Initial Environmental Examination

July, 2015

VIE: INTEGRATED RURAL DEVELOPMENT SECTOR PROJECT IN THE CENTRAL PROVINCES (Additional Financing)
SUBPROJECT: LINING THE MIDDLE SECTION OF RAC RIVER IRRIGATION SYSTEM, HA TINH PROVINCE

CURRENCY EQUIVALENTS

(as of 15 September 2014)

Currency unit – Vietnamese Dong (VND)

VND 1.00 = \$0.0000472 \$1.00 = VND 21,175

ABBREVIATIONS

ADB Asian Development Bank

AP Affected persons

CEP Commitment on Environmental Protection

CPC Communal People's committee
CPMU Central Project Management Unit

DARD Department of Agriculture and Rural Development

DONRE Department of Natural Resources and Environment

DPC District People's Committee

EIAR Environmental Impact Assessment Report
EMDF Ethnic Minority Development Framework

EMP Environmental Management Plan

DARD Department of Agriculture and Rural Development

FPD Forest Protection Department

IEE Initial Environmental Examination

IPM Integrated Pest Management

IRDPCP Integrated Rural Development Project in Central Provinces

LIC Loan Implementation Consultant

MONRE Ministry of Natural Resources and Environment

PC People's Committee

PPC Provincial Peoples Committee

PPMU Provincial Project Management Unit

RF Resettlement Framework

SIR Subproject Investment Report

TPC Town People's Committee

UXO Unexploded Ordnance

WEIGHTS AND MEASURES

km – kilometer

kg – kilogram

ha – hectare

m – meter

NOTE

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

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1. INTRODUCTION

- 1. Loan 2357(SF) for the Integrated Rural Development Sector Project in the Central Provinces (IRDSPCP) was approved by ADB on 15 October 2007. The total cost of the Project was estimated at \$168.2 million and is jointly financed by ADB and Agence Francaise de Developpement (AFD). The IRDSPCP focuses on upgrading and rehabilitating rural infrastructure (rural roads and irrigation systems, flood control, markets and other key infrastructure). To date, 129 subprojects have either been completed or are nearing completion. Review missions had determined that the quality of construction of subprojects was good. The executing agency (EA) has developed the expertise needed to effectively implement the project and significant benefits are already accruing.
- 2. At the request of the Government, the potential for additional financing was investigated during the Mid-Term Review in 2011 and two review missions in 2012. About 39 new subprojects were found eligible for consideration in the additional financing. The amount of \$70 million has been recommended and included in the country program for ADB Board consideration in 2013. The IRDSPCP Additional Financing (the Project) aims to rehabilitate and upgrade deteriorated critical productive rural infrastructure in support of the Government of Viet Nam's new National Target Program for Rural Development (NRD).
- 3. In consultation with the relevant provincial government and field investigation by the CPMU, a total of 23-24 eligible subprojects were initially identified based on 7 screening criteria which are focused on social economic development, safeguards, integrated development model, feasibility and sustainability. The types of subprojects are as follows:
 - (i) Small & medium-sized dam and reservoir improvements e.g., spillways, head-works, reservoir walls, and leakage control;
 - (ii) Rehabilitation of primary and secondary irrigation canals and river bank stabilization. Wherever possible key strategic investments such as the lining of critical lengths of canal or the reinforcing of existing water control structures will be chosen; and
 - (iii) Rehabilitation of commune to district, and inter-commune roads to improve linkages between higher level alignments (provincial and national routes) and lower level commune to village and inter-village roads. In addressing key issues of sustainability, designs will take into account the increased intensity and frequency of climatic hazards anticipated to result from global climate change, the local geology and terrain, potential change in utilization patterns (type and volume of traffic), and the longer-term availability of recurrent expenditure for operations and maintenance (O&M).
- 4. As part of the IRDPC, LINING THE MIDDLE SECTION OF RAC RIVER IRRIGATION SYSTEM subproject will be implemented at Ky Khang, Ky Tho, Ky Tan, Ky Hoa, Ky Thu, Ky Hai communes and Ky Anh town Ky Anh district, Ha Tinh province.
- 5. This Initial Environmental Examination/Commitment on Environmental Protection (IEE/CEP) document has been prepared to meet the environmental safeguards requirements of the ADB¹ and GOV². The IEE/CEP contains the following information:

¹ ADB Safeguard Policy Statement (2009)

² Law on Environment Protection (Revised) 2006; Decree 29/2011/ND-CP and Circular 26/2011/TT-BTNMT

- (i) Section 1 Introduction;
- (ii) Section 2 contains a description of the subproject;
- (iii) Section 3 contains a description of environmental conditions in the vicinity of the subproject;
- (iv) Section 4 contains a describes potential environmental impacts of the subproject;
- (v) Section 5 contains the environmental management plan including mitigation measures, monitoring system and cost estimation for Environmental Monitoring System (EMS) implementation;
- (vi) Section 6 contains activities description on community consultation and subproject disclosure;
- (vii) Section 7 contains conclusion and recommendation including summarization of main impacts and typical mitigation measures in the subproject's implementation.

2. PROJECT DESCRIPTION

Table 1. General information of subproject

DATA ITEM	SUBPROJECT DATA		
GENERAL INFORMATION			
Subproject Name	Lining the middle section of Rac river irrigation system subproject, Ha Tinh Province		
Subproject Type	Irrigation		
Executing Agency	People's Committee of Ha Tinh Province		
Sub-project owner	Department of Agriculture and Rural Development, Ha Tinh Province		
Sub-project Management Unit	PPMU of IRDPCP, Ha Tinh Province		
Address of PPMU's office	South of Cay bridge, Thach Trung commune, Ha Tinh City, Ha Tinh province		
Name and Title of Head of Project owner	Mr. Nguyen Van Duong Title: Director		
Telephone, fax and email details of Project owner	Tel: 0393690336; FAX: 0393858921		
Name of Environmental Officer of PPMU	Nguyen Thanh Lam		
Telephone, fax and email details of PPMU Environmental Officer	0913816368, lamnguyen0609@gmail.com		
SUBPROJECT DESCRIPTION			

DATA ITEM	SUBPROJECT DATA					
New project or rehabilitation	Rehabilitation project					
project	The subproject includes some components as bellow					
	 Lining canal N2 of Rac river irrigation system with a length of 13.066 km; 					
	 Constructing 05 bridges over the cana culverts, 01 spillway ect. on canal structure 		, outlets	ı		
Surface water or groundwater source	Surface water					
Determination of water source	Song Rac reservoir, taking water from Rac	c river				
Is this water used for domestic purposes or not?	No. The canal was built for irrigation pur use the water for their living activities.	pose but sor	ne local	people		
Length of canals	L= 13.066 km					
Width and depth of canals	Canal	Type of canal	Width (m)	Depth (m)		
	N2 - Section from K0+18.4 to K4+942.10	Trapezium	2.0	1.7		
	N2 – Section from K4+942.10 to K5+656	Rectangle	2.8	1.6		
	N2 - Section from K5+656 to K2+992.90	Rectangle	2.5	1.6		
	N2-Section from K5+922.90 to K6+487.80	Rectangle	2.5	1.6		
	N2 - Section from K6+553.50 to K10+66	Rectangle	1.90	1.55		
	N2-Section from K10+115.50 to K13+65.90	Rectangle	1.2	1.4		
CONSTRUCTION ACTIVITIES						
Commencement date (month/year)	The first of June 2016 (as expected)					
Completion date (month/year)	The first of June 2018 (as expected)					
Number of workers	About 50 persons					
Necessary camps (Yes/No)	Yes, 01 main camp and 04 camps along the proposed canal					
Construction in rainy season (Yes/No)	No No					
Concrete mixing plant	No concrete mixing plant, using mobilization concrete mixing machines					
Location and area of borrow area or description of material	·					
source	Stone will be purchased from a licensed quarry located 5-10km from the subproject site;					
	Sand will be purchased from licensed mines located 5-10km from the subproject site. Other material such as steel, cement will be purchased					

 3 Source: Basic Design Explanation of Lining the middle section of Rac river irrigation system subproject, Ha Tinh Province, 2014

DATA ITEM	SUBI	PROJECT DATA			
		ed 5-10km from the subproject site.			
Method on management and balance of excavated soil/surplus soil					
Type and approximate quantity of raw construction materials	Items	Unit	Quantity		
	Cutting soil	m ³	28,615		
	Filling soil	m ³	71,113		
	Cutting humus	m ³	9,743		
	Concrete M200	m ³	13,634		
	Steel	ton	724.4		
generated from construction (calculated monthly following m³) - Soil, sand, debris, etc - Domestic waste Number and conditions construction vehicles and equipment	750kg/month 9 07 bulldozers; 06 excavators; 06 compactors; 06 jumping jack				
OPERATION AND MAINTENA					
Water discharge at the	Canal	Unit	Discharge (Q)		
beginning section of the canal: (m³/s)	N2	m/s	3.43		
Irrigation area (ha)	1741 ha				
Operation, management and maintenance Unit	Northern Ha Tinh Irrigation One Member Limited Company is responsible for operation, management and maintenance after the completion of the work				
Water treatment process	No. Water in Rac river has been used only for irrigation purpose without sign of water pollution. There has not been any water treatment system in the subproject area.				
Descriptions of periodical maintenance activities	Annual maintenance: Annual maintenance activities include greasing machines, replacing				

 4 Source: SIR of Lining the middle section of Rac river irrigation system subproject, Ha Tinh Province, 2014

DATA ITEM	SUBPROJEC	T DATA		
	broken minor parts of machines such as penstocks; dredging sludge of canals, culverts, spillways; repairing banks of canals; removing rubbish in the canals, culverts, troughs, spillways ect; repairing minor breaks of canal slopes, culverts, spillways and treating extrusion joints, penetration through animal holes and nests of white ants.			
	Annual average cost for Operation and Maintenance Activities estimated 820,826,000 VND			
	Periodic maintenance (every 7 years	s):		
	Periodic maintenance is conducted every seven years for canals. Estimated cost for periodic maintenance is 30% of the capital cost including repairing significantly damaged works. Detailed activities will be based on the Economic-Technical Report according to the government's regulations on investment management.			
RESETTLEMENT AND LAND	ACQUISITION 5			
Affected households	0 households			
Number of severely affected APs	There is no production land loss of >10% for any household.			
Number of APs that must relocate	No house/shop shall be relocated or rebuilt at new place.			
Total land area to be acquired (ha)	Temporary= 0 m2	Permanent = 0 m2		
Agricultural land area to be acquired (ha)	Temporary= 0 m2	Permanent = 0 m2		
Forestry land area to be acquired (ha)	Temporary= 0 m2	Permanent = 0 m2		
Aquaculture land to be acquired (ha)	Temporary= 0 m2	Permanent = 0 m2		
Residential land to be acquired(ha)	Temporary= 0 m2	Permanent = 0 m2		
Garden land to be acquired (ha)	Temporary= 0 m2	Permanent = 0 m2		
Other land to be acquired (ha)	Temporary= 0 m2 Permanent = 0 m2			
Affected assets	None None			
SUBPROJECT COST				
Total subproject cost (VND and \$USD)	87,013,909,000 VND/ 4,109,276 USD			

 $^{\rm 5}$ This data is obtained from Resettlement Plan of the subproject

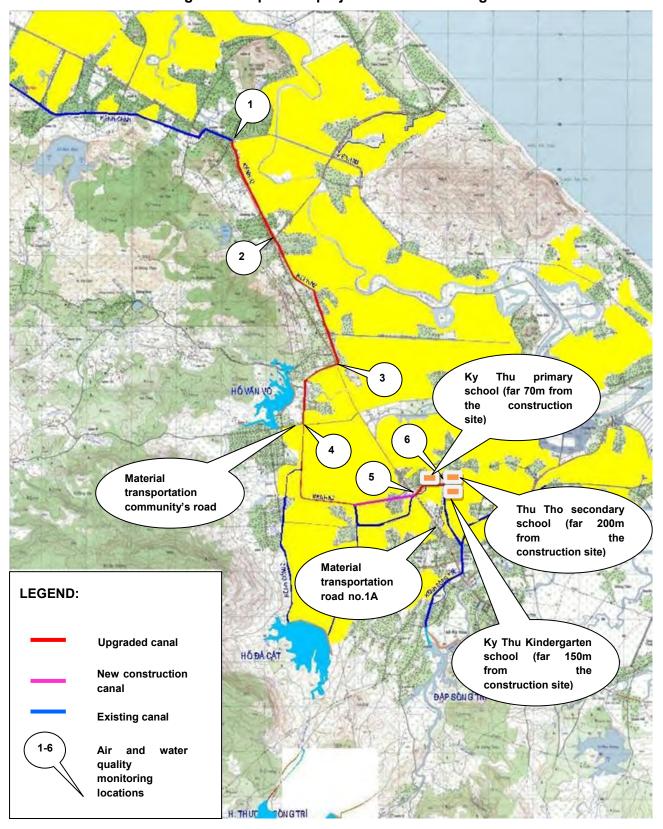


Figure 1: Map of Subproject and Surrounding Area

3. DESCRIPTION OF EXISTING ENVIRONMENT

Table 2. Environmental baseline

DATA ITEM	SUBPROJECT DATA					
PROJECT LOCATION						
Commune(s):	Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa and Ky Anl town					
District:	Ky Anh					
Province:	Ha Tinh					
Geographic location:	From 18°04'35" N÷ 18°11'40" N. From 106°03'40" E ÷ 106°14'16" E.					
PHYSICAL ENVIRONMENT CO	ONDITIONS					
Air quality, noise and vibration	According to the monitoring data of Ha Tinh Center for Environmental Monitoring and Engineering conducted in Ky Anh town, the criteria for air quality in surrounding environment are within the limitation of Vietnamese Standard (QCVN 05:2009 and QCVN 26: 2010).					
Climate and natural disasters	The subproject area has a monsoon tropical climate, divided into two distinct seasons. The rainy season lasts from September to December; average temperature fluctuates above 25°C accompanied by heavy rain. The dry season is from January to August, average temperature fluctuates below 23°C. The meteorology-hydrology data of Ha Tinh Center indicate there are 4-5 storms annually in the subproject area with heavy rainfall.					
Topography and soils	Subproject area is generally flat, with elevations ranging from 1.0m to 10.0m. The soils are mainly ferral soil distributed in western, alluvial soil distributed along bank canal, sand distributed along seashore					
Waterbodies	There are Rac river, and canals in the subproject area. There is no waste water of the subproject discharging into them. Water of the river and canals is mainly used for agriculture purpose.					
Underground water	Groundwater is at shallow layers. As observed, deep well is 3-10 m from the ground surface. Water quality is not good. However, it is effected by salinity intrusion, aluminiferous.					
Water quality	According to the institution for water, irrigation and environment, results of water quality analysis in March 2013 ⁶ show that parameters such as pH, DO, PO43-, NH4+, NO2-, NO3-, BOD5, COD, PO43-, Zn, Pb, Hg,					

⁶ Source: Environmental Management Plan, subproject: multi-purpose exploitation of Ke Go- Song Rac irrigation system in Ha Tinh province, Environmental Consultal Institute for Water and Environment, May 2013.

