## **Environmental and Social Monitoring Report**

Semi-Annual Report January 2017

Viet Nam: Central Regions Rural Water Supply and Sanitation Sector Project

WATER SUPPLY AND SANITATION OF DINH LONG AND DINH LIEN COMMUNES YEN DINH DISTRICT - THANH HOA PROVINCE

Prepared by The Joint Venture of CDM International Inc., Nippon Koei Co. Ltd. and Vinaconsult JSC for the Asian Development Bank.

#### **CURRENCY EQUIVALENTS**

(as of 2 December 2016)

Currency unit - dong (VND) VND1.00 = \$0000440 \$1.00 = VND22714

#### **ABBREVIATIONS**

ADB – Asian Development Bank AHs – affected households APs – Affected Persons

CARC – Compensation Assistance Resettlement Committee
CSC – Design-Build Construction Supervision Consultant

CPC – Commune People's Committee
CPMU – Central Project Management Unit
CVWU – Communal Vietnam Women's Union

D&B – Design and Build

DARD – Department of Agriculture and Rural Development, Provincial DONRE – Department of Natural Resources and Environment, Provincial

DPC – District People's Committee

EARF – Environmental Assessment and Review Framework

EC – Environmental Protection Commitment
EMP – Environmental Management Plan
EMOP – Environmental Monitoring Plan

EO – Environmental Officer
FS – Feasibility Study
GoV – Government of Vietnam

HHs – Households

IEE – Initial Environmental Examination

LARC – Land Acquisition and Resettlement Completion Report

LARP – Land Acquisition and Resettlement Plan

lpcd – Litters per capita per day

MARD - Ministry of Agriculture and Rural Development

MOH – Ministry of Health (BYT)

MONRE – Ministry of Natural Resources and Environment (BTNMT)

MOU – Memorandum of Understanding

NCERWASS – National Centre for Rural Water Supply and Environmental Sanitation

NGO – Non-governmental Organization

NOL – No Objection Letter

O&M - Operation and Maintenance
ODA - Official Development Assistance
OHS - Occupational Health and Safety

OU – Operational Unit

PCERWASS - Provincial Centre for Rural Water Supply and Environmental Sanitation

PIA - Project Implementation Assistance
PPC - Provincial People's Committee
PPMU - Provincial Project Management Unit
PVWU - Provincial Vietnam Women's Union
REA - Rapid Environmental Assessment

SAR – Subproject Appraisal Report

SIEE – Summary Initial Environmental Examination

SSO – Subproject Site Office

VND - Vietnam Dong

VWU – Vietnam Women's Union

WSCC – Water and Sanitation Commune Committee

WTP – Water Treatment Plant

#### NOTE

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#### MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT

# NATIONAL CENTRE FOR RURAL WATER SUPPLY AND ENVIRONMENTAL SANITATION

## CENTRAL REGION RURAL WATER SUPPLY AND SANITATION SECTOR PROJECT

{ADB Loan No. 2609-VIE (SF)}

# Safeguards Monitoring Report JULY + DECEMBER 2016

WATER SUPPLY AND SANITATION OF DINH LONG AND DINH LIEN COMMUNES YEN DINH DISTRICT - THANH HOA PROVINCE

Consulting Services
For
Project Implementation Assistance

The Joint Venture of CDM International Inc., Nippon Koei Co. Ltd. and Vinaconsult JSC

# CENTRAL REGION RURAL WATER SUPPLY AND SANITATION SECTOR PROJECT

{ADB Loan No. 2609-VIE (SF)}

# Safeguards Monitoring Report JULY + DECEMBER 2016

# WATER SUPPLY AND SANITATION OF DINH LONG AND DINH LIEN COMMUNES YEN DINH DISTRICT - THANH HOA PROVINCE

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This report has been prepared based on a combination of information provided by others and by the PIA Consultant. The PIA Consultant has to the extent reasonably possible validated and verified the accuracy of the information in the reports and appendices. To the best of the PIA Consultant's believe and knowledge, the included information is reasonably accurate and correct.

The Joint Venture of CDM International Inc., Nippon Koei Co. Ltd. and Vinaconsult JSC

December 2016

### **Internal Quality Control**

| Project                 | Central Region Rural Water Supply and Sanitation Sector Project  |
|-------------------------|--|
| Project No.             | ADB Loan No. 2609-VIE (SF)   |
| Client                  | National Centre For Rural Water Supply And Environmental Sanitation  |
| Classification          | Safeguards Monitoring Report   |
| Name of report          | Safeguards Monitoring Report – Jul - Dec 2016 for Water Supply and Sanitation of Dinh Long and Dinh Lien communes, Yen Dinh district, Thanh Hoa province |
| File name               | VIE 2609 Yen Dinh-TH Safeguards Monitoring Report – Jul - Dec 2016 EN  |
| Persons in charge       |  |
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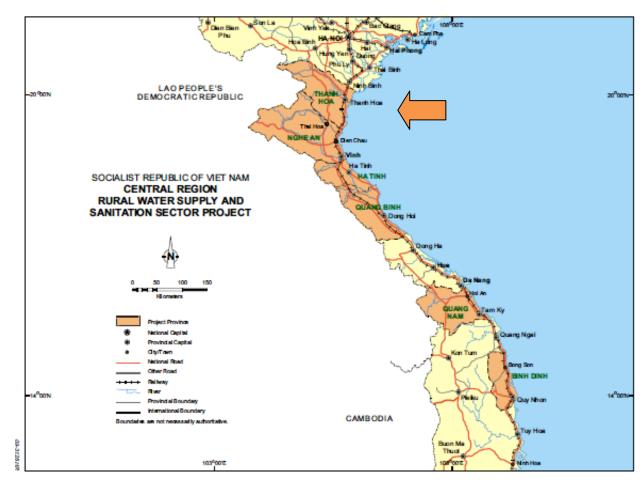


Figure 1 Location map of six Project Provinces of the central coastal region of Vietnam

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#### **Preface**

The Government of Vietnam and the Asian Development Bank have agreed to implement the Central Region Rural Water Supply and Sanitation Sector Project (Project) scheduled to be completion by 31 December 2016. The Project has a total budget of US\$ 50 million and is expected to provide access to clean water and hygienic sanitation for about 200,000 rural people in 33 communes in the six coastal central region provinces of Vietnam: Thanh Hoa, Nghe An, Ha Tinh, Quang Binh, Quang Nam and Binh Dinh.

The Loan Agreement was signed on 2<sup>nd</sup> February 2010. On 26<sup>th</sup> July 2011, the National Centre for Rural Water Supply and Environmental Sanitation (NCERWASS) of the Ministry of Agriculture and Rural Development (MARD) signed a Contract for Consulting Services for Project Implementation Assistance with CDM International Inc. in a joint venture with Nippon Koei Co. Ltd and national consultant Vinaconsult JSC (PIA Consultant). The PIA Consultant mobilized its team members on 25<sup>th</sup> August 2011.

This Safeguards Monitoring Report – July  $\div$  December 2016 covers main findings of the monitoring of safeguards issues of construction and commissioning activities carried out during the reporting period from July to the end of December 2016. This report is prepared based on review of quarterly records of the Provincial Project Management Unit (PPMU), desk review of D&B Contractors' detailed design, office working with PPMU and D&B Contractor and observations made by PIA Consultant during a supervision mission fielded on 19-22 September 2016 to the Subproject area.

#### List of Abbreviations

ADB Asian Development Bank
AHs Affected Households
APs Affected Persons

CARC Compensation Assistance Resettlement Committee

CSC Design-Build Supervision Consultant

CPC Commune People's Committee
CPMU Central Project Management Unit
CVWU Communal Vietnam Women's Union

D&B Design and Build

DARD Department of Agriculture and Rural Development, Provincial DONRE Department of Natural Resources and Environment, Provincial

DPC District People's Committee

EARF Environmental Assessment and Review Framework

EC Environmental Protection Commitment
EMP Environmental Management Plan
EMoP Environmental Monitoring Plan

EO Environmental Officer FS Feasibility Study

GoV Government of Vietnam

HHs Households

IEE Initial Environmental Examination

LARC Land Acquisition and Resettlement Completion Report

LARP Land Acquisition and Resettlement Report

lpcd Litters per capita per day

MARD Ministry of Agriculture and Rural Development
MLISA Ministry of Labour, Invalids and Social Affair

MOH Ministry of Health (BYT)

MONRE Ministry of Natural Resources and Environment (BTNMT)

MOU Memorandum of Understanding

NCERWASS National Centre for Rural Water Supply and Environmental Sanitation

NGO Non-governmental Organization

NOL No Objection Letter

O&M Operation and Maintenance
ODA Official Development Assistance
OHS Occupational Health and Safety

OU Operating Unit

PCERWASS Provincial Centre for Rural Water Supply and Environmental Sanitation

PIA Project Implementation Assistance
PIB Project Information Booklet
PPC Provincial People's Committee
PPE Personal Protective Equipment
PPMU Provincial Project Management Unit

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Project Central Region Rural Water Supply and Sanitation Sector Project

PVWU Provincial Vietnam Women's Union REA Rapid Environmental Assessment SAR Subproject Appraisal Report

SIEE Summary Initial Environmental Examination

SSO Subproject Site Office

Subproject Yen Dinh-Thanh Hoa Batch-2 Subproject

VND Vietnam Dong

VWU Vietnam Women's Union

WSCC Water and Sanitation Commune Committee

WTP Water Treatment Plant

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#### 1 INTRODUCTION AND PROJECT OVERVIEW

#### 1.1 Introduction

The water supply and sanitation Batch-2 Subproject located in Dinh Long and Dinh Lien Communes, Yen Dinh District, Thanh Hoa Province (Subproject) is one of the eight Batch-2 Subprojects of the Central Regions Rural Water Supply and Sanitation Sector Project (Project) to be implemented under the Loan Agreement No. 2609 - VIE (SF) between the Socialist Republic of Vietnam (GoV) and the Asian Development Bank (ADB).

