
QCVN 07: 2009 / BTNMT The national technical regulation on the hazardous waste thresholds;
TCVN 6707: 2009 - Prevention and warning signs for hazardous waste;
TCVN 6705: 2009 - Non-hazardous waste;
TCVN 6706: 2009 - Separation of hazardous wastes.

Standards and regulations on soil environment and sediment
QCVN 03: 2008 / BTNMT, National technical regulation on the allowable limits of heavy metals in soils;
QCVN 43: 2012 / BTNMT, National Technical Regulation on Standard Quality Sediment and regulations on noise and vibration
QCVN26: 2010 / BTNMT, National technical regulation on noise; QCVN 27: 2010 / BTNMT,

National Technical regulation on vibration.
TCVN7210: 2002, Vibration and shock - Vibration caused by construction works and factories - Maximum permitted levels in the environment of public and residential areas.

Standards on labor sanitation
Decision No. 3733/2002 / QD-BYT dated 10th October 2002 issued by Heath Care Department on application of 21 standards on labor sanitation

Safety standards and regulations for construction;
Annex 2. Environmental Supervision for the Maintenance of Phung Hung Road
(including the scope of works for the Construction Supervision Consultant)

General

In order to prevent harm and nuisances on local communities, and to minimize the impacts on the environment during the construction and operation of Phung Hung road construction project, the following documents have been prepared which should be adhered to by all Contractors and his employees:

- The Environmental Impact Assessment (EPC) for Phung Hung road construction project;
- The Environmental Management Plan (EMP) of the sub project including site-specific measures identified in the EMP;
- The mitigation measures included in project design and bill of quantities;
- The specifications, procedures, and best practices included in the EMP.
- These specifications complement any technical specifications included in the work quantities and the requirements of any Vietnamese regulations and standards;

Objective of the Assignment

The Consultant is to provide professional technical services ("the Services") to help ensure effective implementation of the Environmental Management Plan (EMP), mitigation measures included in the Information Page, and the Environmental Specifications during the construction of Phung Hung road construction (the Road).

In order to achieve the goal of minimizing the negative environmental impacts of the project, the EMP has been integrated in the design of the Road, and in the technical specifications and contract documents. It will need to be closely followed and implemented by the contractors. The implementation of the EMP will therefore involve three parties:

- The Contractor's Workplace Safety and Environment Officer (SEO) responsible for implementing the EMP and other construction related environmental and safety issues;
- The Construction Supervision Consultant (CSC) who are responsible for supervising and monitoring all construction activities and for ensuring that contractors comply with the requirements of the contracts and the EMP. The CSC will include Environmental Engineers led by a Workplace Safety and Environment Supervisor (SES)

Scope of Services:

The general services to be provided by the SES are to inspect, monitor and audit the construction activities to ensure that mitigation measures adopted in the EMP are properly implemented, and that the negative environmental impacts of the project are minimized.

The Contractor has the responsibility for ensuring compliance with the project EMP and contract conditions while undertaking the works. The SES oversees this. The SES is therefore to be an independent monitor to ensure compliance with the EMP and to ensure adequate performance of the Contractors on environmental issues.

The SES will inspect, monitor and carry out environmental review of all road contracts packages and lots. The SES shall have extensive knowledge and experience in environmental supervision, monitoring and auditing to provide independent, objective and
professional advice to the client on the environmental performance of the project. The SES team leader shall be familiar with the project works through review of the relevant reports, including the EPC, EMP as well as project technical specifications and contract documents. As part of the CSC, the SES is expected to perform the following duties:

**Phase I: Preparation**

The objective of Phase I is to lay the groundwork for the successful execution of the project. In this phase, the SES shall: (i) review the EPC, EMP, project designs and technical specifications and confirm that there have been no major omissions of mitigation measures; (ii) prepare guides for contractors on implementing the EMP; and, (iv) develop and execute a training program for all involved in construction activities.

**The main tasks in this phase are:**

**Review of Project Documents:** The SES shall review the EPC, EMP, project designs and technical specifications and confirm in writing that there have been no major omissions of mitigation measures. If any issues are identified, the SES shall propose to the PMU updates to the EMP and the design and technical specifications to address these issues. Once approved by PMU, the SES shall update the EMP.

**Environmental Supervision Checklist:** The SES shall establish a comprehensive checklist, which will be used during the construction of the project to monitor the contractor’s performance. This shall cover major aspects of the project, required mitigation/control measures and their implementation schedule.

**Log-Book:** The SES shall keep a log-book of each and every circumstance or change of circumstances which may affect the environmental impact assessment and non-compliance with the recommendations made by the SES to remediate the non-compliance. The log-book shall be kept readily available for inspection by all persons assisting in the supervision of the implementation of the recommendations of the EPC and Contract. The CSC shall verify the log-book as part of his environmental audit.