DATA ITEM	SUBPROJECT DATA			
	As, oil and coliform of canal N3 at hamlet 10 – Ky Dong commune - Ky Anh district and Cai River at Dai Dong hamlet – Ky Van commune are within allowed limits compared to Vietnamese Standards (QCVN 08: 2008/BTNMT, Column B1) except NH4+. So that water quality of this canal in the project area is still not polluted.			
	+ Vietnam's current standards on surface water quality:			
	- QCVN 08:2008/BTNMT - National technical regulation on surface water quality;			
	+ Vietnamese standard on waste water receiving sources:			
	 QCVN 14:2008/BTNMT National technical regulation on domestic waste water; This regulation is applied as a substitution for Standard TCVN 6772:2000 – Water quality – Standard on domestic wastewater in the List of Vietnam's environment standards which must be applied 			
	- MONRE's Circular No. 02/2009/TT-BTNMT regarding regulations on evaluation on waste receiving capability of water source.			
Flooding	This area always has been in state of inundation, 2 times per year (mainly in rainy season from August to Oct)			
Terrestrial flora and fauna	+ Terrestrial flora: mainly rice field, corn, bean and vegetables gardens in residential areas;			
	+ Terrestrial fauna: cow, pig, chicken, ducks, etc.			
	+ Terrestrial flora and fauna species in subproject area are not listed in Vietnam's Red Data Book.			
Protected areas	In subproject area, there is no historical or historical vestiges;			
Environmental sensitive points	Residential area in Dai Dong, Van Lac, Lien Son, My Lien, My Loi, Sa Xa and Thanh Son hamlets, Ky Van commune, Ky Anh district;			
	Residential area in Tan Son, Tan Tho hamlets, Ky Tho commune, Ky Anh district;			
	Residential area in hamlet 9, Ky Dong commune;			
	Residential area in Quang Du, Quang Ich hamlets, Ky Khang commune			
	Residential area in Thanh Binh hamlet, Ky Thu commune			
	Pham Hoanh temple (far from the construction site 400 m);			
SOCIAL ENVIRONMENT CON	DITIONS			
UXO	The proposed canal will be based on the existing route and during management and exploitation process, Ha Tinh Irrigation Work Exploitation Limited Company always implemented dredging and repairing the existing canal and no UXO was detected;			
Land use	Agriculture land: 5002ha; Non-agriculture land: 6638ha; unused land: 9189 ha ⁷ .			
	Land is mainly used for agriculture development;			
	Agriculture: mainly plant rice 2 crops/year;			

⁷ Source: PPMU of Ha Tinh province, SIR of Lining the middle section of Rac river irrigation system subproject, Ha Tinh Province, 2014

DATA ITEM	SUBPROJECT DATA
Nearest residential land	Residential areas are located along the canal and material transportation roads including Dai Dong, Van Lac, Lien Son, My Lien, My Loi, Sa Xa and Thanh Son hamlets, Ky Van commune, residential area in Tan Son, Tan Tho hamlets, Ky Tho commune, Residential area in hamlet 9, Ky Dong commune; Residential area in Quang Du, Quang Ich hamlets, Ky Khang commune; Residential area in Thanh Binh hamlet, Ky Thu commune; The distance between nearest residential houses and the proposed canal ranges from 20m to 200 m;
Rural infrastructure	Rural infrastructure works in subproject including electric system, roads, schools at all level, medical centers, public houses at communes/districts, etc. These infrastructures are not located near the therefore extent of land occupation area and activities during construction period have no impact on existing infrastructure except for taking advantage of rural road to transfer material.
Access to Water Supply & Sanitation and Solid Waste Management	Rubbish is collected 2 times a week in Ky Tan commune and Ky Thu commune. Rubbish is transported to Ky Anh landfill located in a distance of 6 km from the construction sites. There are 90% to 97% of people who access to sanitation latrines. Domestic wastewater discharges on the ground or to ponds, lakes and low areas. There are 80% to 95% of households accessing to clean water in the subproject area.
Agriculture	+ Agriculture: mainly wet rice, bean, corn, vegetable;
Population	Estimated number of people of 10 communes in the subproject area: 56,093 people. Population density is 61-1644 persons/km2 ⁸
Ethnic minorities	There are no ethnic minority groups living in the subproject area.
Livelihoods	+ The main employment of the community is agriculture and handicraft production, occupying 98% of the local population. + The average income is VND 15.67 to 18.7 million/person/year; + The level of poverty (following the new poverty line made by the Government): number of poor households makes up 4.42% to 15.3% of the population.
Physical and cultural heritage	There is no cultural heritage or preservation area in the subproject region;
Public health	Diseases which often occur in the summer are diarrhea, petechial fever Besides, there are respiratory diseases like sore throat, sinusitis

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⁸ Source: PPMU of Ha Tinh province, SIR of Lining the middle section of Rac river irrigation system, 2014

4. ENVIRONMENTAL IMPACT SCREENING

Table 3. Environmental impact screening

	POTENTIAL IMPACT					
IMPACT/ CONCERN	YES/ NO?	IS IT MINOR OR SIGNIFICANT?	IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE	
Pre-Construction St	age Imp	acts				
Environmentally responsible procurement and SEMP preparation	Yes	N/A	N/A	N/A	Including environmental requirements in biding documents and civil work contracts will take importance role to fully reflect environmental protection cost of the civil works and engage the environmental responsibilities of civil contractors. Any missing of environmental management cost will create high risks of implementing mitigation measures during the construction phase due to lack of resources and capacity thus, environmental protection cost and responsibility need to involved at the beginning. More Site Environmental Management Plan (SEMP) will help the contracts deeply understanding on environmental requirement and preparing detail/specific mitigation action on the site, therefore, the an appropriate SEMP will help to implement actual mitigation measures and identify any unanticipated environmental impacts and propose additional mitigation measures.	
Plan construction materials management	Yes	N/A	N/A	N/A	Materials Management Plan (MMP) detailing arrangements to be made to facilitate the timely production and supply of construction materials to avoid impacts due to unnecessary stockpiling outside the Project site.	
Plan Spoil and Waste Disposal	Yes	N/A	N/A	N/A	Waste Management and Spoil Disposal Plan is prepared for handling, storage, treatment, transport and disposal of solid and liquid wastes, hazardous materials, hazardous wastes and excavation spoils. Ensuring disposal of excavation spoils will not cause negative visual impacts. The plan will also provide details of a trip ticket system to ensure that contractors dispose excavation spoils in approved areas. Such system will be designed so that the PPMU and construction supervisors could readily	

Lining the middle section i Rac river imgation system subproject, Ha Tinn Province	7
Integrated Rural Development in Central Provinces Project	

	POTENTIAL IMPACT				
IMPACT/ CONCERN	YES/ NO?	IS IT MINOR OR SIGNIFICANT?	IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE
					monitor the volume and disposal site of excavation spoils, and to ensure that the total volume of spoils disposed will not exceed the maximum capacity of disposal site (landfill). Domestic waste collection and management also need to set plan during this phase to avoid missing implementation resources and sanitation issues on the site.
Disturbance of unexploded mine and bomb (UXO)	No				The canal is upgraded on the existing route. Therefore, there will be no possibility of UXO.
Effects on households from loss of residential or agricultural land	No				The canal is upgraded on the existing route. Thus, no households or land will be effected by the project
Construction Stage	Impacts	5			
Dust, vegetation clearing, noise, water quality or other impacts from development of borrow areas and transportation for construction materials	Yes	Minor	Negative	Temporary	<u>Description:</u> Stone and sand and soil will be purchased from licensed mines. These mines are operated in accordance with environment protection requirements of Ha Tinh DONRE. The owners of these mines take responsibilities for any environmental problems related to vegetation clearing and water quality. Materials from these mines will be transported to construction sites by contractors. Transportation of material to the construction sites will generate noise, dust which affect local residents along transportation routes and near the construction sites. <u>Location</u> : Filling soil will be purchased from licensed borrow pits. They are located 7-10 km from the construction sites. Stone and sand will be purchased from the licensed quarry and mines which is far about 5 to 10 km from the construction sites. Transporting roads are asphalt and concrete (commune's roads and road no.1A). Some sections of commune's roads are earth (in Dai Dong hamlet, Ky Van commune)

	POTENTIAL IMPACT				
IMPACT/ CONCERN	YES/ NO?	IS IT MINOR OR SIGNIFICANT?	IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE
					Soil transportation to the construction sites will affect the local roads of subproject communes. Affected Objects: The local roads in Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa and Ky Anh town Local residents along transportation road (NH1A, commune road in Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa and Ky Anh town Affected level: Small Dust and noise will not be seriously affected because (i) loading capacity of vehicles is less than 7 tons, (ii) communal roads are almost structured of asphalt with the width of 3.5-5m; (iii) Among the total soil about 49,662 m³ must be transported, requires about 26 tip trucks with a capacity of 7 tons within 24 months; (iv) the construction time is short (only 24 months) Time of impact: 24 months
Erosion or sedimentation caused during clearing or earthworks	Yes	Negative	Minor	Temporary	Description: In the work of excavating the canal and filling the banks of the proposed canal, construction of on the canal structures such as culverts, water inlets and outlets, if excavated soil is not collected then siltation will be occurred. It will be able to cause stuck in other canals that pass through the proposed canals, and create filling situation that affects cultivation areas of residents. Location: The intersections of the proposed canal and 43 existing irrigation canals The intersections of the proposed canal and 21 existing drainage canals. The fields nearby the proposed canal in Dai Dong, Van Lac, Lien Son, My Lien, My Loi, Sa Xa and Thanh Son hamlets, Ky Van commune, Tan Son, Tan Tho hamlets, Ky Tho commune; hamlet 9, Ky Dong commune; Quang Du, Quang Ich hamlets, Ky Khang

		POTEN	TIAL IMPACT		
IMPACT/ CONCERN	YES/ NO?	IS IT MINOR OR SIGNIFICANT?	IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE
					commune; Thanh Binh hamlet, Ky Thu commune; in other subproject communes;
					Affected objects:
					Cultivated land, rice fields closed by the subproject canals
					Local peoples in beneficiary area
					<u>Affected level:</u> minor due to excavated volume soil is reused to fill up banks of the proposed canal and the canal safety corridor;
					Time of impact: 24 months
Impacts arising from temporary storage areas including dust, noise and water quality	Yes	Negative	Minor	Temporary	Description: Unloading materials will generate noise, dust and Uncovered material such as sand and soil may generate dust which affects local residents and water quality. Stone, sand will be located near the construction sites where uncultivated land to minimize affecting on living residents. Other items (steel, cement) will be stored at commune PCs, other public buildings or in rented houses. Location: Residential areas near temporary storages Affected objects: Local residents living around temporary material store sites Affected level: Small Level of these impacts is minor because: (1) the temporary material store is mobile; (2) materials are mainly handled manually hence, dust and noise affects residential areas will not be significant. Stores will be located at dry places, away from water sources and channels therefore impacts on water quality will be insignificant; Time of impact: 24 months
Pollution of waterways, aquatic environments or underground water	Yes	Negative	Small	Temporary	<u>Description:</u> In the process of excavating, dredging the canal and filling banks of the canal and constructing on canal structures, oil and grease leakage will be able to cause water and soil pollution.

		POTEN	TIAL IMPACT		
IMPACT/ CONCERN	YES/ NO?	IS IT MINOR OR SIGNIFICANT?	IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE
from wastes, chemicals, waste water or disturbance of contaminated soils					On the other hand, if waste such as spoiled soil, sand will not be collected and controlled strictly then it will able to make water turbidity increased. Location: At the intersections of the proposed canal and other canals as mentioned above, and construction sites and ponds near the construction sites Affected objects: The subproject canal's water quality Aquatic environments Groundwater quality around the subproject canals Affected level: Small The affected level is insignificant because (i) The number of construction machines is small (07 bulldozers; 06 excavators; 06 compactors; 06 jumping jack compactors; 20 tip trucks); (ii) the construction is scattered over 13.066 km long of the canal, therefore the concentration of the uncontrolled waste, oil and grease leakage is not remarkable; (iii) the construction duration is not long (within 2 years as expected); Time of impact: 24 months
Changes of water quality due to changes in inlet operation which cause sedimentation or aluminiferous intrusion or pollution	No				Lining canals will not affect operation of salinity sluices or contaminated sediments

		POTEN	TIAL IMPACT		
IMPACT/ CONCERN	YES/ NO?	IS IT MINOR OR SIGNIFICANT?	IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE
Making sensitive flora disappeared and deteriorated	No				The proposed canals are located on fields or near residential areas. The site clearance for construction of the canals only affects people's crops and weeds. There is no sensitive flora surrounding the subproject area.
Dust or exhaust fumes from construction equipment	Yes	Negative	Minor	Temporary	Description: Dust is mainly generated from excavating and dredging the proposed canal, filling the banks of the canal. Construction activities such as clearance, excavation of foundation, excavation of week soil of the existing canal will result in suspend dust particles near construction sites, as well as generate gaseous emissions (NOx SOx,CO, CO2, etc.). Besides, gaseous emissions will also be generated from other construction equipment such as excavators, concrete mixing machines that if emitted near/beside residential areas, can cause health problems to the residents Location: Dust and exhaust fumes are mainly generated by construction activities, affecting people living near construction sites in Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa communes and Ky Anh town. Affected objects: The subproject workers Local people in the subproject area Affected level: Small However, upgrading the canal and road does not cause serious dust or air pollution because i) the characteristics of the water facilities is constructed in moisture soil that does not cause dust (ii) the subproject area is rural, the construction site is spacious, (iii) number of construction machine is not many (07 bulldozers; 06 excavators; 06 compactors; 06 jumping jack compactors; 20 tip trucks) and distributes over 13.066 km length; Time of impact: 24 months

		POTEN	TIAL IMPACT		
IMPACT/ CONCERN	YES/ NO?	IS IT MINOR OR SIGNIFICANT?	IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE
Noise and vibration from constrution equipment	Yes	Negative	Minor	Temporary	 Description: Construction activities such as clearance, excavation of foundation, excavation of sludge of the existing canal; mixing concrete; transport of redundant spoils to the disposal site through unpaved roads, etc. will cause the generation of noise and vibrations to be felt with the construction sites and adjacent areas. Noise and vibration will cause disturbance to the activity of local people. Location: Residential areas along the transport roads (the commune's roads and road no.1A) and construction sites at in Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa communes and Ky Anh town, in other subproject communes; Affected objects: The subproject workers Local people in the subproject area Affected level: Small Affected level is minor due to (i) The number of construction machine is not many (07 bulldozers; 06 excavators; 06 compactors; 06 jumping jack compactors; 20 tip trucks, 26 concrete mixing machines) and distributes over 13.066 km length; (ii) construction sites are mainly on the field, away from residential areas. Time of impact: 24 months.
Increasing time and area of flooding	No				Canals will take the function of irrigating water for cultivation areas and take no function of drainage; therefore the drainage of the area will not be affected by construction activities;
Impact on traffic or conditions for property access	Yes	Negative	Minor	Temporary	<u>Description:</u> Construction activities can affect on traveling for local people as increasing the density of traffic because construction vehicles will transport materials on roads and disturbance to individual households and cause risk for safety traffic in process transport raw materials.

		POTEN	TIAL IMPACT		
IMPACT/ CONCERN	YES/ NO?	IS IT MINOR OR SIGNIFICANT?	IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE
					Location: A long the material transportation roads including 29 commune's roads. Objects: Local peoples living along transportation roads in in Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa and Ky Anh town Affected level: Small Impact on traffic is minor because the traffic in the subproject area in low density with main transport vehicles of local peoples are motorbike and bicycle; people can use branch route in the communes to travel during construction. Time of impact: 24 months
Impact on public infrastructure such as communication, electricity wires, inter-commune road, etc.	Yes	Negative	Minor	Temporary	Description: Electricity cables were arranged in parallel with commune's roads and across local roads in some sections. Electricity cables may be affected by construction machine and vehicles if they are over height. Local roads may be damaged by trucks during transporting construction materials if they are over load. Location: Commune's roads Affected level: Small However, this impact is not significant because the number of construction machine is not many (07 bulldozers; 06 excavators; 06 compactors; 06 jumping jack compactors; 20 tip trucks, 26 concrete mixing machines) and the subproject will be constructed in only 24 months. Time of impact: 24 months
Employment or livelihood benefits from employment of local people	Yes	Minor	Positive	Temporary	<u>Description:</u> Contractors will use local laborers for simple works such as moving soil, give priority to poor families, female householders, woman if they need jobs. It aims to raise their income, create more jobs and contribute to hunger elimination and poverty alleviation for community.

		POTEN	TIAL IMPACT		
IMPACT/ CONCERN	YES/ NO?	IS IT MINOR OR SIGNIFICANT?	IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE
					Location: Local people in the subproject areas such as Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa communes and Ky Anh town. Objects: Local people in the subproject areas in Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa communes and Ky Anh town. Affected level: Small This is a positive impact; however, it requires the coordination between the contractor and CPC of subproject communes and nearby communes in recruiting local labors. (contractors often prefer to engage their own trained workforces rather than training unskilled laborers) Time of positive impact: 24 months
Effects on nearby heritage items such as graves, pagodas etc.	No				The subproject does not affect any national or local heritage items such as pagodas, temples, gravestones nearby the proposed canals.
Construction workers cause social disruption	Yes	Negative	Minor	Temporary	 Description: Construction workers can cause social effects or disease transmission such as sore eyes, cholera, flu and respiratory problems. Social aspect: some social problems can appear such as gambling, drug addiction, prostitute, violence, conflict amongst workers, or between workers with local people. Workers have to get temporary residence certificate to avoid social disruption in the subproject area. Location: Workers' camps along the proposed canal in the residential area at Dai Dong, Van Lac, Lien Son, My Lien, My Loi, Sa Xa and Thanh Son hamlets, Ky Van commune, Tan Son, Tan Tho hamlets, Ky Tho commune; hamlet 9, Ky Dong commune; Quang Du, Quang Ich hamlets, Ky Khang commune; Thanh Binh hamlet,

		POTEN	ITIAL IMPACT		
IMPACT/ CONCERN	YES/ NO?	IS IT MINOR OR SIGNIFICANT?	IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE
					Ky Thu commune; in other subproject communes. Affected objects: Affect directly on workers and indirectly on the community near the construction site. Affected level: Small Impacts are at unremarkable levels because the construction activities of workers can be controlled by working regulation in the construction site and construction duration is not long (within 24 months expected); Time of impact: 24 months
Risk to health and safety to local people or construction workers	Yes	Negative	Minor	Temporary	 Description: Risks to public and_construction worker health or safety could be raised due to the following reasons: Construction machines and equipment are arranged along the canal, obstructing the travelling of the residents and endangering the traffic, especially at nights; There will be the risk of unsafe traffic conditions on the commune road, especially at intersection with residential road. Dust and noise from material transport will have impacts on daily life of residents living in the subproject area; There will be the risk of site incidents on workers due to the improper use of equipment and machines; Sewage from construction activities and domestic use of workers. This causes some respiratory diseases for local people as well as workers. Accidents may occur if during the construction, workers are not provided with safety equipment and obey construction regulations.