The implementation of the Project will result in better health and living conditions of people living in rural areas in the Project provinces of Thanh Hoa, Nghe An, Ha Tinh, Quang Binh, Quang Nam and Binh Dinh. The Project will construct a piped water supply systems, and sanitation facilities and to promote safer hygiene practices by the commune's residents. The Project's components are the following: (i) Operational and sustainable piped water supply system; (ii) Improved household and public sanitation; (iii) Improvement of hygiene awareness; (iv) Strengthened sector planning and implementation capacity; and (v) Improved project management capacity.

In accordance with the Memorandum of Understanding (MOU) agreed between the ADB and the CPMU, the Yen Dinh- Thanh Hoa Batch-2 Subproject needs to adhere to preparation of semi-annual safeguards monitoring reports. This semi-annual report covers issues in the second half of 2016.

The Subproject is designed to improve rural water supply and sanitation facilities and to promote safer hygiene practices by the rural communes. Water supply includes construction of piped water supply network with treatment facilities.

The Subproject will also include grey water (sullage) disposal and small scale drainage improvements to properly discharge spill and grey water flows that will result from the water supply improvement works.

The Design-Build packages for Water Supply System and Sanitation of the Subproject was signed on December 29, 2014 and started on 08 January 2015. The construction of water supply system was completed on 15 June 2016. Drainage system and sanitation package signed on 29 December 2014 and commenced on 08 January 2015. The construction work of the drainage system and sanitation package has completed basically by the end of Quarter 2, 2016.

Table 1 Yen Dinh-Thanh Hoa Batch-2 Subproject Safeguards Overview

| Project Number and Title:                     | ADB Loan No. 2609-VIE (SF) Central Region Rural Water Supply and Sanitation Sector Project Subproject: Construction of Water Supply and Sanitation for Dinh Long and Dinh Lien Communes, Yen Dinh District, Thanh Hoa Province |             |  |
|---|--|-------------|--|
| Safeguards<br>Category                        | Environment Involuntary Resettlement Indigenous People   | B<br>B<br>C |  |
| Reporting period:                             | July 2016 - December 2016  |             |  |
| Last report date:                             | October 2016   |             |  |
| Key sub-project activities since last report: | <ul> <li>Construction Component</li> <li>The Subproject of Dinh Long and Dinh Lien Communes,<br/>Yen Dinh District, Thanh Hoa District includes two</li> </ul>   |             |  |

| Project Number and Title: | ADB Loan No. 2609-VIE (SF) Central Region Rural Water Supply and Sanitation Sector Project Subproject: Construction of Water Supply and Sanitation for Dinh Long and Dinh Lien Communes, Yen Dinh District, Thanh  |  |  |
|---------------------------|--|--|--|
|                           | Hoa Province   |  |  |
|                           | construction packages:   |  |  |
|                           | (i) Design-Build package of water supply system:<br>TH2/DB1/NCB and  |  |  |
|                           | (ii) Design-Build package of drainage system and sanitation: TH2/DB3/NCB.  |  |  |
|                           | • Progress of Work Main items of water supply component:   |  |  |
|                           | The construction was completed on 15 June 2016 as follows:   |  |  |
|                           | (i) Household connection: 1,900 households;  |  |  |
|                           | (ii) Pipeline: installation of 56 km pipeline was completed.   |  |  |
|                           | Main items of sanitation component:  |  |  |
|                           | (i) Drainage: completed; and   |  |  |
|                           | (ii) Household's latrine substructure: 66 latrine substructures were handed over to households (46 poor households and 20 near poor HHs with sole income provided by woman) and the remaining households no longer wish to have latrine substructures, so the progress for this work item is 100%. |  |  |
|                           | (iii) Latrine at school: completed construction of 01 latrine for high school in Dinh Long commune.  |  |  |
|                           | Changes of Surrounding Environment:     The construction of the Subproject was completed. No major negative impacts.   |  |  |
| Report prepared by:       | PIA consultant   |  |  |

Table 2 Basic data of Subproject.

| No | Contents                       | Data                                       |
|----|--------------------------------|--|
| 1  | Water Supply System            |  |
|    | Designed Population            | 10,864 people                              |
|    | Capacity                       | 10,864 people<br>1,600 m <sup>3</sup> /day |
|    | Water Source                   | Ground Water (from two boreholes)          |
|    | Length of Distribution Network | 57.6 km                                    |

| No | Contents                           | Data       |
|----|------------------------------------|------------|
|    | Number of Service Connections      | 1,991 sets |
| 2  | Sanitation Facilities              |            |
|    | • Public Latrine                   | 1 unit     |
|    | • Household' Latrine Substructures | 66 units   |
|    | Communal Drainage Canal            | 447 m      |

#### 2 ENVIRONMENTAL PERFORMANCE MONITORING

#### 2.1 EMP/EMoP Implementation and Compliance

#### EMP/EMoP Implementation by D&B Contractor

During the construction phase, the implementation of the EMP is the responsibility of the D&B Contractor. The D&B Contractor's responsibility includes the appropriate and timely application of the mitigating measures stipulated in the approved EMP and EMoP. The application and implementation of the mitigation measures are to provide the safeguards that will control, reduce if not eliminate unwanted effects during the Subproject implementation.

Regarding raw water quality, during the pre-construction phase, the D&B Contractor conducted raw water quality analysis as part of the Detailed Design phase. The results verified that no changes or adjustment to the water treatment process is required. The proposed water treatment technology has been designed to remove excessive contents of total Fe and ammonium in the raw water. The iron will be removed by using spray aeration technology. The excessive content of ammonium will also be removed in the treatment process consisting of spray aeration, upflow sedimentation, rapid sand filter and chlorination. Another analysis was carried out at the end of construction when the WTP is already for operation, on 20 September 2016. Although the elevated level of total coliform can be removed through chloride dosing process, further monitoring is required.

#### **EMP/EMoP Implementation by Operating Unit**

During the O&M phase, the Operating Unit (OU) will be responsible for adherence to mitigation measures and activities stipulated in the EMP and EMoP plans. They will be primarily focused on safe operation of the WTP and distribution of treated water including: (i) regular testing of raw water quality and treated water quality; (ii) regular monitoring of the quality of wastewater and sludge; and (iii) applying the health and safety regulations specified in the EMP. The operators will also need to carry out O&M procedures in accordance with the O&M manual.

#### 2.2 Environmental Monitoring by CSC/PPMU

During Subproject preparation phase, the PPMU/EO was responsible for ensuring that all EMP and EMoP requirements were included in the bidding documents and the contracts are followed by the contractors. The templates for D&B construction package and CSC package in the bidding documents and the contract documents prepared by PIA Consultant have already included EMP and EMoP compliance requirements and should be used for all of the Subprojects.

During construction phase, the inspection, evaluation and recording of compliance to the EMP and EMoP as implemented by the contractors is among the tasks undertaken by the Construction Supervision Consultant (CSC) in the field with the assistance of the PIA Consultant. The CSC carries out weekly and monthly inspections and maintains records of the D&B Contractor's mitigating measures and activities prescribed in the approved EMP and EMoP of the Subproject. The responsibilities of CSC cover the period to the end of the commissioning stage including

certifying of construction materials, equipment and items and final checking and acceptance for handing over for operation.

The inspection and evaluation records have been consolidated by the CSC in their Quarterly Environmental Monitoring Report. The CSC's collation and synthesis of the D&B Contractors' compliance to the requirements of the EMP and EMoP have been summarized in matrix attached with the report to be submitted to CPMU and PIA Consultant within 15 days after the end of each quarter.

During O&M phase, PPMU's Environmental Officer (EO) will be responsible for monitoring the OU compliance to the EMP and EMoP, as well as consolidating all the records of the plant operator on laboratory analysis and health and safety issues, and quarterly reporting to the CPMU and PIA Consultant within 15 days after the end of each quarter.