**Environmental Training:** The SES shall design and execute a comprehensive training program for all actors: Supervision Engineers, , PMU, EO, Contractor's SEOs (and workers as part of the trainings given to the SEO), on the environmental requirements of the project, and how they will be supervised, monitored and audited, giving particular attention to:

- **EMP:** The requirements of the EMP, the agreed environmental monitoring checklist, the environmental monitoring form, how non-compliance with the EMP will be handled, and all other key issues shall be covered. Particular attention will be paid to the specific provisions in each contract’s technical specifications indicating how the EMP is to be complied with;
- **Health and Safety:** The health and safety requirements of the project shall be clearly identified and communicated with the Contractors and PMU (include in environmental specifications for contractors).

At the conclusion of the training Contractors will also sign a statement acknowledging their awareness of the environmental regulations, the EMP, the compliance framework, and health and safety obligations. The CSC shall sign a similar statement confirming their understanding of the supervision responsibilities.

**Phase II: Supervision of Construction Activities**
On behalf of the PMU and the Chief Supervision Engineer, the SES will:

- Review, and inspect in an independent, objective and professional manner in all aspects of the implementation of the EMP;
- Carry out random monitoring checks, and review on records prepared by the Contractor’s SEO;
- Conduct regular site inspections;
- Review the status of implementation of environmental protection measures against the EMP and contract documents;
- Review the effectiveness of environmental mitigation measures and project environmental performance;
- As needed, review the environmental acceptability of the construction methodology (both temporary and permanent works), relevant design plans and submissions. Where necessary, the SES shall seek and recommend the least environmental impact alternative in consultation with the designer, the Contractor(s), and PMU:
- Verify the investigation results of any non-compliance of the environmental quality performance and the effectiveness of corrective measures; and Provide regular feedback audit results to PMU and CSC according to the procedures of non-compliance in the EMP;
- Provide training programs, including CSC and PMU staff, to appraise them of issues identified and how to improve environmental compliance; Instruct the Contractor(s) to take remedial actions within a specified timeframe, and carry out additional monitoring, if required, according to the contractual requirements and procedures in the event of non-compliances or complaints;
- Instruct the Contractor(s) to take actions to reduce impacts and follow the required EMP procedures in case of non-compliance / discrepancies identified;
- Instruct the Contractor(s) to stop activities which generate adverse impacts, and/or when the Contractor(s) fails to implement the EMP requirements / remedial actions instructed by the SES.

**Review of Site Plans:** To ensure consistency across the project, the SES shall provide the final review of all site plans, which may affect the environment. These include, but are not limited to: borrow pit and disposal sites plans. The SES will review and approve the EMP Implementation Plan and Landscape Implementation Plan presented by the Contractors. Where these plans are found not to comply with the EMP, EPC, the SES shall work with the CSC and Contractor to establish a suitable solution.

**Health and Safety:** To ensure consistency across the project, the SES shall provide the final review and recommend clearance of all Contractors’ Safety Plans, and, based on these, with inputs from the CSC, prepare an overall Project Safety Plan (PSP). The PSP shall include procedures such as management of explosions, safety during construction, the prevention of slope slide / soil erosion during the rainfall season, etc. These plans shall be reviewed on an annual basis and updated if necessary. The SES shall ensure compliance with the requirements of the health and safety clauses in the contract documents. This shall include, but not be limited to: (i) construction activities; (ii) HIV/AIDS education campaign; (iii) compliance with Viet Nam’s labor laws; and (iv) road traffic safety. For HIV/AIDS the focus shall not only be on the construction sites themselves, but also on assisting the nearby communities.

**Site Inspections:** The SES shall closely audit the construction activities through regular site inspections accomplished through daily site visits, walks and visual inspections to identify areas of potential environmental problems and concerns.
Inspections should be done independently from the Contractor’s staff. It is expected that the SES shall have their own hand held and portable monitoring equipment such as cameras, transport and other resources. Where definitive monitoring is necessary to resolve contentious issues or to impose penalties, the SES may contract third parties to carry out specific monitoring at the locations under review.

Where there is infringement of technical specifications, or condition of contracts, or noncompliance with the EMP, the SES shall be immediately informed Contractor’s Chief Engineer, Supervision Chief Engineer and PMU.

The SES shall also report all infringements to the PMU as part of the monthly reporting. Regular joint environmental site inspections (e.g. weekly) should be organized by the SES and CSC, with participation from the Contractor’s Environmental Officer (SEO). These should be used as an opportunity for the SES to further train the CSC and Contractor’s staff. SES field engineer’s log-book shall be kept readily available for inspection by all persons assisting in project management.

The SES shall also regularly review the records of the contractors to ensure that they are up to date, factual and meet the EMP reporting requirements (e.g. environmental complaint monitoring records).

**Complaints:** Complaints will be received by the Contractor’s Site Office from local residents with regard to environmental infractions such as noise, dust, traffic safety, etc. The Contractor’s Chief Engineer or his deputy, and the SEO shall be responsible for processing, addressing or reaching solutions for complaints brought to them. The SES shall be provided with a copy of these complaints and shall confirm that they are properly addressed by the Contractors in the same manner as incidents identified during site inspections.