		POTEN	TIAL IMPACT		
IMPACT/ CONCERN	YES/ NO?	IS IT MINOR OR SIGNIFICANT?	IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE
					<u>Location:</u> Residential area near the construction sites and material transportation roads; Construction sites along the proposed canals. Affected objects:
					Affect directly on workers and indirectly on the community near the construction site.
					Affected level: Small Exhaust fume, dust and noise do not have remarkable affects on residents because of small quantity, low transport frequency of trucks (26 trips/day) and short construction period (within 24 months as expected)
					Other impacts mentioned above are insignificant because the contractor will apply measures to mitigate impacts on the environment, on workers as well as local people in the subproject area. Besides, the contractor will provide workers with safety equipment.
					Number of workers is not great (during construction, there are often fewer than 50 persons). However, the level of contagiousness depends on the control of construction unit and local authority;
					Time of impact: 24 months
Causes waste disposal problems from solid waste generated during construction activity or municipal waste generated in construction camps	Yes	Minor	Negative	Temporary	<u>Description:</u> Lining canals as well as operations of the worker's camp is expected to generate solid waste such as spoil excavation soil, cutting humus and other construction waste mortar, sand, stone, cement packing, commodity goods packaging, etc. and domestic waste from worker's camp which if not regularly collected and properly disposed of, may be carried away by surface run-off into irrigation canals. Soil, cutting humus and debris in the canals will clog the waterways, deteriorate its water quality, and may cause the over flow of the canals cause flash flooding during strong rains. Excess soil and debris that gets into the productive agricultural land may reduce the productive areas. If domestic waste from worker's camp is not regularly

		POTEN	TIAL IMPACT		
IMPACT/ CONCERN	YES/ NO?	IS IT MINOR OR SIGNIFICANT?	IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE
					collected, it may cause health problems for workers and people living near the worker's camp. Location: Workers' camps along the proposed canal; in other subproject communes; material stores, borrow pits. Affected level: Small Solid waste that will be generated from construction mainly includes domestic waste of workers and scraps of transported soil and stone, debris, mud. Number of worker is not big, total about 50 workers, construction activities mainly include dredging 13.066 km of the proposed canal; therefore, generation of construction waste is not so much about 15 m3/month (construction waste) and 0.75 tons/ month (domestic waste) Time of impact: 24 months
Impacts on irrigation activities	Yes	Negative	Minor	Temporary	Description: Construction of the canal requires dry construction area, meaning of stop water flow in the existing canal. A prolonged suspension of irrigation water supply may seriously affect crop production most especially paddy rice and vegetables that are greatly dependent on moisture. There will be a conflict between water demand for agriculture and construction demand during cultivation period and construction time; Location: The proposed canal and downstream cultivation area including Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa communes and Ky Anh town; Affected objects: Farmers using irrigation canal's water that affected by construction of transfer canal Cultivated area irrigated by existing canal Affected level: Small Irrigation schedule could be changed flexibly to construction time; Moreover, local farmers are highly welcomed for canal upgrading, directly support their irrigation works; therefore this impact could be mitigated and impact level is considered at small level;

		POTEN	TIAL IMPACT		
IMPACT/ CONCERN	YES/ NO?	IS IT MINOR OR SIGNIFICANT?	IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE
					Time of impact: 24 months
Environmental Recovery	Yes	Minor	Negative	Temporary and Permanent	 Description: If after completing the construction of canals, the sites are not cleaned up, construction waste and domestic waste from camp sites will cause pollution for the environment. If contractors do not implement site restoration such as re-planting trees or grass, filling up construction pits, removing camp sites in accordance with environmental regulation then environmental problems such as erosion, sedimentation, and accident may occur. Location: construction sites, disposal areas and borrow areas Objects: People living near the proposed canals and camp sites and disposal, borrow areas Land and water near the proposed canals and disposal, borrow areas Affected level: Small As the amout of waste generated from construction activities and domestic waste is not much about 15 m3/month (construction waste) and 750 kg/ month (domestic waste) and it will be collected every week so the remained amount of waste after construction will be small. Camp sites are assumed in small size and in simple structures. Time of impact: temporary to permanent
Impacts in operation	stage				
Inundation of sensitive vegetation from operation of the canal	No				Upgrading the canal will not cause flooding situation due to increment of irrigation area. On canal structures such as inlets, outlets and other controlling systems will be operated properly to handle flood. Moreover, there is no sensitive vegetation in the subproject area.

Integrated Rural Development in Central Provinces Project

	POTENTIAL IMPACT				
IMPACT/ CONCERN	YES/ NO?	IS IT MINOR OR SIGNIFICANT?	IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE
Excessive exploitation of surface water will make water supply capacity cannot catch up with demands and/or cause conflicts among households	No				Reasonably exploit the surface water according to approved design task of the works with an irrigation capacity of 1741 ha; Increase the ability to meet the water demand for agriculture, especially the area has not been watered for long time; thereby harmonize the conflicts between households using water.
Water quality is changed due to salinity intrusion, aluminiferous water or sedimentation	No				The subproject area is not affected by seawater or tide, so it is not affected by salinity intrusion or alumiferious; The proposed canals will be linned by concrete so the water will not be polluted by sediment.
Water is exploited at sensitive ecological places/or reservation areas	No				There is no sensitive ecological areas or protection areas in the subproject area;
Productivity is improved by increase of irrigation capacity	Yes	Positive	Significant	Permanent	 <u>Description:</u> Increasing irrigation area of 1741 ha compared with current cultivation area; cultivation productivity and diversification plants in the subproject area are increased. <u>Location:</u> Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa communes and Ky Anh town <u>Affected object:</u> Local peoples in beneficiary area

		POTEN	TIAL IMPACT				
IMPACT/ CONCERN	YES/ IS IT MINOR OR OR SIGNIFICANT?		IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE		
					Affected level: Significant		
Cultivation habits will be changed due to the turning of land use for agriculture purposes	Yes	Positive	Significant	Permanent	Location: The utilization area of agricultural land will be increased at less cultivated area where often occurs drought in Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa communes and Ky Anh town Affected objects: Local peoples in beneficiary area Affected level: Significant		
Reduce nutrition in the soil due to over-irrigation	Yes	Minor	Negative	Permanent	Description: There is not statistics or research in the area regarding the percentage loss of nutrients. Actually, the rate of soil nutrient loss is very small due to the cultivation in the plain with small slope that can not cause drift of soil when it rains or excessive irrigation. After the proposed canals are completed, the regulating system will be facilitated and more flexible, hence, the land will not lose nutrients due to excessive irrigation. Location: beneficiary area in Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa communes and Ky Anh town. Affected objects: Soil quality of Cultivated land Local peoples in beneficiary area Affected level: Small due to application of advanced technology in agriculture;		
Soil erosion or scouring of streams or canals	No				The canal is built from concrete so that soil erosion and land slide will not occur;		

		POTEN	TIAL IMPACT				
IMPACT/ CONCERN	NO2		IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE		
Congested canals cause flooding situation	Yes	Negative	Minor	Permanent	Description: In case of improperly operation and regulation of the culvert sy water will cause overflows and broke the canals. In addition, waste on the canals can cause stuck in the canals. Location: Along the proposed canal. Affected objects: The subproject canals Local peoples in beneficiary area Affected level: Small because proper management will be applied.		
Risks caused by natural calamity	Yes	Minor	Negative	Permanent	Description: Natural calamity will have serious affects on resident life as well as economic growth in the region. Location: The subproject area, especially in Dai Dong, Van Lac, Lien Son, My Lien, My Loi, Sa Xa and Thanh Son hamlets, Ky Van commune, Tan Son, Tan Tho hamlets, Ky Tho commune; hamlet 9, Ky Dong commune; Quang Du, Quang Ich hamlets, Ky Khang commune; Thanh Binh hamlet, Ky Thu commune; in other subproject communes; Affected objects: Local peoples in the subproject area The subproject canals Affected level: Small However, directly impacts on canals are minor because their positions are in paddy field, not directly suffered from river or dynamic flow damage		
Affecting water	Yes	Negative	Minor		Description:		

		POTEN	TIAL IMPACT					
IMPACT/ CONCERN	YES/ NO?	IS IT MINOR OR SIGNIFICANT?	IS IT POSITIVE OR NEGATIVE?	IS IT TEMPORARY OR PERMANENT?	BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE			
quality due to the increased volume of pesticide or chemical used for water treatment or increasing the waste water				Permanent	After constructing the canals, the cultivated area will increase to 1741 ha. Consequently, the quantity of pesticides or chemical fertilizers will be increased. The amount of pesticides on field surface and drainage system will affect the quality of agricultural land and irrigation water, possibly groundwater. The risk will increase if the management of pesticides is not reasonable. Location: Irrigation area in Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa communes and Ky Anh town. Affected level: Small due to application of advanced technology in agriculture;			
Affects on employment or livelihood	Yes	Positive	Significant	Permanent	 <u>Description:</u> Increase incomes and living standards for people in the subproject area by means of increasing the agricultural land area for production, cultivation productivity and diversification plants of seasonal crops. <u>Location:</u> The subproject area in Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa communes and Ky Anh town. <u>Affected objects:</u> People in the subproject area <u>Affected level:</u> Significant 			
Impacts on ethnic groups	No				No ethnic households must relocate or loss of residential land in the subproject area			
Generating solid and liquid waste	Yes	Negative	Minor	Permanent	<u>Description:</u> Agricultural waste after harvested or garbage from other farming activities such as pesticide covers and straw is popular. Currently, waste has not polluted severely to the canal water quality, soil, crops and farming areas. However, in the long-term, it will affect increasingly to soil and water quality and plants if the management authorities do not control and minimize; <u>Location:</u> The subproject area in in Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky			

		POTEN	ITIAL IMPACT				
IMPACT/ CONCERN	YES/ NO?	IS IT MINOR OR SIGNIFICANT?	POSITIVE OR TEMPORARY		BRIEF DESCRIPTION OF IMPACT LOCATION AND SCALE		
					Hai, Ky Hoa communes and Ky Anh town.; in other subproject communes; Affected objects: Canals and farming areas Affected level: Small because proper management will be applied.		
Occupying land of canal bank and canal safety corridor for individual purposes	Yes	Negative	Minor	Permanent	 Description: The occuping land for planting perennial trees or for personal purpose in the right of way (ROW) of the channel corridors are remain. Occupying land for planting perennial trees are violate regulations of the Ministry of Agriculture and Rural Development on protecion corridor canals and makes difficulties in implementing compensation and project execution during upgrading of the work; Location: the right of way (ROW) of the corridors of the canal of the sub-project in Dai Dong, Van Lac, Lien Son, My Lien, My Loi, Sa Xa and Thanh Son hamlets, Ky Van commune, Tan Son, Tan Tho hamlets, Ky Tho commune; hamlet 9, Ky Dong commune; Quang Du, Quang Ich hamlets, Ky Khang commune; Thanh Binh hamlet, Ky Thu commune; in other subproject communes; Affected objects: Embankment of the subproject canals Local peoples in beneficiary area Affected level: Small because regulations of the Ministry of Agriculture and Rural Development on protecion corridor canals were issued to deal with this problem. regulations of the Ministry of Agriculture and Rural Development on protecion corridor canals 		

5. OUTLINE ENVIRONMENTAL MANAGEMENT PLAN (EMP)

5.1 Environmental Mitigation Plan

Table 4. Environmental mitigation plan

POTENTIAL IMPACTS	MITIGATION MEASURES	RESPONSIBILIT Y	TREATMENT FACILITIES	COST
Pre-construct	ion stage			
Environment ally responsible procurement and SEMP preparation	 EMP is included in tender documents to ensure that mitigation measures are budgeted and to prepare the contractors for environmental responsibilities. Specify in bid document that Contractors shall engage capable and trained staff or site agent(s) to take responsibilities for the environmental management and safety issues at the working level and to monitor the effectiveness and review mitigation measures as the sub project proceeds. Contractors recruit qualified staff to oversee implementation of environmental and safety measures specified in the EMP. Any recent recommendations and initiatives from DONRE or other local environmental authorities will be incorporated in the EMP and updated as necessary. Before contracting based on the requirements of the IEE, contractors should prepare SEMPs for implementation by contractors. Such SEMPs shall not be in conflict with any provisions of the EMP in the IEE: Waste Management and Spoil, Disposal Plan, Materials Management Plan, Drainage Management Plan, Erosion Control Plan, Tree-cutting and Replanting Plan, Temporary Transport Management Plan, Utilities and Irrigation Provisioning Plan, Noise and Dust Control Plan, and Workers and Public Safety Plan 	Design Consultant, PPMU, Contractor, Environmental Consultant		Included in the contract

Initial Environmental Examination (IEE)/Commitment on Environmental Protection (CEP)

Lining the middle section f Rac river irrigation system subproject, Ha Tinh Province Integrated Rural Development in Central Provinces Project

Plan construction materials management	As planed in design documents, the main construction material will be purchased from licensed borrow pits, quarry and mines near the subproject area.	Design Consultant, PPMU	Included in the contract
	In case that, above material source will be changed, an appropriate material management plan should include the following: Required materials, potential sources and estimated quantities available; Material supply manners: preferring to purchase from existing material quarries. Agreement with the local authorities Check with environmental permission/certification of the quarries to ensure that environmental impacts and mitigation measures have been considered by owners. Environmental recovery plan Material transportation manner plans and schedules Program for delivery of quarry and borrow material		

Plan Spoil and Waste Disposal	 Re-use of waste materials & spoil disposal locations included in bid and contract documents. Surplus soil including cutting humus is used for leveling the canal safety corridor; Contractors may hire Ky Anh Urban Environment Company to collect transport and disposal waste at Ky Anh landfill. Select an properly treatment manners, preferred of for fill up the site of other projects activities/purposes. Determine waste materials & spoil disposal locations. The expectation is that construction waste will be stored temporarily along the proposed road, domestic waste will be stored in rubbish bins and then will be collected and treated by Ky Anh Urban Environment Company at Ky Anh landfill and contractors will be responsible for paying the bill. Agreement with Ky Anh Urban Environment Company need to be obtain during detail design or before starting construction activities; Waste materials transportation manner plans and schedules Establishment of complaints management system for duration of the works 	Design Consultant, PPMU		Included in the contract
Construction s	Operation licenses of the borrow pits must			Included
vegetation clearing, noise, water quality or other impacts from development of borrow areas and transportation for construction materials	certificate. Hence, dust and noise generated by exploitation activities will be minimized. When transporting construction materials, canvas must be used to cover to avoid dust. Watering the road surface based on a daily watering in the residential areas. Trucks must be in good condition and be maintained regularly.	Contractor		in the contract
Erosion or sedimentation caused during clearing or earthworks	canal and existing irrigation and drainage canals;	Contractor	Sediment fences, traps.	Included in the contract

POTENTIAL IMPACTS	MITIGATION MEASURES	RESPONSIBILIT Y	TREATMENT FACILITIES	COST
	for farmers. Minimize area of land clearance and duration of works within this area; Restoration of areas cleared for the construction sites; Dredge sediment if necessary. Re-vegetation after construction activity finishes. Avoid clearing activities during the rainy season from September to December. Implement dust reducing methods as			
Impacts arising from temporary storage areas including dust, noise and water quality	 mentioned in the part "Dust or exhaust from construction equipment" at material extraction sites or temporary material storage yards; Material transportation is strictly forbidden in the evening when stores are located next to residential areas; All material storage areas and material production areas shall be located at least 50 meters from any residence. Cover sand loads with nets or sheets if materials are stored within 50 m from houses 	Contractor		Included in the contract
Pollution of waterways, aquatic environments or underground water from wastes, chemicals, waste water or disturbance of contaminated soils	 Store chemicals in secure area, with concrete floor and weatherproof roof and away from watercourses and floodplains; Ensure construction equipment and vehicles are maintained in good conditions to avoid leakage; Provide rubbish bins and containers at camping sites and construction sites. Transport waste regularly from the sites to the Ky Anh landfill. Install sanitary toilets with septic tanks following sanitation regulation and washing facilities at construction camps. Collect debris, sludge at the construction sites. Avoid directing discharges from concrete mixing equipment to waterways 	Contractor	Tanks for storing chemicals, sanitary toilets, rubbish bins and containers	Included in the contract

POTENTIAL IMPACTS	MITIGATION MEASURES	RESPONSIBILIT Y	TREATMENT FACILITIES	COST
	MONRE.			
Dust or exhaust from construction equipment Noise is generated from construction equipment	 When transporting construction materials, implement strictly dust suppression measures such as watering of exposed surfaces and covering the trucks with canvas,; Ensure that all construction vehicles and equipment are well maintained; All noise generation activities shall be undertaken using minimum impact intensity and only during the hours of 07:00 to 17:00, and shall be located at least 300 metres from any residence; Provision noise protection equipment for worker; Inform local communities near construction area about schedule and duration of construction works. Collect feedbacks from the community through, head of villages and CPC. 	D: (: () T	Canvas, washing facilities	Included in the contract
Affects on traffic or conditions for property access	 Install signal lamps and sign panels at crossing points with road branches. Limit the speed of means of transport on the route; Limit construction activities on local roads and avoid implementing construction at rush hours (at the time of harvesting crops) Notify nearby community of schedule and duration of construction. 			Included in the contract
Impact on public infrastructure such as communication ,electricity wires, intercommune road, etc.	 Avoid impacts on low-voltage lines in villages during transport of materials and construction machinery by using vehicles and machines with the heights below electric wires; Minimize using heavy trucks for transporting materials in wet weather to avoid accidents from crashing into houses or works at road edge due to slippery roads; Contractors must repair material transportation roads if they damage them. Comply traffic regulations (limit the velocity of trucks); Install warning signs and avoid crashes to electric poles and houses. 	PPMU Contractor		Included in the contract
Construction workers cause social disruption	 Consult with local Commune PC in the subproject area to arrange accommodation for workers (to avoid any negative impacts on local people's activities) and register temporary 			No marginal cost