#### 2.3 Monitoring Activities Carried Out by PIA Consultant

In the second half of 2016, the PIA Consultant has provided support to CPMU and PPMUs in terms of environmental documentation preparation, field visits for supervision and assistance, information verification, and detailed design requirements to ensure all the environment related provisions/requirements are followed.

In preparation for environmental assessment of batch-2 subprojects, PIA Consultant has prepared IEE reports based on (i) the environmental documents prepared by FS consultants and PPMUs and (ii) field visits carried out by PIA Consultant's Environmental Specialists to investigate and validate baseline environmental conditions of the proposed Batch-2 subprojects. The IEE reports of 08 batch-2 Subprojects have been issued Conditional Approval from the ADB. The EMPs approved by ADB have been also incorporated in the FS reports approved by the PPCs and in the Environmental Protection Commitments registered and accepted by the Subprojects' DPCs.

The templates of the bidding and contract documents with incorporated-EMP/EMoP plans were prepared by the PIA Consultant specialists and delivered to the PPMU. Subsequent monitoring of the PIA Consultant during bidding and contract process indicated that the EMP and EMoP plans and budget requirements have been included in the Subproject's bidding and bid documents and budgets, as well as in the Subproject's contract documents.

During the construction, the PIA Consultant has provided support and advices to the CSC and D&B Contractors in implementation of EMP/EMoP and assisted CPMU in compiling monitoring reports for submission to ADB.

During the second half of 2016, the PIA Consultant conducted one field trip to the Subproject on 19 – 22 September 2016. The on-site visit was made to check the progress and quality of the construction works and compliance with contract documents including safeguards issues. The meeting with PPMU, CSC and D-B Contractor staff was held afterward to give them recommendation/advices to the Subproject implementation and to have discussion or find resolution to the rising issues. Specific site visits to monitor the environmental compliance of the Subproject focused on the following:

- (i) Review completion of construction works;
- (ii) Inspect construction quality of the works;
- (iii) Conduct assessment of operational and functionality of the water supply system.

The collation of the PPMU's quarterly monitoring reports and PIA Consultant's review on the assessment of the safeguard compliance to the requirements of the EMP and EMoP is summarized in environmental performance matrix of the Subproject attached with this report as an *Annex 1*.

#### 2.4 Key Issues for Further Actions

Table 3 Environmental Issues for Further Action

|   |   | Timing  |  |
|---|---|---|--|
| Old Issues from Previous  | Reports: none   |   |  |
| New Issues from This Re   | port  |   |  |
| Raw water quality analysis taken in September 2016, except level of total coliform (higher than the standard – 23 MPN/100ml vs 3 MPN/100ml), meets the limiting value set stipulated in QCVN 09-MT:2015/BTNMT National technical regulation on groundwater quality. However, the sample analysis applied the incorrect regulation – QCVN 01:2009/BYT on drinking water quality. | remind the Contract and future OU of applying the correct regulation - QCVN 09-MT:2015/BTNMT on groundwater quality and | The PPMU is recommended to remind the Contract and future OU of applying the correct regulation - QCVN 09-MT:2015/BTNMT on groundwater quality and continuing monitoring raw water quality closely. |  |

#### 3 INVOLUNTARY RESETTLEMENT PERFORMANCE MONITORING

#### 3.1 Compliance with RP Requirements

The draft LARP of Yen Dinh Subproject, Thanh Hoa Province has been prepared and submitted to ADB as Volume 5 of Subproject Appraisal Report and has been approved on December 2014. Up to reporting period, the detailed engineering design are under development.

During preparation the draft LARP, a public consultation meeting was held by PPMU on 06 June 2014 with affected households and concerned stakeholders.

The detailed engineering design was approved on 14 July 2015, PPMU has conducted a public consultation meeting on 15 July 2015 with affected households. The detailed measurement survey (DMS) and socio-economic survey (SES) were carried out from 15 to 22 July 2015.

The compensation payment was made to AHs on 28 September 2015

Table 4 Summary of Compliance with RP Requirements

| RP Requirements  | Compliance<br>status<br>Yes/No/Pa<br>rtial | Comment or Reasons for Compliance,<br>Partial Compliance/Non-Compliance  | Issues for<br>Further<br>Action <sup>1</sup> |
|--|--|--|--|
| Establishment of personnel in PMU/PIU                  | Yes  | Compensation Assistance Resettlement<br>Committee for Yen Dinh Sub-project has been<br>established based on Decision No.1408/ QD-<br>UBND dated 03 October 2014  |  |
|  |  | + During preparation the draft LARP, a public consultation meeting was held by PPMU on 06 June 2014 with affected households and concerned stakeholders.   |  |
| Public consultation<br>and socialization<br>process    | Yes  | + The detailed engineering design was approved on 14 July 2015, PPMU has conducted public consultation meetings on 12 and 15 July 2015 with affected households. The detailed measurement survey (DMS) and socioeconomic survey (SES) were carried out from 15 to 22 July 2015.  |  |
| Land area to be acquired is identified and finalized   | Yes  | + Permanently acquired land area: 4,150.9 m <sup>2</sup> out of which 4,111.9 m <sup>2</sup> of 12 AHs with 73 APs and 39 m <sup>2</sup> of public land + Temporarily acquired land area: 36,931 m <sup>2</sup> , out of which 172 m <sup>2</sup> of 04 AHs with 21 APs and 36,759 m <sup>2</sup> of public land   |  |
| Land acquisition completed                             | Yes  | All of acquired land was handed over on 2<br>October and for start construction on 6 October<br>2015   |  |
| Establishment of<br>Resettlement<br>Site(s)            | Not applicable                             | No household has to relocate   |  |
| Compensation payments for affected assets is completed | Yes  | The paid compensation for land and assets on land of 14 AHs (85APs) was 203,202,650 VND; out of which + Land: 164,476,000 VND +Rice and crops: 35,781,650 VND +Trees: 920,000 VND +Structures: 2,025,000 VND  The paid allowances and assistances to 14 AHs (85 APs) 394,991,100 VND (including assistance for acquired land area, transition subsistence allowance for severely AHs |  |

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 $<sup>^{\</sup>rm 1}$  To be elaborated further in Table 5 (Issues for Further Action)

| RP Requirements   | Compliance<br>status<br>Yes/No/Pa<br>rtial | Comment or Reasons for Compliance,<br>Partial Compliance/Non-Compliance  | Issues for<br>Further<br>Action <sup>1</sup> |
|---|--|--|--|
|   |  | and support for life and production stabilization and net income from temporarily acquired land):  The paid support for public land: <b>756,000 VND</b>  |  |
| Transport<br>assistance for<br>relocating affected<br>households  | Not<br>triggered                           | No relocation is required  |  |
| Additional<br>assistance to<br>vulnerable affected<br>household   | Yes  | There was 1 poor household who received 1,200,000 VND.   |  |
| Income Restoration<br>Program   | Yes  | Training course was offered as IRP to 19 APs who less than 30 years old with total budget 57,000,000 VND. However, all of APs want to seek by themselves the suitable vocational training course with their capable, therefore PPMU paid to them by cash with 3,000,000 VND/each |  |
| Temporary impacts<br>have been<br>addressed (affected<br>properties restored<br>to at least pre-<br>project conditions) | Yes  | The pipeline was installed in rest time between 2 crops to minimize the effect on crops of households  |  |
| Capacity building activities  | Yes  | Member of PPMU and District CARC of Yen Dinh attended to the Training course on "ADB's social safeguard policies on environment and resettlement" from 2 April to 4 April, 2014 in Quang Nam province  |  |
| Completion of land acquisition and resettlement   | Partial                                    | Land Acquisition and Resettlement Completion (LARC) Report is under preparation  |  |

#### 3.2 Resettlement Monitoring by PPMU

The water supply system has been constructed since October 6, 2015 PPMU has cooperated with Constructor Supervision Consultant (CSC) to supervise the land acquisition during construction to ensure that neighbour land area has not been affected.

#### 3.3 Monitoring Activities carried out by PIA Consultant

The PIA Consultant conducted one field trip to the Subproject on September  $19^{th} - 22^{nd}$ , 2016. The on-site visits were made to check construction sites. All construction has been carried out within the land boundaries and no claims have been raised by people in the subproject area.

#### 3.4 Key Issues for Further Action

Table 5 LARP Issues for Further Action.

| Issue   | Required Action                       | Responsibility and<br>Timing   | Resolution |
|---|---------------------------------------|--|------------|
| Old Issues from Previous                                  | Reports                               |  |            |
| None  |                                       |  |            |
| New Issues from This Rep                                  | ort                                   |  |            |
| Land acquisition and<br>Resettlement<br>Completion Report | LARC report is under the preparation. | - PPMU prepare - PIA review and submit to CPMU CPMU review and submit to ADB |            |

#### 4 OCCUPATIONAL HEALTH AND SAFETY (OHS) PERFORMANCE MONITORING

The Occupational, Health and Safety (OHS) Performance has been monitored for the public and the workers.