**Unforeseen Impacts:** In the event that an incident arises which was not foreseen in the EMP or EIA, the SES shall work closely with the CSC, the Contractors, and the PMU to confirm satisfactory resolution to the incident. The SES shall then update the EMP and the implementation guidelines, training the Contractors’ staff accordingly. Monthly Payments: The SES shall confirm the monthly payments for environmentally related activities as recommended by the SES to the client.

**Site Restoration and Landscaping:** The SES shall closely monitor all activities with regard to site restoration and landscaping in areas such as borrow pits, quarries, washing vehicles etc. to ensure that the activities are done to an appropriate and acceptable standard. The SES will agree with the Contractor on a Site Decommissioning and Restoration plan to be implemented before the completion of the construction.

**Project Initiation and Staffing:** It is anticipated that the CSC and the SES, will be mobilized one month before the start of the construction activities. The one month start up time will be utilized by the SES to review and familiarize itself with the project, the project design, the technical specifications, contract documents, the EPC, EMP reports and other project relevant documents and reports. Following the review, the SES will prepare a brief report on the potential issues and challenges arising from the implementation of the EMP and the condition of contracts and make recommendations to the PMU about how best to improve the implementation of the EMP.

The SES is expected to be mobilized at the beginning of the contract, to prepare the necessary guidelines, documentation, training, etc. Reporting: As a minimum the SES shall prepare the following written reports:
• Weekly report of non-compliance issues
• Summary monthly report covering key issues and findings from reviewing and supervision activities
• Consolidated summary report from contractor’s monthly report

They shall also collect and report on data as requested by the PMU. At the end of the project the SES shall prepare a final report summarizing the key findings from their work, the number of infringements, resolutions, etc. as well as advice and guidance for how such assignments should be conducted in the future.
### Analysis and Determination of Training Demands

<table>
<thead>
<tr>
<th>Subject</th>
<th>Preliminary assessment on capability/awareness</th>
<th>Capacity building/training on environmental management</th>
</tr>
</thead>
</table>
| **Environment team – PMU** | - Have most staff with University/post university education, thus it is easy for them to comprehend new contents  
   - Have working experiences in previous projects but have not gone into details of the environmental field.  
   - Have basic knowledge in information technology, thus, it will be convenient for data management and information process as well as cooperation with other agencies. | - Should be further trained on environmental management process in project and implementation methods (from preparation stage of bidding documents, bid evaluation, contract signing, monitoring implementation and acceptance works, etc.).  
   - Should increase awareness on critical roles of EMS  
   - Should provide with more knowledge/legal regulations related to penalty for violations on the environment.  
   - Should be provided with treatment solutions for arising problems on site |
| **Local leaders** | - The communes have not been made sufficiently clear and understood about the project process.  
   - Computer skills are still limited.  
   - Awareness on community organization and monitoring is not clear.  
   - Have no experiences in community monitoring on a large scale. | - Should be provided with preliminary knowledge on environmental laws and contents related to coordination in monitoring among ward/commune authorities in projects, which are executed in the areas.  
   - Should be trained on community monitoring.  
   - Should have updated information on project progress and monitoring and information exchange regime.  
   - Especially, environmental management process should be made clear and comprehended before, during and after construction. |
| **Community representatives** | - Not been established in the local area, thus participants have not been determined  
   - Most project areas are rural ones with cultivation works. Education is limited and working style is primarily spontaneous.  
   - Income of residents is not | - Should be provided with rights and responsibilities in environmental management (as well as legal regulations.)  
   - Should be provided with clear simple methods, which will be applied during project implementation |
Based on an analysis of current capabilities, experiences and actual demands in project implementation, a capacity building and training program for relevant agencies is established as shown in the table below:

<table>
<thead>
<tr>
<th>high; infrastructure system is not sufficient; awareness on rights and responsibilities of individuals and community on environmental issues are limited.</th>
<th>process. - Increase the awareness of community on environmental management generally and potential impact of the project in particular. - Continuously utilize project information and important points in EMS as well as operation regime.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractor - Contractor’s leaders are qualified and experienced staffs who are competent in legal regulations. - Periodically organize training courses on environmental sanitation and labor safety. - Most Contractors consider environmental issues as arising ones with a separate cost and do not want to implement them or rectify the issues. - Awareness of Contractors on environmental issues during construction is limited.</td>
<td>Contractor - Should learn about environmental law and focus on contents related to roles of local authority and community supervisors. - Should comprehend environmental management process following requirements of WB’s safeguard policies. - However, for contractors these requirements will be followed through project documents and concrete criteria in bidding documents as well as construction contract.</td>
</tr>
</tbody>
</table>
### Proposed Programs of Capacity Building on Environmental Management