POTENTIAL IMPACTS	MITIGATION MEASURES	RESPONSIBILIT Y	TREATMENT FACILITIES	COST
	residence card for them; Request workers to collect waste as regulation and ensure that their construction camps are maintained in clean and hygienic conditions; Raise workers' awareness of environmental sanitation, infectious diseases as well as prevention of HIV/AIDS and sexually transmitted diseases and dissemination on social evils like drugs, gambling, prostitution, violence, stealing, etc. Install temporary drainage system and sanitary toilets at workers' camping sites. Establish safety measures as required by law and by good engineering practice and provide first aid facilities that are readily	Contractor		
Risk to health and safety to local people or construction workers	 accessible by workers. Workers shall be provided with appropriate personal protective equipment (PPE) such as safety shoes, hard hats, safety glasses, ear plugs, gloves, etc. at no cost to the employee. Construction camps shall be provided with toilet/sanitation facilities in accordance with local regulations to prevent any hazard to public health or contamination of land, surface or groundwater. Ensure reversing signals are installed on all construction vehicles. Minimize impacts of dust, polluted air as mentioned above; Request workers to collect waste as regulation and ensure that their construction camps are maintained in clean and hygienic conditions; 	Contractor	Safety equipment	Included in the contract
Causes waste disposal problems from solid waste generated during construction activity or municipal waste generated in construction camps	 Provide rubbish bins (02 bins at the main camp; 01 bin for each camp along the canal sides and its management road and request workers to collect waste and not to leave litter into any water resources; Provide containers to collect construction waste and hazardous waste such as used oil at construction sites; Spoil soil need to collected, and transported to approval disposal areas (Ky Anh landfill). Collect solid waste regularly and transport rubbish to Ky Anh landfill. 	Contractor	Rubbish bins and containers	Included in the contract
Impacts on	Lining the canal should be implemented in	PPMU/		Included

POTENTIAL IMPACTS	MITIGATION MEASURES	RESPONSIBILIT Y	TREATMENT FACILITIES	COST
irrigation activities	dry season with application of construction and irrigation at same time. The Contractor should coordinate with irrigation authority (Northern Ha Tinh Irrigation One Member Limited Company), commune's irrigation staff and cultivation households in water supply area of the subproject to reach agreement on water supply duration (construction suspension), construction time (should be implemented at the time when irrigation activities are not done); Commune's irrigation staff, irrigation exploitation enterprise or relevant authorities should early inform households and contractor on water supply schedule so that they can make plan on their own initiative; PPMU and the Contractor should pay attention to mitigation measures to reduce damages or to implement compensation for arising impacts due to stop of water supply at cultivation area, etc Proposed construction time: after harvesting. Construction time should be implemented at the time when irrigation activities are not done.	Contractor; Northern Ha Tinh Irrigation One Member Limited Company, commune authorities and local residents in the subproject area		in the contact with the contracto r
Environmental recovery	 Before construction is completed, the contractor will move all construction wastes and unused materials from the sites to approved sites Monitoring environmental recovery at working sites, worker's camps, construction waste disposal location, material stores. Monitor survival of trees / shrubs and grass in bioengineered slopes (e.g. at landslides, also transplanted / compensatory planting trees) and replant, as necessary. 	Contractor		Included in the contract
Operation stag		· · · · · · · · · · · · · · · · · · ·		
Reduce nutrition in the soil due to over-irrigation	 Coordinate with agriculture authority/ Agricultural extension units to ensure that farmers are trained on proper irrigation method; 	DARD of Ha Tinh province		Provincia I budget

POTENTIAL IMPACTS	MITIGATION MEASURES	RESPONSIBILIT Y	TREATMENT FACILITIES	COST
Congested canals cause flooding situation	 Operate regulation works canal properly, flexibly with real condition to avoid waste and water overflow at the proposed canals; Periodically dredge irrigation canal system after harvesting crop, heavy rain and flood; Periodically inspect and maintain canals and on canal structures. 	Northern Ha Tinh Irrigation One Member Limited Company		Provincia I budget
Risks caused by natural calamity	 Ensure that subproject design will meet all safety standards on prevention of flooding, storms and other potential natural calamity; Irrigation works exploitation factory need repairs and maintains the works periodically to ensure the operation capacity. 	PPMU Northern Ha Tinh Irrigation One Member Limited Company		Provincia I budget
Affecting water quality due to the increased quantity of fertilizer or pesticide or chemical substances or waste water	 Coordinate with agriculture authority to ensure that farmers are trained on irrigation method; Cover, bottles from pesticide, insecticide as well as other substance such as herbicide should be stored in safety tanks at cultivation area before transport to dumping area; Ensure weed and other floating waste are periodically cleaned along the canals; Coordinate with Agriculture Extension Center to ensure that farmers are trained on Insect Prevention Method (IPM). 	Northern Ha Tinh Irrigation One Member Limited Company/ DARD		Provincia I budget and other assistanc e funds
Generated solid and liquid waste	 Periodically collect waste in canals and field surface; Build waste collection system; Improve the awareness of local people of waste management and collection in the field, canals via training courses. 	Northern Ha Tinh Irrigation One Member Limited Company/ DARD		Provincia I budget
Occupation of canal and canal safety corridor for individual purposes	 Implement strict management measures to protect the canal banks and reservoir protection area from being reoccupied (for tree planting and other encroachment) by regular check and establishment of regulations on treatment of violations (if any) 	Northern Ha Tinh Irrigation One Member Limited Company		Provincia I budget

5.2 Environmental Monitoring Plan

5.2.1 Environmental effects monitoring

6. Environmental effects monitoring is carried out to examine impacts of project in relation to ambient environmental conditions.

Table 5. Environmental effects monitoring plan

Mitigation Measure	Parameters	Location	Methods	Frequency	Responsibility	Cost
Construction	stage					
Minimization of noise generation	Noise level	At nearest residential areas of the proposed canal and residential areas near material transportation	Observation and community consultation	Weekly or when community' s feedback is raised	Construction Supervision Consultant (CSC)/ hold Environmental Supervision Consultant	
		roads in Dai Dong, Van Lac, Lien Son, My Lien, My Loi, Sa Xa and Thanh Son hamlets, Ky Van commune, Tan Son, Tan Tho hamlets, Ky Tho commune; hamlet 9, Ky Dong commune; Quang Du, Quang Ich hamlets, Ky Khang commune; Thanh Binh hamlet, Ky Thu commune; in other subproject communes		Every 6 months during construction period or when community's feedback is raised	Monitoring consultant on environmental safeguard policies of LIC team	Included in separated contract with CPMU
Minimization of dust generation	Dust concentratio n	The same monitoring locations of Noise	Observation and community consultation	Weekly or when community' s feedback is raised	Construction Supervision Consultant (CSC)/ hold Environmental Supervision Consultant	Included in the contract with PPMU
				Every 6 months during construction period or when community' s feedback is raised	Monitoring consultant on environmental safeguard policies of LIC team	Included in separated contract with CPMU
Control of	Sedimentati	The intersections	Visual	Weekly and	Construction	Included

Mitigation Measure	Parameters	Location	Methods	Frequency	Responsibility	Cost
surface water quality	on, rubbish, lubricating oil and solid waste BOD, DO, pH, TSS, Total coliform; fecal	of the proposed main canal 43 existing canals; The intersections of the proposed canal and 21 drainage canals.	Observation; Sampling and analysis	after large rain evens	Supervision Consultant (CSC)/ hold Environmental Supervision Consultant	in the contract with PPMU
	coliform, lubricating oil			Based on requirement of water supply	Local people, Community monitoring committee Local irrigation staff (commune)	Province budget Without marginal cost
				Once every 6 months during construction or in case of at any time or in case of complaints of residents	Monitoring consultant on environmental safeguard policies/LIC	Included in separated contract with CPMU
Labor safety and community safety	Number, use of labor equipment; signal system	In construction sites and on material transportation roads along	Observation and community consultation	Weekly or when community' s feedback is raised	Local people, Community monitoring committee	Without marginal cost
	Obey for traffic law of transportati on mean of construction material	Lac, Lien Son, My Lien, My Loi, Sa Xa and Thanh Son hamlets, Ky Van commune, Tan Son, Tan Tho		Weekly or when community' s feedback is raised	Construction Supervision Consultant (CSC)/ hold Environmental Supervision Consultant	Included in the contract with PPMU
		hamlets, Ky Tho commune; hamlet 9, Ky Dong commune; Quang Du, Quang Ich hamlets, Ky Khang commune; Thanh Binh		Once every 6 months during construction or in case of at any time if necessary	Monitoring consultant on environmental safeguard policies/LIC	Included in separated contract with CPMU

Mitigation Measure	Parameters	Location	Methods	Frequency	Responsibility	Cost
		hamlet, Ky Thu commune; in other subproject communes.				
Operation sta	age					
Surface water quality	BOD, DO, pH, TSS, Total coliform; fecal coliform, turbidity	Location: At 06 points: at K18, hamlet 9, Ky Dong commune; at the bridge in Quang Ich hamlet, Ky Khang commune; at the bridge in Tan Tho hamlet, Ky Tho commune; at Dai Dong hamlet, Ky Van commune; at Thanh Binh hamlet, Ky Thu commune; at the end of the project in Ky Thu commune	Observation and community consultation Or sampling methods following Vietnamese standard when receiving feedback from communities	Twice a year in two first years of operation (1 time in rainy season and 1 time in dry season)	DARD, Northern Ha Tinh Irrigation One Member Limited Company;	Included in operation cost of Northern Ha Tinh Irrigation One Member Limited Company
Waste management	Conditions on environment al sanitation within the subproject area; temporary waste storage yard	Throughout the subproject area	Observation and community consultation	Once every 6 months in first 2 years of operation	Northern Ha Tinh Irrigation One Member Limited Company	Budget provided following regulation s at Decree No.115
Periodical canal maintenance	Level of canal sedimentati on and conditions of sluices, equipment and works on the main canal	Along the proposed canal	Field survey, community consultation	Once every 6 months in first 2 years of operation		Local budget
Re-	Occupation	Along the	Field survey,	Once every	DARD/	Local

Mitigation Measure	Parameters	Location	Methods	Frequency	Responsibility	Cost
occupation of canal corridor	area, type of occupation (for planting trees or other purposes)		community consultation	6 months in first 2 years of operation	Northern Ha Tinh Irrigation One Member Limited Company	budget

5.2.2 Environmental Compliance Monitoring

7. Environmental compliance monitoring is carried out to test compliance with operating procedures, technical standards and/or contractor specifications in the EMP.

Table 6. Environmental Compliance Monitoring

Mitigation Measure	Parameters	Location	Methods	Frequency	Responsibility	Cost		
Pre - constru	Pre - construction Stage							
Environme ntally responsible procureme nt and SEMP preparation	Inclusion in bid docs	All canal alignment	Checking documents	Bid preparation, before start of civil works	PPMU	Project preparation		
Plan constructio n materials manageme nt	Meting minutes and agreement with local authorities	All canal alignment	Checking documents	Prior to start of site works and throughout construction phase	PPMU	Project preparation		
Plan Spoil and Waste Disposal	Meting minutes and agreement with local authorities	All canal alignment	Checking documents	Prior to start of site works and throughout construction phase	PPMU	Project preparation		
Construction	n Stage							
Erosion and	Condition and	Throughout		Weekly and After heavy rain	Construction Supervision Consultant	Included in the contract signed with		
sediment controls	capacity of controls	construction sites	Observation	Every six months	Environmenta I Specialist of LIC Team	Construction Supervision Consultant (CSC) and Loan		

Mitigation Measure	Parameters	Location	Methods	Frequency	Responsibility	Cost
						Implementation Consultant Team (LIC)
Materials	Condition of materials	Throughout		Weekly	Construction Supervision Consultant	Included in the contract signed with CSC and
storage	storage areas	construction sites	Observation	Every six months	Environmenta I Specialist of LIC Team	LIC
Constructio n equipment	Noise and exhaust generation;	Throughout	Ohaansatian	Weekly	Construction Supervision Consultant	Included in the
and vehicles	covering of trucks; oil/fuel leaks	construction sites		Every six months	Environmenta I Specialist of LIC Team	contract signed with CSC and LIC
Constructio	Cleanliness; waste disposal	All construction	Observation	Weekly	Construction Supervision Consultant	Included in the contract signed with CSC and
n camp conditions	facilities; general condition	camps	Observation -	Every six months	Environmenta I Specialist of LIC Team	LIC
	Check implementat ion of all items			Weekly	Construction Supervision Consultant	Included in the contract signed with the CSC and LIC)
Risks to health and safety of local people and construction workers	Check compliance to Labour Code of Vietnam, Decree 06/1995/ND -CP 20/1/1995, Decree 110/2002/ ND-CP 27/12/2002 and Circular 19/2011/TT- BYT 6/6/2011	Throughout construction site	Checking document, observation and community consultation	Every six months	Environmenta I Specialist of LIC Team	
Property access	Rehabilitate the possibility of temporary and fixed	Affected assets: roads in commune and affected		Once during construction works and once after finishing	Supervision	Included in the Contracts signed with CSC and LIC

Mitigation Measure	Parameters	Location	Methods	Frequency	Responsibility	Cost	
	access	assets during	Observation and	construction	Monitoring Boards	Local budget	
		construction	community consultation	Every six months	Environmenta I Specialist of LIC Team		
Areas of	Ponded or	Throughout	Observation and	Weekly during rainy season	Construction Supervision Consultant Local Community Monitoring Boards	Included in the Contracts signed with CSC Local budget	
standing water	undrained water	construction site	and - community consultation	site community		Monitoring consultant on environmental safeguard policies/LIC	Included in separated contract with CPMU
Impacts on	Check implementat	Throughout construction	Checking documents, observation	Weekly	Construction Supervision Consultant	Included in the contract signed with the CSC	
irrigation activities	ion of all items	site	and community consultation	Every six months	Environmenta I Specialist of LIC Team	and LIC	
	Environmen tal sanitation at			Weekly	Construction Supervision Consultant	Included in the	
Waste disposal	construction site and temporary waste storage area	Throughout construction site	Observation	Every six months	Environmenta I Specialist of LIC Team	contract signed with CSC and LIC	
Environmen tal recovery	Check implementat ion of items	Throughout construction site	Checking documents, observation and community consultation	Every six months and after completing each item	Construction Supervision Consultant/ Environmenta I Specialist of LIC Team	Included in the contract signed with the CSC and LIC	
Operation S	tage						

Mitigation Measure	Parameters	Location	Methods	Frequency	Responsibility	Cost
Waste manageme nt	Site cleanliness and conditions of temporary waste storage areas; recent waste disposal method	Throughout sub-project area	Observation	6 monthly for first 5 years of operation	Northern Ha Tinh Irrigation One Member Limited Company	Provincial budget
Using irrigation water	Using matter	Households near canals	Observation and community consultation	Once every 6 months in first 5 years of operation	PPMU/ Northern Ha Tinh Irrigation One Member Limited Company	Budget provided following regulations at Decree No.115
Soil erosion or land slide in canal	Conditions of the canal; level of sludge in water	At sections which have not be rehabilitated	Observation	Once every 6 months in first 2 years of operation	PPMU/ Northern Ha Tinh Irrigation One Member Limited Company	Budget provided following regulations at Decree No.115
Prevention of soil erosion and land slide in the canal	Conditions of canal bank	At some representativ e locations in subproject area	Observation and community consultation	Once every 6 months in first 5 years of operation	PPMU/ Northern Ha Tinh Irrigation One Member Limited Company	Budget provided following regulations at Decree No.115

5.3 EMP Implementation Arrangements

Table 7. EMP Implementation

	Roles and Responsibilities					
Organization	Subproject Preparation	Subproject Implementation	Subproject Operation			
СРМИ	Advice to PPMU Safeguards Officer on IEE/CEP and IEE/EIAR preparation Review and provide "no- objection" on IEE/CEPs or IEE/EIARs submitted by	Suggest to PPMU Safeguards Officer on EMP implementation during construction Monitor progress during construction	Safeguards Officer on EMP implementation during first 2 years of			

	Ro	les and Responsibilities	
Organization	Subproject Preparation	Subproject Implementation	Subproject Operation
	PPMUs	Consolidate environmental reporting from PPMU	first year of operation Consolidate PPMU environmental reporting
PPC	Sign-off on environmental assessment documents prior to submission for approval Approval of any subprojects requiring EIAR that are not subject to MONRE approval		Project owner with responsibility for operation stage environmental performance including implementation of EMP during operation
DONRE	Provide advice and guidance on environmental issues as required during subproject preparation	Monitoring implementation of EMP through their own internal monitoring system	Monitoring implementation of EMP through their own internal monitoring system
PPMU	Engage consultant and have overall responsibility for IEE/CEP or IEE/EIAR preparation and submission for approval Ensure staff are adequately trained in environmental issues	Responsibility for EMP implementation during preconstruction and construction Ensure that contract specifications and bud documents include environmental requirements Undertake inspections and monitoring of environmental issues during construction Coordinate environmental monitoring reporting to CPMU	Responsibility for EMP implementation during first year of operation Undertake inspections and monitoring of environmental issues during first year of operation Assist project owners to incorporate environmental requirements into infrastructure O&M procedures
Town and District PCs	Approval of subproject CEPs in accordance with GOV legislative requirements	Monitoring implementation of EMP through their own internal monitoring system	Monitoring implementation of EMP through their own internal monitoring system
Town and District Subproject Support Teams (SST)	Assist in IEE/CEP preparation as required Assist PPMU to review bidding documents, contract documents, and tenders to ensure environmental issues are adequately addressed	Day to day supervision of contractors' in district including compliance with environmental management requirements Undertake environmental monitoring and coordination of local	Undertake environmental monitoring and coordination of local community environmental monitoring activities for first year of operation

	Ro	les and Responsibilities		
Organization	Subproject Preparation	Subproject Implementation	Subproject Operation	
		community environmental monitoring activities		
Commune Supervision Boards (CSBs) and local community members ⁹	Involvement in consultation and participation activities to identify and develop subprojects Ability to comment on environmental assessment documentation upon disclosure	Involvement in environmental monitoring activities under the direction of SSTs	Involvement in environmental monitoring activities under the direction of SSTs	
Construction contractor	n/a	Prepare detailed Site EMP to meet the Subproject EMP general requirements Allocate adequate resources to meet the requirements and obligations of Site EMP		
Northern Ha Tinh Irrigation One Member Limited Company	N/a	N/a	Monitoring mitigation measure in the operation phase	
LIC Team on environmental safeguard policies	Implement spot check environmental monitoring at subproject area once every 6 months. Monitoring results will be included in the report which will be sent to CPMU.		N/a	
Construction Supervision Consultant	N/a	Implement construction supervision at construction sites every day. Implement environmental monitoring at subproject area every week. Monitoring results will be included in the report which will be sent to PPMU.	N/a	

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⁹ CSBs have been established under Decree 80 Regulation for Participatory Investment Supervision. Article 8 of Decree 80 provides the community with opportunities to inspect compliance, monitor implementation and evaluate the results of investments in the commune, including environmental impacts.

