



**NORTHERN RURAL INFRASTRUCTURE
DEVELOPMENT SECTOR PROJECT**

**SAFEGUARD MONITORING
OF PACKAGE 7-2 FOR
YEAR 2014**



**First Mission Report
Safeguard Monitoring and Evaluation Report**

Final Version

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Acronyms

ADB	Asian Development Bank
AH	Affected Household
AP	Affected Person
DAFO	District Agriculture and Forest Office
DBST	Double Bitumen Surface Treatment
CEF	Compensation Entitlement Form
CC	Construction Contractor
DAFOs	District Agriculture and Forestry Offices
DCO	District Coordination Office
DD	Detail Design
DLMA	District and Management Authority
DMF	Design and Monitoring Framework
DONRE	District Office of Natural Resources and Environment
EA	Executing Agency
EGDPs	Ethnic Group Development Plans
EMO	Environmental Management Office
EMP	Environmental Management Plan
FS	Feasibility Study
GAPs	Gender Action Plans
GICs	Grant Implementation Consultants
IEE	Initial Environmental Examination
IPPs	Indigenous Peoples Plan
LARC	Land Acquisition, Resettlement and Compensation
LFNC	Lao Front for National Construction
LPDR	Lao People's Democratic Republic
LWU	Lao PDR Women Union
MC	Main Canal
MAF	Ministry of Agriculture and Forestry
MONRE	Ministry of Natural Resources and Environment
NPMO	National Project Management Office
NRIDSP	Northern Rural Infrastructure Development Sector Project
NSC	National Steering Committee
PAFO	Provincial Agriculture and Forest Office
PONRE	Provincial Office of Natural Resources and Environment
PMU	Project Management Unit
PONRE	Provincial office for Natural Resources and Environment
PPO	Provincial Project Office
PSC	Project Steering Committee
RAPs	Resettlement Action Plans
RP	Resettlement Plans
SIA	Social Impact Assessment
SRI	System of Rice Intensification
TOT	Training of the Trainer
WU	Women Union
WUGs	Water User Groups

Executive Summary

A. Background

The Northern Rural Infrastructure Development Sector Project (NRIDSP) has been implemented in four (4) provinces of Bokeo, Luang Namtha, Phongsaly and Oudomxai since its practical commencement with the fielding of Grant Implementation Consultants (GICs) in August 2012. The Project aims at enhancing rural inhabitants' access to, and participation in the market economy to improve food security and livelihoods.

The NRIDSP has four main outputs: (1) production and productivity enhancing rural infrastructure constructed and/or rehabilitated; (2) productivity and beneficial impact enhancing initiatives adopted; (3) capacities of national, provincial and district agencies strengthened to enable a sector development approach; and (4) efficient and effective delivery of subprojects and Project management. There are 9 subprojects of year 1, in 9 districts of three provinces of Bokeo, Luang Namtha and Phongsaly.

With full implementation of environmental and social safeguard adoption (IEE, EGDPs, RAPs GAPS) of the project, the consultants of the consulting company have to supervise the monitoring and procedure of implementing mitigation measures of the Contractor during the construction stage and submit the environmental and social report to PMU and ADB. As per requirement of the project document, Independent Safeguard monitoring team is needed to monitor and evaluate the implementation and progress of the environmental and social safeguard policy.

The field monitoring was scheduled for 3 field missions for 9 subprojects of the package 7-1 in year 1 (2013) and these missions were conducted by the independent safeguard monitoring team from the Faculty of Environmental Sciences; National University of Laos. The safeguard monitoring for package 7-2 in year 2 (2014) has been designed for 2 missions for 18 subprojects; these include 9 subprojects of year 1. This report is the output of the first field monitoring which was undertaken during 7-22 June 2014.

The main purpose of the safeguard monitoring mission of year 2 is to monitor and evaluate the progress of implementation progress of the EMP, EGPs, GAPS, and RAPs; in 18 subprojects where the construction works have been started and completed as well as baseline observation and water sampling for subprojects have not been started.

The methodologies applied for the monitoring and evaluation consist of screening of environmental and social reports of GIC; particularly for the year 2 subprojects, site monitoring (random interviewing the AHs using checklists, observation, water sampling and analysis), discussing with GIC's Consultant team, consulting with relevant stakeholders e.g. PPOs, DCO and village levels, meetings with senior officers of PONRE and the Contractors' site engineers. During the monitoring, the representatives from PONRE and DONRE; where subproject based, actively participated. At the end of the mission in each province; the feedback to the PPO manager was given to brief the monitoring outcomes for him to take remedial actions for improvement of environmental and social management implementation in each subproject.

B. Organizational Structure for the Environmental and Social Safeguard

As mentioned in the first monitoring report of year 1 that the organizational structure for each Subproject was established at provincial, district and village levels to work on environmental and social issues related to the subproject activities. A project Environmental Management Offices (EMO) or its equivalent within the PPO with the assistance of the DCO have been established in coordination with line offices; in particularly with environmental sector. This is to ensure long-term institutional capacity building. During the first visit of year 2, it was confirmed by DCO and PPO confirmed that there has not been any changes on the organizational structure of PPO and DCO in term of sectors involved, but some individual members have been seconded due to administration and government organizational reform and change.

C. Results of Environmental Safeguard Monitoring

The construction works of Subprojects have been progressively implemented with different progress in subprojects. 8 Subprojects were completed, 8 subprojects are being constructed and other 2 subprojects have not been started. With different status of the construction works, the environmental and social concerns associated with those Subprojects can be summarized as followings:

Requirements of environmental permits/clearance: IEE reports for all subprojects of year 1 and 2 were accepted and the certificates for those IEEs have been approved by the provincial Departments of Natural Resources and Environment of provinces. The approved IEE certificates for 9 Subprojects of year 2 are added to Annex 1.

Public participation: All relevant stakeholders have participated in the process of planning, decision making and implementation of Project; regarding the environmental safeguard, have been constantly encouraged through activities of the subprojects of year 2. This includes the involvement of the public during the IEE studies, consultations, group discussions and field works. The Project encourages and prioritizes the engagement of the ethnic minority people, women and other vulnerable people in the project implementation as much as possible. With participation of DONRE and PONRE to the monitoring activities raised in year 1, more active engagement was observed during the first monitoring of year 2. Moreover, more female participants involved during the village IEE consultations in subprojects.

Implementation of EMP and compliance: It was found that the good practice on EMP implementation was undertaken in some subprojects where construction works have been started. A few minor environmental issues were observed e.g. general housekeeping, waste management and handling of chemical materials (not under shade or without cover). However; erosion and sedimentation sensitive areas were found in a few subprojects where the construction works being active. With this regard, It is required the rehabilitation upon the completion of construction activities. No potential dust and noise nuisance and spillage/leakage and no blockage of irrigation water use found. No biological disturbance and damage were reported or observed.

Water quality monitoring: The water samples were collected in 16 subproject sites (excluding Mongchao-Komaen and Komaen-Phongsaek). Two samples for each subproject in the same locations where the baseline samples were collected for subprojects of year 1. Meanwhile, the baseline data for the year 2 subprojects also collected. As indicated in the EMP, 7 parameters were analyzed; which include water temperature, PH, DO, TSS, BOD, COD and Faecal Coliform. The water quality testing results shows that the parameters of samples collected at up

and down streams of subproject areas are not exceeded the National Environmental Standard. Even though the TSS for some streams in subprojects are quite high comparing to others, but they are still not such high when comparing to the baseline data. Details of the water quality testing methodologies and results are presented in the section 4.7.

In addition, the agrochemical parameters were also analyzed for the downstream of the Nam Ma-Oune subproject to monitor the potential load and contamination due to pesticide use in banana plantation and other agriculture production. The required parameters are: i) Pesticides Organochlorine (Dieldrin, Heptachlor, Heptachlor epoxide, Lindane, Total DDT) ii) 2,4-D iii) ATRAZINE (Laddock) iv) Chlordane v) Pesticides Phosphate group vi) Pesticides Pyrethroid group vii) Pesticides Carbamate group. The result shows no detection of substance load in the samples. This seems realistic as the samples were collected during wet season with high flow stream, thereby low concentration due to high dilution. Analysis report sheet for agrochemical parameters in annex 2.

Aquatic Resources Study: As per comment given by the ADB mission in October 2013, the team conducted the basic aquatic resources study through Local Knowledge Study (LKS) method by discussing and interviewing with local people and site observation, particularly for fish species in the streams. The method includes use of fish study manual to facilitate the discussion and identification. Almost all the subprojects aim the improvement of the runoff weirs, the activities of which would not cause additional potential impact on aquatic resources, especially the fish migration and their habitat. The water can flow over both dry and wet season, and the gate will be regularly opened to release the sediment out from the upstream weir basin. Discussion on condition of the facilities for fish migration and habitat is presented in section 4.6 for each subproject. Details of the fish species reported by the villagers are listed in the Annex 5.

D. Results of Social Safeguard Monitoring

Land acquisition, resettlement and compensation: It was presented in the previous safeguard monitoring reports that all the LARC for the subprojects of year 1 had been properly implemented. Continuously, such implementation was carried out for subprojects of year 2 as well. It has been confirmed that all the affected lands were less than 5% of their total productive lands, the owners of which are willing to donate for the Project. The Houay Sat subproject at Paktha district, Bokeo province is an exceptional case, where one of affected HHs would lose more than 5% (based on preliminary design).

With this regard, the consultation meetings have been carried out between PPO-DCO and the village authority with the affected person, and the minutes of the meeting have been made in March and June 2014. Annex 6 presents the minutes of the meeting on 18 June 2014 at Hatdonkeo village, Paktha district, Bokeo province. The minutes confirm that the affected person, Mr. Mai Inh is still willing to contribute his affected area to the Project.

(After this meeting, the concerned staff of PPO/DCO, the village authorities and Mr. Mai Inh further discussed the solution about this issue, and finally found that when the productive lands outside of the project area are included/counted as his total productive lands, the percentage of his affected land would be reduced from 13% to 2.2%. Presently, the PPO re-submitted the application form for contribution of the land to NPMO for revising/updating the LACP of Houay Sat subproject and final approval by ADB.)

No resettlement is required for the subprojects of year 2. The resettlement and compensation implementation methodologies and the measures for the land acquisition in all subprojects have

been carried out in accordance with relevant Lao regulations and ADB policy. This had been implemented through the involvement of the stakeholders e.g. APs, beneficiary groups, committees at the village, DCOs and PPO levels. Based on the review of the LARC from the FS report, it is reported that most of the asset losses from the infrastructure rehabilitations are: agricultural land, tree plantations and old farm land.

Regarding the land and tea trees lost due to the landslide at Mongchao-Komaen subproject of year 1, the first minute of the meeting was made on 24 March 2014 at Mongchao village with the participation of PPO, DCO, village authority and affected HHs for proper remediation measures of such occurrence and solutions were proposed. Continuously, during the M&E mission of independent monitoring team the second meeting minute was made on 9 June 2014 to confirm the progress of the remediation and solution. Details of the minute of meeting are presented in Annex 6.

From the review of FS and observation on sites of year 2 subprojects, no vulnerable people or minority groups of people lost any sources of income and there was no resettlement or relocation of the primary or secondary structures in the subprojects of year 2.

The M&E mission has notified that the owners of affected land are happy to voluntarily donate minor portions of their productive lands (<5%) as they need to have improved infrastructures as confirmed by the PPOs, DCOs, village authorities as well as the owners of the lands.

Ethnic group development plan (EGDP): The EGDP is considered as important part of the project which can be seen through the project documents, engagement of the ethnic people in the activities with strong encouragement from the project. Training on the role of the ethnic groups and supporting the livelihood improvement of ethnic group of people through the project implementation. The project's beneficiaries (priority for ethnic group representatives and gender balance) have been demonstrated by the DCOs and PPOs through the pilot "System of Rice Intensification (SRI)", crops cultivation and poultry raising for both year 1 and 2 subprojects.

The progress of the EGDP implementation remains as good as reported in the previous mission reports, the ethnic groups are strongly supported through the participation in the consultation workshops and community development programs. This includes chicken raising and System of Rice Intensification "SRI" to improve their livelihood and employment opportunity. However; due to the proper technical requirements for SRI system and chicken raising. Therefore, not many of the minority representatives could involve in the agricultural enhancement works. Besides the agriculture, the employment of the minority people is low as well due to their existing way of livelihood unfamiliar with the hard-working job.

Gender Action Plans (GAPs): The strong involvement of women in the project activities remains active for subprojects of year 1 and 2 which are being progressively constructed through different ways. This includes consultation processes, membership to the WUG, trainings, study tours and chicken raising. The implementation of the gender action plan seems to be less for the subprojects of year 1 where the system being operational as most of the activities had been implemented. However, the project remains the aims to achieve the targets of followings:

- At least 60% of participants of women included in training on marketing and financial / budget management
- 30% representation of women in WUG Executive Committee
- 30% of employees in construction/rehabilitation works shall female employment. Equal pay for women and men for work of equal type. For this requirements, it would not be practically applicable for the subprojects due to several reasons.

E. Community Development and Capacity Building

Trainings on several topics were provided to the beneficiary communities in subprojects, which include agricultural enhancement works and demonstrations, chemical use, Gender issues and HIV as well as marketing and revolving funding. In some subprojects, more people have engaged in the community development programs; comparing to the earlier stage of the project implementation. This can be witnessed by the increased number of households are interested in the SRI practice and other crops; particularly more households are willing to have SRI and other crop cultivation as more reliable water availability from the improved irrigation scheme.

However; It was reported by communities and DCO that the chicken raising has been less interesting activities for them due to bird flu and challenges, this brings less households involved to the activities comparing to the year 1.

1 Introduction

1.1 Background of the Project

The Northern Rural Infrastructure Development Sector Project (NRIDSP) has been implemented in four (4) provinces of Bokeo, Luang Namtha, Phongsaly and Oudomxai since its practical commencement with the fielding of GICs in August 2012. The Project aims at enhancing rural inhabitants' access to and participation in the market economy to improve food security and livelihoods. In order to realize the aims above, the Project is addressing the two fundamental constraints of low agricultural productivity and limited market access through investments in i) rural infrastructure for irrigation and rural access roads, and ii) initiatives to achieve greater commercialization in agriculture by exploiting opportunities in the Lao PDR and neighbouring countries. Investments in rural infrastructure for irrigation and rural access roads include rehabilitating existing irrigation facilities and where appropriate, developing new ones, as well as rehabilitating and upgrading rural access roads from district centre and "kumban" (village cluster) centre to villages.

The NRIDSP has four main outputs: (1) production and productivity enhancing rural infrastructure constructed and/or rehabilitated; (2) productivity and beneficial impact enhancing initiatives adopted; (3) capacities of national, provincial and district agencies strengthened to enable a sector development approach; and (4) efficient and effective delivery of subprojects and Project management. there are 9 subprojects of year 1, in 9 districts of three provinces of Bokeo, Luang Namtha and Phongsaly.

Under the investment plans of the Project, about 27 subprojects of rehabilitation of existing irrigation facilities and rural access road will be implemented, which will supply sufficient irrigation water for agricultural area with a target of 2,900 hectares, and improve market accessibility with a target of 176 km of access road (Feasibility study: Nippon Koei Co., Ltd;2012).

In addition to the internal monitoring, the Project Administration Manual (PAM) dated October 2010 requires independent monitoring on safeguards to ensure that all recommendations and mitigation measures under the i) Environment Management Plans (EMPs), ii) Ethnic Group Development Plans (EGDPs or IPPs in PAM), iii) Gender Action Plans (GAPs), and iv) Resettlement Plans (RPs), of each subproject are being implemented in accordance with the plans. This report summarizes the findings of the second field monitoring of the independent monitoring team on the safeguard for the package 7-1.

The field monitoring was scheduled for 3 field missions for 9 subprojects of the package 7-1 in year 1 (2013) and these missions were conducted by the independent safeguard monitoring team from the Faculty of Environmental Sciences; National University of Laos. The safeguard monitoring for package 7-2 in year 2 (2014) has been designed for 2 missions for 18 subprojects; these include 9 subprojects of year 1. This report is the output of the first field monitoring which was undertaken during 7-22 June 2014.

The main purpose of the safeguard monitoring mission of year 2 is to monitor and evaluate the progress of implementation progress of the EMP, EGPs, GAPs, and RAPs; in 18 subprojects where the construction works have been started and completed as well as baseline observation

and water sampling for subprojects have not been started. During the first monitoring of year 2 covered all subprojects; including the ones being operational.

The methodologies applied for the monitoring and evaluation consist of screening of environmental and social reports of GIC; particularly for the year 2 subprojects, site monitoring (random interviewing the AHs using checklists, observation, water sampling and analysis). Discussion with GIC's Consultant team and consultations with relevant stakeholders e.g. PPOs, DCO and village levels, meetings with senior officers of PONRE and the Contractors' site engineers are also made. During the monitoring, the representatives from PONRE and DONRE; where subproject based, actively participated. At the end of the mission in each province; the feedback to the PPO manager was given to brief the monitoring outcomes for him to take remedial actions for improvement of environmental and social management implementation in each subproject.

1.2 Purpose of Monitoring Mission and Report

The purposes of this report are to:

- Meet with the requirement of full implementation of environmental and social safeguard adoption (IEE, EGDPs, RAPs GAPs) for the project as per TOR for the package 7-2 of year 2;
- Assess the attainment and sustainability as defined in the EGDPs, GAPs, EMPs and RPs. Particularly, on environmental issues, the SMEs will provide recommendations for any organizational or methodological improvements with an aim to ensuring the sustainability of the government's internal capacity of environmental monitoring.
- Review the actions taken place by the PPOs, DCOs and the Contractors based on the recommendations given in the previous monitoring missions by the safeguard monitoring team;
- Reflect the facts on the progress of the implementation of the environmental and social management plans in 18 subprojects during the first monitoring mission; and
- Provide the recommendations to the PPOs, DCOs and the Contractors to maintain a good practice on environmental and social management plan.

1.3 Methodologies and Strategies

The approaches applied for the third field monitoring are mainly based on methodologies used during previous missions; which include:

- Review of environmental and social reports for subprojects of year 1 and 2 provided by GIC. This include results of environmental mitigation measures performed, land acquisition and compensation measures, gender action implemented, ethnic minority groups and vulnerable people supported and find out compliance with the EMP in IEE reports. Gender action plans (GAPs), Ethnic Group Development plans (EGDPs) and Land acquisition and resettlement plans (RAPs) based on the checklists prepared for the first field monitoring are reviewed.
- Discussions with GIC's Consultant team: regular coordination for clarification and advice on the progress of project activities, documents and administration.
- Preparation of monitoring and assessment plan as well as the draft contents of the Safeguards monitoring report. This is to respond to the scope of works outlined in the terms of reference including the detailed field survey plan for the mission.

- Consultation with relevant stakeholders e.g. PPOs, DCO and village levels by interviewing and consulting with relevant officers at different levels. This includes affected persons (APs), minority and female groups to hear and understand the facts from them through verbal approach and monitoring sheets.
- Site visit on the construction sites and use of environmental and social monitoring checklists to record the issues observed. The details of the checklists were presented in First Safeguard Monitoring Report of year 1). Water sampling with positioned locations (see section 4.7) and observation as well as interaction with site engineer of the construction Contractors. All the visualized items were recorded and photographed to proof the situation of sites. All site visits were attended by the representatives from PONRE and DONRE
- Review and assessment of implementation progress of instructions given in the previous missions.
- In addition, the meetings with the management level of PONRE and DONRE in each province were taken place to discuss on the environmental and social issues related to the subprojects in the provinces.

1.4 Scope of Study

The main task of Safeguards Monitoring is to assess the progress of environmental and social management and compliance with the EMPs, the EGDPs, the GAPs, and the RPs, identifying constraints and developing remedial actions to effectively address.

The scope of works for Package 7-2 is summarized below:

- 1) To review the feasibility study reports of 18 subprojects of Year 1 and Year 2:

The feasibility reports include the annexes of i) Social Impact Assessment (the EGDPs, or IPPs and the GAPs), ii) Initial Environmental Examination (the EMPs), and iii) Land Acquisition and Resettlement Plan (the RPs).

- 2) To review the safeguard monitoring reports 2013 covered 9 subprojects of Year 1:
The safeguard monitoring for 2013 as Package 7-1 was carried out by Faculty of Environmental Sciences, National University of Laos.