<table>
<thead>
<tr>
<th>Training content</th>
<th>Subject to be trained</th>
<th>Number of trainees</th>
<th>Training time</th>
<th>Organization unit</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaning on Labor safety and environmental sanitation</td>
<td>Contractor's workers and technical staff</td>
<td>All workers and staff on site</td>
<td>Prior to construction and following legal regulations</td>
<td>Contractor in coordination with Institute of Labor, War invalids and Social Affairs</td>
<td>Paid by Contractor</td>
</tr>
<tr>
<td>Learning on general environmental management process</td>
<td>Staff of PMU and public utility companies</td>
<td>3 persons</td>
<td>Prior to construction</td>
<td>PMU in coordination with IMC</td>
<td>Paid by PMU or to be included in a package on training</td>
</tr>
<tr>
<td>Learning on Process of CEMP</td>
<td>Environmental staff under ward PC in the project area</td>
<td>3 persons</td>
<td>Prior to construction</td>
<td>Training consultant under Contract on capacity building and training for relevant agencies.</td>
<td>Included in Contract on training consulting</td>
</tr>
<tr>
<td>Learning on Process of SEMP</td>
<td>CSC's staff in charge of environmental sanitation under CSC</td>
<td>5 trainees</td>
<td>Prior to construction</td>
<td>PMU in coordination with CSC</td>
<td>In the Contract of CSC</td>
</tr>
</tbody>
</table>
Annex 3. Disposal sites oriented certificate

UBND TỈNH HÀ GIANG
VĂN PHÒNG DOÀN DBQH-HDND VÀ UBND TỈNH

Số: 1058 /VP-KTTH
V/v đề xuất của UBND thành phố Hà Giang về địa điểm đỏ đất, đã thửa thuê dự án: Chương trình phát triển các đô thị loại II (các đô thị xanh) – Tiểu dự án tại Hà Giang

Kính gửi:
- Các sở: Tài nguyên và Môi trường, Xây dựng, Nông nghiệp và Phát triển nông thôn;
- UBND thành phố Hà Giang.

Thực hiện Thông báo số 236/TB-UBND ngày 20/9/2019 của UBND tỉnh Thống báo Kết luận phiên họp Thường trực UBND tỉnh tháng 9 năm 2019. Đối với đề xuất của UBND thành phố Hà Giang tại Tờ trình số 115/TTr-UBND ngày 30/8/2019 về việc cho chủ tương địa điểm đỏ đất thửa thuê dự án: Chương trình phát triển các đô thị loại II (các đô thị xanh) – Tiểu dự án tại Hà Giang, Thường trực UBND tỉnh chỉ đạo như sau:

1. Đồng ý với đề xuất của UBND thành phố Hà Giang đề tại Tờ trình số 115/TTr-UBND nói trên về việc đỏ đất, đã thửa kinh thứ công Dự án: Chương trình phát triển các đô thị loại II (các đô thị Xanh) - Tiểu dự án tại Hà Giang.

2. Giao cho UBND thành phố Hà Giang tổ chức triển khai thực hiện theo đúng trình tự, quy định của pháp luật.

3. Các sở: Xây dựng, Tài nguyên và Môi trường, Nông nghiệp và Phát triển nông thôn cần cử chức năng, nhiệm vụ của ngành, lĩnh vực hưởng dẫn UBND thành phố Hà Giang trong việc tổ chức triển khai thực hiện đảm bảo phù hợp với quy định của pháp luật hiện hành.

Văn phòng Đoàn DBQH-HDND và UBND tỉnh trả lời thông báo đến các sở ngành liên quan, UBND thành phố Hà Giang biết và triển khai thực hiện.

Nơi nhận:
- Như trên;
- Chủ tịch UBND tỉnh (B/cáo);
- PCT TTr UBND tỉnh phụ trách (B/cáo);
- LDVP (đ/c Đoàn, Sang, Sắc);

KT. CHÁNH VĂN PHÒNG
PHÓ CHÁNH VĂN PHÒNG

La Tiến Sang
QUYẾT ĐỊNH

Về việc phê duyệt chỉ định thủ gây thu khảo sát, lập phương án dự toàn rà phá bom min, viết nội dung dự án Chương trình phát triển các đô thị loại 2 (các đô thị xanh) - tiêu đề dự án tại Hà Giang.

UỶ BAN NHÂN DÂN THÀNH PHỐ HÀ GIANG

Công hoa xã hội chủ nghĩa Việt Nam
Độc lập - Tự do - Hạnh phúc
TP. Hà Giang, ngày 12 tháng 10 năm 2018

QUYẾT ĐỊNH

Về việc phê duyệt chỉ định thủ gây thu khảo sát, lập phương án dự toàn rà phá bom min, viết nội dung dự án Chương trình phát triển các đô thị loại 2 (các đô thị xanh) - tiêu đề dự án tại Hà Giang.