5.4 Monitoring and Reporting System

Table 8. Monitoring and Reporting System

Project Phase	Type of Report	Frequency	Responsibility	Submitted To Whom
Construction	Site Environmental Performance Report indicating compliance with Site EMP and monitoring results	Monthly	Construction Supervision Consultant	PPMU
	EMP Compliance Report indicating compliance with subproject EMP and monitoring results	Quarterly	PPMU	СРМИ
	EMP Compliance Report indicating compliance with subproject EMP and monitoring results	Bi-annually or twice during construction depending on construction duration	CPMU/LIC	ADB
	Subproject Environmental Report indicating overall subproject environmental performance and EMP compliance	At completion of subproject	CPMU/LIC	ADB
Operation	EMP Compliance Report: Operation indicating compliance with subproject EMP commitments during operation	Every six months for first two years of operation. Ongoing frequency to be determined based on review after 2 years	Northern Ha Tinh Irrigation One Member Limited Company	ADB and Town and District People's Committee

5.5 EMP Budget

Table 9. EMP Budget

Item	Marginal Cost for Pre- Construction		Marginal Consti			Marginal for Ope		Margina Costs Su Total	
Monitoring									
PPMU's Intermonitoring		in cost	Included Contracts Contractor as well as manageme	in PF	CMC PMU's	Local provincial budget	and I	Included contracts other opera capital sour	
Community monitoria	g Not available (n/	/a)	Local bud	get (as in	Local	budget	Local budge	et

Item	Marginal Costs for Pre- Construction	Marginal Costs for Construction	Marginal Costs for Operation	Marginal Costs Sub- Total
		Decision No.80/2005/QĐ-TTg)	(as in Decision 80/2005/QD- TTg)	
Independent monitoring consultant on environmental safeguard policies	n/a	Included in a separate contract with CPMU	n/a	
Training on capacity enhancement on environmental monitoring capability	n/a		Local budget	n/a
Public disclosure	Defined in consultancy contract on IEE		n/a	Public disclosure
TOTAL (intensify the capability and public disclosure)				

6. PUBLIC CONSULTATION AND DISCLOSURE ACTIVITIES

6.1 Description of Activities to Date

Table 10. Public consultation and public disclosure activities

CONSULTATION METHOD	DE	TAILS OF ACTIVITIES
Correspondence and meetings	Date of correspondence	15 /09/ 2014
with local authorities (District and Commune PCs, Commune Fatherland Front, Women's	Dates of meetings (if requested)	23/09/2014
Union, Youth Union and others)	Minutes of meeting attached (Yes / No)	Yes
Public meetings	Date(s) held	23/09/2014
	Location(s) held	PC's meeting hall and cultural house of Ky Van, Ky Tan, Ky Thu and Ky Tho communes
	Invitees	Commune PCs, stakeholders, village heads, Young Communist League, Fatherland front, Farmer Association, Women Union of the communes.
	Methods of invitation	Radio announcement and letter, coordinate with Women Union to mobilize women's participation in meetings

CONSULTATION METHOD	DETAILS OF ACTIVITIES		
	Agenda attached (Yes / No)	Yes	
	Minutes of meeting attached (Yes / No)	Yes	
	Number of participants	Total have 140 people	
		Man: 67 people	
		Women: 73 people	
		(the list of participants will be closed in the minutes of consultation)	

6.2 Outcomes of Public Consultation to Date

Table 11. Results of public consultation

Description of Issue Raised	By Whom?	Required Follow-up Actions?
Detailed design	Local people of Ky Van and Ky Tho communes	In the surveying and detailed design period, the consulting firm is expected to coordinate with local authorities to find suitable water in lets and outlets
Affect water supply and agriculture production	Local people of Ky Van and Ky Tho communes	Make plan for water supply properly. Require farmer to implement in accordance with harvest
Restoration of construction site	Local people of Ky Van and Ky Tho, Ky Tan communes	It is desired that the sites will be restored after completing the construction
Traffic safety on commune's roads	Local people	The Contractors are supposed to slow down when transporting materials by the residential area along commune's roads. It is necessary to plant construction signposts and speed limit signs
Construction workers cause social disruption and sanitation problems	Local people	It is requested that the workers maintain sanitation and public order; Register temporary residence card for workers;
		Request workers to collect waste as regulation and ensure that their construction camps are maintained in clean and hygienic conditions.

6.3 Future Public Consultation Activities

Table 12. Proposed community consultation activities

Activity Participants	Expected Outcomes	Schedule	Cost Estimate
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Initial Environmental Examination (IEE)/Commitment on Environmental Protection (CEP)

Lining the middle section f Rac river irrigation system subproject, Ha Tinh Province Integrated Rural Development in Central Provinces Project

Activity	Participants	Expected Outcomes	Schedule	Cost Estimate
Kick-off meeting prior to construction commencement	PPMU, the Contractor, Construction Supervision Consultant, community representatives at project area	Publicize construction contents, schedule and plan for water supply		Be estimated in EMP budget
Periodical meetings	Contractor, Construction Supervision Consultant and representatives of local authority, organizations and community at project area	Propose treatment alternatives and reach agreement on	from construction commencement	

7. CONCLUSION AND RECOMMENDATIONS

- 8. The subproject "Lining the middle section of Rac river irrigation system, Ha Tinh Province" will be implemented by Ha Tinh PPMU under IRDPCP in Ky Anh district, Ha Tinh province.
- 9. An environmental assessment of the project has been carried and the main negative potential environmental impacts of the sub-project during construction and operation stages include:
 - Air pollution from dust or exhaust emissions (CO, NOx, SOx, etc). Noise, vibration from construction equipments and vehicles on the road;
 - Dust and noise generated during the transport of material from material stores to the construction sites:
 - Traffic disturb when transporting material, effect on infrastructure system (electricity, road, communication cables), risks of health and safety of local people and construction workers;
 - Waste disposal problems from solid waste generated during construction activities or municipal wastes generated in construction camps;
 - Agriculture wastes (residue of vegetables, pesticide cover, straw of cultivation area) from the boundaries of the upgraded main & primary canal have been focus at the canal bed, obstructing and polluting the flow;
 - Conflicts between agriculture water supply for irrigation area and water supply stop
 - Affecting water quality due to the increased quantity of fertilizer or pesticide or chemical substances or waste water;
 - Risks of natural calamity due to Storm & flood occur during rainy season.
- 10. A range of mitigation and monitoring measures has been developed for the sub-project, which includes the following activities:

Mitigation measures:

- Measures for mitigating air pollution: During the transport of construction materials, watering the road surface and covering means of transport with canvas. Besides, other measures may include installing wheel washing equipments at construction sites and regularly maintaining vehicles and machines.
- The Contractors do not transport materials at rush hours (6 am to 7 am; 11 am -12 pm; 5 pm- 6pm) and to be supposed to slow down when transporting materials by the residential area and to plan construction signposts and speed limit signs
- Provide rubbish bins to store domestic waste at the construction site; request workers not to leave litter; provide containers to store construction waste at construction sites; install sediment fences and/or sediment traps to collect sediment before it enters waterways;
- The Contractor should coordinate with irrigation authority (Northern Ha Tinh Irrigation one Member Limited Company), commune's irrigation staff and cultivation households in water supply area of the subproject to reach agreement on water supply duration (construction suspension), construction time (should be implemented at the time when irrigation activities are not done)
- During exploitation process, management authority should disseminate and consult the local authority/water users to limit the excessive use of water; establish regulated procedures and detailed water supply plan; update information year by year to inform users, implement dissemination and training on scientific irrigation to the community for understanding and implementation,

- Avoid deteriorating soil/water quality by increasing quantity of fertilizer and pesticide
 Ha Tinh PPMU should coordinate with Agriculture Extension Centre to ensure that
 farmers are trained on Integrated Pesticide Management (IPM)
- PPMU should ensure that subproject design will meet all safety standards on prevention of flooding, storms and other potential natural calamity

Monitoring activities:

In order to ensure the compliance of measures to mitigate negative environmental impacts caused by the subproject, these monitoring activities must be carried out:

- The contractor must implement measures to mitigate environmental impacts in residential areas near the construction sites, along the material transportation roads and construction sites, worker's camps ect. Their implementation can be monitored by observing and measuring water quality, air quality and frequency of implementing these measures. Moreover, the contractor must arrange adequate resources to meet general requirements and compulsory regulations on EMP at the construction sites;
- During operation stage, O&M agency (Northern Ha Tinh Irrigation one Member Limited Company) have to periodically manage water quality according to recent Vietnamese Standards and National Technical Regulations;
- PPMU should intensify the contractor's compliance with environmental regulations on material storage, construction equipment, waste disposal, air quality, dust, noise and vibration to ensure safety for the community during construction stage and operation stage; coordinate with local authorities to formulate and implement EMP.

Conclusion:

- 11. Lining the middle section of Rac river irrigation system, Ha Tinh Province will supply irrigation water for 1741 ha of agriculture land and improve livelihoods and reduce poverty for local people in the subproject area. It is expected to directly benefit 56,093 people in 10 communes and town namely Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa and Ky Anh. Thus, the subproject will contribute to promote socio-economic development and modernize rural area;
- 12. Negative environment impacts caused by the subproject mainly generate during the construction stage. However, these impacts are temporary and they will end when the canals are put into operation. Upon completion, the upgraded road will help supply irrigation water to farmers. On the other hand, it will bring positive impacts to the environment and promote economic development for the subproject area. Thus, based on the Initial Environmental Examination, the consultants and Ha Tinh PPMU would like to recommend as follows:
 - (i) There will not be any significant impacts to the environment and no further environment assessment is necessary.
 - (ii) The IEE of the subproject "Lining the middle section of Rac river irrigation system subproject, Ha Tinh Province" should be approved by authorities so that next steps can be implemented to ensure good progress and project benefits.

8. ANNEXES

- Photos of locations of air quality monitoring
- Public consultation and meeting minutes
- Photos of implementation of public consultation
- Data source

Annex 1: Photos of locations of air and water quality monitoring



Photo 1: Air quality monitoring point at K18, Photo 2: Water quality monitoring point at K18, hamlet 9, Ky Dong commune



hamlet 9, Ky Dong commune



Photo 3: Air quality monitoring point at material Photo 4: Water quality monitoring point at the transportation road in Quang Ich hamlet, Ky bridge in Quang Ich hamlet, Ky Khang commune Khang commune





Photo 5: Air quality monitoring point at the Photo 6: Water quality monitoring point at the construction site in Tan Tho hamlet, Ky Tho bridge in Tan Tho hamlet, Ky Tho commune commune





Photo 7: Air quality monitoring point at material Photo 8: Water quality monitoring point in Dai transportation road in Dai Dong hamlet, Ky Van Dong hamlet, Ky Van commune commune





Photo 9: Air quality monitoring point at material Photo 10: Water quality monitoring point in transportation road and construction site in Thanh Binh hamlet, Ky Thu commune Thanh Binh hamlet, Ky Thu commune





material transportation road and construction end of the project in Ky Thu commune site in front of Ky Thu primary school, Ky Thu commune



Photo 11: Air quality monitoring point at Photo 12: Water quality monitoring point at the

Annex 2: Public consultation and meeting minutes

Meeting minutes at public consultation and lists of attendance in the public consultation meeting at Ky Tho commune

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM Độc lập – Tự do – Hạnh phúc

.. Ky...Th.o...., ngày . 23.tháng . 29.năm 2014

DỰ ÁN PHÁT TRIỂN NÔNG THÔN TỔNG HỢP CÁC TỈNH MIÈN TRUNG - KHOẢN VAY BỔ SUNG

BIÊN BẢN HỌP THAM VẤN CỘNG ĐỒNG

Về các chính sách an toàn: Môi trường, Tái định cư, Giới và Dân tộc thiểu số

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l. Thành phần tham dự:	7
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- Ong/Ba. Doan Van Dinh.	Chức vụ Chuyển gra tai til ce
- Ong/Bà Vu thoang Lan,	Chức vụ Chuyển goa mã trường
- Ong/Bà. N.g. Thasa Lam,	Chức vụ Cán bố Ky Thuật Ban QLDA trê
- Ong/Bà. D. Lady Perte this,	Chức vụ. Chủ trah U.B.P. D. Xa.
- Ông/Bà Ng Tuến Hưng,	Chức vụ Can bố tra chenh
- Ong/Bà. Le Thi tlinh	Chức vụ thời phố hại phụ mã
 Đại diện những hộ bị ảnh hưởng thiểu sốngười, chiếm% 	người, trong đónữ, chiếm(%) , Dân tộc
II. Nội dung	
2.1 Các nội dung phổ biến:	
- Cung cấp các thông tin về dự án như đị	a điểm, quy mô, các thông số kỹ thuật cơ bản
- Chính sách an toàn của dự án bao gồm	: Chính sách về giới và sự tham gia của cộng đồng;
	ối trường, Chính sách Tái đinh cư và kế hoạch phát

2.2 Tham vấn cộng đồng:

- Tham vấn các vấn đề giám sát và tham gia của cộng đồng trong các giai đoạn chuẩn bị, thực hiện, vận hành tiểu dự án, các vấn đề về giới và lồng ghép giới, nhóm dễ tổn thương, hộ bị ảnh hưởng nặng...
- Tham vấn các vấn đề về môi trường, tác động môi trường tiềm năng của dự án bao gồm tác động lên môi trường tự nhiên và xã hội của khu vực dự án và những biện pháp giảm thiểu các tác động tiêu cực;

1

- Tham vấn các vấn đề v	về tái định cư, các tác động	g dự kiến, quyền lợi của người bị ảnh
hưởng, các biện pháp giả	im thiểu tối đa nhằm có ít táo	động nhất đến người bị ảnh hưởng.

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III. Ý kiến thảo luận
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gia philip han vao qua turil thic hily off an. I down san su than goa cua or
Lois from ban gram sat
the Lord cong they though mick whan Law bas
In it for da cho eng dong, dae bief
là pay mi
III. 2. Các vấn đề về môi trường
Ng Rà da ung hộ dư cá và mong muốn nhà thâu
the cong se Ket hon bas và oku të tim ra
va this her tot can bien phap nay nham stam bao
we sich må trelay, an nine trat tel trang que!
trink this cong
I'm in thick ke' Ket high wa' dan to tim re doen
cap nulle va tou nulle han ly
Joh in the cong trilde the tree Khai xay clery phase co
cam set vor dra Thilong ve dam bas an toan, ve sich, mer
May give ot son war hank trujen trujen cho dan has de
Viti Xa rac vão kena.