#### 4.1 OHS for Workers

Before construction, the construction site was surveyed and cleared of bombs and unexploded ordnance by Sapper Division- 4<sup>th</sup> Military Region.

The following issue related to OHS for workers has been identified:

Table 6 OHS Issues for Further Actions

| Issue                                  | Required Action | Responsibility and<br>Timing | Resolution |  |  |
|--|-----------------|------------------------------|------------|--|--|
| Old Issues from Previous Reports: None |                 |                              |            |  |  |
| New Issues from This Report: None      |                 |                              |            |  |  |

#### 4.2 Public Safety

No public safety issues have been identified or reported.

#### 5 INFORMATION DISCLOSURE AND SOCIALIZATION INCLUDING CAPABILITY BUILDING

#### 5.1 Public Consultations and Information Disclosure

#### 5.1.1 Environmental Public Consultation and Information Disclosure

There are two public consultations on environmental issues to be implemented for each of the Subproject. The 1<sup>st</sup> public consultation was held during FS preparation. The 2<sup>nd</sup> public consultation was held for Dinh Long and Dinh Lien communes on August 22, 2015 before construction commencement in order to inform the local people of at least: (i) commencement time of construction, (ii) duration of construction, (iii) EMP and EMoP requirements and responsibilities, (iv) introduction of Subproject site office, contact details and telephone numbers of contractors,

9

CSCs and PPMU staff. The approved IEE report and SIEE report were disclosed on the information boards of the related CPCs (*see annex 3*) and the soft copies of the full IEE reports are stored in computers by CPC staff and shall be disclosed to any third party if requested.

Updates of the Subproject information will also be disseminated to all the beneficiaries through the loudspeaker system of the Subproject communes as well as over activities of the Water and Sanitation Commune Committee (WSCC) members and the Health and Sanitation Promoters (HSPs).

#### 5.1.2 Resettlement Public Consultation and Information Disclosure

During preparation the draft LARP, a public consultation meeting was held by PPMU on 06 June 2014 with affected households and concerned stakeholders.

Another Public Consultation Meeting was conducted on 15 July 2015 for the Updated LARP, in the meeting affected households were informed about the project's resettlement framework and the replacement unit rates for compensation. The cut-off date was disclosed to affected households on 22 July 2015.

#### 5.2 Training - Capacity Building

#### 5.2.1 Environment

To improve environmental monitoring capacity of commune environmental officers, WSCCs and HSPs for Batch 2 subprojects, PIA consultant organized training courses on environmental monitoring during project implementation for WSCCs and HSPs in Thanh Hoa city, Thanh Hoa province on 26<sup>th</sup> & 27<sup>th</sup> June 2015. This capacity building activity equipped 34 participants of Yen Dinh-Thanh Hoa and Thieu Do-Thanh Hoa Subprojects with solid knowledge about ADB's and GoV's environmental policies and environmental monitoring.

The PPMU staff and CSCs of Thanh Hoa, Nghe An, Quang Nam and Binh Dinh Batch-2 Subprojects attended 2<sup>nd</sup> training course on "Contract management and Construction quality supervision" organized by PIA Consultant on September 30 and October 1, 2015. There were 22 participants in the course (2 female) – including 3 participants of this Subproject. The training course aimed to improve the trainees' capacity on management of contracts and construction quality, environmental management and monitoring, and preparation of progress reports etc. and also to enable the participants to transfer skills and knowledge to other offices/personnel after the course.

Apart from the above organized training courses, PIA Consultant has delivered on-the-job training via phones, emails and meetings when necessary as well as clarified any queries from CPMU and PPMUs.

#### 5.2.2 Resettlement

The resettlement has been completed, no training is required.

#### 5.3 Press/Media Releases

In order to extent the publicity for the Project information, information of implementation status and lessons learnt from the ADB funded CRRWSSSP Project has been published and updated on the website of the National Centre for Rural Water Supply and Environmental Sanitation (NCERWASS) (<a href="http://ncerwass.mard.gov.vn/">http://ncerwass.mard.gov.vn/</a>) since January 2014. These publications aim to share experiences of the Project activities and the Project's progress among the network of Rural Water Supply and Sanitation Project (RWSSP), partners and interested stakeholders.

#### 6 GRIEVANCE REDRESS MECHANISM

A Subproject site office has been established, and the Subproject's information including grievance redress mechanisms on environment and resettlement have been disclosed to the public on the notice boards of the CPCs of the Subproject.

#### **Environment**

No written grievance has been received and no oral complaint has been raised.

#### Resettlement

No written grievance has been received and no oral complaints have been raised.

#### 7 CONCLUSIONS AND RECOMMENDATIONS

#### **Environment**

The results of the implementation of the EMP/EMoP have indicated that most of the requirements of the EMP and EMoP have been followed by the contractors and the PPMU.

The issues arising during this reporting period are (i) the limiting value set in the raw water quality analysis was adapted from unsuitable regulation – QCVN 01:2009/BYT on drinking water quality; and (ii) level of total coliform is higher than standard. The PPMU/OU is recommended to apply the correct regulation – QCVN 09-MT:2015/BTNMT on groundwater quality for the raw water quality analysis and continue to monitoring raw water quality closely.

The overall implementation/compliance of the Thanh Hoa Batch-2 Subproject to the EMP/EMOP is rated as partially satisfactory in this reporting period. In the forthcoming time, the PPMU shall enforce that the OU will do the O&M of the Subproject facilities in compliance with the approved EMP/EMOP provisions, and to timely conduct raw water and treated water sampling and quality analysis.

#### Resettlement

Implementation of the resettlement activities of Yen Dinh sub-project is appraised as satisfactory and within the project's resettlement framework.

#### (i) Summary of Subproject compliance with EMP requirements

| EMP Requirements<br>(Mitigation Measures)  | Compliance Status<br>(Yes, No, Partial) | Comment or Reasons for Non-Compliance  | Issues for<br>Further Action |
|--|---|--|------------------------------|
| (1)  | (2)                                     | (3)  | (4)                          |
| OPERATION & MAINTENANCE PHASE  |   |  |                              |
| Environmental and Occupational Health and Safety   |   |  |                              |
| Equipped workers with gas masks and protective clothing and gears such as boots, helmets during working.   | Yes                                     | Operational unit has provided sufficient work wear for workers such as: work safety gear, helmets, boots, gloves, protection mask, etc.  |                              |
| WTP operator will strictly comply with instructions for use<br>and storage of chemicals. If leakage or spillage events happen,<br>the WTP operator will inform to relevant agency to deal with | Yes                                     | Along with ensuring safety, the construction unit has instructed and trained the workers how to operate safety devices and fire protection equipment.  |                              |
| immediately.   |   | Safety equipment in regards of chemical use and fire protection is sufficiently supplied including: ventilation fan for chemical mixing room, chemical shelf, fire extinguisher, back-up water for fire extinguishing, signs, instructions, etc. The WTP uses sodium hypochloride solution produced from salt. |                              |
|  |   | Along the pipelines, fire hydrants have been installed and are always ready for using at any time.   |                              |

#### (ii) Summary of Subproject compliance with EMoP requirements

| EMoP Requirements<br>(Mitigation Measures)   | Compliance Status<br>(Yes, No, Partial) | Comment or Reasons for Non-Compliance  | Issues for Further Action  |
|--|---|--|--|
| (1)  | (2)                                     | (3)  | (4)  |
| OPERATION & MAINTENANCE PHASE  |   |  |  |
| Raw (surface) water quality  Conduct raw water sample (taken from two raw water wells) and analysis annually | Partial                                 | Raw water quality analysis was conducted in this reporting period and meets the standard. However, the limiting value set applied in the raw water quality analysis belongs to QCVN 01:2009/BYT National technical regulation on drinking water quality. The correct regulation applied here must be QCVN 09-MT:2015/BTNMT National technical regulation on underground water quality. In addition, the level of total coliform is higher than standard. | The PPMU is recommended to remind the Contract and future OU of applying the correct regulation - QCVN 09-MT:2015/BTNMT on groundwater quality and of continuing monitoring raw water quality closely. |
| Treated water quality  Conduct treated water sample (taken from treated water basin) and analysis quarterly  | Yes.                                    | Treated water quality analysis was conducted in this reporting period and meets the standard.  |  |

| Central Regions<br>Consulting Ser | Rural Water Supply and Sanitation Sector Project vices for Project Implementation Assistance | Safeguards Monitoring Report<br>Jul - Dec 2016<br>Yen Dinh District, Thanh Hoa Province<br>14 |
|-----------------------------------|--|---|
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| Annex 2                           | Monitoring data: Raw water and tr  | reated water quality analysis   |
|                                   |  |   |
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#### **Original:**

#### Thanh Hoa Batch 2 Subproject: Raw water quality analysis

CHI CỤC TIÊU CHUẨN ĐO LƯỜNG CHẤT LƯỢNG THANH HÓA

Thanh Hoa Branch of Standardisation - Metrology and Quality

TRUNG TÂM DỊCH VỤ KỸ THUẬT TIÊU CHUẨN ĐO LƯỜNG CHẤT LƯỢNG

Thanh Hoa Technical service Centrer for Standards and Quality

Địa chỉ: 15 đường Hạc Thành Thành phố Thanh Hoá Add: 15 Hac Thanh Road Thanh hoa City Tel: (037) 3712264 - 3720704 Fax: (037) 3712264 E-mail: tcdlcl.th@hn.vnn.vn

## PHIẾU KẾT QUẢ THỬ NGHIỆM

THE TEST RESULTS Số (N°): 1397- TNH(S)/2016

Tên mẫu thử:

NƯỚC GIẾNG KHOAN – G17

(Object) Ký hiệu:

**MMT** 

Số lượng: 01 mẫu.