UỶ BAN NHÂN DÂN THÀNH PHỐ HÀ GIANG

Căn cứ Luật Tổ chức chính quyền địa phương ngày 19/6/2015;
Căn cứ Luật Đấu thầu công số 49/2014/QH13 ngày 18/06/2014 của Quốc hội;
Căn cứ Luật Đấu thầu số 43/2013/QH13 ngày 26/11/2013 của Quốc hội;
Căn cứ Nghị định số 63/2014/ND-CP ngày 26/6/2014 của Chính phủ quy định chi tiết thi hành một số điều của Luật Đấu thầu về lựa chọn nhà thầu;
Căn cứ Quyết định số 1370/QĐ-UBND ngày 04/7/2018 của UBND tỉnh Hà Giang về việc phê duyệt điều chỉnh Báo cáo nghiên cứu khả thi dự án “Chương trình phát triển các đô thị loại 2 (các đô thị xanh)” - tiêu đề dự án tại Hà Giang;
Căn cứ Quyết định số 2056/QĐ-BQP ngày 05/6/2017 của Bộ Quốc phòng về việc tổ chức thực hiện công tác rà phá bom min, viết nội dung dự án Chương trình phát triển các đô thị loại 2 (các đô thị xanh) - tiêu đề dự án tại Hà Giang;
Căn cứ Hợp đồng nguyên tắc số 14/2017/HĐNT-RPBMVN ngày 27/10/2017 giữa Ban QLDA phát triển đô thị loại hai xanh và Công ty TNHH MTV Lũng Lố 3 về việc khảo sát, lập phương kỹ thuật thi công và dự toàn rà phá bom min, viết nội dung dự án Chương trình phát triển các đô thị loại 2 (các đô thị xanh) - tiêu đề dự án tại Hà Giang;
Căn cứ Quyết định số 1048/QĐ-BQP ngày 01/4/2018 của Bộ Quốc phòng về việc phê duyệt phương án kỹ thuật thi công, dự toàn rà phá bom min, viết nội dung dự án Chương trình phát triển các đô thị loại 2 (các đô thị xanh) - tiêu đề dự án tại Hà Giang.

QUYẾT ĐỊNH

Điều 1. Phê duyệt chỉ định thủ gây thu khảo sát, lập phương án dự toàn rà phá bom min, viết nội dung dự án Chương trình phát triển các đô thị loại 2 (các đô thị xanh) - tiêu đề dự án tại Hà Giang, với các nội dung chủ yếu như sau:

1. Tên gói thủ: Khảo sát lập phương án kỹ thuật thi công, dự toàn rà phá bom min, viết nội dung dự án Chương trình phát triển các đô thị loại 2 (các đô thị xanh) - tiêu đề dự án tại Hà Giang.
2. Tên đơn vị được chỉ định: Công ty TNHH MTV Lụng Lớp 3; Địa chỉ: Số 06 Mạc Thái Tố, phường Yên Hòa, Quận Cầu Giấy, Tp Hà Nội.
Diễn thoại: 0243.728.2959        Fax: 0243.728.2957
Tài khoản số: 10201001095539 tại: Ngân hàng TMCP Công Thương Việt Nam, chi nhánh Hoàng Mai - Hà Nội.

3. Giá chỉ định thầu (lâm trên): 91.093.000 đồng (Bảng chữ: Chín mươi ba nghìn đồng), không bao gồm thuế VAT.
5. Thời gian thực hiện hợp đồng: 15 ngày kể từ ngày bàn giao mặt bằng.

Điều 2. Công ty TNHH MTV Lụng Lớp 3 có trách nhiệm lập phương án dự toán rà phá bom mìn, vật lộn theo đúng các quy định hiện hành, chịu trách nhiệm trước pháp luật về hồ sơ lập phương án dự toán rà phá bom mìn, vật lộn trên.

Điều 3. Chánh Văn phòng HDND-UBND Thành phố, Ban QLDA phát triển đô thị loại hai xanh, Thủ trưởng các phòng, ban có liên quan và Công ty TNHH MTV Lụng Lớp 3 chịu trách nhiệm thi hành Quyết định này./.

Noi nhận:
- Như điều 3;
- CT, PCT UBND thành phố;
- Lưu: VT; BQL ĐTX.

[Signature]

Nguyễn Thị Phương Lan
QUYẾT ĐỊNH
Về việc phê duyệt phương án và duy toàn rà phá bom mìn, vật nổ
Dự án: Chương trình phát triển các đô thị loại II
các đô thị xanh-Tiêu dự án tại Hà Giang
Địa điểm: Thành phố Hà Giang, tỉnh Hà Giang