III.3. Các vấn đề về tái định cư và dân tộc thiểu số
(See They hand do an all how ce
thing and felling to that via cay cold
ending dir Lan Lo vang cap trees buyer our
co Cair.
, Cae ho day stong find their holy
du av. và mong must de fiel land son
some bly Just die or
THE TOTAL OF THE STATE OF THE S
IV. Kết luận
Whin chung ba can rat ung ho vier Thire
hien du? an in du? an tem lei là ich cho
bå cen bå cen chi co' të nghi trong que
tinh this range va thiet re cung she van hate can
de vi hen quan phui dam bas cad brenghap
gram thier tree day to ma they cho
Khu like du as

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM Độc lập - Tự do - Hạnh phúc

KHOẢN VAY BỔ SUNG

DANH SÁCH ĐẠI BIỂU THAM DỰ CUỘC HỌP (Tham vấn cộng đồng về chính sách an toàn: Môi trường, Tái định cư, Giới và Dân tộc thiểu số

Tên tiểu dự án: Navy cấp, sưa chức tITTL vung giữa TL Sý Rac Vayên Kỳ Anh Xã kỳ Tho huyên kỳ Anh tỉnh tha Tirk

STT	Họ và tên	Giới tính	Địa chỉ	Ký tên
1	Le Thi Thanh Huyin	Ni	Son Bac - ky Tho	thujen 4.
2	Pham thi thao	Mi	Vinh The -ty Tho	thao
3	Nguyễn Thi Hanh	Ni	Son Boic - by The	Heanh
4	Diring Thi Van	Na	Són Bric - ley Tho	Udy
5	La Thisthi	Nav	Son Box Ky Tho	-110
6	phan die Ban	Jvan	vis The KyTho	Ban
7	Ho tiên Song	Name	Sou box Ky Tho	Hlbory
	Dring Dink Winds	Nam	Sow the ty the	at the
9	Nguyên Cong al	Nem	Son his ky tho	Cel
10	No year Van Ehach	Name	Sa bae ky Tho.	Viast of
	10000		Son line ky tho	nients
12	Le Tehai Hon	Nan	Son Nam Kytho	to Pay
			San Nan Ky Tho	Thatlet
14	Tván Zhu Hug	Waln	Sin Nan Cetho	The
	Dainy Dinh Châu		sin Nan Kysh	Char
16	Ho Van Duc	Noin	Son Nam - Kee The	Duy
			Sin nom legtho	14

STT	Họ và tên	Giới tính	Địa chỉ	Ký tên
18	Phow-Did The	Unter	Will Tho	1
19	Phony And ban	Malle.	11.	Bay
20	Ho ron now	Mair	//	Told
21	Thom Xeron phon	ace	1	Bus
22	Tran Van bism	Mary		Sigm
23	Thom Pinh giai	Melel	//	608
24	18 The Hores	nn'	//	Hoz
V25	Thank the theo	Mi	7	Mao
26	Thain Than Xelan		1/	Xach
27	No The Misn	2 ² 0	1/	line
28	nguyên The Hien	her	Son ham	heir
29	là the tain	lr	//	FAM
30	Ho Thi Hea	<u>I</u>	1/	Thor
31		1/		Doan
	Ho Minh Chave	Karu Ni	Jan Tho	Cloudy
3.3	TRân Công Khang	Nam	Tan Tho	School
35	Pham Dunh Nhan	Nam	Tân Sin	1 Also
36		Nam	Tan Tho	tang
37	Namen Thanh Quara	Nam	Son Bac	Duang
38	Nguyễn Tiền Hưng Nguyễn Thanh Quang Drong Định Hồi Hồ Ninh Hiểu	Nam	Pan The	Deceer
39	Hô Minh Hiểu	Nam	Sơn Baic	Fier

Integrated Rural Development	anment in Centra	l Drovinces	Draiga
IIIICYIAICU NUIAI DEVEN	שטוווכווג ווו טכווגומו	FIUVILICES	

A) (1)	Họ và tên	Giới tính	D ịa chỉ		Ký tên
			02000		X. I OU
	Đại diện Bạn OLDA	tỉnh		Duong D	
	Đại diện Ban QLDA				
				Duong	
	TRIÊN				
	BAH QUÁN LÝ CÁC DU ÁN ODA TICA A NATARA				

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM Độc lập - Tự do - Hạnh phúc Ky Tho, ngày 23.tháng O.J.năm 2014 DỰ ÁN PHÁT TRIỂN NÔNG THÔN TÔNG HỢP CÁC TỈNH MIÈN TRUNG (Loan 2357-VIE) BIÊN BÁN LÀM VIỆC Hôm nay, ngày .28 tháng ag năm 2014, tại...ky...Tha......chúng tôi gồm: I. Đại diện nhóm tư vấn của dự án Phát triển nông thôn tổng hợp miền Trung: - Ong/Ba. V. Work g. Thanh thing Chức vụ. Chuyên goa đạo tạo Chức vụ.... Chuyển goa tại dinh của - Ong/Bà. Hoan Van Duly - ông/Bà Vu toang Lan Chức vụ Chuyển goa mà trường II. Đại diện Ban QLDA tỉnh Chức vụ Can bố ky thuất Ban QIDA Tinh - Ong/Bà. Ng. Thanh Lam - Ông/Bà....., - Ông/Bà..... Chức vụ..... III. Đại diện địa phương - Ong/Bà Durchy Dinh Holi, Chức vụ Chu tha UBND Xã Chức vụ. Can bà tra chính - Ông/Bà Ng Tiên Hưng - ông/Bà lê Thi thình Chức vụ thôi pho ha phu nư Nội dung làm việc: Can b. 3. Ban Quan ly Pri and tink think bay ve star atien del an los ich cua del an Cheyin goa Tai strik cer trink bay van te tai die Muyen gota min tribny trink bay ear tac dang min tried ... che del an tray of our stoan tribe The cay, the cong Wan hand va cac but phase given there tac stay Choopen goa the tax truck base whiley not knee but trong state tak we du an van way bo sung ver gle an gran toan I như care tap huan cua ba on sa tham goa cua phy net va nog with dan was dis and

Sau khi đọc lại biên bản, những người có mặt đồng ý về nội dung biên bản, không có ý kiến gì Đại diện UBND xã Đại diện Ban QLDA tỉnh TRIEN BAH QUÂN LY CÁC DƯ ÁN ODA Lauyễn Văn Tương Đại diện tư vấn

Meeting minutes at public consultation and lists of attendance in the public consultation meeting at Ky Van commune

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập – Tự do – Hạnh phúc
Dự ÁN PHÁT TRIỂN NÔNG THÔN TÔNG HỢP CÁC TỈNH MIỀN TRUNG (Loan 2357-VIE)
BIÊN BẢN LÀM VIỆC
Hôm nay, ngày 23 tháng .0.9 năm 2014, tại
I. Đại diện nhóm tư vấn của dự án Phát triển nông thôn tổng hợp miền Trung:
- ông/Bà Vũ Lloang Làn Chức vụ Chuyển gia Mối Trừng - ông/Bà Đông Làn Địng Chức vụ Chuyến già Tái được cư
- Ong/Bà Doay low Ding Chức vụ Chungey giữ Tai Liel W
- Ông/Bà Chức vụ
II. Đại diện Ban QLDA tỉnh
- Ong/Bà Ng Thank Lam, Chức vụ Can hờ kỳ thuất
- Ông/Bà, Chức vụ
- Ông/Bà Chức vụ
III. Đại diện địa phương
- Ông/Bà Ng Tiên Piên, Chức vụ Pho Chu tách UBNP Ka
- Ong/Bà Ngo Van lly Chức vụ Thổ CT UBMTTO Xã
- Ong/Bà Hoàng Thi Dueyen Chức vụ Chu từch hàn phu nữ xã
Nội dung làm việc:
Ban quen ly DA tind the time god thier we cong trush
Tham is and dilase
Il van tai dish cel gid thien ve van de ter b
tai dish as cua dil an
Til van ma triling trush bay ve cenh hudy u triling khi thuc pien du an wa bith phap good thieu tak day trong qua trinh thi cang, w hanh
al the thic hien dil an wa striplian of oa
hand at any Trong qua think the cong, we
Ng và dan phat biểu y kiến về các vài để tạng

Sau khi đọc lại biên bản, những người có mặt đồng ý về nội dung biên bản, không có ý kiến gì Đại diện Ban QLDA tỉnh Đại diện UBND xã Nguyễn Văn Dương Đại diện tư vấn

CỘNG	HÒA)	(Ã H	ĴΙC	ΗÙΙ	NGHĨA	VIỆT	NAM
	Độc lâ	p - T	u de	0-1	Hanh n	húc	

, ngày 23.tháng. Onăm 2014

DỰ ÁN PHÁT TRIỂN NỚNG THÔN TÔNG HỢP CÁC TỈNH MIỀN TRUNG - KHOẢN VAY BÓ SUNG

BIÊN BẢN HỌP THAM VẤN CỘNG ĐỒNG

Về các chính sách an toàn: Môi trường, Tái định cư, Giới và Dân tộc thiểu số

Tên tiểu dự án: Năng Câg, Xã Cự L. W, huyệ	fra e hiro le thop Thuy los' song Rac
I. Thành phần tham dự:	
- Ong/Ba VI Honing Cay	Chức vụ Chuyên gia MS frung
- ông/Bà Don Van Ins.	Chức vụ Chuyển gia Tou Lind Ciê
- Ong/Ba Ng I Rans Lang	Chức vụ CB Chân OLDA Fins.
- Ong/Ba No Dey Brey	Chức vụ PCT UBNO Xã:
- Ông/Bà Ngo llav lly	Chức vụ ICT UBALTER XÃ.
- ông/Bà Hoang The Duye	y Chức vụ CT Hơi phụ nư sã,
- Ông/Bà,	Chức vụ
- Đại diện những hộ bị ảnh hưởng thiểu sốngười, chiếm%	người, trong đónữ, chiếm(%) , Dân tộc
II. Nội dung	

2.1 Các nội dung phổ biến:

- Cung cấp các thông tin về dự án như địa điểm, quy mô, các thông số kỹ thuật cơ bản
- Chính sách an toàn của dự án bao gồm: Chính sách về giới và sự tham gia của cộng đồng; Kế hoạch hành động giới; Chính sách môi trường, Chính sách Tái đinh cư và kế hoạch phát triển người dân tộc thiểu số.

2.2 Tham vấn cộng đồng:

- Tham vấn các vấn đề giám sát và tham gia của cộng đồng trong các giai đoạn chuẩn bị, thực hiện, vận hành tiểu dự án, các vấn đề về giới và lồng ghép giới, nhóm dễ tổn thương, hộ bị ảnh hưởng nặng...
- Tham vấn các vấn đề về môi trường, tác động môi trường tiềm năng của dự án bao gồm tác động lên môi trường tự nhiên và xã hội của khu vực dự án và những biện pháp giảm thiểu các tác động tiêu cực;

1

Integrated Rural Development in Central Provinces Project	t
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- Tham vấn các vấn đề về tái định cư,	các tác động dự kiến,	, quyền lợi của người bị ảnh
hưởng, các biện pháp giảm thiểu tối đa n		

- Tham vấn nhu cầu đào tạo của các hộ bị ảnh hưởng.

III. Ý kiến thảo luận

III.1.Các vân đề về giới, tham gia cộng đồng
Marin Lan mong mich them give ban
gian sat cong song rhàn Lan Par Ron.
to char Sling Jong hard
Am o' the way can away train alow
this are much by cut ba con. Chief refund
tem do and that nine to thing the
Charter de las eug nous das cuno unis
Jain las 82 July note this clower cans
toe rong nghiệp
) -] -

III. 2. Các vấn đề về môi trường

Ada in thi cong on Ban quan ly co' bien phap stain bao green thien tar oter sten most tricky. Peh in this cong phai Vest hop wer store phulos, ot or is van hach keich ste tim ra this green this cong thich han, trank and huig sten vi er cap ruise trien cho dan. Ada in this cong can give gou ve sinh stain bao khoy xa rae brea bai, khoy ste lo' are tul nilde stang. Ada in thiest te' phai ret hon while store phulos at this cap ruise, tou will han ly', chir y stem can think cap ruise, tou will han ly'. Nha thair can on cam ket was stea pluos tried khi this can we steen had an toan trather, ve sing mon t ning cho to the phulos. Trong gour doan va hach, can xa then ken the qua pai grae due ng são dan sto khipra rai ra ken.

N. San	
	III.3. Các vấn đề về tái định cư và dân tộc thiểu số
	and buing der day day tai say my nouth
	day. De Austig Berl ou bla rong new ver
	Thi cong nam hoar toar trong trujer wing
	bling to rgill day for therey So sonof
	Tong Chu viec de ais.
	và mong must die du Jones Chail (In)
	IV. Kết luận
	Các bên liên quan thông a hat of chu mang
	This hier do an và mong I much all au con Hutchin
	Du or this ong phat that this the uling
	any Tinh Cour duan trong and trink their
	3

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM

Độc lập – Tự do – Hạnh phúc (Ly Vay ,, ngày 23. tháng 9. ... năm 2014

DỰ ÁN PHÁT TRIỀN NÔNG THÔN TỔNG HỢP CÁC TÌNH MIỀN TRUNG -KHOẢN VAY BỔ SUNG

DANH SÁCH ĐẠI BIỂU THAM DỰ CUỘC HỌP (Tham vấn cộng đồng về chính sách an toàn: Môi trường, Tái định cư, Giới và Dân tộc thiểu số

STT	Họ và tên	Giới tính	Địa chỉ	Ký tên
1	Nguyễn Thi Niem	Nű	Thank Son - Ky Vain	Vien
	Bui Chi Duyên	mi	sa xá - ky Ván	Dujen
	Le Chi xoan	m	kỳ răn	xxon
4	Dung Chi Hué	n	ky Van	Itné
5	Ledong thi teins	17	t _t	= 5 Tril
6.	Kan Ohi Van	n	•	Nân
1.	Dang Thi Helong	me	Y	LAB
8.	Nguện Chi Truc	mai	и	The
9	Vo oh Ha	Nie	Tr.	19
10	Heary Thi Vish	nu	Þ	Hule
11	Lelong Ehr Lý	mi	ч	Vez _
12	Cao bui Thuy Teairs	Nu	1/	Huh
1.3	Le Thuy Link	Nie	η	Scenz
14	Hoàng Thi Duyên	N.Z.	11	:00
15	Phan Thi Thu Hing	Nu	1p	(glag
16	Le thi Ly	Nie	· h	ity
1F	Phan thi Nhung	Wil	Ц	to the

STT	Họ và tên	Giới tính	Địa chỉ	Ký tên
18	Nguyễn thủ Nga	Nu	Ký ran	Naga.
19	Nguyễn Tiến Điện	ham	0.11	mo
20	LE vais bay	Man	ч	Bay
21	Le The ky	Wan	V	Leigh
23	Train Ngọc Kinh	War	Y	Phile
23	Não Van mý	Mam	4	· gallo
24	Dang Van Hille	Nam	4	thus
25	Nguyên Man Ngo	Nam	٧	wys
26	Phing Voin Hop	nan	Y	Hay
27	Train Dul Heing	Nam	P	ajly
28	Le van Ly	Nan	1	Ty
29	Mgo Van Bay	Wans	Y	Bay
30	Phan Van Tháng	Nam	i.	alies
	0			
				1
			THE RESERVE OF THE PERSON OF T	

Integrated Rural Development	anment in Centra	l Drovinces	Draiga
IIIICYIAICU NUIAI DEVEN	שטוווכווג ווו טכווגומו	FIUVILICES	

STT	Họ và tên	Giới tính	Địa cl	វ	Ký tên
			No.	12000	
			1.80	Nguyễn Sử	iến Điện
	Đại diện Ban QLD	OA tỉnh	1.87	Nguyễn Gi Đại diện	
NGHIED & S	Dai diện Ban QLE HAT TRIỂN NO THE BAN QUẨN LÝ CÁC DỤ ẨN ODA HIG ÀN NO THE WING HOMEPHAND	OA tỉnh	1.87	Đại diện	tư vấn
NON BUREPAS	BAH QUÁN LÝ CÁC DỰ ÁN ODA FIGA NIVA NING NGHỆN ÁNH À		1.8 7 ***	Đại diện	
NG NGHIED & S.	BAH QUANLY BAH QUANLY		1.87	Đại diện	tư vấn
NON BUREPAS	BAH QUÁN LÝ CÁC DỰ ÁN ODA FIGA NIVA NING NGHỆN ÁNH À		1.8 7 ***	Đại diện	tư vấn

Meeting minutes at public consultation and lists of attendance in the public consultation meeting at Ky Tan commune