(Notation)

(Number of)

Khách hàng: (Customer name)

Công ty CP Đầu tư xây dựng và thương mại Minh Hương

Dự án: (Project) Dự án cấp nước sạch và vệ sinh môi trường nông thôn liên xã Định Liên - Định Long

Ngày nhận mẫu:

(date of receipt)

20/9/2016

| TT Oder (1) | Tên chỉ tiêu  Hems (2)                   | Phương pháp thử<br>Test method (3) | Đơn vị tính<br>Unit (4) | QCVN<br>01:2009/BYT | Kết quả th<br>Results (5) |
|-------------|--|------------------------------------|-------------------------|---------------------|---------------------------|
| 1           | Màu sắc                                  | TCVN 6185:2008                     | TCU                     |                     | N1                        |
| 2           | Mùi vị                                   | Cảm quan                           | -                       | 15<br>Không có      | 18,0<br>Không có          |
| 3           | Độ đục                                   | TCVN 6184:1996                     | NITTI                   | mùi, vị lạ          | mùi, vị tan               |
| 4           | рН                                       | TCVN 6492:2011                     | NTU                     | 2                   | 29,0                      |
| 5           | Độ cứng (CaCO <sub>3</sub> )             | TCVN 6224:1996                     | - /1                    | 6,5-8,5             | 6,4                       |
| 6           | Tổng chất rắn hòa<br>tan (TDS)           | TCVN 6625:2000                     | mg/l<br>mg/l            | 1000                | 110,0                     |
| 7           | Hàm lượng N/NH <sub>4</sub> <sup>+</sup> | TCVN 5988:1995                     | mg/l                    | 3                   |                           |
| 8           | Hàm lượng Cl                             | TCVN 6194:1996                     | mg/l                    | 300                 | 3,6                       |
| 9           | Hàm lượng F                              | Palintes                           | mg/l                    | 1,5                 | 42,5                      |
| 10          | Hàm lượng Cu                             | TCVN 6193:1996                     | mg/l                    | 1,3                 | 0,0                       |
| 11          | Hàm lượng CN <sup>-</sup>                | Palintes                           | mg/l                    | 0,07                | 0,01                      |
| 12          | Hàm lượng Fe tổng                        | TCVN 6177:1996                     | mg/l                    | 0,07                | 0,0                       |
| 13          | Hàm lượng Mn                             | Palintes                           | mg/l                    | 0,3                 | 2,05                      |
| 14          | Hàm lượng N/NO <sub>2</sub>              | TCVN 6178:1996                     | mg/l                    | 3                   | 0,01                      |
| 15          | Hàm lượng N/NO <sub>3</sub>              | TCVN 6180:1996                     | mg/l                    | 50                  | 0,001                     |
| 16          | Hàm lượng SO <sub>4</sub> <sup>2-</sup>  | TCVN 6200:1996                     | mg/l                    | 250                 | 1,68                      |

| 18                      | Chỉ số Pecmanganat Hàm lượng As  | TCVN 6186:1996                               | mg/l  | 2     | 8,07     |
|-------------------------|--|--|---|-------|----------|
| 19                      | Hàm lượng Al   | TCVN 6626:2000                               | mg/l  | 0,01  | 0,0067   |
|                         |  | TCVN 6657:2000                               | mg/l  | 0,003 | KPHE     |
| 20                      | Hàm lượng Pb   | TCVN 6193:1996                               | mg/l  | 0,01  | KPHE     |
| 21                      | Hàm lượng Zn   | TCVN 6193:1996                               | mg/l  | 3     | 0,72     |
| 22                      | Coliform   | TCVN 6187-2:1996                             |   | 0     | 23       |
| 23                      | E.coli   | TCVN 6187-2:1996                             | MPN/100ml   | 0     | 0        |
|                         |  |  |   |       |          |
|                         |  |  |   |       |          |
| - Phiếu kế<br>- Kết quá | THỬ NGHIỆM VI  Tester  Nguyễn Thị Hảo  t quả thử nghiệm không có giá trị kl tchi có giá trị đổi với mẫu thử. chi tiểu có đầu (*) trong phạm vi côn | ÊN ni sao chép từng phần nếu không được sự c | thanh Hóa, ngày  GIÁM  RUNG TÂM  RUNG TÂM  CHẤT LƯƠNG TÂM  THÀNH HOA  Ngư yến TM  Tông ý của Vitas 142. | ĐÓC   | năm 2016 |

# Translation: Thanh Hoa Batch 2 Subproject: Raw water quality analysis result

| No. | Parameter                                       | Unit      | Result (20 <sup>th</sup><br>September<br>2016) | Limiting<br>value set in<br>QCVN 09-<br>MT:2015/<br>BTNMT <sup>2</sup> |
|-----|---|-----------|--|--|
| 1   | Color   | TCU       | 18.0   |  |
| 2   | Odor  | -         | No odor  |  |
| 3   | Turbidity                                       | NTU       | 29.0   |  |
| 4   | pН  | -         | 6.4  | 5.5-8.5  |
| 5   | Hardness (CaCO <sub>3</sub> )                   | mg/l      | 110.0  | 500  |
| 6   | Total dissolved solid (TDS)                     | mg/l      | 860.0  | 1500   |
| 7   | Concentration of N/NH <sub>4</sub> <sup>+</sup> | mg/l      | 3.6  |  |
| 8   | Chloride  | mg/l      | 42.5   | 250  |
| 9   | Fluoride  | mg/l      | 0.0  | 1.0  |
| 10  | Copper  | mg/l      | 0.01   | 1.0  |
| 11  | Cyanide   | mg/l      | 0.0  | 0.01   |
| 12  | Fe total  | mg/l      | 2.05   | 5  |
| 13  | Manganese                                       | mg/l      | 0.01   | 0.5  |
| 14  | Concentration of N/NO <sub>2</sub>              | mg/l      | 0.001  | 1  |
| 15  | Concentration of N/NO <sub>3</sub>              | mg/l      | 1.68   | 15   |
| 16  | Concentration of SO <sub>4</sub> <sup>2-</sup>  | mg/l      | 22.0   | 400  |
| 17  | Permanganate index                              | mg/l      | 8.07   | 4  |
| 18  | Arsenic   | mg/l      | 0.0067   | 0.05   |
| 19  | Aluminum  | mg/l      | BDL  |  |
| 20  | Lead  | mg/l      | BDL  | 0.01   |
| 21  | Zinc  | mg/l      | 0.72   | 3.0  |
| 22  | Total coliform                                  | MPN/100ml | 23   | 3  |
| 23  | E.coli  | MPN/100ml | 0  | BDL  |

#### Note:

- QCVN 09-MT:2015/BTNMT: National technical regulation on underground water quality

- BDL: Below Detected Level.

<sup>&</sup>lt;sup>2</sup> The limiting value set applied in the raw water quality analysis belongs to QCVN 01:2009/BYT National technical regulation on drinking water quality. However, the correct regulation applied here must be QCVN 09-MT:2015/BTNMT National technical regulation on underground water quality. Therefore, the limiting value set in the above table is adapted from the QCVN 09-MT:2015/BTNMT.

#### **Original:**

#### Thanh Hoa Batch 2 Subproject: Treated Water Quality Analysis

#### CHI CỤC TIÊU CHUẨN ĐO LƯỜNG CHẤT LƯỢNG THANH HÓA

Thanh Hoa Branch of Standardisation - Metrology and Quality

#### TRUNG TÂM DỊCH VỤ KỸ THUẬT TIÊU CHUẨN ĐO LƯỜNG CHẤT LƯỢNG

Thanh Hoa Technical service Centrer for Standards and Quality

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### PHIẾU KẾT QUẢ THỬ NGHIỆM

THE TEST RESULTS Số (Nº): 1496 - TNH(S)/2016

Tên mẫu thử: (Object)

NƯỚC SẠCH

Ký hiệu:

MMT

Số lượng: 01 mẫu.