- 3) To review the participation and disclosure:

The SMEs assessed the adequacy of: i) processes such as participation, consultation, grievance resolution, ii) integration of gender and vulnerable groups and ethnic minorities into planning and implementation of activities; and iii) mitigation of environmental impacts with respect to the EGDPs, GAPs, EMPs and RPs.

- 4) To develop a monitoring and assessment plan:

The second monitoring and assessment plan was developed responding to the scope of works outlined in these terms of reference including the detailed field survey plan.

- 5) To conduct field monitoring survey:

The SME will conduct field monitoring survey according to the monitoring plan by interviewing the concerned households as well as the project staff of PPOs and DCOs visiting 18 subproject sites.

6) To conduct water quality monitoring:

Refer to the water quality monitoring for 2013 conducted in Package 7-1 by Faculty of Environmental Sciences, National University of Laos, the SME will conduct the water quality monitoring for 2014 excluding i) two (2) road construction sites in Phongsaly district, and ii) two (2) irrigation completed sites of Nam Haad Right Bank Irrigation, and Nam Dai (V) and (VI) irrigation subprojects. In addition, the following water quality analysis (parameters) (one sample per field monitoring survey, 2 times in total) should be added for the monitoring of Nam Ma Oune subproject in Long district, Luangnamtha province.

Additional Water Quality Parameters for Nam Ma Oune Subproject:

- i) Pesticides Organochlorine (Dieldrin, Heptachlor, Heptachlor epoxide, Lindane, Total DDT)
- ii) 2,4-D
- iii) ATRAZINE (Laddock)
- iv) Chlordane
- v) Pesticides Phosphate group
- vi) Pesticides Pyrethroid group
- vii) Pesticides Carbamate group

2 Project Description

There are totally eighteen (18) subprojects to monitor, nine (9) subprojects of Year 1, and nine (9) subprojects of Year 2 in nine (9) districts of the three (3) provinces of Bokeo, Luang Namtha and Phongsaly. All the feasibility reports including i) the EMPs, ii) the EGDPs (or IPPs), iii) the GAPs, and iv) the RPs of the eighteen (18) subprojects above have been completed. The status of the implementation of each subproject as of the end of January 2014 is summarized table 2.1 below:

No.	Province	District	Subproject Name	Year	Status for Implementation (as of the end of January 2014)	
					Bidding	Construction
1	Bokeo	Houayxai	Nam Tin Irrigation	1	-	Ongoing
2			Nam Pouk Irrigation	2	On going	Not yet
3		Paktha	Houay Xo Irrigation	1	-	On going
4			Houay Sat Irrigation	2	On going	Not yet
5		Pha Oudom	Nam Haad Right Bank Irrigation	1	-	Completed
6			Nam Haad Left Bank Irrigation	2	On going	Not yet
7	Luang Namtha	Long	Nam Ma Oune Irrigation	1	-	On going
8			Nam Bak Irrigation	2	On going	Not yet
9		Namtha	Hong Kong Irrigation	1	-	On going
10			Nam Gngang Irrigation	2	On going	Not yet
11		Sing	Nam Dai (V) and (VII) 1Irrigation	1	-	Completed
12			Nam Gna (VI) and Houay Luang Irrigation	2	On going	Not yet
13	Phongsaly	Boun Tai	Nam Lan Irrigation	1	-	On going
14			Nam Ngene (Nawai) Irrigation	2	On going	Not yet
15		Nhot Ou	Nam Ou Irrigation	1	-	On going
16			Nam Thae Irrigation	2	On going	No yet
17		Phongsaly	Mongchao-Koamen Irrigation	1	-	On going
18			Koamen-Phonsae Irrigation	2	On going	Not yet

2.1 Nam Tin Irrigation Subproject

Nam Tin Irrigation Subproject is located in the District of Houayxai, Bokeo Province. The scheme is approximately 15km east of Bokeo Provincial Center as the crow flies and approximately 34km by road. Nam Tin is an existing reservoir scheme with a total of 8.29x106

m3 of active storage capacity that was commissioned in May 2001. The scheme comprises of a 15m-high earth dam, 560m in length and 6m-wide crest. The existing system has two intake gates to control intake flow of water to Right Main Canal (RMC) and to Left Main Canal (LMC), respectively. The original design of the system has a total of 760ha of the command area, among which 450 ha is covered by RMC with a total length of 7.4km, and 310 ha is covered by LMC with a total length of 5.0km. The right bank command area (450ha) is further divided into 15 secondary blocks by 15 secondary canals with a total length of 6.6km. The left bank command area (310 ha) is further divided into 8 secondary blocks by 8 secondary canals. The subproject covers seven villages of HouayxaiNoi, Xaichalern, Fai, Nam Pouk, Phonxay, Phonsavang, and Phouvane Tai with total of 1,558 households and a population of 9,084

2.2 Nam Phouk Irrigation Subproject

Nam Pouk Irrigation Subproject is located in the District of Houayxai, Bokeo Province. The proposed subproject is approximately 15 km east of Bokeo Provincial Center, and can be reached by traveling a distance of approximately 34 km by road. The subproject will benefit two (2) villages: i) Ban Xaychaleun; and ii) Ban Nam Pouk. The two villages are inhabited by 751 households with a population of 4,580. The scheme is currently benefiting 250 households of the two villages but there are also a few beneficiaries in the villages of Houayxai Noi and Donsavanh.

The Nam Pouk is a small stream with low discharge during the dry season. There is an existing weir along the Nam Pouk stream, constructed in 1992 with EU funding. The existing headwork is a buttress type concrete weir (W=13.76 m, H = 2.3 m). The head of the WUG reported that the present irrigated area during the wet season is 166.35 ha and very minimal area (4 to 5 ha) during the dry season. Existing main canals totals 1,600m, with 4,010m of secondary canals.

There is an existing WUG, an organization that currently implements few activities. The WUG needs re-organizing and strengthening.

2.3 Houayxo Irrigation Subproject

Houay Xo Irrigation Subproject is located in the District of Paktha, Bokeo Province. It is on the western bank of the Mekong and is only accessible by boat crossing. Direct land access is available only through the Thai border, which is about 37km from the subproject area. From Paktha District Center, access is through a 35 km boat ride followed by a 10km -drive along an all-weather dirt road. There are seven (7) existing wooden/stone weirs presently used along the Houay Xo river covering a total of 92 ha in three (3) villages of Ban Dong, Ban Pangsa and Ban Pakxo. Among seven (7) weirs, three (3) weirs cover 34 ha in Ban Dong, two (2) weirs cover 25 ha in Ban Pangsa, and two (2) weirs cover 33 ha in Ban Pakxo in the wet season respectively. The subproject covers three villages of Ban Dong, Ban Pangsa and Ban Pakxo with total of 258 households and a population of 1,182.

2.4 Houay Sat Irrigation Subproject

The Subproject is located in the District of Paktha, Bokeo Province. The subproject will benefit Haad Don Keo village with 152 HHs. It is located on the western bank of the Mekong River. From Paktha District Center, it can be reached through a 27.5 km land drive or 35 to 40 minutes speed boat ride along the Mekong River. Houay Sat is the stream that provides the main water source for the irrigation. The Sat discharges into the Mekong.

Houay Sat has 6 existing weirs/regulating structures across it: 1) Pakhouaykhan; 2) Fai Houanar; 3) Fai Phouvat; 4) Pakhouay ngat; 5) Napoung; and 6) Hangnar. The weirs/regulating structures are owned and managed by villagers of Haad Don Keo. The structure at Phouvat is a concrete weir constructed in 2009 by the government with contribution in labor from the villagers. All the other 5 structures are indigenous wooden cross regulating structures constructed and maintained by the water users. Existing main canals are unlined earth canals totaling 4.29 km.

The village of Haad Don Keo is located on the banks of the Mekong. There is an existing track from the village to Phouvat weir totaling 5 km. The existing irrigation system irrigates some 59 ha in the wet season and 20 ha in the dry with a rainfed area of 27 ha.

2.5 Nam Haad Right Bank irrigation Subproject

The subproject is located in Phaoudom district; Bokeo province. The subproject involves the replacement of a temporary wooden structure (weir) with a concrete reservoir wall of approximately 5m high to retain wet season flows within a small reservoir. This water will be used for downstream irrigation of an existing 90 ha irrigated area and for the development of an additional 60 ha of land suitable for paddy development (already cleared and under seasonal production) on the right bank of the Nam Haad River.

The subproject will involve the relocation and construction of the main delivery canal and associated water management structures together with the construction of secondary canals in the incremental areas. The subproject beneficiaries reside in the four villages of Phonexay, PhaOudom, Thinkeo, and Phiengkham with approximately 1.5 km separating the most westerly village Phonexay from the most easterly, Phiengkham. The subproject will impact a total of 617 households and 3,303 persons in four villages.

2.6 Nam Haad Left Bank irrigation Subproject

Nam Haad Left Bank Irrigation Subproject is located in the District of Pha Oudom, Bokeo Province. The scheme is located east of Bokeo Provincial Center, at a distance of approximately 84km by road. Most of the villagers originated from Bokeo with a few migrants from nearby provinces.

Nam Haad Left Bank existing irrigation system was constructed with funding from the Government in 1995/96. It is approximately 1.5 km from the Nam Haad Right Bank Subproject from Year 1 of the NRI Project. The Nam Haad Left Bank is divided into two groups: i) Nam Haad Left Irrigation (Pung Xieng Group) of about 25ha; and ii) Pung Hin Group with water supply from Nam Kha Irrigation System covering a total area of about 423 ha.

The subproject beneficiaries reside in eleven (11) villages of Pha Oudom District, Bokeo Province: i) Pha Oudom; ii) Thinkeo; iii) Phonxay; iv) Ponglard; v) Sibounheuang; vi) Phiengkham; vii) Xaysavang; viii) Namkha; ix) Somsavang; x) Xayoudom; and xi) Donsavanh. The subproject beneficiaries is composed of 1,389 households and a population of 7,849. The existing irrigation system irrigates some 450 ha in the wet season and 100 ha in the dry.

2.7 Nam Ma Oune Irrigation Subproject

This subproject is located in the District of Long, Luang Namtha Province. The scheme is approximately 42km as the crow flies at an approximate bearing of 285 degrees to the northwest of Luang Namtha Provincial capital. By road the scheme is 77km from the provincial capital and 24km from the district capital of Long. Nam Ma Oune is an existing weir irrigation system with an existing reinforced concrete weir of 24m crest length and 2.3m in height which

was commissioned in 2003. It is located on the Ma Oune River at the confluence with Ma Yen River. Existing main canal length is 2, 000 m. Existing command area is 105 ha in the wet season. The dimension of the existing earth main canal is 0.70 m of the bottom width, 1.30 m of the top width and 1.2 m of the height. The main canal appears to be in good condition. According the beneficiary farmers, maintenance of the canals is carried out twice per year through cleaning and clearance of vegetation. The subproject covers the village of Ban Thad with 67 households and a population of 315 people (Feasibility study: Nippon Koei Co., Ltd;2012).

2.8 Nam Bak Irrigation Subproject

The Nambak Irrigation Subproject is located in Long District, Luang Namtha Province. The scheme is approximately 24 km from Long District and about 76 km from Luang Namtha Provincial Capital by road.

The subproject benefits the 4 villages of Phayaluang, Khok Hin, Nambak, Phokham and Silimoun. The villages have a total of 411 households and population of 2,102.

The Nam Bak Scheme is a sort of integrated scheme with six weirs diverting water from the Nam Bak Noi, Nam Bak Nyai and Nam Ma Rivers. The weirs support the irrigation water supply for a compact/homogenous command area of 217 hectares. The scheme diverts water from three rivers, Nam Bak Noi, Nam Bak Nyai and Nam Ma through a series of six weirs (referred to as Weirs 1, 2, 3, 4, 5 and 6), two of which are concrete (weirs 2 & 3) and the other 4 are indigenous weirs made of bamboo, wood and stones. Concrete weirs were constructed for Weirs 1, 2 and 3 by funds from the EU and ACF (NGO) in 2005 with labor and local materials participation from the villages. Weir 1, however, is not operational as the elevation of the location is lower than the desired elevation of the main canal for Weir 1. Weirs 1, 2, 3, and 5 gets water from the Nambak Nyai, Weir 4 from the Nambak Noi and Weir 6 (actually an intake) from the Nam Ma River. The existing scheme irrigates a wet season command area of 217 ha.

An informal WUG is established but such needs strengthening and registration as WUA. The WUG does not collect any irrigation fee. The WUG collects cash contribution from irrigated HHs whenever funds are needed for the repair of the scheme, labor is contributed free by irrigated farmers. Maintenance is done through labor contribution from irrigated households usually at the start of the season.

The cropping system is rice during the wet season and rice/other crops during the dry season. Most of the lands are planted to pumpkin during a visit conducted in 15 January 2013. Farmers claim that there are no idle lands even during the dry season. Other crops reported to be planted during the dry season are tobacco, water melon, beans, chili and cucumber.

2.9 Hong Kong Irrigation Subproject

Hong Kong subproject is located in the District of Luang Namtha, Luang Namtha Province. The scheme is approximately 4km at an approximate heading of 314 degrees northwest of Luang Namtha Provincial capital by road (Figure 2-1). Hong Kong is an existing scheme that diverts water from the Nam Gnaene river to Hong Kong channel with four existing weirs on Hong Kong channel; The subproject covers three villages of B. Nam Gneane, B. Khone, and B. Luang with total of 936 households and a population of 5,196. Hong Kong is an irrigation canal covering a total of 155 ha (Feasibility study: Nippon Koei Co., Ltd;2012).

2.10 Nam Gngang Irrigation Subproject

The Nam Gngang Irrigation Subproject is located in the District of Namtha, Luang Namtha Province. The scheme is about 4 km at Northwest of Luang Namtha Provincial Capital by road. The subproject covers the (8) villages of Nam Ngaen, Khone, Luang , HuaKua, Thong Ome, Vieng Neua, Vieng Tai and Nam Chang with about 1,900 HHs and a population of 10,189.

Nam Gngang is an existing scheme that diverts water from the Nam Gngang River with supplemental water coming from a Diversion Canal at the left side of the upstream Nam Ngaen Weir. It has a wet season command area about 350 ha and about 450 beneficiary HHs.

The Nam Gngang Weir is a buttress type concrete weir with a crest length of 45m and 2m in height. The weir basin is seriously silted, limiting the flow of water to the intake at the left side of the weir. The main canal is also silted with eroded sides and irregular in shape and depth. There are no water control and regulation structures at the intake and along the main canal. During dry season when water is scarce, the weir is provided with supplemental water from the Nam Ngaen River through a Diversion Canal fed by the left side intake of the Nam Ngaen Weir.

The cropping system is mainly rice-rice with some of areas planted with corn, watermelon and pumpkin during the dry season.

There is an existing informal WUG but such is weak and inactive. ISF collection was done in 2007/2008 at 50,000 kips/ha/year collected during the wet season for the O&M of the system but such was discontinued after farmers begun complaining of insufficient irrigation

2.11 Nam Dai Irrigation Subproject

This subproject is Located in Sing district, Luang Namtha province. It is comprised of three discrete investments that involve two irrigation rehabilitations and the upgrading of one rural access road. The two irrigation schemes - Nam Dai V and VI are existing schemes that currently provide wet season irrigation (finishing water) to 128 ha. With the rehabilitation, an additional 29 ha can be irrigated. The investment involves the replacement of two existing temporary weirs with permanent concrete structures together with associated delivery canals. In addition, the subproject will rehabilitate 2.8 km of gravel-surfaced access road to facilitate delivery of production inputs. This subproject will benefit to 3 villages as: Namkeo Luang, Siri Huang and Yang Phieng with total 311 households and population of 1,496 people (Feasibility study: Nippon Koei Co., Ltd;2012).

2.12 Nam GnaVI-HouayLuang Irrigation Subproject

The Nam Gna VI - HouayLuang Irrigation subproject is located in the District of Sing, Luang Namtha Province. The scheme is approximately 4 km from Sing district center and 64 Km from Luang Namtha provincial center and 12 Km to Lao-China border Checkpoint.

The subproject covers the seven (7) villages of Chome, Houay Luang, Xiengmoun, Namai, Huakhua, Xieng-Inn and Xieng-Yeun. There are 750 HHs and about 846 families in the 7 villages. Total population is 3,892 people comprising of 1,934 females and 1,958 male. The HHs living in the villages are composed of different Ethno-Linguistic Groupings: 1) Lao-Tai Ethno-Linguistic Group - 380 Households; 2) Mone-Khmer 83 HHs; 3) Hmong-lu Mien 2 HHs; and 4) Tibeto-Chinese 260 HHs.

The existing Nam Gna 6 Irrigation Scheme consists of a concrete weir with a 12m crest length. The weir basin is seriously silted limiting the flow of water to the intake at the left side of the weir. The main canal is silted, eroded and irregular in shape and depth, and there are no water control and regulation structures. This scheme has a command area of about 224 hectares.

Nam Yaluang is an earth dam of 8m height and an 18m spillway. The reported design storage capacity is about 220,000 m³, but the reservoir is presently seriously silted and may not have the same capacity. There is no data given on the dead storage of the Dam. Nam Yaluang is reported to have a command area of 182 hectares.

The Nam Gna 6 and Houay Luang Schemes are reported to have been constructed by the Lao Government in 2003 with community participation of labor and local materials. The construction of the Yaluang Scheme amounted to approximately 2.7 billion Kips.

There are existing WUGs but these are not very active and are poorly performing the O&M of the schemes. These are being supervised by DAFO Staff with the support of Village Authorities.

2.13 Nam Lan Irrigation Subproject

This subproject is located in the district of Bountai, Phongsaly Province. The scheme is approximately 37km as the crow flies at an approximate bearing of 199 degrees to the south - west of Phongsaly's current provincial capital. By road the scheme is 92km from the provincial capital and 4.5km from the district capital of Bountai. It is 48 km away from the China border. The existing Nam Lan scheme is a weir irrigation system with a total command area of 34 ha covered by a main canal of 2,750 m long. The concrete weir is 1.8m in height, with a crest length of 43m. The weir was first commissioned in 2008. The district authorities together with the Nawai villagers propose to extend the canal about 1 km crossing the village road to the existing paddy area of another 48 ha. Thus, Nam Lan irrigation system will have a total command area of 82 ha, some main canal sections have already been excavated by the farmers. The water source is Nam Lan river and the existing weir can be reached by a 2.0 km walk along the main canal from the village road of Ban Nawai. The subproject covers only one village of B. Nawai with 165 households and a population of 822.

2.14 Nam Gneue Irrigation Subproject

Nam Ngaene Irrigation Subproject is located in the District of Bountai, Phongsaly Province. The scheme is approximately 37km as the crow flies at an approximate bearing of 199 degrees, south-west of Phongsaly's Provincial Capital. By road the scheme is 92 km from the provincial capital and 4.5km from the district capital of Bountai. It is 48 km away from the China border.

The proposed subproject will benefit the 4 villages of Bountai, Nonbounkang, Phothong and Nawai. (Ban Nawai is a beneficiary of Nam Lan Irrigation System – Year 1 NRI Subproject).

The existing Nam Ngaene scheme consists of a concrete weir and two (2) main canals: 1) 3.62 km Right Main Canal (RMC); and 2) 2.25 Left Main canal (LMC). The concrete weir was constructed out of Lao government (GOL) funds in 2008, although the canal system is reported to have been in use for several decades with indigenous/temporary weirs (before the construction of the concrete weir by the government). The present irrigation service area of the system is reported at 117 ha, benefiting about 213 HHs.

Informal WUGs exist but no collection of fees and hence no funding for O&M. Repairs are made through use of members labor and water distribution decided through the village authorities.

2.15 Nam Ou Irrigation Subproject

This subproject is an existing weir type scheme with an existing reinforced concrete weir with 48 m crest length and 3m in height. It was commissioned in 2000 and is currently in good condition. The system has one intake gate at the left bank followed by Main Canal (MC) with 1,715 m long, is then further divided in to two (2) main canals, Right Main Canal (RMC) with 2,603 m long and Left Main Canal (LMC) with 3,622 m long. The total command area is 440 ha

consisting of 117 ha of the right bank command area and 263 ha of the left bank command area. The subproject covers six villages of B. Loum, B. Kad, B. Tai, B. Theung, B. Phouxangand B. Somxay in Nhot-Ou district in Phongsaly province, with a total of 844 households and a population of 4,314 people (Feasibility study: Nippon Koei Co., Ltd; 2012).