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM Độc lập – Tự do – Hạnh phúc
DỰ ÁN PHÁT TRIÊN NÔNG THÔN TÔNG HỢP CÁC TÌNH MIÈN TRUNG (Loan 2357-VIE) BIÊN BẢN LÀM VIỆC
Hôm nay, ngày 🍪 tháng3. năm 2014, tại UBNO xã (4 Teachúng tôi gồm:
ا. Đại diện nhóm tư vấn của dự án Phát triển nông thôn tổng hợp miền Trung:
- Ong/Bà. LE Thi Mong Mildag Chức vụ. Thi Voin (D. O)
- ông/Bà. Diễng the Chiến, Chức vụ Từ Voin Tớc
- Ong/Bà Ng Thị Thư Trưng Chức vụ Từ Vất MT
II. Đại diện Ban QLDA tỉnh
- Ong/Bà Tran Van San , Chức vụ Caro bố BQLD A linh.
- Ong/Bà tran Van Sany, Chức vụ Từ Van Thia ro
- Ông/Bà Chức vụ
III. Đại diện địa phương
- Ong/Bà. Horang Yuma Town, Chức vụ phá CT MBND Xã
- Ong/Bà LE Van Thao, Chức vụ C B. Dia Chính
- Ong/Bà. N. guyễn Thị Hong Navier Chức vụ Chủ tí ch Hơi Phụ nư
Nội dung làm việc:
1) the vais thick Ki trinh bay we not those In
Chi từ Ky thuất của PATP. 2) Tư Vois Lê Chiơt, TĐC, MI trình bág và Chinh Sách an toàn của DA
wo chink sach an town cuia DA
25 Cthi phas nhong of hier we view that him
Du an tou dia philong Tre lank otere dia
William Và Cac ho BAH

S k	nac.	ời có mặt đồng ý về nội dung biên bản, không có ý kiến gi
	Đại diện Ban QLDA tỉnh RANGUAN LÝ CÁC DỤ ÁN ĐƠA RING NHA PHILA	Hoàng Luân Tan
	Nguyễn Văn Lương	Đại diện tư vấn
		Sheere
		predng Due Chim

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM

Độc lập – Tự do – Hạnh phúc

DỰ ÁN PHÁT TRIỂN NÔNG THÔN TỔNG HỢP CÁC TỈNH MIỀN TRUNG - KHOẢN VAY BỔ SUNG

BIÊN BẢN HỌP THAM VẤN CỘNG ĐỒNG

Về các chính sách an toàn: Môi trường, Tái định cư, Giới và Dân tộc thiểu số

Tên tiểu dự án: Nững Cất	Sura chula he thong Kent tuer veing gride Ky ANh thur let sing
l. Thành phần tham dự:	
- Ong/Ba. LE Thi riong Adding	Chức vụ Từ Van Vố (p)
- Ong/Ba. Alding Dec. Chien,	Chức vụ. Tư Vớn T.B.C.
- Ong/Ba. Nguyon Van Sam,	Chức vụ Ban QL D.A Linh
- Ong/Bà. Tran. Very Sang.	Chức vụ. Trẻ Vais thiệt là
- Ong/Bà Hoang Xuan Tran	Chức vụ Pho CT UBND
- Ong/Ba Le Van Thais,	Chirc vy. C13 ctice Chimb
- Ong/Ba Maguyan The Hong Nang	Chức vụ Chu tích Họi phụ nư
	người, trong đónữ, chiếm(%), Dân tộc
thiểu sốngười, chiếm%	
II. Nội dung	

2.1 Các nội dung phổ biến:

- Cung cấp các thông tin về dự án như địa điểm, quy mô, các thông số kỹ thuật cơ bản
- Chính sách an toàn của dự án bao gồm: Chính sách về giới và sự tham gia của cộng đồng; Kế hoạch hành động giới; Chính sách môi trường, Chính sách Tái đình cư và kế hoạch phát triển người dân tộc thiểu số.

2.2 Tham vấn cộng đồng:

- Tham vấn các vấn đề giám sát và tham gia của cộng đồng trong các giai đoạn chuẩn bị, thực hiện, vận hành tiểu dự án, các vấn đề về giới và lồng ghép giới, nhóm dễ tổn thương, hộ bị ảnh hưởng nặng...
- Tham vấn các vấn đề về môi trường, tác động môi trường tiềm năng của dự án bao gồm tác động lên môi trường tự nhiên và xã hội của khu vực dự án và những biện pháp giảm thiểu các tác động tiêu cực;

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	am vấn các vấn đề về tái định cư, các tác động dự kiến, quyền lợi của người bị ảnh ng, các biện pháp giảm thiểu tối đa nhằm có ít tác động nhất đến người bị ảnh hưởng.
- Tha	m vấn nhu cầu đào tạo của các hộ bị ảnh hưởng.
· III. Ý	kiến thảo luận
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CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM Độc lập - Tự do - Hạnh phúc

DỰ ÁN PHÁT TRIỀN NÔNG THÔN TỔNG HỢP CÁC TÌNH MIỀN TRUNG – KHOẢN VAY BỔ SUNG

DANH SÁCH ĐẠI BIỂU THAM DỰ CUỘC HỌP (Tham vấn cộng đồng về chính sách an toàn: Môi trường, Tái định cư, Giới và Dân tộc thiểu số

Tên tiểu dự án: Nững Cap , Siên Chiến hù thống Kénh tười Song Rac Xã. Ky Tân, huyện ky AMH, tỉnh tha linh

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Meeting minutes at public consultation and lists of attendance in the public consultation meeting at Ky Thu commune

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM Độc lập – Tự do – Hạnh phúc [April 1985] - Năm 201 DỰ ÁN PHÁT TRIỀN NÔNG THÔN TÔNG HỢP CÁC TỈNH MIỀN TRUNG (Loan 2357-VIE)
BIÊN BẢN LÀM VIỆC
Hôm nay, ngày 🔀 tháng 🤧 năm 2014, tại UBNO xa ky Thư chúng tôi gồm:
l. Đại diện nhóm tư vấn của dự án Phát triển nông thôn tổng hợp miền Trung:
- Ong/Bà Là Thị Mộng Phulơng Chức vụ Từ Ugir Crist
- Ong/Ba During Ave Chien Chức vụ Từ van THE
- Ong/Bà Ng Tather Mang Chức vụ Tx Vay MT.
II. Đại diện Ban QLDA tỉnh
- ông/Bà. Tran Van Son, Chức vụ Can họ Ban QLDA
- Ong/Bà. Ng. Manh Scring, Chức vụ từ trong thiết ket.
- Ông/Bà Chức vụ
III. Đại diện địa phương
- Ong/Bà Phan Vam Thien, Chức vụ Phố CT UBNO Xa
- ông/Bà Phan Vam Thình, Chức vụ Phú CT UBND Xa - ông/Bà Và Xuân Dung, Chức vụ Can bộ đượ Chính Xa
- ông/Bà Vo Thị Sau Chức vụ Phố CT HĐ ND Xci
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Sau khi đọc lại biên bản, những người có mặt đồng ý về nội dung biên bản, không cố ý kiến gì Đại diện Ban QLDA tỉnh Đại diện UBND xã CÁC DU ÁN ODA Phan Văn Thiên Vguyễn Văn Lương Đại diện tư vấn

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM Độc lập – Tự do – Hạnh phúc

Ky...T.w..., ngày. 13.tháng. . g.. năm 2014

DỰ ÁN PHÁT TRIỂN NÔNG THÔN TÔNG HỢP CÁC TỈNH MIÈN TRUNG - KHOẢN VAY BỔ SUNG

BIÊN BẢN HỌP THAM VẤN CỘNG ĐÒNG

Về các chính sách an toàn: Môi trường, Tái định cư, Giới và Dân tộc thiểu số

Tên tiểu dự án: Nome (a)	de those thing los some ?
xãKjTVB, huyện	le thong they low song Pace
I. Thành phân tham dự:	_
- Ong/Bà. Le Thi Mong huding	Chức vụ Tư Van Grat
- Ong/Ba Nilong . Dr.C Chien	Chức vụ Tư Vào TĐC
- Ong/Ba Ng T. Thu Trong,	Chức vụ Từ Van MT
- Ong/Bà Trân Jan Som,	Chức vụ Ban QLDA Linh
- Ong/Bà Ng Manh Sang,	Chức vụ Từ vàn thing 10
- Ong/Bà Phan Van Thiên,	Chức vụ Phá CT UBND Xa
- Ong/Bà Vo Thi Sau,	Chức vụ phố CT HOND Xa
- Đại diện những hộ bị ảnh hưởng thiểu sốngười, chiếm%	người, trong đónữ, chiếm(%) , Dân tộc

II. Nội dung

2.1 Các nội dung phổ biến:

- Cung cấp các thông tin về dự án như địa điểm, quy mô, các thông số kỹ thuật cơ bản
- Chính sách an toàn của dự án bao gồm: Chính sách về giới và sự tham gia của cộng đồng; Kế hoạch hành động giới; Chính sách môi trường, Chính sách Tái đinh cư và kế hoạch phát triển người dân tộc thiểu số.

2.2 Tham vấn cộng đồng:

- Tham vấn các vấn đề giám sát và tham gia của cộng đồng trong các giai đoạn chuẩn bị, thực hiện, vận hành tiểu dự án, các vấn đề về giới và lồng ghép giới, nhóm dễ tổn thương, hộ bị ảnh hưởng nặng...
- Tham vấn các vấn đề về môi trường, tác động môi trường tiềm năng của dự án bao gồm tác động lên môi trường tự nhiên và xã hội của khu vực dự án và những biện pháp giảm thiểu các tác động tiêu cực;

1

- Tham vấn các vấn đề về tái định cư, các tác động dự kiến, quyền lợi của người bị ảnh hưởng, các biện pháp giảm thiểu tối đa nhằm có ít tác động nhất đến người bị ảnh hưởng.
- Tham vấn nhu cầu đào tạo của các hộ bị ảnh hưởng.

III. Ý kiến thảo luận

III.1.Các vấn đề về giới, tham gia cộng đồng
1) Ban CtS CD what the vide the high DA
tou stra philong và se than gra vàs cae
hoen ting wa DA.
2) Ban Ct SCD eurog you can street top hum
wham nang can nang luc ou a cae thanh vien
3) Lanh atao har plu mi rahar the se
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mut giot.
III. 2. Các vấn đề về môi trường
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1) Trung grat trinh thi cong new xáy ra tinh Trung bui, Khoi hay & mhiair, can phou co
1) Trung grat trinh thi cong new xáy ra tinh Trung bui, Khoi hay & mhiair, can phou co
1) Tong grat trinh thi cong new xay ra tinh Thang bui, Khai hay & nhiệm, can phoù co bien pháp Khai phụ c ngay: 2) New anh hưởng toi đượ, cây cơ hoa mau
1) Thong give trinh thi cong new way in the trinh thang bui, What hay & nhien, can phou co bien phap khat phu congay: 2) Now ownh huding to The cong or has more trinh the cong, can phai but thelong
1) Thing goes trinh thi cong new say ra tinh Thang bui, What hay & nhiam, can phase con bian phase khat phu conque; 2) Not outh huding too Jas, cay or has man thing qua trinh thi cong, con phai but thelong Chu cur he BHH
1) Thong give trink the cong new day is tink Thoma how, When how & mhien, can phou co brien phap khat phu congay. 2) Now ownh humany to the cong or how many thong que trink the cong coin phai but theroug Che core hop BHH 3) thong que trink very hand can phan co coe him phap de van hand an toan, mham
1) Thong give trink the cong new day is tink Thoma how, When how & mhien, can phou co brien phap khat phu congay. 2) Now ownh humany to the cong or how many thong que trink the cong coin phai but theroug Che core hop BHH 3) thong que trink very hand can phan co coe him phap de van hand an toan, mham
1) Thing goes trinh thi cong new say ra tinh Thang bui, What hay & nhiam, can phase con bian phase khat phu conque; 2) Not outh huding too Jas, cay or has man thing qua trinh thi cong, con phai but thelong Chu cur he BHH

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III.3. Các vấn đề về tái định cư và dân tộc thiểu số
1) Do hi to the cong steer mans tring ve in
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tà tài San cua cac ha dan.
27 Ban lainh dan stig philong cam Ker Se
apmB the who that the cong tung tien do
3) trong quá trình thi công, nữi lam anh
hương đến các tài San Khac thủ yếu cáu
nhã thai phai cam kar ba thương tho cae
IV. Kết luận
1) Land stow stie philong và cac ho BAH
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2) trong great trinh the cong new with hurding
1 of mon trueding com phair co bien phap xã ly
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3) Cac ban nganh down the Se tham gra vao
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CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM

Độc lập - Tự do - Hạnh phúc

Dự ÁN PHÁT TRIỂN NÔNG THÔN TỔNG HỢP CÁC TÌNH MIỀN TRUNG – KHOẢN VAY BỔ SUNG

DANH SÁCH ĐẠI BIỂU THAM DỰ CUỘC HỌP (Tham vấn cộng đồng về chính sách an toàn: Môi trường, Tái định cư, Giới và Dân tộc thiểu số

Tên tiểu dự án: Nững Cap Sie Chura hà thông thuy lới Sông	Rac
Xã Kỹ Thư huyện Kỳ Anh tinh tha Từnh	

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Photos of public consultation meeting





Photo 13: Public consultation in Ky Van Photo 14: Public consultation in Ky Tho commune

Annex 3: Environmental monitoring forms

Environmental Compliance Monitoring Form for Construction Package

Part A: General Project Information

Subproject Name:			
SIR Code: Subproject Package #: Activity Sector:			
Province: Districts:			
Design and Supervision Consultant Firm:			
Construction Company Name: Contract Date:			
Contract Amount: Contract Duration (days)			
Person Responsible: Phone			
PPMU EMO: Phone			
Part B: Monitoring checklist			
Performance Indicator 1. Design and Preparations			
The PPMU to complete 1-4 in conjunction with the subproject design consultant at the Date of Monitoring:	e time t	the pro	oject is tendered.
		l NI-	Damada
Have all UXO been cleared prior to commencement of construction?	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
 Does the subproject design meet applicable engineering safety and public health standards? 			
3. Have the resettlement provisions been disclosed to the affected communities and compensation made to affected persons or households?			
4. For the applicable subproject type:			
 Roads, embankments, irrigation works and coastal protection: does the design provide cross drainage to prevent flooding? 			
 Markets: does the design provide washing facilities and toilets in the market area? 			
The construction Supervision consultant (CSC) to complete 5-10 with the PPMU and time of start-up. Date of Monitoring:	constr	uction	contractor at the
5. Has the contractor prepared a Site EMP?			
6. Has the contractor posted a public notice regarding the nature, extent and cost of the project?			
7. Are locations for mixing plants sufficiently distant from houses, schools and hospitals?			
8. Are agreements in place with owners for temporary use of land for worker camps and construction yards?			
9. Have spoil disposal sites been selected in consultation with local authorities?			
10. Are official permits on record for quarry sites and borrow pits? Score (1-10; 10 total)	-		(%)
Score (1-10, 10 total)	1	1	\ ^{/0} /

Lining the middle section f Rac river irrigation system subproject, Ha Tinh Province Integrated Rural Development in Central Provinces Project

Performance Indicator 2. Worker Provisions

The CSC to	complete	11-16 i	n con	junction	with	the	PPMU	and	construction	contractor	following	commenceme	nt of
construction.	Date of M	1onitorin	ıg:										

	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
11. Were local authorities consulted in the planning for the location of construction worker housing?			
12. Are supervisors or other site personnel trained in basic first aid emergency response measures?			
13. Are first aid kits readily available to workers at the job site along with instructions for use?			
14. Has the contractor or Inspector from the Department of Health undertaken an awareness program for communicable diseases/HIV-AIDS?			
15. Has the contractor provided safety equipment (hard hats, ear plugs, dust masks, safety boots and glasses) to workers and training in use?			
16. Are construction camps equipped with adequate water supply, sanitary toilets, washing facilities and facilities for waste collection and storage?			
Score (11-16; 6 total))		(%)

Performance Indicator 3. Biodiversity

The CSC should complete 17-21 in conjunction with the PPMU and construction contractor following commencement of construction. Date of Monitoring:

	<u>Yes</u>	<u>No</u>	<u>Remarks</u>
17. Does the project avoid encroaching on natural forests or wetlands?			
18. Does the project avoid adverse effects on flow of natural streams and water quality?			
19. Are worker camps located outside of forested areas and has the contractor restricted access of workers to forests, fishing and hunting?			
20. Does the contractor obtain fill materials only from pre-existing quarries, or from borrow pits within the strict limits of the construction zone?			
21. For irrigation sector projects, are effects on agricultural biodiversity limited through use of integrated pest management?			
Score (17-21; 5 total)			(%)

Performance Indicator 4. Community Based Monitoring

The CSC to complete 22 and 23 in conjunction with the PPMU and construction contractor following commencement of construction. Date of Monitoring:

	Yes	<u>No</u>	Remarks
22. Has the contractor posted a public notice regarding complaints from the			
community?			
23. Has there been a public consultation regarding construction, environmental			
impact, and the community complaints system?			
Score (22-23; 2 total)			(%)

Outcome of Public Consultation:							
Date: Location:							
Topics	covered	in	presentation:				
Comments	from Attendees:						

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Performance Indicator 5. Community Values and Safety

<u>Items 24 – 35 should be inspected quarterly.</u> Date of Monitoring:

	Yes	<u>No</u>	Remarks
24. Is temporary access provided to adjacent properties as needed?			
25. Is permanent access to adjacent properties reinstated on completion of a segment of work?			
26. Are construction hours adjusted around houses, hospitals and schools to minimize disturbance?			
27. Does the contractor limit the scope of construction in progress to minimize community impacts?			
28. Are physical impacts on public infrastructure and service disruption minimized?			
29. Are materials transported on approved haul routes?			
30. Are construction equipments maintained in good condition?			
31. Do vehicles operate within legal speed limits?			
32. Are material loads traveling on public routes covered?			
33. Is dust suppressed by watering exposed surfaces?			
34. Has the contractor installed signs and lighting in vicinity of works on public roads?			
35. Is access to the construction site restricted to the public?			
Score (24-35; 12 total)			(%)

Performance Indicator 6. Hydrology/Water Pollution

<u>Items 36 – 43 should be inspected quarterly.</u> Date of Monitoring:

	Yes	No	Remarks
36. Are construction camps maintained in a clean and hygienic condition?			
37. Are oil, fuel and chemicals stored in enclosed areas (dyked or covered)?			
38. Is discharge of wastewater into water bodies used for water supply avoided?			
39. Is clearing activity suspended during rains?			
40. Does the contractor prevent discharge of concrete trucks to waterways?			
41. Have existing drainage patterns been maintained during construction?			
42. Are areas of standing water in the construction area drained and backfilled?			
43. Are sediment controls installed upslope of waterways?			
Score (36-43; 8 total)			(%)

Performance Indicator 7. Project Completion

Items	44	_	50	should	be	inspected	prior	to	finalizing	the	construction	works.
Date of	Monito	ring:_										

	Yes	No	Remarks
44. Have drainage fixtures, curbs, road shoulders and ditch slopes been finished out to			
prevent hazard to the public during use?			
45. Are ground surfaces in the project area graded to prevent water from collecting?			
46. Have all construction debris, tree cuttings, excess dirt, rubble and scrap been			
removed from the construction zone?			
47. Have all pits been filled in and graded to drain, underground tanks (including septic			
tanks) removed and holes backfilled?			
48. Are all waste products removed from the construction site, equipment yards and			
worker camps, including oil waste, scrap materials and equipment, building materials			
and domestic waste?			
49. Have all points of access (drives, walks) and utilities (water supply, power,			
communications) to public and private property been restored to original condition?			
50. Have all complaints by the local community and individuals been resolved by the			
Contractor?			
Score (44-50; 7 total)			(%)

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Performance Tracking

Performance Tracking consists of three sections:

- a. Performance Follow-up, where performance shortfalls noted in prior monitoring are listed and checked against current monitoring results.
- Community Complaints, where issues raised by the affected community are registered, tracked and outcomes recorded.
- c. Performance Indicator Results, where environmental performance against indicators are recorded.