(Notation)

MMT

(Number of)

Khách hàng: (Customer name)

Công ty CP đầu tư xây dựng và thương mại Minh Hương

Co so: (Establishments)

Số 109, phố Cao Sơn, phường An Hoạch, thành phố Thanh Hóa

Ngày nhận mẫu:

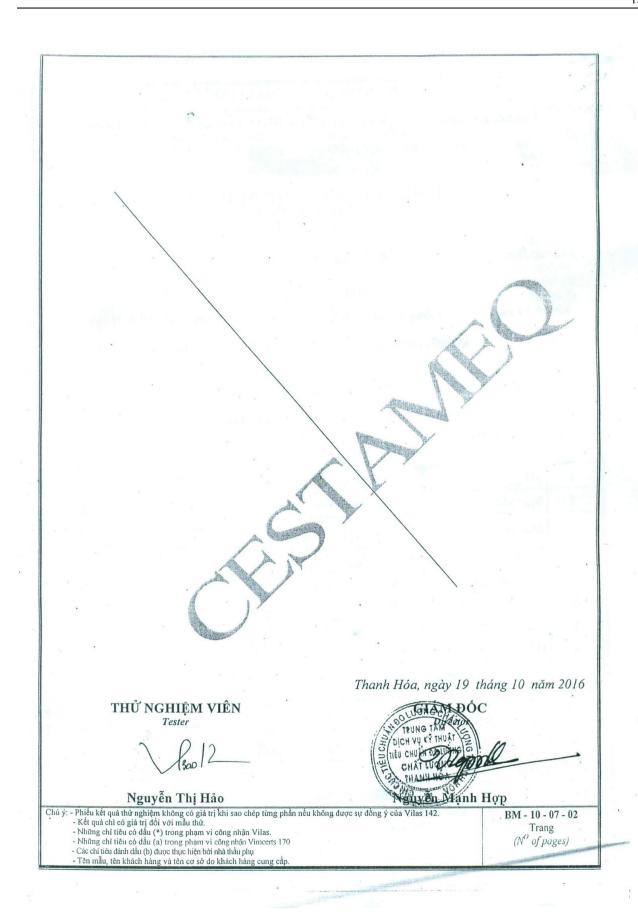
(date of receipt)

12/10/2016

| TT Oder (1) | Tên chỉ tiêu<br>Items (2)    | Phương pháp thử  Test method (3) | Đơn vị tính<br>Unit (4) | QCVN<br>01:2009/BYT    | Kết quả thử Results (5) |
|-------------|------------------------------|----------------------------------|-------------------------|------------------------|-------------------------|
|             |                              |                                  |                         |                        | N1                      |
| 1           | pH                           | TCVN 6492-11                     |                         | 6,5-8,5                | 7,22                    |
| 2           | Màu sắc                      | TCVN 6185:1996                   | TCU                     | 15                     | 3                       |
| 3           | Mùi vị                       | Cẩm quan                         | -                       | Không có mùi,<br>vị lạ | Không có<br>mùi, vị lạ  |
| 4           | Độ đục                       | TCVN 6184:1996                   | NTU                     | 2                      | 0,8                     |
| 5           | Hàm lượng Fe                 | TCVN 6177:1996                   | mg/l                    | 0,3                    | 0,25                    |
| 6 .         | Độ cúng (CaCO <sub>3</sub> ) | TCVN 2672:1978                   | mig/l                   | 300                    | 155,0                   |
| 7           | Hàm lượng Clo dư             | Palintes                         | mg/l                    | 0,3-0,5                | 0,35                    |
| 8           | Hàm lượng N/NH <sub>4</sub>  | TCVN 5988:1995                   | mg/l                    | 3                      | 0,08                    |
| 9           | Chỉ số Pecmanganat           | TCVN 6491:1999                   | mgO <sub>2</sub> /l     | 2                      | 1,2                     |
| 10          | Hàm lượng Cl                 | TCVN 6194:1996                   | mg/l                    | 250                    | 125,0                   |
| 11          | Hàm lượng F                  | Palintes                         | mg/l                    | 1,5                    | 0,25                    |
| 12          | Hàm lượng As                 | TCVN 6626:2000                   | mg/l                    | 0,01                   | KPHĐ                    |
| 13          | E.coli                       | TCVN 6187-2:1996                 | MPN/100ml               | 0                      | 0"                      |
| 14          | Coliform                     | TCVN 6187-2:1996                 | MPN/100ml               | 0                      | 0                       |

Ghi chú: - N1: Bể chứa nước sạch

Kết quả chỉ có giá trị trên mẫu thử do khách hàng gửi đến.



#### **Translation:**

### Thanh Hoa Batch 2 Subproject: Treated Water Quality Analysis

| No. | Parameter                                    | Unit          | QCVN 01:2009 BYT | Result (on 12 October 2016) |
|-----|--|---------------|------------------|-----------------------------|
| 1   | Color  | TCU           | 15               | 3                           |
| 2   | Odor   | -             | No odor          | No odor                     |
| 3   | Turbidity                                    | NTU           | 2                | 0.8                         |
| 4   | Chlorine residual                            | mg/l          | 0.3-0.5          | 0.35                        |
| 5   | pH   | -             | 6.5-8.5          | 7.22                        |
| 6   | N/NH <sub>4</sub> <sup>+</sup>               | mg/l          | 3                | 0.08                        |
| 7   | Fe total                                     | mg/l          | 0.3              | 0.25                        |
| 8   | Permanganate index                           | mg/l          | 2                | 1.2                         |
| 9   | Hardness (calculating by CaCO <sub>3</sub> ) | mg/l          | 300              | 155                         |
| 10  | Chloride                                     | mg/l          | 250              | 125                         |
| 11  | Arsenic total                                | mg/l          | 0.01             | BDL                         |
| 12  | Fluoride                                     | mg/l          | 1.5              | 0.25                        |
| 13  | Total coliform                               | MNP/10<br>0ml | 0                | 0                           |
| 14  | E.coli                                       | MNP/10<br>0ml | 0                | 0                           |

#### Notes:

QCVN 01:2009/BYT: National technical regulation on drinking water quality.

Safeguards Monitoring Report Jul - Dec 2016 Yen Dinh District, Thanh Hoa Province

**Annex 3** Photographs



Figure 3 SIEE disclosure at Dinh Long CPC (May 2015)



Figure 4 SIEE disclosure at Dinh Lien CPC (May 2015)

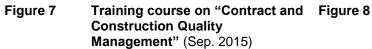


Figure 5 Environmental training for WSCCs and HSPs in Thanh Hoa city (June 2015, picture 01)



Figure 6 **2<sup>nd</sup> Public consultation meeting** (Aug. 2015)







Construction of sludge settling pond (Mar 2016)



Figure 8 Construction of clean water and baskwash pumping station (Mar. 2016)



Figure 9 Construction of drainage ditch (Mar. 2016)





Figure 10 Construction of school toilet for secondary school in Dinh Long Commune (Mar. 2016)

Figure 11 Latrine substructure (Mar. 2016)





Figure 12 Construction of chemical house (May 2016)

Figure 13 Construction of administration house (May 2016)



Figure 14 Affected Household checked compensation amount

Figure 105 Affected households satisfied with compensation



Figure 11 AHs are waiting for their turn

| Central Region Re<br>Consulting Serv | ural Water Supply and Sanitation Sector Project<br>vices for Project Implementation Assistance | Safeguards Monitoring Repor<br>Jul - Dec 2016<br>Yen Dinh District, Thanh Hoa Province<br>25 |
|--------------------------------------|--|--|
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| Annex 4                              | IEE Addendum and Endorsement Le  | tter   |
|                                      |  |  |
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|                                      |  |  |

#### **ADDENDUM** to

## IEE of The Subproject of Dinh Long and Dinh Lien Communes, Yen Dinh District, Thanh Hoa Province

# Comparison between Subproject Appraisal Report (SAR) and Detail Design (DD) configurations

#### 1. Project Description

The Water Supply and Sanitation Subproject (WSSS) for Dinh Long and Dinh Lien communes, Yen Dinh District, Thanh Hoa Province has been selected as one of eight Subprojects in Batch 2 of the Central Region Rural Water Supply and Sanitation Sector Project (CRRWSSSP) to be implemented under the Loan Agreement No. 2609 – VIE (SF) between the Socialist Republic of Vietnam (GoV) and the Asian Development Bank (ADB). The Subproject consists of the following components:

- Construction and operation of a piped water supply system for 2 communes with a capacity of 1,600 m<sup>3</sup>/day serving a population of approximately 11,000 people by 2025;
- Provision of in-kind grants for construction of substructure of household latrines to 131 poor households and near-poor female-headed households with women being the sole income providers;
- Establishment of Sanitation Revolving Fund and provide about 164 loans to non-poor households for construction or rehabilitation of hygienic latrines;
- The subproject will construct 01 public latrine for Dinh Long primary school;
- The subproject will rehabilitate 707 m of existing drainage/sewage ditch;
- Promotion of community participation in subproject implementation; carry out subproject CBA-IEC Plan to increase awareness of hygiene and sanitation among local people in the project area; formation and training of Water and Sanitation Commune Committee (WSCC), including recruitment and training of Health and Sanitation Promoters;
- Strengthened sector planning and implementation capacity by training of O&M staff for the water supply systems, improvement of M&E of water and sanitation investments through promotion of community involvement in data collection and evaluation, capacity building of provincial and commune VMUs to manage sanitation revolving fund; and

• Improved project management capacity by training and support of PPMU, provincial and commune WUs, WSCC and HSPs on: (i) contract management; (ii) financial management; (iii) social and gender awareness; (iv) social safeguards implementation and monitoring; (v) planning and budgeting; (vi) accounting and bookkeeping; (vii) procurement.