2.16 Nam Thae Irrigation Subproject

The Nam Thae irrigation subproject is located in the Nhot Ou District (Figure 2), at a distance of about 21 Km north east of the District, and 177 km from Phongsaly Provincial Capital through an all-weather laterite and asphalt road passable by all types of vehicles.

The Subproject will benefit 5 villages in the area namely: 1) Ban Don Ngeng; 2) Ban Sen Inmay; 3) Ban Navone; 4) Ban Nong Ngai; and 5) Ban Bortai. The five (5) villages comprise of 416 Households, 545 families and a population of 2,211.

The Nam Thae irrigation subproject is a scheme with an existing reinforced concrete weir 40m in length and 3m in height funded by the government. Existing main canal length is approximately 6,400m. Presently, the storage basin of the weir is filled with sand, the sluice gate is broken and cannot be operated, portions of the main canal are seriously silted and with leakages, and damaged turnouts. Some households resort to shifting cultivation upstream of the catchment area due to the insufficient irrigation water from the Nam Thae Irrigation System. There is no formal Water Users' Association (WUA) and no suitable WUA Roles, Rules and Regulations. Irrigation System operation and maintenance (O&M) is not properly done and no water fee collection to support funding needs for O&M.

2.17 Mong Chao-Koman Road Subproject

This subproject is located in Phongsaly district. The aim of the subproject is to rehabilitate approximately 13.5 km long road; which comprises of a combination of gravel and sealed surfaces. The gravel-surfaced road (7.8 km in length) will be 4.5 m in width (including two, 0.5 m shoulders) with surface and longitudinal drainage structures as required. The sealed surface (5.7 km in length) will be undertaken where the alignment passes through villages and in sections with steeper gradients as well as in areas with identified problems. It will have a 3.5 m wide double bitumen surface treatment (DBST) to minimize the maintenance requirements and maintain functionality of the alignment given the more extreme climatic conditions experienced in the north. The road continues on to Phongsak en route through Phagnasy. This latter section is not part of the subproject. The project will serve with improved road for 8 villages with 488 households and 2,174 residents. Six of these villages are located alongside the road with the remaining two, Namleng and Kodaeng, relying on access tracks to the road of approximately 3 km distance (Feasibility study: Nippon Koei Co., Ltd; 2012).

2.18 Kormaen-Phongsak Road Subproject

The proposed subproject, Kormaen-Phongsak Road, is a continuation of the Year 1 Mongchao-Kormaen Road Rehabilitation Subproject. The start of the proposed subproject road is located at Kormaen Village, which is some 14km by road from Phongsaly District/Provincial Capital, where the first section of the year 1 subproject road ends. The Kormaen-Phongsak subproject road continues for a further 10.3km and terminates at Phongsak village school which lies in a northeasterly direction from the starting point.

The road services two villages of Phayasy (Km 4+900) and Phongsak (Km 9+700) of 133 households, 148 families and population of 645.

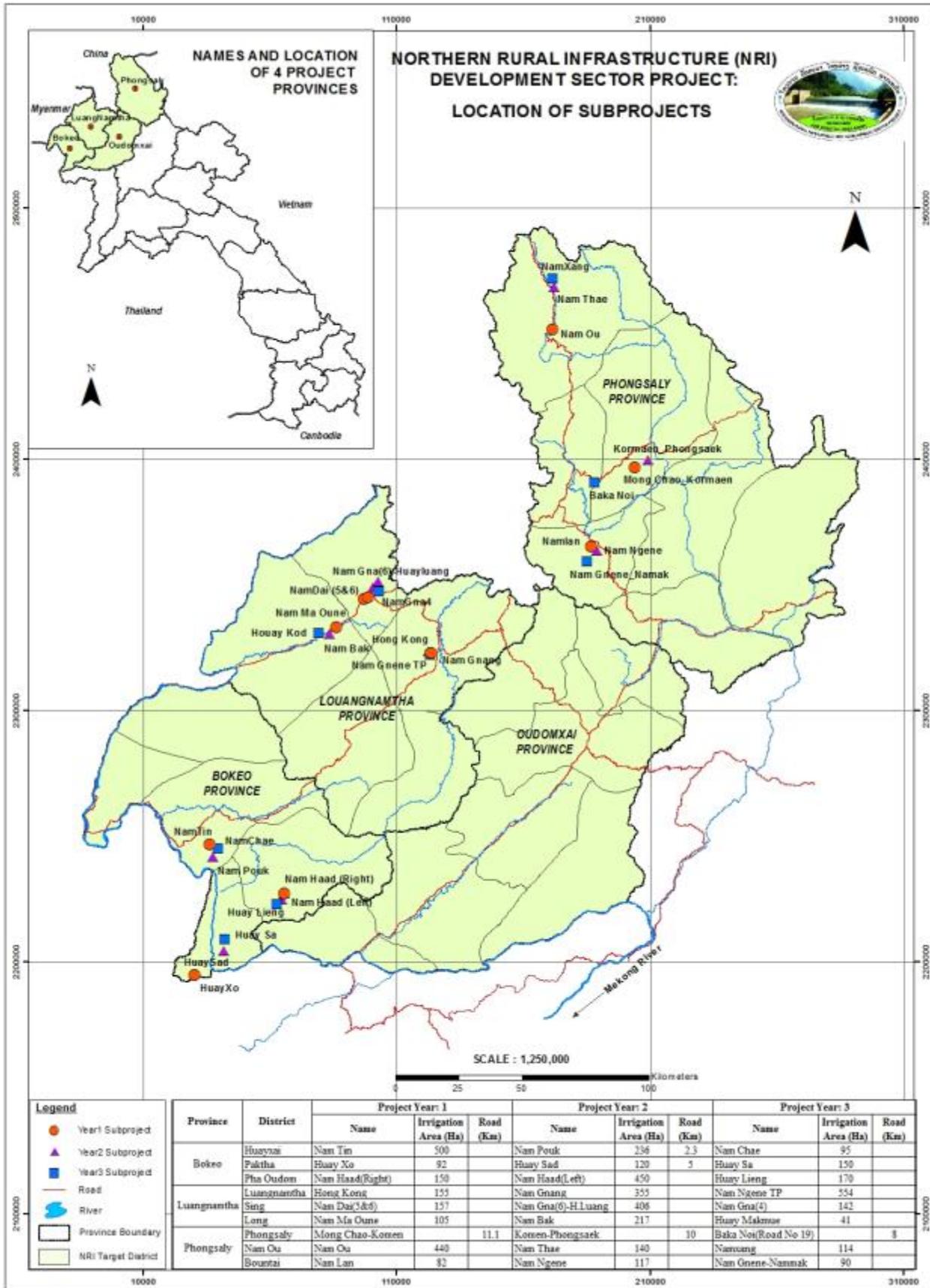


Figure 2-1 Map of the project location and subproject sites of year 1 and 2

3 Project Organization, Environmental and Social Safeguard and Responsibilities

3.1 Institutional Arrangement of Project

To ensure inter-agency cooperation at the national level, a National Steering Committee (NSC) has been established. The NSC will meet annually or as required to review overall implementation progress, approve annual work- plans and budgets, and provide overall policy guidance. The National Project Management Office (NPMO) provides secretariat services to NSC. Provincial Steering Committees (PSCs) have been established to ensure inter-agency coordination at provincial level. The PSCs are chaired by provincial vice governors with equivalent representation to that for the NSC, including governors from the participating districts. The PSCs meet bi-annually or as required to review implementation progress and to ensure adequate levels of coordination between key agencies for project coordination. Subproject Investment Reports (SIRs) shall be approved by PSCs after obtaining the necessary concurrence of ADB for social and environmental safeguards. The PPO will provide secretariat services to PSCs.

The Ministry of Agriculture and Forestry (MAF) is the executing agency (EA) for the Project with the responsibility for overall project coordination and management transferred to its Department of Planning (DOP) who has established the NPMO for day-to-day coordination and management of the Project. The implementing agencies at the provincial level are the Provincial Agriculture and Forestry Offices (PAFOs). Provincial Project Offices (PPOs) have been established in each PAFO to be responsible for financial management at provincial level, and coordination and management of implementation of subprojects. To assist the implementation of the Project at the district level, District Coordination Offices (DCOs) have been established within District Agriculture and Forestry Offices (DAFOs) to mainly coordinate and supervise subproject activities.

3.2 Organizational Structure for the Environmental and Social Safeguard

Besides the Steering committees at provincial and district levels established in 2010, the Committees with different roles for grievance have been formed at levels (provincial, district and village/community) during 2011-2012 for all subprojects. The key roles of the committees are to coordinate and mitigate the negative impacts on environment, land acquisition and compensation, socio-economic, culture and livelihood of the communities; which would be caused by subproject activities. This is to ensure the compliance with ADB policy and relevant Lao PDR's regulations regarding the environmental and social safeguards.

The structure of the committees is varied in terms of number and representative sectors in each province (see table 3-1). However, members of committee are representatives from line departments and district offices responsible for environmental and social aspects e.g. department/ office of natural resources and environment at province, Lao women Union, Lao Front for National construction and district cabinet offices and others. A project EMO or its equivalent within the PPO with the assistance of the DCO have been established in coordination with line offices; in particularly with environmental sector. This is to ensure long-term institutional capacity building. It is recommended that the staff of the EMO be drawn from the permanent full-time staff of the executing agency.

Similarly, the committees and DCO at district level have also been established; particularly the grievance committee that has the roles to coordinate with provincial committee, advise the

village committee and supervise the implementation of safeguard plans and support community development activities.

At village/community level, the grievance committee have been set up by district governor to ensure that all the concerned matters regarding the complaint on land acquisition and resettlement, engagement of the ethnic minority groups are basically resolved at village level.

Meanwhile, the formation of Water User Groups (WUGs) has been set up in each subproject to maintain operational mechanism. the mechanism will be managed by the beneficiaries and funded by beneficiaries' contribution through water user fees as is consistent with Lao PDR Irrigation Management and Transfer Strategies recently developed. This is to maintain the sustainable use of the provided structures in the sustainable way. The committee at the village/community level comprises of the representatives from village office, village security, village defence, Lao youth, Lao Women Union (LWU) and Lao Front for Nation Construction (LFNC).

It was confirmed during the monitoring survey by the PPOs and DCOs that few individual members of PPOs and DCOs have been seconded or promoted and replaced by others due to administration reform of the local government. However; the member sectors involved in the PPO and DCO remain the same, and the same members from sectors appointed for subprojects of year 1 will be continuing for the year 2 (see the table 3.1).

Table 3-1 Representatives of the grievance and resettlement committee at provincial and district levels

Sector	Hongkong		Nam Maoune		Nam Dai		Nam Ou		Mongchao-Koman		Nam-Lan		Nam-Haad Right Bank		Nam-Tin		Houay-Xo		Nam Gngang		Nam Bak		Nam Gna-Houay Luang		Nam Thae		Kormaeen-Phongsak		Nam Gnaene		Nam Haad Left Bank		Nam Phouk		Nam Sat	
	P	D	P	D	P	D	P	D	P	D	P	D	P	D	P	D	P	D	P	D	P	D	P	D	P	D	P	D	P	D	P	D	P	D	P	D
Provincia I cabinet	√		√		√		√		√		√	√							√		√		√		√		√	√								
District authority		√		√		√		√		√				√		√		√		√		√		√				√		√		√		√		
Village cluster								√				√													√				√							
MAF	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
MPWT										√				√													√			√						
MPI		√		√				√		√		√		√				√		√				√		√		√		√						
MF	√		√	√	√	√	√	√	√	√	√	√		√				√		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
MJ														√		√		√											√		√		√		√	
MIC														√																√						
MONRE	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
LWU	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
LFNC	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

Note: P= Members of Grievance and Resettlement committee from relevant sectors at provincial level

D= Members of Grievance and Resettlement committee from relevant sectors at district level

3.3 Role and Responsibility of Environmental and Social Management Team

The established PPO and DCO as well as EMO play important roles for environmental and social management and monitoring for the executive agency to ensure that environmental and social impacts are well and appropriately prevented and mitigated in conformity with the approved EMP, GAPS, EGDPs and RAPs to ensure that good engineering practices are exercised for the protection of the environment and social aspects. Main responsibilities of EMO established within the PPO are to ensure the mitigation measure and monitoring programs are carried out regularly, to identify problems and develop plans for corrective actions. Routine reporting will be maintained by the DCO and PPO for the NPMO, MAF and ADB as part of its routine reporting responsibilities in compliance with the ADB requirements.

A safeguard officer of the EMO established within the PPO shall be responsible for safeguard monitoring (including grievance mechanisms) to ensure that the following required policies, procedures and plans are addressed:

- Resettlement including land acquisition and compensation,
- EMP and environmental monitoring implementation, supervise the Contractor to implement the EMP Compliance with the Contractual Specifications
- The implementation of Indigenous peoples specific actions and the achievement of their expected outcomes during subproject preparation, implementation and operation, and
- The closer follow up of gender action plan.

As member to steering committee and PPO and DCO of the subprojects, the PONREs and DONREs are actively encouraged to involve the safeguard monitoring and evaluation; both joining with Independent monitoring team and their own monitoring missions in subprojects with support from the PPO and DCO in quarterly or bi-annual basis. Such implement is also part of the roles and mandates of PONRE and DONRE. The encouragement of NRI Project for the PONRE and DONRE also contribute the strengthening of capacity building to MONRE through different ways; this include engagement of PONRE and DONRE staff during the Safeguard Monitoring missions of year 1 and 2.

4 Results of Environmental Safeguard Monitoring

4.1 Environmental Permits/Clearance and Progress of Environmental Safeguard

As per requirement, any development projects in Lao PDR are subject to environmental assessment and management planning according to the Decree on Environmental Impact Assessment, April 2010. The Decree describes investment projects into two categories; Category 1 - for small scale projects that require an IEE, and Category 2 - for large scale investments requiring an environmental impact assessment (EIA). For irrigation projects, those with a command area of between 100 - 2,000 ha come under Category 1, while those with a command area greater than 2,000 ha come under Category 2. The corresponding category in the ADB's classification system is B, which requires an IEE.

As for the NRI subprojects, all subprojects are mainly improvements of the existed infrastructures only. The IEEs for the subprojects revealed that potential negative impacts can be mitigated by adhering to the EMP prepared for the subproject. No further assessment is therefore required (sourced from Feasibility Studies for subprojects, Sept 2012 for subprojects of year 1 and March 2013 for subprojects of year 2).

With above-mentioned requirements, the IEE reports including EMP for subprojects were drafted in 2012 (year 1 subprojects) and March 2013 (subprojects of year 2) and submitted to PONRE for review and consideration in order to issue the IEE certificates for the Subprojects.

The IEEs of 18 Subprojects were officially approved by the PONREs in each province during late 2013 and early 2014. The IEE certificates for 9 subprojects of year 2 are presented in the Annex 1. For the IEE of 9 subprojects of year 1 were included in the Third Safeguard Monitoring report of year 1.

The environmental and social monitoring and evaluation for the first mission was undertaken between 7-22 June 2014. The Mission was mainly focused on the subprojects being actively constructed. Further, the water quality baseline data were also collected for subprojects which have not been started e.g. Nam Bak and Nam Gngang. Similarly; the water samplings and aquatic resources studies were carried out for subprojects that have been completed e.g. Hongkong, Nam Tin, Nam Haad Right Bank, Nam Ou, Nam Lan and Nam Dai. For the ongoing constructing subprojects, the comprehensive monitoring and site inspections was undertaken for all relevant aspects, this include aquatic resources, water quality, waste management, hazardous waste management, erosion and sediment control and dust & noise. The details of monitoring outcomes for the environmental compliance and status of each Subproject during the site visit can be summarized in the section 4.6.

4.2 Progress of Civil Works

The progress of the construction was reported by PPOs, DCOs and Contractors in subprojects during the field mission in June. It was observed that the construction works in subprojects have been progressively implemented. Particularly 8 subprojects of year 1 were 100% completed. (see the table 4-1 below). The progresses of other subprojects vary from "not yet started (site preparatory works only)" to 75% depending on the subproject scale and site conditions. All the construction works of the subprojects are planned to be temporary stopped at the end of July for the rainy season suspension. The work progress of the subprojects can be summarized in the table 4-1.

Table 4-1 Subprojects' progress of construction works

No.	Province	District	Subproject Name	Progress of Construction work (as per end of May)	Project year
1	Bokeo	Houayxai	Nam Tin Irriation	100%	1
2			Nam Phouk	75%	2
3		Paktha	Houay Xo Irrigation	57%	1
4			Houay Sat	1.2%	2
5		PhaOudom	Nam Haad Right Bank Irrigation	100%	1
6			Nam Haad Left Bank	42%	2
7	Luang Namtha	Long	Nam Ma Oune Irrigation	100%	1
8			Nam Bak	Not yet started	2
9		Namtha	Hong Kong Irrigation	100%	1
10			Nam Gnaeng	Not yet started	2
11		Sing	Nam Dai (V) and (VI) Irrigation	100%	1
12			Nam Gna-Houay Luang	2.6%	2
13	Phong-Saly	Boun Tai	Nam Lan Irrigation	100%	1
14			Nam Ngaen	21%	2
15		Nhot Ou	Nam Ou Irrigation	100%	1
16			Nam Thae	60%	2
17		Phongsaly	Ban Mong Chao – Koman Road	100%	1
18			Kormaen-Phongsak	23%	2

Sourced: PPOs and DCOs

4.3 Institutional Arrangement for Environmental Management and Monitoring

The committees at provincial, district and village levels have been set up for all Subprojects within the PPOs and DCOs for grievance and environmental monitoring issues. The committee members are representatives from line departments and offices (detailed in the section 3.2) within their province and district, this includes the representative from PONRE. The purposes of the establishment of the committees are to ensure that the environmental and social impacts are appropriately managed and mitigated in compliance with the ADB Safeguard Policy and relevant regulations of Lao PDR.

More involvement of PONRE and DONRE to the environmental and social management has been actively supported. The representatives from these offices have participated in activities. It was obviously seen more engagement of PONREs and DONREs during the monitoring missions; including the first mission of package 7-2.

Besides joining with the Independent Safeguard Monitoring, it was confirmed by the PONRE of Luang Namtha province that PONRE and DONRE have carried out their own monitoring on Subprojects in quarterly basis with support from PPO for the budget. However; similar activity has not yet implemented in other 2 provinces and during this mission the PONREs and DONREs were consulted for possibility to carry out such monitoring.

4.4 Environmental Compliance Status

The main environmental impacts were foreseen at stages of all Subprojects implementation, particularly during the construction period and the mitigation measures were proposed in the IEE and EMP for the Subprojects. The main environmental concerns for Subprojects are:

- Soil erosion, silt and sediment deposition,
- Hazardous/chemical waste and material,
- Disturbance of water flows,
- Potential dust and noise nuisance.
- Use of private land for storage and work depots,
- Waste management,
- Insufficient use and distribution of irrigation water during the cultivation period,
- Water quality
- Aquatic and terrestrial biology

As the construction has not been implemented, there will be no impacts to local environmental conditions from the subproject, except for the changes due to human activities caused by local communities e.g. chemical use for agriculture, land use change due to increase agriculture land and urbanization, improper sanitation systems and etc.

At the moment of the Mission, there are 8 Subprojects which are on the progress of construction works, but other 2 subprojects (Nam Bak and Nam Gngang Subprojects) have not yet been started. However; the procurement procedures for these 2 subprojects and detailed design are completed.