BỘ TRƯỞNG BỘ QUỐC PHÒNG

Căn cứ Nghị định số 164/2017/ND-CP ngày 30 tháng 12 năm 2017 của Chính phủ quy định chức năng, nhiệm vụ, quyền hạn và cơ cấu tổ chức của Bộ Quốc phòng;
Căn cứ Quyết định số 96/2006/QĐ-TTg ngày 04 tháng 5 năm 2006 của Thủ tướng Chính phủ về việc quản lý và thực hiện công tác rà phá bom, mìn, vật nổ;
Căn cứ Thông tư số 146/2007/TT-BQP ngày 11 tháng 9 năm 2007 của Bộ Quốc phòng hướng dẫn thực hiện Quyết định số 96/2006/QĐ-TTg ngày 04 tháng 5 năm 2006 của Thủ tướng Chính phủ;
Căn cứ Quyết định số 2056/QĐ-BQP ngày 15/6/2017 của Bộ Quốc phòng về việc tổ chức thực hiện công tác rà phá bom, mìn, vật nổ Dự án: Chương trình phát triển các đô thị loại II (các đô thị xanh-Tiêu dự án tại Hà Giang);
Căn cứ Quyết định số 450/QĐ-UBND ngày 23/3/2017 của Ủy ban nhân dân tỉnh Hà Giang về việc: Phê duyệt điều chỉnh Báo cáo nghiên cứu khả thi Dự án: Chương trình phát triển các đô thị loại II các đô thị xanh-Tiêu dự án tại Hà Giang;
Xét đề nghị của Công ty TNHH MTV Lằng Lô 3 tại Tô trình số: 185/TTR-LL3 ngày 28/12/2017 và đề nghị của Trung ương Công bình tại Báo cáo số 44/BCH-BTL ngày 23/3/2018 về kết quả thẩm định phương án kỹ thuật thi công và duy toàn rà phá bom, mìn, vật nổ Dự án: Chương trình phát triển các đô thị loại II các đô thị xanh-Tiêu dự án tại Hà Giang do Công ty TNHH MTV Lằng Lô 3 lập với những nội dung chịu yêu sau:

QUYẾT ĐỊNH

Điều 1. Phê duyệt phương án kỹ thuật thi công và kết quả thẩm định dự toán rà phá bom, mìn, vật nổ Dự án: Chương trình phát triển các đô thị loại II các đô thị xanh-Tiêu dự án tại Hà Giang do Công ty TNHH MTV Lằng Lô 3 lập với những nội dung chịu yêu sau:

1. Vị trí công trình: Thành phố Hà Giang, tỉnh Hà Giang
4. Chất lượng thi công:
- Chất lượng thi công: Đạt yêu cầu kỹ thuật, phù hợp với quy trình kỹ thuật số 05/QĐ-BQP ngày 07/8/2003 của Bộ Quốc phòng và Quyết định phương án kỹ thuật thi công của Bộ Quốc phòng.
- Tiền đô thi công: Đạt yêu cầu.

5. Kết luận:
- Các bên tham gia nghiệm thu thống nhất nghiệm thu khối lượng đã phù böm, min, vật nọ dự án trên làm cơ sở để Chủ đầu tư thanh toán cho đơn vị thi công.

Đại diện Chủ đầu tư

Trần Đình Chiến
Cán bộ BQLDA

Chủ huy trưởng CQ Trương

Trần Quang Đức

Giám đốc

Bùi Hồng Phương

Trần Đăng Tuấn
CÔNG HOÀ XÃ HỘI CHỦ NGHĨA VIỆT NAM
Dược lập - Tư do - Hành phúc

Hà Giang, ngày 24 tháng 12 năm 2018

BIÊN BẢN
NGHIỆM THU KHÔI LƯỢNG HOÀN THÀNH

Dự án: Chương trình phát triển các đồ thị xanh loại II (các đồ thị xanh)
- Tiêu dự án tại Hà Giang.
Gói thu: Rà phá bom, min, vật nỏ
Địa điểm: Thành phố - Tỉnh Hà Giang.

I. Đối tượng nghiệm thu: Rà phá bom, min, vật nỏ.
II. Địa điểm: Thành phố Hà Giang - Tỉnh Hà Giang.
III. Thời gian nghiệm thu:
- Bắt đầu: 7h30 ngày 24 tháng 12 năm 2018
- Kết thúc: 16h30 ngày 24 tháng 12 năm 2018

IV. Thành phần tham gia nghiệm thu:
1. Đại diện Chủ đầu tư: Ban QLDA phát triển đồ thị loại hai xanh
   - Ông: Trần Đình Chiến
   - Ông: Trần Quang Được
   - Ông: Bùi Hồng Phương
   - Ông: Trần Đăng Tuấn
2. Đại diện nhà thầu thi công: Công ty TNHH MTV xử lý bom, min, vật nỏ 319
   - Chức vụ: Giám đốc