During the Subproject preparation phase the IEE report document including Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP) was approved by the ADB as part of the Subproject Appraisal Report (SAR) of Yen Dinh- Thanh Hoa Water Supply and Sanitation Subproject. This addendum to the IEE of Yen Dinh- Thanh Hoa Subproject has been prepared based on the finalized Detailed Design and provides information on the changes in the subprojects for updating the IEE.

#### 2. Comparison of Changes

There are no changes in the locations of the WTP and the supply network. The changes are in the scope of permanent and temporary land acquisition and minor changes in compensations for loss of crops, trees, and structures. These changes do not have influence on the findings of the Subproject's approved IEE Report.

The changes made to the Subproject during the Detailed Design and their impacts on environmental issues based on the Detailed Measurement Survey (DMS) and environmental assessment at the Subproject sites are shown in Table 1 below:

Table 7 Description of Changes made during Detailed Design by Subproject Component and their impacts on IEE report.

| Component/ item                | Changes between SAR and DD&DMS (Yes/ No) | Clarification and Impacts on IEE<br>Report |  |  |  |  |  |
|--------------------------------|--|--|--|--|--|--|--|
| I. Head works (raw water       |  |  |  |  |  |  |  |
| source, raw water pipeline     |  |  |  |  |  |  |  |
| and access road)               |  |  |  |  |  |  |  |
| 1. Raw water source            | No                                       | Still well G4 and well G17                 |  |  |  |  |  |
| 2. Production well G17, raw    | Yes                                      | Production well G4 is located within       |  |  |  |  |  |
| water pipeline and access road |  | the water treatment plant (WTP) area       |  |  |  |  |  |
| to the well                    |  | and the other production well G17 is       |  |  |  |  |  |
|                                |  | located outside of WTP. In the FS          |  |  |  |  |  |
|                                |  | stage, the access road was proposed to     |  |  |  |  |  |
|                                |  | be constructed in parallel with the raw    |  |  |  |  |  |
|                                |  | water pipeline. However, during the        |  |  |  |  |  |
|                                |  | detailed engineering design the location   |  |  |  |  |  |

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| Component/ item  | Changes between<br>SAR and<br>DD&DMS (Yes/<br>No) | Clarification and Impacts on IEE<br>Report  |
|--|---|---|
|  |   | of the access road was changed right above the raw water pipeline. The acquired land for construction of production well G17, raw water pipeline/access road is 436 m² of agricultural land for planting crops, compared to $600\text{m}^2$ of total crop land and public land estimated during the FS stage. Thus, there are no changes to anticipated environmental impacts, the approved EMP and EMoP. |
| II. Water Treatment Plant<br>(WTP) and production well<br>G4 located within the<br>boundary of WTP |   |   |
| 1. Location  | No  |   |
| 2. Scope of land permanently acquired  | Yes   | Total land permanently acquired for WTP and production well G4 has decreased by roughly 100 m <sup>2</sup> according to the DMS. It is still agricultural land which is currently used for planting crop. Thus, there are no changes to anticipated environmental impacts, the approved EMP and EMoP.   |
| 3. Scope of land temporarily acquired  | Yes   | For construction of the fence foundation of WTP, the area of temporarily acquired private land (for crop cultivation) is 130 m <sup>2</sup> , which was not included in the basic design. For this adjustment, there are <b>no changes</b> to anticipated environmental impacts, the approved EMP and EMoP.   |
| 4. Capacity  | No  |   |

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| Component/ item                             | Changes between<br>SAR and<br>DD&DMS (Yes/<br>No) | Clarification and Impacts on IEE<br>Report   |
|---|---|--|
| 5. Treatment technology                     | No  | The treatment technology is the same, however, the detailed engineering design has been adjusted slightly due to the increase of permanently acquired land for WTP.  |
| III. Electric line                          |   |  |
| 1. Scope of land permanently acquired       | Yes   | Total permanently acquired area of land for the construction of the electric line is 80 m <sup>2</sup> consisting of 41 m <sup>2</sup> of private agricultural land and 39 m <sup>2</sup> of public land, compared to 102 m <sup>2</sup> of private agricultural land initially estimated in the FS. As only crops are lost on the acquired land area, there are <b>no changes to anticipated environmental impacts, the approved EMP and EMoP</b> . |
| 2. Scope of land temporarily acquired       | Yes   | For the construction of electric line temporarily 51 m <sup>2</sup> of land will be acquired, out of which 42 m <sup>2</sup> is private land and 9 m <sup>2</sup> is public land. This area was not included in the FS's estimation but only crops are lost on the temporarily acquired land area. Therefore, there are <b>no changes to anticipated environmental impacts, the approved EMP and EMoP</b> .  |
| IV. Transmission and distribution pipelines |   |  |
| 1. Area of service coverage                 | No  |  |
| 2. Scope of land permanently acquired       | No  | No permanent land acquisition for installation of clean water pipelines.   |

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| Component/ item                       | Changes between<br>SAR and<br>DD&DMS (Yes/<br>No) | Clarification and Impacts on IEE<br>Report  |  |  |  |  |  |  |
|---------------------------------------|---|---|--|--|--|--|--|--|
| 3. Scope of land temporarily acquired | Yes   | The area of temporary land acquired will be approximately 37,000m <sup>2</sup> compared to 24,000m <sup>2</sup> of the area initially estimated. However, there are no changes to anticipated environmental impacts, the approved EMP and EMoP.   |  |  |  |  |  |  |
| V. Sanitation                         |   |   |  |  |  |  |  |  |
| 1. Household latrines                 | Yes   | The number of household latrines built by loan from Sanitation Revolving Fund will decrease by 100 units. Thus, there are no changes to anticipated environmental impacts, the approved EMP and EMoP.   |  |  |  |  |  |  |
| 2. Public latrines                    | No  |   |  |  |  |  |  |  |
| VI. Structures/ assets                |   |   |  |  |  |  |  |  |
| 1. Private structures/ assets         | Yes   | Based on approved detailed engineering design, 1 household (9 persons) will lose 15 m deep drilled-well D<50 mm with plastic piping. The compensation will be paid to the AH prior to the land acquisition and issuing Possession of the Site to the Contractor so that the AH, if opt for, will have time to construct a new drilled well on the remaining land area of 1768 m <sup>2</sup> . This change does not materially affect anticipated environmental impacts, the approved EMP and EMoP. |  |  |  |  |  |  |
| 2. Public structures/ assets          | Yes   | Based on detailed engineering design, no cultural/aesthetic structure has been identified to be affected or to be relocated. The transmission pipeline will pass a historical monument but not affect the structure. Thus, there are no changes to anticipated environmental impacts, the approved EMP and  |  |  |  |  |  |  |

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| Component/ item   | Changes between<br>SAR and<br>DD&DMS (Yes/<br>No) | Clarification and Impacts on IEE<br>Report   |
|---|---|--|
|   |   | EMoP.  |
| VII. Other aspects  |   |  |
| 1. New findings about the potentially affected fauna/ flora species or protected structures | No  | No new findings about the potentially affected fauna/ flora species or protected structures. |
| 2. Other newly found aspects that can potentially create significant impacts                | No  | No other newly found aspects that can potentially create significant impacts.                |

Based on the above assessment and findings the Rapid Environmental Assessment (REA) checklist and the checklist for Preliminary Climate Risk Screening of the Subproject do not change after the detailed design stage.

#### 3. Conclusion

The modifications made at the detailed design stage compared to the SAR preparation stage do not materially affect the findings of the IEE Report of Yen Dinh- Thanh Hoa Subproject. As a result, the approved IEE including the EMP and EMoP of the aforementioned Subproject is still applied for the Subproject.

## CENTRAL REGION RURAL WATER SUPPLY AND SANITATION SECTOR PROJECT

ADB Loan No. 2609-VIE (SF))

# ENDORSEMENT OF ADDENDUM TO THE IEE REPORT OF

WATER SUPPLY AND SANITATION OF
DINH LONG AND DINH LIEN COMMUNES – YEN DINH DISTRICT –
THANH HOA PROVINCE

This endorsement has been prepared based on a combination of observations made during field visits and designs made by third parties. The CPMU, PPMU and PIA Consultant have to the extent reasonably possible validated and verified the information in the IEE report and its appendices. To the best of our belief and knowledge, the included information in this addendum is reasonably accurate and correct.