The details of implementation for environmental and social management and Outstanding issues observed and seen during the third mission in 6 subprojects are presented as follow:

1). Nam Tin Irrigation Subproject:

Disturbance of water flows	Proposed mitigation and required action
Soil erosion, silt and sediment deposition	
No major issues regarding erosion and sediment observed and reported, the construction works were completed before wet season.	It is recommended that the PPO and DCO should follow up the erosion and sediment load for this wet season even though the construction work was completed and remediation should be undertaken if erosion/ landslide occurred
Disturbance on Water Flow	
No change on flow regime for the stream and water use at downstream comparing to the pre-construction stage	No action or mitigation required.
Dust and Noise Nuisance	
As the construction activities was completed. No any concerns regarding dust and noise issues	No action or mitigation required.
Borrow Pits/Quarry	
As scope of construction work, there were no borrow pits	No action or mitigation required.

and quarry for this subproject during the construction.	
Waste Management	
No domestic and construction waste observed on sites as the rehabilitation of sites was undertaken	No action or mitigation required
Construction Camp	
The agricultural huts of villagers, accommodation at the Nam Tin agriculture centre and tents were used for accommodations during the construction.	No action or mitigation required
Hazardous/Chemical Waste	
No hazardous material/waste observed on site.	No action or mitigation required
Water Quality	
Water sampling at upstream and downstream of this Subproject was conducted at the same location where previously collected.	It is recommended that the collection of upstream and downstream water sampling should be continued for basic parameters.
Traffic and Safety	
No more construction and transportation activities on site. Therefore no concern on this issue.	No action or mitigation required
Terrestrial and Aquatic Biology	
<p>Due to the existing structure with high earth dam and reservoir for this subproject and the scope of for this Subproject, It is less possibility or not possible for fish migration and there was no construction activities from the Subproject would cause additional impacts on aquatic resources and habitat and migration.</p> <p>As mentioned in the previous Monitoring Reports that the reservoir of the Nam Tin is allocated as fish conservation zone and under the management of PAFO. Every year the fish fingerling release is undertaken.</p> <p>During the monitoring mission, the team did consultation with villagers on aquatic resources and use. It was confirmed that the fish species can be found in Nam Tin are listed in the Annex 5</p>	<ul style="list-style-type: none"> - Raising awareness training of minimizing harmful fishing activities within the communities and tougher enforcement of regulation. - Minimum flow should be released during the dry season if water available to maintain the water level for aquatic resources during the operation.
Environmental Monitoring	
Up to now, the PONRE and DONRE has engaged only in the Independent Safeguard Monitoring, but not their old independent monitoring.	It is recommended that besides the involvement in the safeguard monitoring the PONRE and DONRE should plan and implement quarterly or bi-

	quarterly basis.
Community perception	
The villagers said they are happy with the improved structures and they will receive more liable water for irrigation.	It is recommended that during the operation the PPO and DCO has to review and check the water sharing and use by different groups of people and making sure that the villagers can get sufficient water for irrigated areas.

2). Nam Pouk Irrigation Subproject

Disturbance of water flows	Proposed mitigation and required action
Soil erosion, silt and sediment deposition	
This Subproject is located in the flat land and the canal alignments go along the low terrain areas. No severe erosion and landslide observed during the site visit and most of the area along canal sides are stabilized compacted, no potential impact of erosion on villagers paddy fields or stream flow. The small section within the silted weir basin which is being clearing and levelling for concrete lining of wings both upstream and downstream of weir, but this would not cause significant erosion and sediment transport.	Rehabilitation along the canal sides where necessary upon the completion of earth works to avoid the potential impact to the paddy fields of the villagers.
	
Photos of the construction site concerning erosion	
Disturbance on Water Flow	
With low flow of Nam Pouk, very limited water available in the stream and the water were temporarily blocked due to de-silting and concrete lining work close to the weir structure and no disturbance on water use for irrigated paddy fields.	It is recommended that during the operation the minimum flow should be released to the downstream during the high demand for irrigation to maintain the water required for aquatic resources.

	
Photo of the water low water flow of Nam Pouk	
Dust and Noise Nuisance	
<p>As the canal alignment and road pave with gravel passes through the residential area. However, only few trucks and vehicles used during the construction and the works was only carried out during the day time and the main construction area where the machineries are needed is quite far from the communities. Therefore, the concerns associated with dust and noise is quite minor.</p>	<p>Operation of heavy machineries at night time should be minimize and the speed limit for the driving in the residential area to minimize the dust suppression.</p>
Borrow Pits/Quarry	
<p>No borrow pit and quarry on site. Aggregates for construction were supplied by the local supplier.</p>	<p>No actions or mitigation measures required</p>
Waste Management.	
<p>In general, the temporary accommodation during the construction was provided with good housekeeping with waste pit, arrangement of facilities was acceptable</p>	<p>It is recommended that the PPO and DCO in coordination with PONRE or DONRE has to check and monitor the general housekeeping and waste management on site when the construction work restart again.</p>
Construction Camp	
<p>One agricultural hut and few tents were used as accommodation and the toilets were provided. It was confirmed by the Contractor that the accommodation will be moved to other place soon upon the completion of the improvement of the weir and intake gate. However; the Contractor was instructed to clean and rehabilitated properly before leaving the site.</p>	<p>It is recommended that the DCO should inspect and making sure that the cleaning and site rehabilitation are undertaken properly before moving out.</p>

	
Photos of temporary accommodation available on site	
Hazardous/Chemical Waste	
No storage of hazardous material was found on site and no spillage and leakage.	PPO and DCO should always advise the Contractor to carry out safe and proper handling of the hazardous material/waste
Water Quality and water resources	
<p>Water samples were collected at upstream and downstream of Houay Pouk. Besides the construction activities of Subproject, the clearing and ploughing of many hectares for land for banana plantation nearby the weir; would impact on water quality of Houay Phouk.</p> <p>The details of the water quality analysis result is described in the section 4.7</p>	It is recommended that the collection of upstream and downstream water sampling should be continued for basic parameters.
Traffic and Safety	
With the scope of work, only few trucks and vehicles used during the construction and the main construction area where the machineries are needed is quite far from the communities. No potential anticipated accident would happen. It was confirmed by the village authorities confirmed that so far there have not been accidents happened.	It is recommended that the Contractor should be advised on traffic safety particularly for the drivers.
Terrestrial and Aquatic Biology	
<p>Due to the very low flow of Houay Pouk; particularly in wet season and existing weir structure on site, the aquatic resources are not abundance. Most of the fish are small size species, construction activities from the Subproject would cause additional only minimal impacts on aquatic resources and habitat and migration.</p> <p>On the other hand, there is no fish conservation zone in the Subproject area and it would be difficult to allocate the conservation area along this stream due to limited water availability in dry season.</p> <p>During the monitoring mission, the team did consultation with villagers on aquatic resources and use</p> <p>- aquatic species reported and found in the Nam Pouk are</p>	It is recommended that awareness raising of minimizing harmful fishing activities within the communities should be enhanced.

listed in the Annex 5	
Environmental Monitoring	
Up to now, the PONRE and DONRE has engaged only the safeguard monitoring missions. No their own independent monitoring.	It is recommended that besides the involvement in the safeguard monitoring the PONRE and DONRE should plan and implement quarterly or bi-quarterly basis.
Community perception	
No complaints on Subproject received by village authorities and DCO. Villagers are very supportive for the project	It is recommended that during the operation of the Subproject, the PPO and DCO has to check the water sharing and use by different groups of people and making sure that the villagers can get sufficient water for irrigated areas.

3) Houay Xo Irrigation Subproject

Disturbance of water flows	Proposed mitigation and required action
Soil erosion, silt and sediment deposition	
Subproject is on progression of earth works mainly canal alignment activities, as the result the material is disposed along sides the canal line which partially runs through the agriculture land. However, the canals pass mostly though the low-altitude areas with less potential for erosion and landslide and it was confirmed by the PPO that the disposed material along canal sides will be graded and levelling.	It is recommended that the PPO and DCO should advise the Contractor to rehabilitated the along canal sides where necessary upon the completion of earth works to avoid the impact to the paddy field of the villagers.
Disturbance on Water Flow	
Construction of weir structures for Houay Xo 2 and 3 were completed, but Houay Xo 3 was being constructed and the water was diverted through the diversion pathway next to the weir structure. Not yet diverting water from Houay Xo 1&2 for irrigation purpose. The water is freely released though the sediment releasing gates. In general, no blockage of water flow and the aquatic resources still can migrate up and down.	It is recommended that during the operation the minimum flow should be released to the downstream during the high demand for irrigation to maintain the water required for aquatic resources.
Dust and Noise Nuisance	
It is less concern for the Houay Xo1&2 due to the locations of the construction sites. Houay Xo 3 is located close to the residential area of Ban Dong, therefore, there should be potential noise	It is recommended that the construction work with potential noise should be schedule to day

<p>impact due to operation of the machine and trucks, but only short term and small construction work. No concern on dust as the road pas the residential area is paved with asphalt and only few trucks a week for delivery of construction materials.</p>	<p>time only.</p>
<p>Borrow Pits/Quarry</p>	
<p>It was confirmed by the Contractor and PPO that the construction material for the Houay Xo 3 was sourced from Houay xai only. It was found that gravel and sand were sourced from the stream for the weirs construction of Houay Xo1& 2.</p>	<p>Rehabilitation of the material-sourced areas along the Houay Xo should be rehabilitated</p>
<p>Waste Management</p>	
<p>No construction waste observed at the construction sites, no physical structures of the camp for Houay Xo 1&2 construction sites as the workers used to based in the agricultural huts of the villagers and plastic tents and moving places to places. Therefore, no domestic waste observed. Wood waste for framing of construction was piled nearby the construction site of Houay Xo 3. It was confirmed by the Contractor that the wood waste will be gave to the villagers to be used as firewood.</p>	<p>The instruction was given to the site manager for Houay Xo 3 and PPO that the wood waste shall be removed from the site upon the completion of the construction work to avoid the risk for the villagers who bathing nearby</p>
	
<p>Photo of the wood waste from the construction work</p>	
<p>Construction Camp</p>	
<p>As mentioned in the third Safeguard Monitoring Report of year 1 that the agricultural huts and tents were used as temporary accommodation during the construction. No camp facilities found for the Houay Xo 1&2 as the works have been temporary stopped for wet season. However, one small hut was located nearby the weir structure of Houay Xo 3 where 2-3 workers based.</p>	<p>It is recommended that the temporary hut used during the construction should be removed and the area shall be cleaned.</p>

Hazardous/Chemical Waste	
No hazardous material/waste observed on site. all hazardous materials for trucks and machine are delivered from the station nearby in Ban Dong.	It is recommended that all the hazardous material/waste shall be kept properly and in the safe manner.
Water Quality	
<p>It was seen that the water was physically clear even though it was early wet season in the region, this would be due to well protected watershed area of Houay Xo; comparing to other Subprojects' watershed. The construction activities of subproject would cause less impact to the level of water quality of Houay Xo. Besides the construction activities on sites, other factors that could influence on the water quality. It was reported by the villagers and DCO that the chemical fertilizer and pesticides are widely used in the Subproject beneficiary areas.</p> <p>The details of the water quality analysis result is described in the section 4.7</p>	<p>It is recommended that the collection of upstream and downstream water sampling should be continued for basic parameters.</p> <p>The agro-chemical parameters should be collected and analyzed PPO and DCO in coordination with PONRE, DONRE and village authorities should raise awareness on safe and minimal agro-chemical use and proper handling, enhancing the bio-fertilizer use.</p>
Traffic and Safety	
Construction and transportation activities was not intensified	It is recommended that the Contractor has to make sure that the transportation of construction materials and equipment to the sites is safe and minimizing the potential risk hazard.
Terrestrial and Aquatic Biology	
<p>There is no concern on terrestrial biology due to the existing land use in the Subproject area.</p> <p>The team conducted the basic fish study through local knowledge method by consulting and interviewing with local people and site observation. Furthermore; the discussion with DCO and PPO was made for the future fish conservation plan.</p> <ul style="list-style-type: none"> - Fish conservation zone is allocated in each village of the Subproject along the Houay Xo, but only Ban Dong enforces the strict rule on fishing. The length of conservation zone is about 1500-2000 m long along the stream from village settlement area. - Person violates the rule will be fined 3 million kips/time - All structures of 3 weirs are designed with high potential of fish migration up and down though the structures as there 	<ul style="list-style-type: none"> - Ongoing fish conservation activities in the area should be enhanced through integrating technical and local knowledge - raising awareness training of minimizing harmful fishing activities within the communities and tougher enforcement of regulation. <p>It is recommended that the proper fishing should be introduced to the villagers and regulation on water use and fish conservation should be regulated.</p> <ul style="list-style-type: none"> - Minimum flow should be released

<p>are 2 slots in the middle of each weir for sediment and this can be the fish passage.</p> <p>- Even though the weirs with the concrete structures are new for the Houay XO, but these will not cause much negative impact on fish migration and habitat as there are slots for fish passage and the water level at upstream and downstream is not much different (see the photos)</p> <p>aquatic species reported and found in the Houay Xo are listed in the Annex5</p>	<p>during the dry season if water available to maintain the water level for aquatic resources during the operation.</p>
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	<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p>gateways for sediment release and fish migration</p> </div>
<p>Photos of weir structures of Houay Xo 1&2</p>	

<p>Environmental Monitoring</p>	
<p>Up to now, the PONRE and DONRE has engaged the safeguard monitoring missions, but not their old independent monitoring.</p>	<p>It is recommended that besides involvement in the Independent Safeguard Monitoring, the PONRE and DONRE should plan and implement his own monitoring in quarterly or bi-quarterly basis.</p>

<p>Community perception</p>	
<p>consultation with the beneficiary villagers and village authorities, it was confirmed that they are happy with the new structures comparing to previous wooden-made structures that they have to fix every year.</p>	<p>It is recommended that during the operation the PPO and DCO has to review and check the water sharing and use by different groups of people and making sure that the villagers can get sufficient water for irrigated areas.</p>

4). Houay Sat Irrigation Subproject

<p>Disturbance of water flows</p>	<p>Proposed mitigation and required action</p>
<p>Soil erosion, silt and sediment deposition:</p>	
<p>The canal alignments of this Subproject pass different geographical terrains. However; most of canal length go along the low land area where the erosion and sediment control can be minimize by rehabilitation upon the completion of construction work. However; the area where the canal goes to the higher terrain is quite prone to erosion easily and this would cause</p>	<p>It is recommended the PPO and DCO should check and make sure that carry out rehabilitation along the canal sides is undertaken upon the completion of the construction work.</p>

<p>impact on paddy fields and the canal would be filled with sediment and blocked. In general, these areas with potential erosion will be only for short term and at the end of wet season these area will be recovered quickly with natural vegetation.</p>	<p>For long term use of facilities, the WUG should be trained of facilities maintenance to make sure that the materials deposit inside the canal is regularly removed.</p>
	
<p>Photo of the potential areas subject to erosion.</p>	
<p>Disturbance on Water Flow</p>	
<p>During the site visit, the concrete work on weir structure was being taken place. However, no disturbance on water flow as the water runs through the existing intake gates. no water is released to the paddy field through the canals yet. the water still flow along its natural way.</p>	<p>No actions or mitigations required</p>
<p>Dust and Noise Nuisance</p>	
<p>No potential dust and noise concerns as construction location is very far from residential area.</p>	<p>No action and mitigation measures required.</p>
<p>Borrow Pits/Quarry</p>	
<p>Construction materials; including aggregate for concrete work was supplied by the local supplier which sourced from Mekong river bank.</p>	<p>No action and mitigation measures required</p>
<p>Waste Management</p>	
<p>Good housekeeping was practiced in the camp and construction sites. Waste pit was provided and buried. There were only few people based at the temporary camp. Other people moved place to place in different days in the agricultural huts.</p>	<p>It is recommended that the was pit should be backfilled</p>
<p>Construction Camp</p>	
<p>One was built to accommodate for few workers. It is confirmed that this hut will be moved out before the temporary stop of construction for wet season</p>	<p>No action and mitigation measures required</p>

	
<p>Photos of temporary hut and camp used during construction camp.</p>	
<p>Hazardous/Chemical Waste</p>	
<p>Few drums of chemical materials were observed under the roof of storage house. However, no spillage/leakage was observed on site.</p>	<p>The PPO and DCO has to make sure that proper handling and delivery of such hazardous material is regularly practiced</p>
<p>Water Quality</p>	
<p>There would not be the construction activities that can cause significant impact on water quality of Nam Sat. only the level of sediment load in the water would be increased due to the construction activities. Water samples were collected at upstream and downstream of the Subproject</p> <p>The details of the water quality analysis result is described in the section 4.7</p>	<p>It is recommended that the collection of upstream and downstream water sampling should be continued.</p>
<p>Traffic and Safety</p>	
<p>Potential road accident or safety risk is minimal as the construction activities of the Subproject are distant from the residential area. However, the access road to the construction site is also used by the farmers to their paddy fields</p>	<p>It is recommended that the advice of safe driving should be given to the drivers of the Contractor.</p>
<p>Terrestrial and Aquatic Biology:</p>	
<p>No potential impacts for the terrestrial biology from the construction activities.</p> <p>With the existing structure on site, the fish migration is limited. Most of the fish are small size species, construction activities from the Subproject would cause additional only minimal impacts on aquatic resources and habitat and migration.</p> <p>On the other hand, there is no fish conservation zone in the Subproject area and it would be difficult to allocate the conservation area along this stream due to limited water availability in dry season.</p> <p>During the monitoring mission, the team did consultation</p>	<p>It is recommended that awareness raising of minimizing harmful fishing activities within the communities should be enhanced.</p>

with villagers on aquatic resources and use - Aquatic species reported and found in the Houay Sat are listed in the Annex 5	
Environmental Monitoring	
Up to now, the PONRE and DONRE has engaged only the safeguard monitoring missions. No their own independent monitoring.	It is recommended that besides the involvement in the safeguard monitoring the PONRE and DONRE should plan and implement quarterly or bi-quarterly basis.
Community perception	
No complaints on Subproject received by village authorities and DCO.	It is recommended that during the operation of the Subproject, the PPO and DCO has to check the water sharing and use by different groups of people and making sure that the villagers can get sufficient water for irrigated areas.

5). Nam Haad Right Bank Irrigation Subproject

Disturbance of water flows	Proposed mitigation and required action
Soil erosion, silt and sediment deposition:	
As the construction work has been completed for months and the system is now operational. Most of the disturbed areas subject to erosion are covered with natural vegetation. However, there are some small sections along the canal sides sensitive to erosion, but no report concerning the complaints from the local people for this regard.	It is recommended the PPO and DCO should regularly check and carry out removal eroded materials and stabilization of slope should be undertaken based on necessity
	
Photo of the vegetation along the canal sides of Nam Haad Right Bank	
Disturbance on Water Flow	

No construction activities from Nam Haad Right Bank Subproject which would cause the blockages of stream flow was observed during the site visit. the normal flow was observed since the completion of weir structure in second mission of package 7-1.	It is recommended that the minimum flow should be released to the downstream during the high demand for irrigation to maintain the water required for aquatic resources.
Dust and Noise Nuisance	
Nor more construction activities on site for this subproject	No action required as the construction has been completed
Borrow Pits/Quarry	
No more activities on borrow pit/quarry and the rehabilitation was undertaken	No action and mitigation measures required
Waste Management:	
No construction and domestic wastes were observed during the site visit as construction works completed and the temporary construction camp was taken out from the site.	No action and mitigation measures required
Construction Camp	
The temporary accommodation camp next to the weir structure was displaced	No action and mitigation measures required
	
Construction camp during and post-construction at Nam Haad Right Bank	
Hazardous/Chemical Waste	
No storage and handling of hazardous material and waste on site	No action and mitigation measures required
Water Quality	
<p>Most of the disturbance on water quality would come from construction activities of Nam Haad Left Bank Subproject and agricultural activities nearby the construction site.</p> <p>The details of the water quality analysis result is described</p>	It is recommended that the collection of upstream and downstream water sampling should be continued.

in the section 4.7	
Traffic and Safety	
No construction and transportation activities	No action and mitigation measures required
Terrestrial and Aquatic Biology:	
<p>As per comment given by the ADB mission in October, the team conducted the basic aquatic study through local knowledge method by discussing and interviewing with local people and site observation. Furthermore; the discussion with DCO and PPO was made for the future fish conservation plan. It was told that the fishing is not active in the area, only in wet season few villagers go fishing but can catch small amount of fish because the population of the fish have been decreased and only some species are available.</p> <p>As the runoff weir, the improve structure would not cause potential impact on the fish migration and their habitat as the water can flow over both dry and wet season, the gate will be regularly open to release the sediment out from the reservoir area and when there is no agricultural activities require water.</p> <p>It was confirmed by the DONRE that the DONRE in coordination with district authorities release fish fingerlings into Nam Haad at upstream of the weir structure annually on the National Aquatic and Wildlife Day and the regulation of fish conservation zone has been set up.</p> <p>The fish conservation zone is designated with regulations, but no effective enforcement exercised. list of fish species are presented in the Annex 5</p>	<p>PPO and DCO should coordinate with DAFO, DONRE and village authority for the proper fish conservation zoning and effective regulation enforcement is required. Annual release of fish fingerlings in the conservation zone should be enhanced.</p>
Environmental Monitoring	
<p>Even though no more construction activities taken place on site for Nam Haad Right Bank, independent monitoring of PONRE and DONRE on site is still continued due to Nam Haad Left Bank Subproject nearby. Besides, the DONRE and PONRE also involved during the safeguard monitoring.</p>	<p>It is recommended that the independent monitoring of PONRE and DONRE should be continued with participation of DCO and DAFO.</p>
Community perception	
<p>Based on the result of the consultation with the beneficiary villagers and village authorities, it was confirmed that they are very satisfied with the success of the improvement as they will get reliable water for their paddy field. Additionally nor report on water use conflict.</p>	<p>The PPO and DCO has to review the water sharing and use by different group of people and make sure that the villagers can get sufficient water for cultivation</p>

6). Nam Haad Left Bank Irrigation Subproject.