Section 1: Performance Follow-up

Column 1	Column 2	Column 3	Column 4	Column 5
Performance		Was agency	Was problem	Was performance
variable (#) /		responsible	corrected before	indicator
Date Observed	Reason for negative rating	notified? / Date	next monitoring?	adjusted?

Section 2: Community Complaints

Column 1	Column 2	Column 3	Column 4	Column 5
Person		Was agency	Was problem	Was Person
Registering		responsible	corrected before	satisfied with
Complaint / Date	Summary of Complaint	notified? / Date	next monitoring?	Action?

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Section 3: Performance Indicator Results

Project Name:						SIR	No.:		Package	
Project Start Date:										
	Startup	Rev.	Q1	Q2	Q3	Q4	Average	Completion	Rev.	Final
Recording Date:										
Design and Preparations										
2. Worker Provisions										
3. Biodiversity										
Community Based Monitoring										
5. Community Values / Safety										
Hydrology/Water Pollution										
7. Project Completion										
Submittal Date: For Calendar Quarter:										
Inspector:	Inspector:									
(Signature)										

Annex 4: Environmental mitigation measure to include into bid documents

Subproject of Lining the middle section of Rac river irrigation system subproject, Ha Tinh Province

Sub-project Activity	Potential impacts	Proposed Mitigation Measure				
Earthworks Concrete embankment Waste and	Noise and vibration generation	Use modern and new construction machines and equipment to meet standards of exhaust, noise, and vibration as regulated by the Government. The Contractor needs to submit the Engineer documents proving that all construction vehicles, equipment, and machines are checked and meet requirements concerning noise and vibration generation of the current Vietnam standards as QCVN 26: 2010 for noise level and QCVN 27:2010 for vibration emitted by construction works;				
material transportation		 All noise and vibration generation activities shall be restricted to the hours of 22h – 6h and not to be undertaken on Sundays or public holidays at the location nearby residential area such as: Residential areas in Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa and Ky Anh town. 				
		Regularly maintenance of construction machines.				
		 Provision noise protection equipment for worker; 				
		 In case that, noise generation equipment need to run during night time and holiday time nearby the above sensitive objects, the detail schedule will be considered and approved by SC before could be applied. 				
		 Local communities must be informed about construction schedules and time through informal public consultation or any local people meetings and notice board; 				
		 Strictly implementing noise control measures as noted above through sampling and taking adequate corrective actions if needed 				
	Dust and exhaust generation	• All excavated soil should be reused for levelling low areas where applicable such as excavated soil could be used for levelling existing sites for construction of access road surface.				
		■ Excavation at site will be watered to maintain certain moisture levels, and to prevent or minimize dust dispersion. The watering activities have been proposed at least one per day during dry season in the residential areas, such as residential area in Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa and Ky Anh town				
		■ The construction machineries and equipment have to comply with Decision No. 249/2005/QĐ-TTg dated 10/10/2005 of Prime minister, Regulation on Emission roadmap for road transportation vehicles				
		 Cover the material storage, setting up appropriate of mobilize material to the site to ensure that material will not obstruct at the site and release dust; 				
		• All material/waste storage shall be located at least 50 meters from any households and sensitive areas as mentioned above.				
		■ Trucks carrying construction waste are covered. All trucks used should have well fitted bodies and not be overtopped in loading to avoid soil scattering. Excavated sludge will be transported by specialized vehicles.				
		■ Speeds shall be limited when the trucks pass residential areas to				

Sub-project Activity	Potential impacts	Proposed Mitigation Measure
		constrain dust flying in the wind which affect health and daily activities of the people living along the roads. The certain section route will be identified by SPC. Speed limitation signs shall be adequately installed within construction site and its regulation shall be reminded to each driver by contractor.
		Soil scattered on the paved road and public road shall be removed immediately.
Sludge excavation, Worker camp	Odour generation and in-sanitation	 Excavation activities must be carefully scheduled to avoid the rainy season in order to ensure drainage of runoff water as well as sanitation for both local residents and workers;
establishment, Waste generation	condition	It is strong recommended that any intervention actions on the channels, it should be dewatered and dried before implementing excavation activities to reduce odour generation and in-sanitation condition and avoid polluting surface water quality.
		 Construction waste need to be transported by adequate manners to use for levelling purpose at hollow areas along main canal in Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa and Ky Anh town.
		 Domestic waste and garbage from construction site will be collected by hygienic manner. Provide dustbins at work site. Disposal of solid wastes into canals, stream, other watercourses, agricultural field and public areas shall be prohibited. Burning of construction and domestic wastes shall be prohibited. Toxic waste, if any, need to be collected, transported and treated according to the Circular No. 12/2011-BTNMT dated on 14/04/2011 of MONRE.
		 Excavated sludge will be transported by specialized vehicles to avoid the leaking out of sludge on the transport routes.
		 Before the construction activities completed, contractors have to carry out site clearance and environmental recovery, such as:
		+ Transport of all unused materials from the site;
		+ Remove all construction machine and equipment, temporary facilities, worksites;
		 Environmental recovery at the site such as provision of green trees, grass in both construction sites and disposal location in Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa and Ky Anh town
Excavate activities and worker camp establish on	Water quality impacts	 Worksite, camps, material storage areas and load/unload construction material/waste activities must be located far from watercourse to ensure that materials will not be disposed into water,
sites		 Excavation activities of drain items must be scheduled to avoid rainy to reduce suspended maters in runoff water entering the surrounding water bodies and existing canals;
		 Provide adequate facilities in the site including latrines, holding areas and garbage cans. Waste from latrines will be collected and treated properly through an economic contract with local environmental co-operatives/companies.
		 Cover material storage areas when raining is needed. Temporary storage of construction and domestic waste on the sites will be no longer than 24 hours.

		The placement of washing instruments/vehicles next to the water
		 bodies, existing canals (identified in Water quality impact section) will not allowed avoiding the leaching of waste, sludge, soil and oil contaminated water and maintenance activities will be banned on the sites in all construction drains; Equipping the dustbins and mobility septic tanks to work sites ((it is proposed that there will be 1 dustbin and 1 mobility septic tank for each site)
Inappropriate soil pit practices and concrete station operation operation Soil eros vegetation clearance run off water soil pit	and	 Prioritize the use of existing soil pit sites with suitable materials and update the list of soil pit monthly and report to PPMU and minimize impacts on other local resources; Procure materials only from DONRE authorized soil pit and borrow sites; Extraction of sand and gravel in river beds shall be prohibited except: (i) where this is no technically and economically feasible alternatives and (ii) provided specific mitigation measures are implemented to minimize impact on river morphology, water quality (e.g., turbidity) and aquatic ecosystems (e.g., reduced extraction during fish spawning period); Checking the environmental protection commitment documents of soil pit, asphalt concrete stations since the Project will purchased construction material and hot concrete from these areas; Monitoring the implementation of environmental protection measures at the soil pit and concrete stations; Supervision the responsibility of environmental recovery activities at the soil pit areas and concrete stations.
Inappropriate construction waste spreading surrounding cultivation as well as pollution ambient environment	area air to	 All solid waste should be reused for levelling low areas where applicable; Construction waste shall to be transported by adequate manners to places under permission from Commune authorities Ky Khang, Ky Van, Ky Tho, Ky Tan, Ky Thu, Ky Hai, Ky Hoa and Ky Anh town and dumped at local peoples gardens Equip dustbins and mobility septic tanks to work sites ((it is proposed that there will be 4 dustbins and 2 mobility septic tanks provided at each construction site; Domestic waste and garbage from worker camps need to be collected by hygienic manner through survive provision of Ha Tinh environmental co-operative; Disposal of solid wastes into canals, stream, other watercourses, agricultural field and public areas shall be prohibited; Burning of construction and domestic wastes shall be prohibited; Toxic waste, if any, need to be collected, transported and treated according to Circular No. 12/2011-BTNMT dated on 14/04/2011 of MONRE Before construction is completed, the contractor will move all construction wastes and unused materials from the site; Providing environmental protection measures at the soil disposal location include levelling, temporary drainage during rainy time, boundary edge provision, plantation and environmental recovery.

Sub-project Activity	Potential impacts	Proposed Mitigation Measure	
substances and hazardous waste		from any water bodies in the project area such as irrigation canals, ponds to avoid the leakage to water bodies	
disposal		 Ensure that safe storage of fuel, other hazardous substances are agreed by PMU and have necessary approval/permit from DONRE and local authorities; 	
		 Equipment/vehicle maintenance and refuelling areas will be confined to areas in construction sites designed to contain spilled lubricants and fuels; 	
		■ Fuel and other hazardous substances shall be stored in areas provided with roof as stated in TCVN 5507:2002- Hazardous chemicals – Code of practice for safety in production, commerce, use, handling and transportation;	
		 Segregate hazardous wastes (oily wastes, fuel drums) and ensure that storage, transport and disposal shall not cause pollution; 	
		 Ensure all storage containers are in good condition with proper labelling; 	
		 Collected, transported and treated by contract with company which has a work permit for treating hazardous waste disposal according to the Circular No. 12/2011/TT-BTNMT on 14 April, 2011 of MONRE. 	
Transport vehicle activities	Community Disturbance	Place sign boards near construction sites to direct traffic means to slow down at the section close to Work site:	
Construction machinery	and Traffic safety	and Traffic	 Regulating the transport vehicle speed will not be over 20km when passing above areas;
operation			 Construction materials shall be stored tidily at the required locations.
Worker concentration		 Inform the community about construction schedule through informal public consultation or any local people meetings and notice board; 	
.Poor management at worksites	Health and safety for the construction workers and	 Constructor need to work with CS, PMU to establish labour safe regulations on the sites required by law and by good engineering practice, which include: electric safety, operating equipment - general safety requirements, general safety requirements. 	
	the nearby community	 Workers shall be provided with appropriate personal protective equipment (PPE) such as safety shoes, hard hats, safety glasses, ear plugs, gloves, etc. at no cost to the employee 	
		 A first aid kit will be provided at each construction site to ensure patients can receive first aid timely before transporting them to the medical station/hospital 	
		 It is mandatory for workers to attend training courses on labour safety before they are recruited to work for the project; 	
		 Supervise period on compliance to labour safe measures of workers at project sites. 	
		 Contractors ensure to provide safe drinking water to workers for daily uses. 	
		Construction site shall be provided with toilet/sanitation facilities	
		 Contractor shall readily provide and maintain lights, protection fences, signboards and wardens where necessary as requested by the Engineer or local authorities. 	
Excavation, transport	Impacts to public facilities	 Obtain the agreement with local authorities in using the transport routes, intervening the canals and if any downgraded observations due to project activities have been found, the 	

Sub-project Activity	Potential impacts	Proposed Mitigation Measure
activities		contractors have to fully compensate;
		 Providing the temporary irrigation canals or drainage canals during construction phases if any interventions will be made on these canals;
		 Consultation and obtain the agreement from local authorities and local peoples on replacement of all affected canals on the fields;
		 Record the status of the existing roads and canals before construction and make proper compensation for the damages if any.
		 All public facilities should be fully compensated as its origin after completion of construction works;
Earthworks and excavation activities	Impacts on surrounding	 No construction materials and/or wastes fall into agricultural land;
	agricultural land and infrastructure	 Providing the temporary irrigation canals or drainage canals during construction phases if any interventions will be made on these canals to ensure the water flows on all cultivation areas;
		 Appropriate management of water pollution sources from construction activities to ensure that the construction will not pollute water and soil on all cultivation areas;
		 Reinstate road surface and fix up damages caused to irrigation canals, water supply/drainage canals;
		 All activities of contractor only allow within the acquired land areas.
Construction activities Concentration of workers and	Social disturbance	 Excavated pond will be dewatered and fenced to reduce high risk for local peoples; Construction materials shall be stored tidily at the required locations. Install barriers (temporary fence) at construction areas to deter
equipment		 people access to the site. The local people shall not be allowed in high-risk areas (excavation sites and areas where heavy equipment is in operation). Remain the light during the night time on all construction sites.
		 Construction workers who are not local people must register temporary residents and obtain temporary residential certificate from local authority.
		 Educate workers on appropriate behaviour for interactions with local community and risks of communicable diseases
Obstructed drainage water flow	Localized flooding and insanitation condition	 Setting up appropriate construction schedule at the site to avoid rainy season, especially for excavation activities; Provision supplemental temporary drainage plans in the construction site to ensure the quickly respond in case of heavy rain, other unforeseen drainage issues and avoid obstructing
		 water in surrounding areas and construction sites; Providing the temporary irrigation canals or drainage canals during construction phases if any interventions will be made on these canals to ensure the water flows;
		 Supplemental temporary drainage plans must be revised and approved by PMU, and Construction Supervision before construction works started.
excavation activities and Lining &	Affect irrigation water supply system for	 Lining the canal should be implemented in dry season with application of construction and irrigation at same time. The Contractor should coordinate with irrigation authority (Northern Ha Tinh Irrigation One Member Limited Company),
upgrading for the	agriculture	(Table 1 and Angelia and Manager Limited Company),

Sub-project Activity	Potential impacts	Proposed Mitigation Measure
canal	production	commune's irrigation staff and cultivation households in water supply area of the subproject to reach agreement on water supply duration (construction suspension), construction time (should be implemented at the time when irrigation activities are not done); Commune's irrigation staff, irrigation exploitation enterprise or relevant authorities should early inform households and contractor on water supply schedule so that they can make plan on their own initiative; PPMU and the Contractor should pay attention to mitigation measures to reduce damages or to implement compensation for arising impacts due to stop of water supply at cultivation area, etc Proposed construction time: after harvesting. Construction time should be implemented at the time when irrigation activities are not done.
All construction activities	Cultural heritage impacts	 Where grave is found during construction, coordinate with local authorities to arrange for relocation and mapping the location of the graves before and after relocation; Halt construction activities, protect the site and inform construction supervision for guidance if artifacts are found at construction site.
Environmental recovery	Odour generation, unsafety and sanitation condition to local people	Before construction is completed, the contractor will move all construction wastes and unused materials from the sites to approved sites Monitoring environmental recovery at: Construction waste disposal location Material soil pit and borrow areas Working sites Reinstate and ensure good condition for any effected public facilitates.

Annex 5: Data Source

- 1. PPMU of Ha Tinh province, Subproject Investment Report (SIR) of lining the middle section of Rac river irrigation system 2014.
- 2. PPMU of Ha Tinh province, Basic Design Explanation of lining the middle section of Rac river irrigation system 2014.
- 3. Environmental Management Plan of multi-purpose exploitation of Ke Go Song Rac irrigation system in Ha Tinh province, May 2013.
- 4. Ky Thu People's Committee, Annual Report on Social Economy, December 2013.
- 5. Ky Tho Commune People's Committee, Annual Report on Social Economy, December 2013.
- 6. Ky Van Commune People's Committee, Annual Report on Social Economy, December 2013
- 7. Ky Tan Commune People's Committee, Annual Report on Social Economy, December 2013.