1. Tài liệu và các căn cứ nghiệm thu:
   Quyết định số 96/2006/QĐ-TTg ngày 04/5/2006 của Thủ tướng Chính phủ v/v Quản lý và thực hiện công tác rà phá bom, min, vật nỏ;
   Thông tư số 121/2012/TT-BQP ngày 12/11/2012 của Bộ Quốc phòng về việc ban hành QCVN 01:2012/BQP, Quy chuẩn kỹ thuật quốc gia về rà phá bom min, vật nỏ;
   Quyết định số 441/QĐ-BKHCN ngày 17/3/2014 của Bộ trưởng Bộ khoa học và công nghệ về việc khai thác hiệu quả nghiên cứu;
   Căn cứ Quyết định số 2056/QĐ-BQP ngày 05/6/2017 của Bộ Quốc phòng về việc tổ chức thực hiện công tác rà phá bom min, vật nỏ Dự án: Chương trình phát triển các đồ thị xanh loại II (các đồ thị xanh) - Tiêu dự án tại Hà Giang;
   Căn cứ Quyết định số 1048/QĐ-BQP ngày 01/4/2018 của Bộ Quốc phòng về việc phê duyệt phương án và dự toán rà phá bom min, vật nỏ Dự án: Chương trình phát triển các đồ thị xanh loại II (các đồ thị xanh) - Tiêu dự án tại Hà Giang;
   Căn cứ Quyết định số 3368/QĐ-UBND ngày 14/11/2018 của UBND thành phố Hà Giang về việc phê duyệt chỉ định thẩm định gói gói đầu rà phá bom min, vật nỏ Dự án: Chương trình phát triển các đồ thị xanh loại II (các đồ thị xanh) - Tiêu dự án tại Hà Giang;
Căn cứ Hợp đồng số 02/2018/HĐ-RPBVMN ngày 15/11/2018 giữa Ban QLDA phát triển đô thị loại hai xanh với Công ty TNHH MTV xử lý bom, min, với số Đơn vị: Chương trình phát triển các đô thị loại II (các đô thị xanh) - Tiểu dự án tại Hà Giang:

Biến bản bản giao mặt bằng trước thi công;
Biến bản kiểm tra, giám định chất lượng thi công đã phải bom min, vật nó;
Biến bản nghiệm thu kỹ thuật công tác thi công đã phải bom min vật nó;
Biến bản xác minh số lượng bom min vật nó tìm được để đưa đi hủy;
Biến bản hủy bom min vật nó;
Nhật ký thi công tại hiện trường từ ngày 16/11/2018 đến ngày 20/12/2018;
Bản vẽ hoàn công đã phải bom min, vật nó;
Bản cam kết đảm bảo an toàn mặt bằng đã phải bom min, vật nó.

2. Nội dung nghiệm thu:
Sau khi kiểm tra thực tế tại hiện trường, đối chiếu với hồ sơ phương án thi công đã được phê duyệt và các tài liệu có liên quan, các bên nghiệm thu thống nhất nghiệm thu khối lượng thi công đã phải bom min, vật nó Đơn vị: Chương trình phát triển các đô thị loại II (các đô thị xanh) - Tiểu dự án tại Hà Giang do Công ty TNHH một thành viên xử lý bom min, vật nó số 319 với các nội dung như sau:

3. Phạm vi, diện tích, độ sâu và khối lượng thực hiện:
- Phạm vi đã phải bom min, vật nó được thể hiện trên thiết kế bằng các cọc móc, đánh dấu som đố và trên bản vẽ hoàn công.
- Diện tích đã chỉ công đã phải bom min, vật nó là: 64,68 ha. Trong đó:
  - Diện tích đã phải bom min, vật nó trên can đến độ sâu 3m và 5m: 61,01 ha;
  - Diện tích đã phải bom min, vật nó dưới nước đến độ sâu 3m: 3,67 ha.
- Độ sâu thi công đã phải bom min, vật nó tính từ mặt đất tự nhiên, mặt ruộng, vũng... hiện tại trước.

- Khối lượng thực hiện và nghiệm thu: Như bảng tổng hợp dưới đây.

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4. Chất lượng thi công:
- Chất lượng thi công: Đạt yêu cầu kỹ thuật, phù hợp với quy trình kỹ thuật số 95/QĐ-BQP ngày 07/8/2003 của Bộ Quốc phòng và Quyết định phương án kỹ thuật thi công của Bộ Quốc phòng.
- Tiến độ thi công: Đạt yêu cầu.

5. Kết luận:
- Các bên tham gia nghiệm thu thông nhất nghiệm thu khối lượng rà phá bom, min, vật nổi dưới trên lầm cơ sở để Chủ đầu tư thanh toán cho đơn vị thi công.

ĐẠI DIỆN CHỦ DẦU TƯ

[Signature]
Trần Đình Chiến

CẤN BỘ BQLDA

[Signature]
Trần Quang Đức

BÁO DIỄN ĐƠN VỊ THI CÔNG

[Signature]
Giám đốc
Bùi Hồng Phong

CHỈ HUY TRƯỞNG CÔNG TRƯỞNG

[Signature]
Trần Đăng Tuấn
Annex 5. Public Consultations

Secondary Cities Development Program (Green Cities)-Ha Giang Sub-project
"Chương trình Phát triển các thị trấn, làng (các thị xã, thị trấn) ở tỉnh Hà Giang"

CÔNG HÒA XÃ HỘI CHỦ NGHĨA VỆ TẤN
Độc lập – Tự do – Hạnh phúc

BIÊN BẢN HỘP THAM VĂN CỘNG ĐỒNG
(Về các vấn đề liên quan đến thu hoạch, đến bà ho tàu, tài chính cấp và môi trường)