Disturbance of water flows	Proposed mitigation and required action
Soil erosion, silt and sediment deposition:	
<p>As the main canal is close to the stream, some cut material was dumped down slope which would be subject to erosion and scouring by the high flow; particularly during wet season. However, it was confirmed by site manager of the Contractor that redirection of flow would be undertaken to avoid the scouring and destruction of the canal. This would minimize the erosion and scouring potential at some certain level. For the upslope face with steep cut, it seems the cut slope would be subject to erosion as well, but not much because it is mainly covered with highly rock-contained soil (ultramafic rock).</p>	<p>It is recommended the PPO and DCO should regularly check and carry out removal of eroded material and stabilization of slope.</p> <p>PPO and DCO should advise for proper redirection of the some section of stream to avoid potential erosion and scouring. It is recommended that the redirection of flow should be undertaken during dry season.</p>
	
<p>Photo of the potential areas for erosion and scouring by flow.</p>	
Disturbance on Water Flow	
<p>No any construction activities on main structure of weir for this Subproject, the minor change on flow would be caused by disposed material down slope along the main canal only. However, no complaints or potential impacts has been reported and as mentioned above that redirection of flow will be undertaken.</p>	<p>PPO and DCO should advise for proper redirection of the some section of stream to avoid potential erosion and scouring. It is recommended that the redirection of flow should be undertaken during dry season.</p>
Dust and Noise Nuisance	
<p>No potential dust and noise concerns as construction location is far from residential area.</p>	<p>No action required as the construction has been completed</p>
Borrow Pits/Quarry	
<p>Construction materials; including aggregate for concrete work were supplied by the local supplier.</p>	<p>No action and mitigation measures required</p>
Waste Management	

Waste management around the small temporary house is acceptable with good housekeeping. very limited amount of waste is generated on site as there are only 2 workers based in this house and the waste is regularly burned.	PPO and DCO in coordination with DONRE to make sure that the construction site and temporary camp shall be clean with proper waste management
Construction Camp	
Temporary hut was built to accommodate for few workers. It is confirmed that this hut will be moved out before the temporary stop of construction for wet season	No action and mitigation measures required
	
Photo of temporary hut used as construction camp	
Hazardous/Chemical Waste	
No storage and handling of hazardous material and waste onsite observed. the chemical material was regularly delivered from the station supplying by local supplier	The PPO and DCO has to make sure that proper handling and delivery of such hazardous material is practiced
Water Quality	
Besides the construction activities, the agricultural practice nearby the Subproject area will be the source of variation of water quality at downstream of Nam Haad. Water samples were collected at the same positions that collected for Nam Haad Right Bank Irrigation Subproject The details of the water quality analysis result is described in the section 4.7	It is recommended that the collection of upstream and downstream water sampling should be continued.
Traffic and Safety	
Potential road accident or safety risk is minimal as the construction activities of the Subproject is distant from the residential area.	No action and mitigation measures required
Terrestrial and Aquatic Biology	
The same to the Nam Haad Right Bank	The same to Nam Haad Right Bank
Environmental Monitoring	

The same to the Nam Haad Right Bank	The same to Nam Haad Right Bank
Community perception	
The same to the Nam Haad Right Bank	The same to Nam Haad Right Bank

7). Nam Ma Oune Irrigation Subproject

Disturbance of water flows	Proposed mitigation and required action
Soil erosion, silt and sediment deposition	
<p>It is less subject to erosion for this subproject due to topographical location. No areas with steep slope of backfill at high elevation along the canal sides and nearby weir structure are existed. Most of the cut and fill areas are recovered with natural vegetation. However, besides the construction activities, there is sand and gravel dredging along the river by local company and large-scale irrigation project at upstream of Nam Ma Oune Subproject. This would increase the sediment load in the water of Nam Ma Oune.</p>	<p>It is recommended the PPO and DCO should regularly check and carry out removal eroded material and stabilization of slope if necessary</p>
	
<p>Photo of the sand and gravel dredging along the Nam Ma Oune and government irrigation project</p>	
Disturbance on Water Flow	
<p>No disturbance on water flow caused by subproject as canal alignment works and weir structure have been completed</p>	<p>It is recommended that the minimum flow should be released to the downstream during the high demand for irrigation to maintain the water required for aquatic resources and ecosystem.</p>
Dust and Noise Nuisance	
<p>Nor more construction activities on site for this subproject</p>	<p>No action required as the construction has been completed</p>
Borrow Pits/Quarry	

No more activities on borrow pit/quarry and the rehabilitation was undertaken	No action and mitigation measures required
Waste Management	
General construction waste e.g. wood and scrap metals were observed nearby the accommodation camp of the Contractor. It was confirmed by the site engineer that the waste will be moved out from the site as the construction work was completed.	The PPO and DCO in coordination with PONRE and DONRE to check whether the waste is moved out from the site
	
Photos of the camp area with some scrap metal and wood waste nearby the camp	
Construction Camp	
As mentioned in the previous reports of package 7-1 that 3 houses nearby the road were hired for temporary accommodation during the construction. The houses will be given back to the owners upon the completion of the subproject. During the site visit, there are 4 people living in the camp.	PPO and DCO in coordination with PONRE, DONRE and the owners of the houses to ask the Contractor to clean and rehabilitate the camp to make sure that site is clean before giving back to the owners.
Hazardous/Chemical Waste	
Only some empty drums were found nearby the camp, no spillage or leakage observed. It was confirmed by the site engineer that these drums will be moved out soon	PPO and DCO in coordination with PONRE and DONRE to check and make sure that the Contractor will move out those drums.
Water Quality	
As a nature of the water quality in the stream in wet season, the water contains high sediment load. Several activities occurred along the Nam Ma Oune both upstream and downstream of the Subproject. This includes the large-scaled irrigation scheme of government at upstream, banana plantation, sugar cane plantations and local agriculture activities particularly paddy fields. Mean while, intensive agro-chemical use is widely seen and would cause impact on water quality and aquatic ecosystem	It is recommended that the collection of upstream and downstream water sampling should be continued. PPO and DCO in coordination with PONRE, DONRE and village authorities should raise

<p>as well as water use of local villagers.</p> <p>The details of the water quality analysis result is described in the section 4.7</p> <p>It is found that the agro-chemical parameter from the sample collected at downstream of the Subproject has. unofficial result confirms that no agro-chemical parameters exceed the standard level.</p>	<p>awareness on safe and minimal agro-chemical use with proper handling and enhancing the bio-fertilizer use.</p>
<p>Traffic and Safety</p>	
<p>No construction and transportation activities</p>	<p>No action and mitigation measures required</p>
<p>Terrestrial and Aquatic Biology:</p>	
<p>The team conducted the basic fish study through local knowledge method by consulting and interviewing with local people and site observation. Furthermore; the discussion with DCO and PPO was made for the future fish conservation plan.</p> <p>It was told that the fishing is not widely practiced in the area particularly nearby the village settlement area where the conservation zone is allocated within 800 m along the stream up-downstream of the residential area, only in wet season some few villagers go fishing. Aquatic species reported and found in the Nam Ma Oune are listed in the Annex5</p> <p>The improved structure would not cause additional potential impact on the fish migration and their habitat comparing to the existing structure, the water can flow over both dry and wet season, the gate will be regularly open to release the sediment out from the reservoir area and when there is no agricultural activities require water which will good for some species to migrate upstream, but limited.</p>	<ul style="list-style-type: none"> - PPO and DCO should coordinate with DAFO, DONRE and village authorities for the effective and proper fish conservation zoning. Annual release of fish fingerlings in the conservation zone should be promoted. - Ongoing fish conservation activities in the area should be enhanced through integrating technical and local knowledge - raising awareness training of minimizing harmful fishing activities within the communities and tougher enforcement of regulation.
<p>Environmental Monitoring</p>	
<p>Besides engagement during the safeguard monitoring, the PONRE and DONRE has carried out independent environmental and social monitoring for this subproject with support from PPO quarterly plan.</p>	<p>It is recommended that the independent monitoring of PONRE and DONRE should be continued with participation of DCO and DAFO.</p>
<p>Community perception</p>	
<p>consultation with the beneficiary villagers and village authorities, it was confirmed that they are happy with the success of the improvement as they will get reliable water for their paddy field in this wet season. Additionally, no confirmation on water use conflict.</p>	<p>The PPO and DCO has to review and check the water sharing and use by different group of people and make sure that the villagers can get sufficient water for cultivation</p>

8). Nam Bak Irrigation Subproject

Site mobilization and construction works have not been started, However; the water samplings at upstream and downstream were undertaken.

9). Hong Kong Irrigation Subproject

Disturbance of water flows	Proposed mitigation and required action
Soil erosion, silt and sediment deposition	
<p>This Subproject was completed last month. Even though the site rehabilitation was undertaken but several places along the canal sides where canals run through the paddy fields were subject to erosion due to the agricultural tractor uses and paddy field ploughing activities. However; the erosion will be minimize due to availability of topsoil and natural vegetation growth in wet season.</p>	<p>It is recommended that monitoring of PPO and DCO after wet season should be carried out to check the areas to be damaged or eroded for maintenance and advice should be given to the WUGs for regular check.</p>
	
Photos of the potential erosion areas	
Disturbance on Water Flow	
No concern on water disturbance by the improved structures comparing to structures already existed .	No action or mitigation required.
Dust and Noise Nuisance	
As the construction activities was completed. No any concerns regarding dust and noise issues	No action or mitigation required.
Borrow Pits/Quarry	
No active borrow pits/quarry	No action or mitigation required
- Waste Management	
No domestic and construction waste observed on sites as the rehabilitation of sites was undertaken and no longer workers and camp on site.	No action or mitigation required
Construction Camp	

No temporary camp facilities existed on site.	No action or mitigation required
Hazardous/Chemical Waste	
No hazardous material/waste observed on site.	No action or mitigation required
Water Quality	
<p>The Water samples both upstream and downstream of the Subproject were collected even though it is in operational.</p> <p>Main sources of the potential water pollution in this Subproject would be from agricultural activities, domestic water use and urbanization as the main canal runs through the residential area of Ban Nam Gnaene.</p> <p>Some households in the village use water from the irrigation canal for other purposes e.g. livestock raising, clothes washing and gardening.</p> <p>The details of the water quality analysis result is described in the section 4.7</p>	<p>It is recommended that the collection of upstream and downstream water sampling should be continued for basic parameters.</p> <p>Consultation with the WUG and village authorities should be conducted regarding the direct water use from the canals to minimize the health risk.</p>
Traffic and Safety	
No more construction and transportation activities on site. Therefore no concern on this issue.	No action or mitigation required
Terrestrial and Aquatic Biology	
<p>As mentioned in the previous Safeguard monitoring reports that there is very limited impact on terrestrial biology due to the existing land use in the Subproject area.</p> <p>As the existing structure had limited possibility for fish migration. There is less additional impact on aquatic resources and habitat and migration from this Subproject. However, the aquatic resources along the stream mainly migrate up and down along the stream through the local drainage systems and paddy field during wet season due to low land area.</p> <p>Based on the consultation with the village authorities and villagers reported: no fish conservation zone available in this subproject, fishing activities is usually partially practiced in paddy fields Most of fish caught is for household consumption. The population of fish trends to be declined due to harmful fishing e.g. electro fishing.</p> <p>It is confirmed by the villagers that there is no change on aquatic resources by the improved structure. The species reported by the communities are listed in the Annex 5</p>	<p>- Raising awareness of minimizing harmful fishing activities within the communities.</p>
Environmental Monitoring	
Besides joining the monitoring with safeguard monitoring team, PONRE and DONRE carried out the monitoring in	Independent monitoring of PONRE and DONRE should be

coordination with PPO and DCO.	continued and feedback to PPO and DCO.
Community perception	
Very good feedback was received from the village authorities and villagers during the consultation. However; water use conflict happened due to individual owner of paddy field need his own inlet	Meeting with WUG and beneficiary farmers should be organized to clarify on water use and water sharing.

10). Nam Gnang Irrigation Subproject

No site mobilization and construction works have been started. However; the water samplings at upstream and downstream were undertaken.

11). Nam Dai Irrigation Subproject

Disturbance of water flows	Proposed mitigation and required action
Soil erosion, silt and sediment deposition:	
As the construction work has been completed for months and the system is now operational. Most of the disturbed areas subject to erosion are covered with natural vegetation. No report received from villagers concerning the complaints from the local people concerning this regard.	No further action required
	
Photo of the vegetation along the canal sides of Nam Dai 5&6	
Disturbance on Water Flow	
No disturbance on water flow of Nam Dai and water use for paddy field as the construction of the structures both canals and weir has been completed and water is released to the paddy field, no any concerns raised by local community regarding water flow due to the project. However; the villagers reported that there would be less water available for the paddy field as the water is taken by the owner of the banana plantations at upstream of the Nam Dai 6 weir by diverting the water from the tributaries of Nam Dai e.g. Houay Nam Hou and Houay Lek into the storage ponds which use for banana plantation. This would cause the negative impact to the water use of local people at downstream particularly during dry season and early wet	The PPO and DCO should review on the irrigation water use and consult with the owners of banana plantation and other relevant government sectors to make sure that the proposed irrigated paddy fields can get sufficient water for agricultural production.

season when the villagers prepare the seeding.	
Dust and Noise Nuisance	
No construction activities, Subproject is now on operation	No action required as the construction has been completed
Borrow Pits/Quarry	
No more activities on borrow pit/quarry and the rehabilitation was undertaken	No action and mitigation measures required
- Waste Management:	
No construction and domestic wastes were observed, the temporary construction camp was rehabilitated,	No action and mitigation measures required
Construction Camp	
The temporary accommodation next to the weir structure was displaced	No action and mitigation measures required as the temporary camp was demolished
- Hazardous/Chemical Waste:	
No hazardous/chemical materials or waste was stored on site	No action and mitigation measures required
- Water Quality:	
<p>As the Subproject are operational and no more construction activities. therefore variance of water quality at upstream and downstream can be caused only by the activities in the local area; mainly agriculture and agro-chemical use</p> <p>Most of the values for parameters at upstream and downstream are not much different and not exceeding the national standard and similar to the baseline data.</p> <p>The details of the water quality analysis result is described in the section 4.7</p>	Only downstream sampling would need for next Mission as no construction activities in this Subproject
Traffic and Safety:	
No construction and transportation activities	No action and mitigation measures required
Terrestrial and Aquatic Biology:	
No activities which can threaten the aquatic biology was observed on site. It has been recommended that the long-term monitoring on fish migration impact would be regularly conducted to see the impact caused by the improvement of structure upon the completion of the improvement work (operation period). With the on-site observation and local	PPO and DCO should coordinate with DAFO, DONRE and village authority for the proper fish conservation zoning and effective regulation enforcement is required. Annual fish fingerling releasing in the conservation

<p>knowledge study on fish and aquatic resources from Nam Dai, there is no potential impact on fish migration which would be caused by the Subproject as there have been existing structures at upstream of these structures (Nam Dai 1-6). Reportedly, the aquatic resource particularly fish in the stream have been decreased since last 8-9 years ago due to the harmful fishing techniques of local people (electro fishing, it was also told that only few people do fishing in the stream in wet season. It is also confirmed by the villagers that the fish would be affected due to chemical use in the in the agricultural activities; particularly from the banana plantation where the chemical has been used widely in the surrounding area.</p> <p>The fish conservation zone is designated with regulations, but no effective enforcement exercised</p>	<p>zone should be promoted. Additional trainings on safe and minimal chemical use for agriculture shall be promoted and enhanced.</p>
<p>Environmental Monitoring</p>	
<p>Even though the construction activities was completed, the environmental monitoring has been carried out by the PONRE and DONRE through the joining the safeguard monitoring team and by PONRE and DONRE independently</p>	<p>It is recommended that the independent monitoring of PONRE and DONRE should be continued with participation of DCO and DAFO.</p>
<p>Community perception</p>	
<p>consultation with village authorities of 3 villages in the subproject area was conducted to hear the feedbacks and comments. It was confirmed that the villagers are happy with improved structure. However; the villagers concern about the water use as the water is diverted to the banana plantation.</p>	<p>The PPO and DCO has to review the water sharing and use by different group of people and make sure that the villagers can get sufficient water for cultivation</p>

12). Nam Gna 6-Houay Luang

Disturbance of water flows	Proposed mitigation and required action
<p>Soil erosion, silt and sediment deposition</p>	
<p>As the construction work had just started and only 2.57% completed (125m long concrete lining). It has been stopped temporarily for wet season. Erosion and sedimentation is considered as minor for this subproject even though some material excavated from main canal was disposed along sides of the canal, but less subject to erosion as no waterway run through the area and low terrain.</p>	<p>Rehabilitation along the canal sides where necessary upon the completion of earth works is required to avoid the impact to the paddy field of the villagers.</p>

		
<p>Disturbance on Water Flow</p>		
<p>Most of the work for this Subproject is improving the canals and intake gate. There is no work which would cause potential impact on water flow from this Subproject. No change on flow regime for the stream and water use at downstream comparing to the pre-construction stage.</p> <p>During the dry season only very less or no water discharged to downstream due to level of existing spillway and water level in the reservoir as the water released into the irrigation canal</p>		<p>It is recommended that during the operation the minimum flow should be released to the downstream during the high demand for irrigation to maintain the water required for aquatic resources.</p>
		
<p>Photos of the reservoir and spillway</p>		
<p>Dust and Noise Nuisance</p>		
<p>No dust and noise concerns reported by the community. The noise and dust would not happen in some particular place as the construction work will be move to place by place in different day along the alignment.</p>		<p>Operation of heavy machineries at night time should be minimize and the speed limit for the driving in the residential area to minimize the dust suppression.</p>
<p>Borrow Pits/Quarry</p>		
<p>No borrow pit and quarry on site. Aggregates for construction were supplied by the local supplier (villager in Ban Namai).</p>		<p>No actions or mitigation measures required</p>
<p>Waste Management</p>		
<p>No waste observed on site and no temporary accommodation camp was existed during the site visit.</p>		<p>It is recommended that the PPO and DCO in coordination with PONRE or DONRE has to check and monitor the general housekeeping and waste management on site when the</p>

	construction work restart again.
Construction Camp	
No any physical accommodation or camp was found during the site visit, it was reported by the DCO that during the construction, the workers based at the house next to the reservoir and some workers use tents for accommodation.	No actions or mitigation measures required
Hazardous/Chemical Waste	
No storage of hazardous material was found on site and no spillage and leakage.	PPO and DCO should always advise the Contractor to carry out safe and proper handling of the hazardous material/waste
Water Quality and Water Resources	
<p>Physically see, the water in the reservoir of Houay Luang is clear, but downstream has higher concentration of sediment as the water flow through the agricultural areas prior flowing back to the stream. No much change between upstream and downstream for Nam Gna6.</p> <p>Water samples were collected in the reservoir of HouayLuang upstream of Nam Gna 6 and downstream of both stream</p> <p>Watershed area of HouayLuang partially converted to rubber plantation; particularly surrounding area of the reservoir</p> <p>The details of the water quality analysis result is described in the section 4.7</p>	<p>It is recommended that the collection of upstream and downstream water sampling should be continued for basic parameters.</p> <p>It is also recommended that the watershed management planning should be introduced in this area.</p>
Traffic and Safety:	
No traffic concern due to the location of the Subproject remotely from the residential area. No potential accident would happen.	It is recommended that the Contractor should be advised on traffic safety particularly for the drivers.
Terrestrial and Aquatic Biology	
<p>Due to the existing concrete structure and earth dam and reservoir for this subproject, It is less possibility for fish migration and there are no construction activities from the Subproject would cause additional impacts on aquatic resources and habitat and migration.</p> <p>However, the reservoir of Houay Luang is allocated as fish conservation zone and under the management of PAFO with strict regulation. every year the fish fingerling release is undertaken.</p> <p>During the monitoring mission, the team did consultation with villagers on aquatic resources and use</p> <p>- Aquatic species reported and found in the Nam Gna 6-</p>	<p>- It would be not easy to zone the fish conservation area in this Subproject due to the location and water flow. However; awareness raising of minimizing harmful fishing activities within the communities should be enhanced.</p> <p>- Minimum flow should be released during both wet and dry season to maintain the water level for aquatic resources and habitat during the operation.</p>

HouayLuang are listed in the Annex 5	
Environmental Monitoring	
Besides joining the monitoring with Independent Safeguard Monitoring, PONRE and DONRE has not carried out their own monitoring.	It is recommended that the PONRE and DONRE in coordination with PPO and DCOs should carry out the quarterly or bi-quarterly monitoring.
Community perception	
No complaints on Subproject received by village authorities and DCO Villagers are very supportive for the project	It is recommended that during the operation of the Subproject, the PPO and DCO has to check the water sharing and use by different groups of people and making sure that the villagers can get sufficient water for irrigated areas.