Thanh Hoa PPMU PIA Consultant

CPMU

Nguyen Xuan Trang Director Esko Toivonen Team Leader Annex 5 Copies of Summary table of compensation with AHs' signature

#### BĂNG TÔNG HỢP CÁC HỘ GIA ĐÌNH BỊ ÂNH HƯỚNG VĨNH VIỄN ĐÃ NHẬN TIỀN ĐỀN BỦ

Công trình: Tiểu dự án Cấp nước sạch và vệ sinh mỗi trường nông thôn xã Định Long, xã Định Liên, huyện Yên Định, tính Thanh Hóa

Thuộc dự án Cấp nước sạch và vệ sinh mỗi trường nông thôn vùng miền Trung, vay vốn ADB

|    | Hộ bị ảnh hưởng Tổng điện tích bị ảnh hưởng (m2) |            |             |                    |                 |       |  |                              | Thiệt hại cây trồn |            |                | Dự toán kinh phí bỗi thường (đồng) |                      |                            |            |   |                                  |  |  |                                    |           |               |             |         |
|----|--|------------|-------------|--------------------|-----------------|-------|--|------------------------------|--------------------|------------|----------------|------------------------------------|----------------------|----------------------------|------------|---|----------------------------------|--|--|------------------------------------|-----------|---------------|-------------|---------|
| Ì  | Chủ hộ   |            |             |                    |                 |       | Dá                                       | it nông ng                   | hiệp               |            |                |                                    | , hoa<br>àu          |                            |            |   |                                  | Trong  | tó   |                                    |           |               |             |         |
| т  | Tên chủ hộ                                       | Nam/<br>Nữ | Địa<br>chí  | Số<br>nhân<br>khẩu | Hộ<br>nghê<br>o |       | Tổng<br>diện<br>tích đất<br>được<br>giao | Diện tích<br>bị ảnh<br>hưởng | %                  | Số<br>thứa | Tở<br>BĐ<br>số | Loại                               | Diện<br>tích<br>(m2) | Cây<br>lâu<br>năm<br>(cây) |            | Bồi thường<br>hoa màu và lợi<br>nhuận trên<br>đất thu hồi<br>tạm thời | Hộ try chuyển<br>đổi nghề nghiệp | Hỗ trợ cho hộ<br>mắt hơn 10%<br>diện tích đất<br>NN theo chính<br>sách ADB | Hỗ trợ cho hộ<br>mất từ 30%<br>trở lên diện<br>tích đất nông<br>nghiệp | Bồi thường<br>Cây,vật kiến<br>trúc |           | của hộ bị mắt | Tộng cộng   | Ký nhận |
|    | VŨ XUÂN<br>BÁO                                   | Nam        | Thôn<br>4.1 | 9                  |                 | Số đó | 2866                                     | 1098,3                       | 38,3               | 836        | 20             | внк                                |                      | 6                          | 43,932,000 | 10.709.650  | 65.898.000                       | 24.000.000   | 14.400.000   | 2.289.000                          |           | 15.000,000    | 176,228.650 | alum    |
|    | VŨ VĂN<br>LƯỢNG                                  | Nam        | Thôn<br>4.1 | 4                  |                 | Số đó | 4964                                     | 1003,4                       | 20,2               | 837        | 20             | внк                                |                      |                            | 40.136.000 | 11.031.900  | 60.204.000                       | 24,000,000   | 1  |                                    |           | 9,000,000     | 144.371.900 | Light   |
| 3  | NGUYÈN<br>VĂN CHIÉN                              | Nam        | Thôn<br>4.1 | 7                  | x               | Số đó | 2793                                     | 1062,2                       | 38,0               | 782        | 20             | внк                                |                      |                            | 42,488,000 | 8.215.300   | 63,732,000                       | 24,000,000   | 12.600.000   |                                    | 1.200.000 | 9,000,000     | 161.235.300 | Elian V |
| 4  | TRINH KHÁC<br>QUANG                              | Nam        | Thôn<br>4.1 | 7                  |                 | Số đó | 2370                                     | 495,0                        | 20,9               | 841        | 20             | внк                                |                      | ,                          | 19,800,000 | 3.743.750   | 29.700.000                       | 24.000.000   |  |                                    |           | 12.000,000    | 89.243.750  | Just    |
| 5  | TRINH THI<br>THIẾT                               | Nū         | Thôn<br>4.1 | 11                 |                 | Số đỏ | 2155                                     | 291,0                        | 13,5               | 881        | 20             | внк                                |                      |                            | 11.640.000 | 1.309,500   | 17.460.000                       | 24,000,000   | 0  |                                    |           | 12.000.000    | 66.409.500  | The s   |
| 6  | ĐÀO THỊ<br>XUYÊN                                 | Nū         | Thôn<br>4.1 | 5                  |                 | Số đỏ | 3567                                     | 37,6                         | 1,1                | 879        | 20             | внк                                |                      |                            | 1.504.000  | 432.400   | 2.256,000                        |  |  |                                    |           |               | 4.192,400   | 1 Xugen |
| 7  | NGUYĚN<br>ĐỨC TẦN                                | Nam        | Thôn<br>4.1 | 7                  |                 | Số đó | 1675                                     | 36,8                         | 2,2                | 882        | 20             | внк                                |                      |                            | 1.472.00   | 423.20  | 2.208,000                        |  |  |                                    |           |               | 4.103.200   | o Tan   |
| 8  | NGUYÊN<br>VĂN HÀN                                | Nam        | Thôn<br>4.1 | 5                  |                 | Số đỏ | 3094                                     | 38,2                         | 1,2                | 918        | 20             | внк                                |                      |                            | 1,528.00   | 0 439.30  | 0 2.292,000                      | 9  |  |                                    |           |               | 4.259.300   | Ma      |
| 9  | LÊ VĂN<br>THAO                                   | Nam        | Thôn<br>4.1 | 4                  |                 | Số đỏ | 2175                                     | 32,4                         | 1,5                | 919        | 20             | вни                                |                      |                            | 1.296.00   | 0 372.60  | 0 1.944.000                      | 0  |  |                                    |           |               | 3.612.60    | " bu    |
| 10 | NGUYÊN<br>TRƯỜNG<br>XUÂN                         | Nam        | Thôn<br>4.1 | 4                  |                 | Số đó | 2242                                     | 5,0                          | 0,2                | 965        | 20             | вн                                 | c                    |                            | 200.00     | 0 94.05   | 0 300.00                         | 0  |  |                                    |           |               | 594.05      | · Xua   |
| 11 | LĚ THỊ THỜI                                      | Nü         | Thôn<br>4.1 | 3                  |                 | Số đó | 900                                      | 6,0                          | 0,7                | 1.119      | 20             | вн                                 | <                    |                            | 240.00     | 0 98.55   | 0 360,00                         | 0  |  |                                    |           |               | 698,55      | ° 6 he  |
| 12 | ĐÀO QUANG<br>THANH                               | Nan        | Thôi<br>4.2 |                    |                 | Số đề | 1939                                     | 6,0                          | 0,3                | 1.192      | 20             | вн                                 | K                    |                            | 240,00     | 98.55   | 360,00                           | 0  |  |                                    |           |               | 698.55      | · VILE  |

| UBND XĀ            |    | 11,0   | 884 | 20 | LUC |   |   | 308.000    |            |             |             |            |           |           |            | 308,000     | ) Dul |
|--------------------|----|--------|-----|----|-----|---|---|------------|------------|-------------|-------------|------------|-----------|-----------|------------|-------------|-------|
| 14 UBND XÃ         |    | 16,0   |     |    | ccc |   |   | 448.000    |            |             |             |            |           |           |            | 448.000     | )01   |
| NGUYÊN THI<br>PHÂN | 8  |        |     |    |     |   |   |            | 90,000     |             |             |            |           |           |            | 90,000      | phân  |
| ĐÀO VĂN<br>HOÀNG   | 4  |        |     |    |     |   | 3 | _          |            |             |             |            | 656,000   |           |            | 656.000     | Throp |
| 1 Cộng             | 85 | 4138,9 |     |    |     | 0 | 1 | 65.232.000 | 37.058,750 | 246,714,000 | 120,000,000 | 27.000.000 | 2.945.000 | 1,200,000 | 57.000.000 | 657.150.000 |       |

(Số tiền bằng chữ: Sáu trăm năm mươi bảy triệu, một trăm năm mươi nghìn đồng )

ĐẠI DIỆN BAN QUÂN LÝ DỰ ÁN

DAI DIỆN HOI ĐỘNG GPMB HUYỆN

ĐẠI DIỆN UBND XÃ ĐỊNH LIÊN ĐẠI ĐIỆN

HO BI ANHHUONG

GIÁM ĐỐC Nguyễn Luân Trang LƯU VỮ LÃM

**сні тісн** Вій Thanh Hái