Hà Giang, ngày 8 tháng 3 năm 2019

Hà Giang, Nguyễn Thị Chung

Xã Phường Nguyễn Thị Chung

Thành phố Hà Giang, tỉnh Hà Giang

I. Thanh phân tham dự:
- Ông/Bà: Trần Bình Chốn - Chức vụ: Phó Giám đốc
- Ông/Bà: Nguyễn Văn Long - Chức vụ: Phó CT. PND, HTTBC, Thành phố
- Ông/Bà: Nguyễn Xuân Hưng - Chức vụ: Phó trưởng phòng TH
- Ông/Bà: Nguyễn Thanh Đông - Chức vụ: Phó chánh văn phòng
- Ông/Bà: Nguyễn Thanh Thảo - Chức vụ: Chủ tịch UBND phường, Nguyễn Thị Hòa
- Ông/Bà: Nguyễn Thị Vân - Chức vụ: Tổ trưởng, tổ dân dân tộc
- Ông/Bà: Nguyễn Thị Bình - Chức vụ:

II. Nội dung tham vấn
- Công bố thông tin chung về dự án như mục tiêu, địa điểm, phạm vi xây dựng, thể loại công trình...
- Phạm vị ảnh hưởng, số liệu và mức độ ảnh hưởng của Dự án, các tác động của việc thu hồi đất và các tài sản trên đất;
- Các tác động của dự án về môi trường có thể xảy ra trong quá trình chuẩn bị, thi công, vận hành; Các biện pháp giảm thiểu tác động, đặc biệt đối với các hộ dân, khu vực gần dự án, các hố phải di ròi.
Secondary Cities Development Program (Green Cities)-Ha Giang Sub-project

"Chương trình Phát triển các đô thị xanh (các đô thị xanh)" - Tầm nhìn và cơ chế khuyến nghị và giải quyết tiêu cực

- Phối hợp chính sách để bảo vệ, bảo tồn tài sản địa giới của người dân trong đô thị và cơ chế khuyến nghị và giải quyết tiêu cực.
- Tham vấn người dân xung quanh và các bên liên quan về chính sách an toàn, xã hội, môi trường và các vấn đề khắc phục quan trọng quá trình đô thị hóa.
- Thực hiện các yêu cầu của cấp UBND xã/xã, cấp bộ BAH liên quan.

III. Kết quả thanh văn/xin lưu

- Chinh quyền cho phép và người dân thực hiện dự án, mong muốn tăng cường. Bên cạnh, thanh toán các công việc, các cơ chế khuyến nghị, giải quyết tiêu cực, giảm gian nhàn.
- Người dân thực hiện việc các biện pháp quản lý thị xã. Đồng thời, quan trọng là việc quản lý, bảo vệ môi trường, và các biện pháp khác liên quan.

- Việc thực hiện các biện pháp để nâng cao chất lượng môi trường, bảo vệ môi trường, và các biện pháp khác liên quan.
- Việc thực hiện việc, bảo vệ môi trường, và các biện pháp khác liên quan.
- Việc thực hiện việc, bảo vệ môi trường, và các biện pháp khác liên quan.

- Việc thực hiện việc, bảo vệ môi trường, và các biện pháp khác liên quan.
- Việc thực hiện việc, bảo vệ môi trường, và các biện pháp khác liên quan.
Environmental Management Plan
# Environmental Management Plan

Secondary Cities Development Program (Green Cities)-Ha Giang Sub-project

"Chương trình Phát triển các đô thị xanh (các đô thị xanh)" - Túc dự án tại Hà Giang

#### ĐÀN SÁCH ĐẠI BIỂU THAM ĐỰ CỘNG HÒP

Xếp hạng...Ngã...Hào... Thành phố Hà Giang... Tỉnh...Hà Giang...

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### DANH SÁCH ĐẠI BIỂU THAM DỰ CUỘC HỘP

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II. Nội dung tham vấn

- Công bố thông tin chuẩn về dự án như mục tiêu, địa điểm, phạm vi xây dựng, thiết kế công trình.

- Phẩm vi ảnh hưởng, số liệu và mức độ ảnh hưởng của Dự án, các tác động của việc thực hiện dự án và các tài sản liên quan.

- Các tác động của dự án về môi trường có thể xảy ra trong quá trình chuẩn bị, thi công, vận hành. Các biện pháp giảm thiểu tác động, đặc biệt đối với các hộ dân, khu vực gần dự án, các hộ phải di rời.

- Phối hợp, chăm sóc đến bộ, hộ trợ tài chính cụ thể với tài sản bị ảnh hưởng của người dân trong Dự án và cơ chế khuyến nghị và giải quyết khiếu nại.

- Tham vấn người bị ảnh hưởng và các bên liên quan về chính sách an toàn, xã hội, môi trường và các vấn đề khác liên quan đến quá trình thực hiện dự án.

- Thu thập các ý kiến của các UBND xã/phường, các hộ BAH liên quan.
Environmental Management Plan
Secondary Cities Development Program (Green Cities)-Ha Giang Sub-project

"Chương trình Phát triển các đô thị xanh của các đô thị xanh" – Thiết kế ở tại Hà Giang

Công việc phó kop trong chỉ dẫn

- chúc mừng của ban lãnh đạo

- Nội dung của ban lãnh đạo

- Chúc mừng các thành viên

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- Kiểm tra

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