13). Nam Lan Irrigation Subproject

Disturbance of water flows	Proposed mitigation and required action
Soil erosion, silt and sediment deposition	
<p>This Subproject was completed last months ago. No erosion hazard was observed along the canal and nearby the weir structure. On the other hand, the disturbed areas have been gradually recovered with natural vegetation.</p> <p>Currently possible source of the sediment is from the agriculture activities at upstream and downstream of the weir structure; particularly during the wet season.</p>	<p>It is recommended that the watershed management at upstream of weir shall be enhanced by PAFO and PONRE authorities though the existing watershed management plan.</p>
	
Photos of the natural vegetation along the sides of the canal sides	
Disturbance on Water Flow	
No concern on water disturbance from the construction activities from the Subproject comparing to existing structure.	No action or mitigation required.

Dust and Noise Nuisance	
As the construction activities was completed. No any concerns regarding dust and noise issues	No action or mitigation required.
Borrow Pits/Quarry	
Most of the canal alignment is cut and no more construction activities	No action or mitigation required
Waste Management	
No domestic and construction waste observed on sites as the rehabilitation of sites was undertaken.	No action or mitigation required
Construction Camp	
The temporary house which used to be the accommodation was demolished after the completion of the construction and the site was rehabilitated.	No action or mitigation required
Hazardous/Chemical Waste	
No hazardous material/waste observed on site.	No action or mitigation required
Water Quality	
Water sampling at upstream and downstream of this Subproject was conducted at the same location where previously collected. Main sources of the potential water pollution in this Subproject would be only agricultural activities, domestic water use and urbanization. It was reported and found that the contract farming was widely practiced and chemical fertilizer and pesticide are widely used The details of the water quality analysis result is described in the section 4.7	It is recommended that the collection of upstream and downstream water sampling should be continued for basic parameters. Optionally, the agro-chemical parameters for water quality analysis should be included particularly during the dry season.
Traffic and Safety	
No more construction and transportation activities on site. Therefore no concern on this issue.	No action or mitigation required
Terrestrial and Aquatic Biology	
As mentioned in the Safeguard monitoring reports that there is very limited impact on terrestrial biology due to the existing land use in the Subproject area. As the existing structure had limited possibility for fish migration due to the height of the weir and the scope of the Subproject for the Subproject, There is less additional impact on aquatic resources and habitat and migration from the construction activities. Based on the consultation with the village authorities and	- Raising awareness of minimizing harmful fishing activities within the communities and tougher enforcement of regulation. - Minimum flow should be released during the dry season if water available to maintain the water level for aquatic resources during the

<p>villagers reported:</p> <ul style="list-style-type: none"> - no fish conservation zone available in this subproject - More fishing is practiced during dry season due to difficulties in wet season - During the dry season, the population of fish is less at upstream as the fish could not migrate upstream, but during the wet season more fish can be caught at upstream as the fish can migrate upstream due to high flow. - Most of fish caught is for household consumption - No regulation and rule for fishing along the stream both upstream and downstream is existed - The population of fish has been declined since last 4-5 years ago due to harmful fishing e.g. electro fishing and e - It is confirmed by the villagers that there is no change on aquatic resources by the improved structure. <p>The species reported by the communities are listed in the Annex 5</p>	<p>operation.</p> <p>It is also recommended that the conservation zone should be established for upstream of weir</p> <ul style="list-style-type: none"> - Watershed management plan for Nam Lan watershed should be developed; including land use management plan.
Environmental Monitoring	
<p>Up to now, the PONRE and DONRE has engaged only in the safeguard monitoring missions.</p>	<p>It is recommended that besides the involvement in the Independent Safeguard Monitoring the PONRE and DONRE should plan and implement their own monitoring in quarterly or bi-quarterly basis.</p>
Community perception	
<p>Very good feedback was received from the village authorities and villagers during the consultation. No water use conflict happened</p>	<p>No action or mitigation required</p>

14). Nam Gnaene Irrigation Subproject

Disturbance of water flows	Proposed mitigation and required action
<i>Soil erosion, silt and sediment deposition</i>	
<p>Excavated material disposed along sides of the canal alignment is subject to erosion but would not be severe as the alignments go through the low terrain areas and most of the sections are far from stream. The prone area to erosion would be occurred during the construction period only.</p> <p>The sediment load in the stream would be also caused by the agricultural activities at upstream, this includes the</p>	<p>It is recommended that the PPO and DCO should advise the Contractor to rehabilitated the along canal sides where necessary upon the completion of earth works, to avoid the impact to the paddy field of the villagers.</p>

increasing conversion of forest area into plantation for banana and rubber.	
	
Disturbance on Water Flow	
<p>The improvement for the main weir structure is only change of intake gates only. Therefore, there will be no additional impact on water flow of Nam Ngaene from the Subproject. During the site visit, the water was released through the gate to downstream and it was supposed to diverted water partially into the irrigation canal for paddy fields by the end of June.</p>	<p>It is recommended that during the operation the minimum flow should be released to the downstream during the high demand for irrigation to maintain the water required for aquatic resources.</p>
Dust and Noise Nuisance	
<p>It is less dust and noise concerns for this Subproject as it is quite far from the residential area of Nawai village and the construction site is quite far from the main road.</p>	<p>No actions or mitigation measures required</p>
Borrow Pits/Quarry	
<p>The construction material e.g. aggregate and sand was sourced from Nawai and Bountai villages (no borrow pit/quarry). Therefore, no borrow pit/quarry for this Subproject.</p>	<p>No actions or mitigation measures required</p>
Waste Management:	
<p>Site visit at the camp was undertaken, it was found that no waste pit was provided at the temporary camp and the waste was disposed next to the accommodation house nearby the Nam Ngaene. The instruction was given to the site engineer for cleaning and provision of pit for the waste.</p>	<p>It is recommended that the PPO and DCO in coordination with PONRE or DONRE have to check and monitor the general housekeeping and waste management on site.</p>
Construction Camp	
<p>A small temporary house was built to be used as accommodation for the workers on site during the construction. However, the arrangement of the facilities is not good enough. With this regards, the instruction was given to the site engineer, and the PPO and DCO confirmed that this issue will be solved before temporary</p>	<p>It is recommended that PPO and DCO in coordination with DONRE and PONRE to check whether the housekeeping and facilities arrangement within the camp area is proper and satisfied.</p>

stop of construction work on site due to wet season.	
Hazardous/Chemical Waste	
Few small drums of hazardous material were found close to the accommodation, but no spillage and leakage. The instruction was given during the site visit.	It is recommended that the proper handling of chemical material on site should be advised to the site engineer.
Water Quality and water resources	
<p>Similarly to some streams in other Subproject, the water in Nam Ngaene is quite clear at upstream and downstream of the Subproject. The construction activities of subproject would cause less impact to the level of water quality of Nam Ngaene due to existing weir structure. Main contribution to the water pollution from the Subproject will be only increasing sediment load in the stream. Besides the construction activities, the variation of the water quality level in the stream would only influenced by the agricultural activities in the area.</p> <p>Watershed area of Nam Gnaene partially has been converted into the plantation for banana and rubber and the DAFO also mentioned that the watershed management in the Subproject area should be promoted.</p> <p>The details of the water quality analysis result is described in the section 4.7</p>	<p>It is recommended that the collection of upstream and downstream water sampling should be continued for basic parameters.</p> <p>Agro-chemical parameters will be necessary similarly to Nam Gnaene Subproject.</p> <p>It is also recommended that the watershed management should be introduced in this area.</p>
Traffic and Safety:	
No traffic concern due to the location of the Subproject remotely from the residential area. No potential accident would happen.	It is recommended that the Contractor should be advised on traffic safety particularly for the drivers.
Terrestrial and Aquatic Biology	
<p>There is no concern on terrestrial biology due to the existing land use in the Subproject area and scope of work for the canal alignment.</p> <p>Fish migration is limited with existing weir structure and no improvement of the structure would cause additional impact on fish migration even though the water level in the stream remains at some certain level in dry season.</p> <p>The team conducted the basic fish study through local knowledge method by consulting and interviewing with local people of Nawai village site observation. It is confirmed that no fish conservation available within this Subproject area as it is difficult to control due to distant location from residential area.</p> <p>- Aquatic species reported and found in the Nam Gnaene are listed in the Annex 5</p>	<p>- It would be not easy to zone the fish conservation area in this Subproject due to the location and water flow. However; awareness raising of minimizing harmful fishing activities within the communities should be enhanced.</p> <p>- Minimum flow should be released during both wet and dry season to maintain the water level for aquatic resources and habitat during the operation.</p>

	
<p>Photos of existing weir structures of Nam Gnaene built in 2008</p>	
<p>Environmental Monitoring</p>	
<p>Up to now, the PONRE and DONRE has engaged only the safeguard monitoring missions. No their own independent monitoring.</p>	<p>It is recommended that besides the involvement in the safeguard monitoring the PONRE and DONRE should plan and implement quarterly or bi-quarterly basis.</p>
<p>Community perception</p>	
<p>Positive feedback was received from the village authorities and villagers of Nawai.</p>	<p>It is recommended that during the operation of the Subproject, the PPO and DCO has to check the water sharing and use by different groups of people and making sure that the villagers can get sufficient water for irrigated areas.</p>

15). Nam Ou Irrigation Subproject

Disturbance of water flows	Proposed mitigation and required action
<p>Soil erosion, silt and sediment deposition</p>	
<p>Construction for this Subproject was completed last couple of months ago. No erosion hazard was observed along the canal and nearby the weir structure. On the other hand, the disturbed areas have been recovered with natural vegetation.</p> <p>However, high concentration of the sediment loads in the Nam Ou river was observed, this would be caused by the upstream activities. e.g. Nam Ou 7 Hydropower Project (ongoing construction) which is located approximately 5Km upstream, Road 1B upgrading works is ongoing and crushing plant close to the weir structure about 100 m at</p>	<p>No action or mitigation required as the current potential environmental impact would be caused by several development projects in the vicinity.</p>

upstream.	
	<div style="border: 1px solid black; padding: 5px; display: inline-block;">crushing plant</div>
Photos of the canal alignment with some vegetation and crushing plant nearby the weir structure	
Disturbance on Water Flow	
Water flow in this Subproject can be influenced by different activities at upstream of the Subproject. The improvement of Subproject cause limited disturbance on water flow of Nam Ou due to existing weir structure.	No action or mitigation required.
Dust and Noise Nuisance	
As no more construction activities completed. No any concerns regarding dust and noise issues	No action or mitigation required.
Borrow Pits/Quarry	
Construction materials for this Subproject were sourced during the removal of material from water storage area of the weir	No action or mitigation required
Waste Management	
No domestic and construction waste observed on sites as the rehabilitation of sites was undertaken.	No action or mitigation required
Construction Camp	
The accommodation which used to be the camp during the construction has been used as the water supply system office of Nhot Ou district.	No action or mitigation required
Hazardous/Chemical Waste	
No hazardous material/waste observed on site.	No action or mitigation required
Water Quality	
Water sampling at upstream and downstream of this Subproject was conducted at the same locations where previously collected. The details of the water quality analysis result is described in the section 4.7	It is recommended that the collection of upstream and downstream water sampling should be continued for basic

	parameters.
Traffic and Safety	
No more construction and transportation activities on site. Therefore no concern on this issue.	No action or mitigation required
Terrestrial and Aquatic Biology	
<p>Due to the nature of the Subproject location and existing structure on site and the scope of the Subproject, There is less additional impact on aquatic resources and habitat and migration from the construction activities.</p> <p>It was confirmed by the DCO and village authorities of the beneficiary villages that the conservation zone was designated about 1 Km at upstream.</p> <p>During the monitoring, the team had consultation with villagers on aquatic resources and use. It is reported that no change on aquatic resources availability prior and post construction of the Subproject, decrease of aquatic resources is caused by the harmful/destructive fishing methods of local villagers' e.g. electro-fishing and explosive method. The species reported by the communities are listed in the Annex 5</p>	<ul style="list-style-type: none"> - Raising awareness of minimizing harmful fishing activities within the communities and tougher enforcement of regulation. - Minimum flow should be released during the dry season if water available to maintain the water level for aquatic resources during the operation.
Environmental Monitoring	
Up to now, the PONRE and DONRE has engaged only in the Independent Safeguard Monitoring.	It is recommended that besides the involvement in the safeguard monitoring the PONRE and DONRE should plan and implement in quarterly or bi-quarterly basis.
Community perception	
Very good feedback was received from the village authorities and villagers during the consultation.	No action or mitigation required

16). Mongchao-Koman Road Subproject

Disturbance of water flows	Proposed mitigation and required action
Soil erosion, silt and sediment deposition:	
<p>The slide material was cleaned. however, the additional material is subject to more erosion and landslide for 2 HHs affected with 1600 teas due to the landslide on the tea plantation.</p> <p>PPO and DCO confirm the progress of the remediation that the Land allocation and management is preparing and surveying the area for the compensation at Ban Bokong. with this issue, the consultation with the AHs with</p>	<p>It is also confirmed that the compensation could be made in 2 option as followings:</p> <ol style="list-style-type: none"> 1. As the government would not support the cash for the lost tea trees, the PPO would provide the additional land in the same value of the lost tea and lost land.

<p>participation of village chief and DCO and PPO and the meeting notes was signed on 24 March 2014.</p> <p>Additional consultation was made during the safeguard monitoring on 9 June 2014 with the AHs and PPO, DCO, safeguard monitoring team and village authority.</p>	<p>2. if the governmental budget is available, the compensation for the lost tea can be made with cash (rate will be based on the provincial standard existed) and there will be compensation for the lost land with new land at Bokong village (no other land plots are available nearby the lost land).</p> <p>However; outcome from the second consultation with witness of Independent Safeguard Monitoring team, the AHs confirmed that they do not need the compensation of the land by land (no compensation for lost land). They requested only the compensation for the lost tea trees with cash.</p>
	
<p>Photo of the landslide and consultation with the AHs at Mongchao village</p>	
<p>Disturbance on Water Flow</p>	
<p>The culverts were installed where necessary as per designed</p>	<p>The PPO and DCO has to check whether all culverts are effectively installed and operated</p>
<p>Dust and Noise Nuisance</p>	
<p>No concerns on this issues as no more construction activities on site</p>	<p>No action and mitigation measures required</p>
<p>Borrow Pits/Quarry</p>	
<p>No more activities on borrow pit/quarry and the rehabilitation was undertaken</p>	<p>No action and mitigation measures required</p>
<p>Waste Management:</p>	
<p>No concerns on this</p>	<p>No action and mitigation measures required</p>

Construction Camp	
The temporary camp and area used during the construction period has become the individual ownership of local villager	No action and mitigation measures required
- Hazardous/Chemical Waste:	
No concern on this issues	No action and mitigation measures required
- Water Quality:	
No water sampling and analysis for this subproject as recommended in the reports of package 7-1 year 1	No action and mitigation measures required
Traffic and Safety:	
No construction and transportation activities	It is recommended that the safety signs should be erected nearby the residential area to minimize the accident potential
Terrestrial and Aquatic Biology:	
As no construction activities for this subproject, No issues raised and reported on terrestrial biological impacts.	No action and mitigation measures required
Environmental Monitoring	
Even though the construction work was completed, The monitoring is still undertaken by PPO and DCO with involvement of PONRE and DONRE particularly for the case of landslide on tea plantation at Mongchao village. Additionally; the safeguard monitoring also has been carried out in each mission with the involvement of PONRE and DONRE.	It is recommended that the independent monitoring of PONRE and DONRE should be continued with participation of PPO and DCO
Community perception	
Besides the issue of landslide of tea plantation of 2 HHs, villagers along the road are very happy with improved road as they have better road and can travel during the wet season to township of Phongsaly province.	It is recommended that the public hearing of concerning issue should be regularly practiced.

17). Komaen-Phongsak Road

Disturbance of water flows	Proposed mitigation and required action
Soil erosion, silt and sediment deposition:	
It was found that the potential erosion and landslide is less for this Subproject comparing to Mongchao-Kormaen Subproject as the cut material is dumped down slope of the road in the designated area with vegetation cover and no	It is recommended that the PPO and DCO shall coordinate with PONRE and DONRE to monitor the condition of erosion/landslide that would

<p>tea plantation or other crops. Lower part of the disposed area is buffered with vegetation which would minimize the erosion, landslide and material movement.</p> <p>No landslide or collapse of the material reported and seen and no complaints received from the villagers.</p>	<p>occurred during the wet season; particularly for the very steep slope.</p>
	
<p>Photos of the spoil disposal down slope of the road with no tea plantation</p>	
<p>Disturbance on Water Flow</p>	
<p>The culverts have been installed where necessary as per design</p>	<p>The PPO and DCO has to check whether all culverts are effectively installed and operated and additional culverts are needed</p>
<p>Dust and Noise Nuisance</p>	
<p>No issue on dust was observed during the site visit due to the rain. No any complaints received from the communities regarding the noise caused by Subproject activities. On the other hand, as only few heavy trucks and machineries are on site and reportedly no construction work during the night nearby the residential area.</p>	
<p>Borrow Pits/Quarry</p>	
<p>No borrow pit or quarry to be operated in the Subproject area; aggregate will be brought from outside.</p>	<p>No action and mitigation measures required</p>
<p>Waste Management</p>	
<p>No construction waste or domestic waste was found along the ongoing improving road. However; the waste management and housekeeping at the camp was not inspected due to heavy rain and risky access road to the camp area on the day of site visit.</p>	<p>It is recommended that the PPO, DCO and PONRE and DONRE should schedule to have joint environmental monitoring for the Subproject. Otherwise, the site engineer of PPO should be advised to control the environmental issues during the wet season.</p>

Construction Camp	
The temporary camp has been provided on site nearby the Phongsæk village and it was confirmed by the site engineer and PPO that the camp facilities (e.g. toilets, kitchen, accommodation, and office and storage area) are provided with good arrangement.	It is recommended that the PPO, DCO and PONRE and DONRE should schedule to have joint environmental monitoring for the Subproject. Otherwise, the site engineer of PPO should be advised to control the environmental issues during the wet season.
Hazardous/Chemical Waste	
No spillage/leakage of chemical and hazardous material/waste on the construction site observed. It was reported that the material/waste was stored in the camp area. The advice was given to the PPO, PONRE and DONRE regarding the proper handling of such material.	It is recommended that the PPO, DCO and PONRE and DONRE should schedule to check for proper and safe hazardous material/waste storage and handling.
Water Quality	
No water sampling and analysis for this subproject.	No action and mitigation measures required
Traffic and Safety	
The working hour for the construction activity is set during the day time. No report on accidents since start of Subproject and no complaints from the communities on the road safety	It is recommended that the safety signs should be erected nearby the residential area to minimize the accident potential. The PPO site engineer should advise the drivers for safe driving and speed reduction during driving in the communal areas.
Terrestrial and Aquatic Biology	
No issues raised and reported on terrestrial biological impact.	No action and mitigation measures required
Environmental Monitoring	
Only one environmental monitoring was undertaken since start of this Subproject by the PONRE and DONRE with the safeguard monitoring team.	It is recommended that the independent monitoring of PONRE and DONRE should be planned and implemented with participation of PPO and DCO
Community perception	
It was confirmed by the DCO and village authorities that no complaints regarding the landslide, loss of tea plantation and tea trees received from villagers.	It is recommended that the public hearing of concerning issue should be regularly practiced.

18). Nam Thae Irrigation Subproject

Disturbance of water flows	Proposed mitigation and required action
Soil erosion, silt and sediment deposition	
<p>No sever erosion and potential impact was observed as the topographical location of the area in the Subproject area is mainly flat. However, the area beside the weir structure is subject to erosion, it is confirmed that the rip rap would be used to stabilize the slope area.</p> <p>The sediment load in the stream is quite low and most of the water was diverted into the irrigation.</p>	<p>It is recommended that the PPO and DCO should advise the Contractor to rehabilitated the along canal sides where necessary upon the completion of earth works, to avoid the impact to the paddy field of the villagers.</p>
	
Disturbance on Water Flow	
<p>The construction work has not been completed, but temporarily stopped for wet season. During the site visit, the disturbance on water flow in the stream was observed as the water was diverted into the irrigation canals on the left bank of the weir for paddy fields.</p> <p>The improvement of weir structure and canals would not cause much additional impact on water flow of Nam Thae.</p>	<p>It is recommended that during the operation the minimum flow should be released to the downstream during the high demand for irrigation to maintain the water required for aquatic resources.</p>
Dust and Noise Nuisance	
<p>It is less dust and noise concerns for this Subproject as it is quite far from the residential area and the construction work has been stopped for wet season.</p>	<p>No action or mitigation required</p>
Borrow Pits/Quarry	
<p>It was confirmed by the Contractor and PPO that the construction material for Nam Thae are sourced from Ou Tai (township of Nhot Ou district) only. Therefore, no potential impact would caused by borrow pit/quarry.</p>	<p>No actions or mitigation measures required</p>
Waste Management	
<p>No construction waste and general waste were seen on site and no temporary camp provided on site as the Contractor</p>	<p>It is recommended that when the construction work is started again</p>

used the agricultural huts nearby the construction areas as temporary accommodation.	the PPO and DCO in coordination with PONRE or DONRE to monitor the general housekeeping and waste management on site.
Construction Camp	
Agricultural huts of the villagers were used as the temporary accommodation during the construction.	It is recommended that PPO and DCO have to check whether no damage or destruction of the villagers' agricultural huts which used as temporary accommodation and rehabilitation is required
Hazardous/Chemical Waste	
No hazardous material/waste storage and spillage/leakage were observed on site. It is report that the chemical material was delivered from the stations of Ou Tai.	It is recommended that the proper handling of chemical material on site should be advised to the site engineer when the construction work restarted at the end of wet season.
Water Quality	
It was seen that the water was clear at upstream and downstream of the Subproject even though it was early wet season in the region, this would be due to well protected watershed of Nam Thae. The construction activities of subproject would cause less impact to the level of water quality of Nam Thae due to existing weir structure. It was reported by the villagers and DCO that the chemical fertilizer and pesticides are less used in the subproject beneficiary area; main crop type is rice. Besides the construction activities, the variance of the water quality in the stream would only influenced by the agricultural activities in the long term. The details of the water quality analysis result is described in the section 4.7	It is recommended that the collection of upstream and downstream water sampling should be continued for basic parameters.
Traffic and Safety:	
No traffic concern due to the location of the Subproject. No potential accident would happen.	It is recommended that the Contractor should be advised on traffic safety particularly for the drivers.
Terrestrial and Aquatic Biology	
There is no concern on terrestrial biology due to the existing land use in the Subproject area and no extension of the canal alignment into the forest area.	- It would be not easy to zone the fish conservation area in this Subproject due to the location and water flow. However;

<p>Fish migration is limited with existing weir structure and no improvement of the structure would cause additional impact on fish migration. On the other hand, the water level in the stream is very low during the dry season in some sections of the stream at downstream of the weir structures.</p> <p>The team conducted the basic fish study through local knowledge method by consulting and interviewing with local people and site observation. furthermore; the discussion with DCO and PPO was made for the future fish conservation plan.</p> <p>- Aquatic species reported and found in the Nam Thae are listed in the Annex 5</p>	<p>awareness raising of minimizing harmful fishing activities within the communities should be enhanced.</p> <p>- Minimum flow should be released during both wet and dry season to maintain the water level for aquatic resources and habitat during the operation.</p>
	
<p>Photos of weir structures of Nam Thae</p>	
<p>Environmental Monitoring</p>	
<p>Up to now, the PONRE and DONRE has engaged only the safeguard monitoring missions. No their own independent monitoring.</p>	<p>It is recommended that besides the involvement in the Independent Safeguard Monitoring, the PONRE and DONRE should plan and implement quarterly or bi-quarterly basis.</p>
<p>Community perception</p>	
<p>Positive feedback was received from the village authorities and villagers.</p>	<p>It is recommended that during the operation of the Subproject, the PPO and DCO has to check the water sharing and use by different groups of people and making sure that the villagers can get sufficient water for irrigated areas.</p>

4.5 Water Quality Monitoring

The baseline data for water quality was referred to results of the analysis of samples taken during the first mission in 8 subprojects (excluding Mongchao-Kormaen) of year 1. Meanwhile the baselines data for water quality of 8 Subprojects of year 2 were collected during the Mission (7-22 June 2014), the samples were collected both upstream and downstream of Subprojects. The samples of Subprojects for year 1 were collected at the same locations where samples

were collected during the previous missions. The coordinate points of each sampling site are indicated in the table 4-2 and photos of water sampling are shown in Figure 4-1.

The analyzed parameters in this Mission are the same to the conducted in the year 1 missions based on the parameters proposed in the IEE reports of Subprojects. However; in this mission the agro-chemical parameters were collected and analyzed separately for Nam Ma Oune subproject as per TOR, the sample was collected at downstream where the pollutant would flow into Nam Ma Oune from the banana plantation and other agriculture.

The methods and process used for the sampling and analysis is the same used for the previous missions. The parameters include BOD, COD, TSS, PH, temperature, DO and Faecal Coliform, which were proposed in the IEE report. The analysis of water samples for all parameters was conducted in the Lab. The results of water quality are shown in the Annex 2.

These results of the samples collected for the Subprojects of year 1 will be compared to the baseline data and national standard. For the results of the samples for subprojects of year 2 will be baseline data and comparing to the national standards.

		
Water sampling at upstream of the Nam Ou Subproject	Water sampling at upstream of the Nam Thae Subproject	Water sampling at upstream of the Hong Kong Subproject
		
water sampling at downstream of the Nam Haad Subproject	Water sampling at downstream of the Nam Ma Oune Subproject.	water sampling at upstream of the Nam Houay Xo Subproject

Figure 4-1 Photos of water samplings in Subprojects

Table 4-2 Water sampling locations

No	Location of water sampling	Coordinate and Projection		
		Easting	Northing	Projection
1	NH1 (Nam Haad)-Up	693351	2223088	WGS 84; Zone 47 N
2	NH2 (Nam Haad)-Down	689598	2222683	WGS 84; Zone 47 N
3	MO1 (Nam Ma Oun)-up	709924	2329292	WGS 84; Zone 47 N
4	MO2-down	708194	2328302	WGS 84; Zone 47 N

5	D1 (Na Dai)-up	719544	2340920	WGS 84; Zone 47 N
6	D2-down	721617	2343597	WGS 84; Zone 47 N
7	NO1 (Nam Ou)-up	790312	2451006	WGS 84; Zone 47 N
8	NO2 (Nam Ou)-Down	787268	2446466	WGS 84; Zone 47 N
9	NL1 (Nam Lan)-up	807251	2364602	WGS 84; Zone 47 N
10	NL2 (Nam Lan)-up	809263	2365188	WGS 84; Zone 47 N
11	NT1 (Nam Tin)-up	663063	2241552	WGS 84; Zone 47 N
12	NT2-Down	662300	2235289	WGS 84; Zone 47 N
13	HX1 (Houay Xo)-up	659223	2189266	WGS 84; Zone 47 N
14	HX2 (Houay Xo)-down	664805	2191449	WGS 84; Zone 47 N
15	HK1 (Hong Kong)-up	746494	2321167	WGS 84; Zone 47 N
16	HK2 (Hong Kong)-down	749830	2317655	WGS 84; Zone 47 N
17	NY1 (Nam Gngang)-up	747341	2320662	WGS 84; Zone 47 N
18	NY2 (Nam Gngang)-down	749630	2317655	WGS 84; Zone 47 N
19	NGH1(Nam Gna6-HouayLuang)-up	724834	2348503	WGS 84; Zone 47 N
20	Nam Gna6 (up)	723763	2348075	WGS 84; Zone 47 N
21	NGH2(Nam Gna6-HouayLuang)-down	723512	2349421	WGS 84; Zone 47 N
22	NB1 (Nam Bak)-up	707441	2326753	WGS 84; Zone 47 N
23	NB2 (Nam Bak)-down	705100	2327200	WGS 84; Zone 47 N
24	NS1 (Nam Sat)-up	670332	2199399	WGS 84; Zone 47 N
25	NS2(Nam Sat)-down	667766	2199456	WGS 84; Zone 47 N
26	NP1 (Nam Pouk)-up	664805	2236348	WGS 84; Zone 47 N
27	NP2(Nam Pouk)-down	662300	2235289	WGS 84; Zone 47 N
28	NGN1 (Nam Gnaene)-up	8119086	2363616	WGS 84; Zone 47 N
29	NGN2 (Nam Gnaene)-down	808447	2368019	WGS 84; Zone 47 N
30	NTH1 (Nam Thae)-up	795432	2467742	WGS 84; Zone 47 N
31	NTH2 (Nam Thae)-down	789426	2466442	WGS 84; Zone 47 N

The results of the water quality analysis are presented in the tables of Annex 2. With nature of the quality of natural streams in wet season, some parameters of samples are quite higher than the standard e.g. DO and BOD. Fluctuation of the water quality would be influenced by the high flow and velocity of the streams. However, no significant values that exceed the guideline of the surface water quality standard of Laos (National Environmental standard; No 2734; dated 7 Dec 2009). The results show that all the parameters of each sample are quite higher than the baseline data (for year 1 Subprojects). Level of the TSS is quite high for some subprojects e.g. Nam Gngang, Nam Dai Hongkong and HouyLuang-downstream, but other Subprojects seem to be low values of TSS. With the scope and type of the subprojects, the construction activities would mainly contribute only the level of physical parameters e.g. turbidity, TSS, TDS and there would be less influence on other parameters. The results show no much different between samples collected at upstream and downstream of construction sites. It seems the construction activities do not contribute much to the variance of water quality in subprojects. In addition, the results of the water quality analysis look realistic for the water quality of the stream in wet season.

Interpretation of water quality analysis results are summarized in the table 4-3.

Table 4-3 Interpretation of water analysis results

Analysis of water quality results	
PH	All water samples have values within the range of the standard of Lao PDR (5-9).
DO	All the values of water samples slightly above the standard (6mg/l), but not exceeding 8 mg/l.
BOD	Most of the values are within the range of the standard (1.5mg/l) and similar to the base line data, excepting the sample collected at upstream of Haad-up, HK1&2, Nam Gngang 1&2, but it is not significant.
COD	The values of COD of some samples are above the standard (5mg/l) e.g. HK1&2, Nam Dai 1&2, NP1&2 and NT1&2. These values of these samples are quite high both upstream and downstream, but now significant.
TSS	Values of the TSS of samples are quite high for some samples in Subproject e.g. Nam Gngang, Nam Dai Hongkong and HouyLuang-downstream, even though it is not identified in the national standard. the higher level of TSS would mainly caused by the agricultural activities at upstream of Subprojects.
Faecal coliform	All the values are more than 23 MPN/100ml (the experimental equipment in the lab cannot detect the value of Faecal Coliform above 23 MPN/100ml) with the standard (<1000 MPN/100ml), the variance of this parameters in the Subproject areas mainly would influenced by agricultural activities

It can be concluded that the water quality in all Subproject areas are realistic with the natural water quality with the variance to season in the regions. There were no construction activities in subproject that would create the significant negative impacts on streams and aquatic resources. The main impact caused by the construction works mostly associates with level of turbidity.

Concerning the agro-chemical level in Nam Ma Oune, The required parameters are: i) Pesticides Organochlorine (Dieldrin, Heptachlor, Heptachlor epoxide, Lindane, Total DDT) ii) 2,4-D iii) ATRAZINE (Laddock) iv) Chlordane v) Pesticides Phosphate group vi) Pesticides Pyrethroid group vii) Pesticides Carbamate group. The results show no detection of substance load in the samples. This seems realistic as the samples were collected during wet season with high flow stream, thereby low concentration due to high dilution. Analysis report sheet for agrochemical parameters in annex 2.

4.6 Complaints Concerning Environmental Issues

The consultations with the communities in subprojects where the construction works have been started and completed. This is to hear the comments and feedbacks from the communities on the implementation of the subprojects; particularly on environmental safeguard. It was confirmed by the village authorities and villagers that so far no severe or outstanding environmental issues occurred to their villages or living.

4.7 Environmental Enhancement Works

The actions on capacity building for environmental management and implementation have been progressively enhanced since year 1 of the Project. Positively, the engagement of the PONRE the PPOs and DONREs in independent safeguard monitoring missions has been much improved since second mission of year 1. At the beginning, only some representatives from PONREs and DONREs were engaged, but after 2nd mission of year 1 the representatives from DONRE and PONREs have actively engaged in the independent safeguard monitoring missions. Moreover; as proposed in the 3rd Missions of year 1 that the independent monitoring of PONREs and DONREs should be enhanced and support, It was confirmed by the PONRE, DONRE and PPO that the independent monitoring of PONRE and DONREs in Luang Namtha province has been undertaken in quarterly basis with close cooperation with PPO and DCO. However; Similar practice should be introduced in other remaining provinces and districts (excepting for Pha Oudom where the DONRE regularly monitor the EMP implementation for Nam Haad Subprojects (Left Bank and Right Bank). With this regard, the team met with the senior management of PONREs and PPOs to discuss the possibility to support the monitoring of PONREs and DONREs in regular basis besides joining with Independent Safeguard Monitoring Missions. This will be good opportunities for the PONREs and DONREs for capacity building and more effective environmental management for subproject activities and other development projects in the region in the longer term.

5 Results of Social Safeguard Monitoring

5.1 Land Acquisition, Resettlement and Compensation (LARC)

5.1.1 Summary of LARC for the project

The subprojects have different levels of land requirements and acquisition for their facilities (e.g. weirs, canals, tracks along the canal, road). The summary of the land acquisition, resettlement and compensation which were studied by GIC are summarized in the Table 5-1 both for subprojects of year 1 and 2.

The land acquisition and compensation methodologies applied are the same for all subprojects. The land owners whose land have been required by the infrastructure developments are satisfied with the solution through the proper procedures and solutions in accordance with the ADB policy and relevant laws of Lao PDR on resettlement and compensation as mentioned in the previous Mission Reports. All the AHs are willing to contribute the affected lands to the Subproject activities as the affected lands cover less than 5% of their total productive lands. Therefore they prefer to contribute this small partial of lands for the project activities to get the better and improved infrastructure for their better agricultural productions as common benefits for communities.

The Houay Sat subproject at Paktha district, Bokeo province is an exceptional case, where one of affected HHs would lose more than 5% (based on preliminary design). With this regard, the consultation meetings have been carried out between PPO-DCO and the village authority with the affected person, and the minutes of the meeting have been made in March and June 2014. Annex 6 presents the minutes of the meeting on 18 June 2014 at Hatdonkeo village, Paktha district, Bokeo province. The minutes confirm that the affected person, Mr. Mai Inh is still willing to contribute his affected area to the Project.

(After this meeting, the concerned staff of PPO/DCO, the village authorities and Mr. Mai Inh further discussed the solution about this issue, and finally found that if the productive lands outside of the project area are included/counted as his total productive lands, the percentage of his affected land would be reduced from 13% to 2.2%. Presently, the PPO re-submitted the application form for contribution of the land to NPMO for revising/updating the LACP of Houay Sat subproject and final approval by ADB.)

Based on the review of the LARC reports of the subprojects, the loss of assets from the rehabilitation of the infrastructures is productive land including fruit trees and tree plantations. In general the temporary loss of land for AHs is comparatively small and occurred during the construction period only.

Table 5-1 Information on Land Acquisition, Resettlement and compensation

Types of asset	Description of loss	Rounded amounts (kip)	No. HHs	Comments	
Nam Tin irrigation subproject					Year 1
Loss of land	None	None	None	No land acquisition, resettlement, compensation requirement. Related planning can be regarded as completed at feasibility stage.	
Loss of crops	None	None	None		
Loss of trees	None	None	None		
Loss of common property resource	None	None	None		
Relocation of housing and resettlement	None	None	None		
Income restoration and rehabilitation	None	None	None		
Houay Xo irrigation subproject					
Loss of land (1.4% of APs total area cultivated)	913 m ²	19,076,000	4	The compensation cash-for-kind has formally calculated and included in the resettlement budget, but alternative option of donated land-for-irrigation could also be rediscussed at detailed resettlement planning.	
Loss of crops	None	7,000,000	None	None	
Loss of trees	4h	None	None		
Loss of common property resource	None	None	None		
Relocation of housing and resettlement	None	None	None		
Income restoration and rehabilitation	None	None	None		
Nam Haad irrigation subproject					

Loss of land	(28614 m ²)	143,514,000	58	This amount is not necessary as all APs agreed in voluntary donation of their affected land to the subproject .
Loss of House and structures	None	No cost	None	
Loss of crops	None	None	None	Compensation would not required if construction work started after harvesting period
Loss of tree	605 trees	118,990,000	30 out of 58 HHs	This amount is not necessary as all APs agreed in voluntary donation of their affected trees to the subproject.
Loss of common property resources	None	No cost	None	
Income restoration	None	None	None	
Name MaOun Irrigation subproject				
Loss of land	None	None	None	No land acquisition, resettlement, and compensation requirement Related planning can be regarded as completed at feasibility study
Loss of houses and other infrastructures	None	None	None	
Loss of crops and trees	None	None	None	
Loss of common property resources	None	None	None	
Economic resettlement /vulnerable people	None	None	None	
Income restoration	None	None	None	
Hongkong irrigation subproject				
Loss of land	None	None	None	No land acquisition, resettlement, and compensation requirement Related planning can be regarded as completed at feasibility
Loss of houses and other	None	None	None	

structures				study
Loss of crops and trees	None	None	None	
Loss of common property resources	None	None	None	
Economic resettlement/vulnerable people	None	None	None	
Nam Dai irrigation subproject				
Loss of land (About 1.1% of APs total of productive land) during the construction period	9192m ²	131.638.000	46	This amount is not necessary as all APs agreed on voluntary donation of their affected land to the subproject
Loss of House and structures	None	None	None	
Loss of crops	None	None	None	
Loss of tree	326 trees	87.350.000	13 out of 46 HHs	This amount is not necessary as all APs agreed on voluntary donation of their affected trees to the subproject
Loss of common property resources	None	None		
Case of economic resettlement and vulnerable people	None	None		
Nam Lan irrigation subproject				
Loss of land	None	None	None	No land acquisition, resettlement, and

Loss of houses and other structures	None	None	None	compensation requirement Related planning can be regarded as completed at feasibility study
Loss of crops and trees	None	None	None	
Loss of common property resources	None	None	None	
Economic resettlement/vulnerable people	None	None	None	
Nam Ou irrigation subproject				
Loss of land	None	None	None	No land acquisition, resettlement, and compensation requirement Related planning can be regarded as completed at feasibility study
Loss of houses and other structures	None	None	None	
Loss of crops and trees	None	None	None	
Loss of common property resources	None	None	None	
Economic resettlement/vulnerable people	None	None	None	
Mongchao-Koman road rehabilitation subproject				
Loss of land	None	None	None	No cost or compensation/ Resettlement
Loss of houses and other structures	None	None	None	
Loss of crops and trees	None	None	None	

Loss of common property resources	None	None	None		
Economic resettlement/vulnerable people	None	None	None		
Income restoration	None	None	None		
Special assistance	None	None	None		
Types of asset	Description of loss	Rounded amounts (kip)	No. HHs	Comments	
Kormoen-Phongsak Road subproject					Year 2
Loss of land	None	None	None	No land acquisition, resettlement, compensation requirement. Related planning can be regarded as completed at feasibility stage.	
Loss of crops	None	None	None		
Loss of trees	None	None	None		
Loss of common property resource	None	None	None		
Relocation of housing and resettlement	None	None	None		
Income restoration and rehabilitation	None	None	None		
Nam Thae Irrigation Subproject					
Loss of land (0.32% of APs' total area cultivated)	1545 m ²	40,300,000	10	The compensation cash-for-kind has formally calculated and included in the resettlement budget, but alternative option of donated land-for-irrigation could also be rediscussed at detailed resettlement planning.	
Loss of crops	None	None	None		
Loss of trees (83trees)		unknown	1		

Loss of common property resource	None	None	None	None
Relocation of housing and resettlement	None	None	None	
Income restoration and rehabilitation	None	None	None	
Nam Gne irrigation subproject				
Loss of land	17798 m ²	227,300,000	43	The loss of 2.0% of their total productive land This amount is not necessary as all APs agreed in voluntary donation of their affected land to the subproject .
Loss of House and structures	None	No cost	None	
Loss of crops	917 trees	Included in land loss	30 out of 43 HHs	This amount is not necessary as all APs agreed in voluntary donation of their affected trees to the subproject.
Loss of tree				
Loss of common property resources	None	No cost	None	
Income restoration	None	None	None	
Name Gngang Irrigation subproject				
Loss of agricultural land	2287 m ²	unknown	10	The copensation budget has been planned with a total of 47.7 millions mainly based on values of affected assets and some allowances; equivalent to average of 2.74 millions for each AH
Loss of residential land	559 m ²	unknown	6	
Loss of houses	None	None	None	
Secondary structure	3(1 toilet, 1 pig hut and 1 well)	unknown	2 compounds	

Loss of crops and trees	37	unknown	7	
Loss of common property resources	None	None	None	
Economic resettlement /vulnerable people(0.5% of land their total land)	Unknown	unknown	3	
Income restoration	None	None	None	
Nam Gna6-Houay Luang Irrigation Subproject				
Loss of agricultural land	5590 m ²	133.2 million	13	3.2% of their total productive land
Loss of crops and trees	325		10	12.1% of their total trees
Economic resettlement/vulnerable people	Minor loss of agriucultral land		4	
Loss of houses and other structures	None	None	None	
Loss of common property resources	None	None	None	
Nam Bak Irrigation Subproject				
Loss of land (About 1.4% of APs total of productive land)	7894 m ²		30	This amount is not necessary as all APs agreed on voluntary donation of their affected land to the subproject

Loss of residential land	215	136.000.000	5	
Loss of secondary structures (toilet)	1		1	Under construction
Loss of tree	87 trees		6	This amount is not necessary as all APs agreed on voluntary donation of their affected trees to the subproject
Case of economic resettlement and vulnerable people	Unknown		6	Would loss their minor portion of their productive land
Loss of House and structures	None	None	None	
Loss of crops	None	None	None	
Loss of common property resources	None	None		
Nam Phouk Irrigation Subproject				
Loss of land	None	None	None	No land acquisition, resettlement, and compensation requirement Related planning can be regarded as completed at feasibility study
Loss of houses and other structures	None	None	None	
Loss of crops and trees	None	None	None	
Loss of common property	None	None	None	

resources				
Economic resettlement/vulnerable people	None	None	None	
Nam Haad Left Bank Irrigation Subproject				
Loss of agricultural land (1.4% of their total land)	208	2.3 million	2	Compensation & Entitlement Forms to voluntarily donate their affected land and/or trees as their contribution to the subproject
Loss of houses and other structures	None	None	None	
Loss of crops and trees	None	None	None	
Loss of common property resources	None	None	None	
Economic resettlement/vulnerable people	None	None	None	
Nam Sat Irrigation Subproject				
Loss of agricultural land	3189	Unknown	8	3.3% of their total productive land for 7 HHs, but 13% of his total productive land for 1 HH.
Loss of trees	91		3	About 30% of their total trees
Loss of houses and other structures	None	None	None	
Loss of common property resources	None	None	None	
Economic resettlement/vulnerable	None	None	None	

people					
Income restoration	None	None	None		
Special assistance	None	None	None		

5.1.2. Progress of Implementation of Land Acquisition, Resettlement and Compensation

It is mentioned in the previous independent safeguard monitoring reports that the grievance committees working on LARC issues have been established at provincial, district and village levels since the beginning of the subprojects. Their responsibilities also include holding consultations and meetings to conduct technical surveys at different levels and working closely with the asset owners.

To elaborate on the APs voluntary donations their assets as described in the LAC reports, the independent safeguard monitoring team had meetings with PPOs, DCOs, village committees and interviewing some APs on this regard (registration lists and photos are attached in the Annex 3). It was confirmed that no complaints on LARC received, as all activities related to LARC were solved earlier stage of subproject implementation on sites. Excepting the case in Mongchao-Kormaen subproject where the landslide has been occurred to the tea plantation of 2 households in Mongchao village. The grievance is ongoing process.

1). Subprojects under Operation Phase.

Findings listed below are satisfying for the project offices, authorities, and affected households:

- *Loss of land and trees:* The loss of land is minor. All the APs in the subprojects where the land acquisition and loss of trees were taken place optimistically voluntarily donate because they considered the loss of land and trees as small with about less than 5% in average of APs' productive lands (excepting one AH in Houay Sat Subproject which is under process of grievance). They are happy to voluntarily donate the land or trees as they need to have improved infrastructures and gaining more productions.

- *Donation:* All the APs reportedly voluntarily agreed to donate their minor part of affected lands and trees to the subprojects and no requirements of cash compensation which was proved by the compensation and entitlement forms signed by affected household and PPO in all Subprojects of year 1 & 2. During the Monitoring Mission, the discussions with PPOs, DCOs and village authorities in all Subprojects were conducted and it was confirmed that the implementation of the LARC was carried out. It was confirmed that they are satisfied with process and their contribution and they are happy to donate their assets voluntarily.

- *Structures:* No loss of structures reported.

2). Subprojects under the pre-construction phase.

Similarly; the solutions for the compensation of the land and tree loss were practiced for subprojects under the pre-construction. However, it was reported in the feasibility study that there would be impact on secondary structures in Nam Gngang Subproject (1 pig hut, 1 toilet and 1 well) and Nam Bak (1 toilet). The potential impacts will be mitigated through the consultation and coordinate closely with the AHs as construction works for these two Subprojects have not been started. With this regards, the mitigation measures for the impact on these potential secondary structures will be reviewed during the second Mission of year 2.

5.1.2. Complaints and Grievance Redress Mechanism

The discussion and consultation on complaints and grievance redress was undertaken with villagers, village authorities, DCOs and PPOs. This is to hear the comments and feedbacks from the communities on the implementation of the subprojects associated with LARC, EGD, GAP, water utilization and community development programs.

It was reported that no have been received since Start of the Subprojects activities;. However; the solution has been on process.

The PPO, DCO and the committee at the village level reportedly have confirm that no written complaints received concerning the subprojects' activities. Villagers remain strongly support to the implementation of the project. Some of beneficiary households, who have the land in the project area, have utilized the water from improved irrigation system provided by project and people in villages along the road from Mongchao to Koman are satisfied with the improved road that they can use the road entire year from now on. The local communities are happy to see such progress and further supporting the project.

However, It was told that one of AHs at Mongchao village that the Mongchao-Kormaen Road Subproject has sent the letter to requested for compensation on tea tree loss in March 2014. With this regards, the grievance committee at provincial, district and village levels for this subproject conducted the formal consultation with 2 AHs and the minute of meeting was prepared and signed (24 march 2014), based on agree solution by all relevant parties (see annex 4). Additionally, during the mission of safeguard monitoring team the meeting and consultation with the AHs was undertaken with the participation of village authority of Mongchao, PPO and DCO, and the another minute of meeting was taken with the witness of safeguard monitoring team. All the content of the meeting minute were proposed and agreed by the AHs.

Regarding the land loss over 5% of Mr. Mai Inh in Nam Sat Subproject, So far there has not been complaints to village authority, DCO and PPO. Even though the area to be lost more than 5%, but the owner personally is willing to contribute to the Subproject. It was confirmed through consultations between the owner and village authority, DCO and PPO with meeting minute on 29 May 2014. To review the progress of the grievance and confirmation from AH, the safeguard monitoring team had consultation with the AH and minute of the meeting was taken on 18 June 2014. The outcome of the consultation found that the AH still confirmed and willing to contribute the land for the Subproject. He said if the alignment pass through his land, he would get more area of irrigated paddy field nearby the his land to be affected (see the details in the meeting minute in Annex 4)



Figure 5-1 Photos of consultation with AHs in Subprojects

5.2 Ethnic Group Development Plan (EGDPs) and Gender Action Plans (GAPs)

5.2.1. EGDPs

A. Overview of the Subproject's EGDPs

Based on the review of FS Reports, the communities in the subproject areas compose of different groups of minorities (proportion/percentages and number of households) as summarized in the table 5-2 below. It was proposed in the FS draft about issues on impact of subprojects' activities on indigenous people and development plan for them. This is the requirement and policy of Lao government on minority groups of people and the Safeguard of ADB on Indigenous People (IP).

On the other hand, the social impact assessment (SIA) report for the Ethnic group also mentioned that the ethnic groups in the subprojects have been strongly encouraged to involve in the process of the assessment and implementation. IP has been supported and participated in the process of the consultations; including group discussions and project implementation activities e.g. community development programs and membership of WUGs.

Table 5-2 Composition of ethnicity in subprojects

No.	Province	District	Subproject Name	Ethnic minority
1	Bokeo	Houayxai	Nam Tin Irrigation	236 HHs (Mon-Khmer), 501 HHs (Hmong-lu Mien) and 1 HH (Chino-Tibet) out of total 1588 HHs
2			Nam Pouk	The 338 HHs in Xay Chalern are all of the Hmong-lu Mien Ethno-Linguistic Group, while the 413 HHs in Nam Pouk are all of the Lao-Tai Ethno-Linguistic Group
3		Paktha	Houay Xo Irrigation	100% of Lao-Tai(Pangsa and Dong villages) and Mixed with Mong-Lu Mien (Xo village)
4			Houay Sat Irrigation	The 152 HHs in Ban Hat Don Keo are all of the Lao-Tai Ethno-Linguistic Group
5		PhaOudom	Nam Haad Right Bank Irrigation	63% Mon-Khmer (31% are poor), Others are Lao-Tai
6			Nam Haad Left Bank Irrigation	Lao- Tai (46%), Mone-Khmer (43%) and Hmong-lu Mien (11%)
7	Luang Namtha	Long	Nam Ma Oune Irrigation	Only two HHs of minority groups, 1- Mon-Khmer and 1- Chino-Tibet; these 2 HHs middle income with sufficient rice, Others are Lao-Tai
8			Nam Bak Irrigation	dominant Lao-Tai Ethno-Linguistic Group 53%, Mone-Khmer 25% and Tibeto-Chinese 22%.
9		Namtha	Hong Kong Irrigation	Hmong-lu mien- 4% and Mon-Khmer- 2%, others are Lao-Tai
10			Nam Gnang Irrigation	86% of the dominant Lao-Tai Ethno-Linguistic Group. The other 14% are Mone-Khmer (8%), Hmong-lu Mien (4%), and 1% Tibeto-Chinese
11		Sing	Nam Dai (V) and (VI) Irrigation	No ethnic minority in 3 villages (No EGDP required)
12			Nam Gna6-Houay Luang	52% Lao-Tai; 11% Mone-Khmer; 36% Tibeto-Chinese; and less than 1% of the Hmong-lu Mien Group in Xieng-Yeun
13	Phong-	Boun Tai	Nam Lan Irrigation	Only one Mon-Khmer household and

	Saly			being a member of WUG, others are Lao-Tai
14			Nam Gnaene Irrigation	Leu under the dominant Lao-Tai Ethno-Linguistic Group, Khmu of the Mone-Khmer Linguistic Group, Hmong of the Hmong – lu Mien Group, and Phounoi of the Tibeto-Chinese Group
15		NhotOu	Nam Ou Irrigation	4 HHs (Mon-Khmer) and 215 (Chino-Tibet others are Lao-Tai
16			Nam Thae	85% Lao-Tai; and 2) 15% Tibeto-Chinese Ethno-Linguistic Groups
17		Phongsaly	Ban Mong Chao – Kormaen Road	7 villages are Phounoi and 1 village Akha (sub-group of Chino-Tibet)
18			Kormaen-Phongsaek Road	100% of the Phunoi Ethnicity classified as Tibeto-Chinese Ethno-Linguistic Group

B. Progress of the EGDPE Implementation of Subprojects:

It is proposed in the FS that; to ensure equality of project benefits and opportunity sharing between ethnic groups in the area. The Ethnic Group Development Plan (EGDP) defines mechanisms for inclusion and benefits for all ethnic minority groups. Particular concern has been given to the villagers in villages, which have the highest incidence of poor households and of the minority groups of people in the villages. The EGDPE defines and will implement safeguards against employment of children, priority targeting of poor households in the hiring of labor for subproject construction works and associated initiatives, and coordination with local education offices for programs to improve adult literacy/numeracy.

The project maintains good practice on EGDPE implementation and being progressively continued in all Subprojects. As mentioned in the previous independent safeguard monitoring reports that even though the populations of the ethnic groups are varied in subprojects as outlined in the table 5-2, but implementation activities and methodologies used in all subprojects are very similar. The results of the checklists during the site visit show that the ethnic people in each subproject responded to the questions with very similar answer.

The ethnic people have been progressively supported to engage in the subproject process; particularly active engagement in consultations at different stage of subproject activities. This includes agricultural promotion activities and trainings. This is to improve the livelihood of ethnic group of people through the project implementation.

Demonstration: the project's beneficiaries (priority for ethnic group representatives and gender balance) have been demonstrated by the DCOs and PPOs through the pilot rice cultivation with "System of Rice Intensification (SRI)", crops cultivation and poultry raising.

However; based on results of consultations and meeting with villagers it was some challenges are existed for the EGDPE implementation particularly SRI and chicken raising for the minority people due to reasons e.g. labor limitation, adaptability with new techniques and their involuntary engagement to the support programs.

5.2.2 Gender Action Plans (GAPs)

A. Review on GAP:

A Gender Action Plan was developed each Subproject based on the Project-Wide Gender Action Plan. The main concern of the plan is the promotion of the involvement of women in Subproject activities and their representation in the village administration committees/units and village organizations. It was recommended the Subprojects aim to get a) 30% women representation in the WUG/FPG and participation in subproject management committees; b) at least 30% women attendance in subproject consultation forums, meetings, trainings and study tours; c) development of programs to ease the burdens of women; c) Women assigned in financial related WUG/FPG positions; and d) coordination with local education offices for programs to improve the literacy/numeracy programs. The targeting of poor FHHs women in the hiring of labor as well as in the delivery of associated initiatives and livelihood programs for the subproject is recommended in the GAP.

As mentioned in the previous reported that the main findings of the female roles and responsibility as well as the participation of the female gender to the project activities is main focus of the project to improve the gender issues for the community in the beneficiary areas from the Subprojects. This is to solve the common issues existing in the Subproject areas, these include:

- Women are not proportionally represented in the leadership of the village authority administration; accepting for the LWU
- Prominent role in the safekeeping of money, marketing and household basic chores,
- More responsibilities in household activities and performs agricultural production works
- The capacity building for women and gender training is needed to promote community awareness on the importance of participation of women in the community development.
- Female group discussions were conducted during the SIA study.
- In some Subprojects, the percentage of the female-headed households is high (see the table 5-3) and they are poor and need more supports on GAP and community development plan

Table 5-3 Information of female-headed households and poverty status

No.	Province	District	Subproject Name	Percentage of female-head households (%)	Percentage of poor FHHs
1	Bokeo	Houayxai	Nam Tin Irriation	5% of 1558 HHs	41% of FHHs are poor
2			Nam Pouk Irrigation	42 FHHs in 2 villages	about 38% of FHHs or 16 HHs are poor
3		Paktha	Houay Xo Irrigation	3% of 258 HHs	2 FHHs are poor
4			Houay Sat Irrigation	15 FHHs	1 poor FHH
5		PhaOudom	Nam Haad Right Bank Irrigation	8% of 618 HHs	62% of FHHs are poor
6			Nam Haad Left Bank Irrigation	100 FHHs or 7% HHs	53% HHs are poor
7	Luang Namtha	Long	Nam Ma Oune Irrigation	2.6% of 67 HHs	1 FHHs is poor
8			Nam Bak Irrigation	9 FHH	5 poor FHHs
9		Namtha	Hong Kong Irrigation	27% of 488 HHs	27% of FHHs are poor
10			Nam Gngang Irrigation	169. Of the total FHHs,	No poor FHH

11		Sing	Nam Dai (V) and (VI) Irrigation	7.1% of 311 HHs	32% of FHHs are poor
12			Nam Gna-Houay Luang Irrigation	6% of the total HHs in the area	33% are classified as poor
13	Phong-Saly	Boun Tai	Nam Lan Irrigation	3.3% of 165 HHs	100% Rice sufficient
14			Nam Gneue Irrigation	38 FHHs	7 are very poor
15		NhotOu	Nam Ou Irrigation	2% of 844 HHs	15% of FHHs are poor
16			Nam Thae Irrigation	8 FHHs	No poor FHH
17		Phongsaly	Mong Chao – Koman Road	26% of 488 HHss	44% of FHHs are poor
18			Kormaen-Phongsaek Road	12 FHHs	two FHHs are classified as poor

B. Progress of the GAPs:

The female participation to the project activities has been improved as the project has tried to enhance the gender issues in the project activities. During the mission, the consultations were conducted in villages and it found that the proportion of female participants is high with 30% target or more in some Subprojects. This would conclude that the implementation of GAPs have been well implemented as more women in the subproject areas realize of their important role and contribution in the activities.

Key findings for GAPs include:

- From the discussion and consultation, it was found that all the activities related to the gender action plans are progressively implemented through engagement in activities of project even though the proportion of the female staff in the some Subproject management at different level engaged in the project has not achieved the target of 30%.
- The implementations of project activities have well promoted the participation of the women; particularly in the public consultations and meeting as well as the decision making.
- At village levels, the proportion of women appointed as a member of the WUG and grievance committees in subprojects remain good even though WUG in some Subproject could not reach targeted 30%, but the efforts have been made to increase the proportion.
- Female participation in subproject activities has been maintained; particularly the engagement of the women in the development programs of the project.
- The consequence of the TOT, Training and awareness on gender and indigenous people issues for local people in the subprojects of year 1. Similar training was conducted in some Subproject of year 1, but other to be provided soon.
- The encouragement of female employment in the village are promoted to engage in the project implementation (for subprojects being constructed). However; based on the discussion with the village authorities, PPOs, DCOs and engineers of the Contractors said that the ratio of the female employment to the project activities remains low due to the low availability of the female jobs. Most of the available jobs are heavy-duty positions. the women prefer agriculture work as their experience and it is not common to see the female worker in the construction works.
- Similar answers, which got during the previous missions, responded by the female group discussion with the female groups during the first monitoring. There is still a common perception among the most of women in the local communities of subprojects that the women have less

influence on decision making even through women take more responsibilities on activities of households; in particular; for some minority people due to their traditions and understandings. However, in some subprojects more active engagement and contribution on comments from female was observed during the consultation.

- The action plans on gender, and community development plans have been increased through pilot programs of the project e.g. chicken raising, demonstration of SRI cultivation trial and other crops, but there are some difficulties due to labour availability, lack of equipments, no land plot and the technique need; leading to less involvement of female groups; particularly FHHs.

- The target of the achievement on the female participants for the project activities described in the GAPs

- At least 60 % of women included in training on marketing and financial / budget management; the summary of the female participants attended the training
- 30% representation of women in WUG Executive Committee
- 30% female employment in construction/rehabilitation works. Equal pay for women and men for work of equal type

- Based on the data (from GIC's community development consultant) of participation of the people to the trainings on "Awareness Programme on Gender/ Indigenous/ Human Traffic and HIV Prevention/ and Sanitation Hygiene", it is shown that the percentage of female participants cover 46% and about 50% of the WUG members are female (WUG establishment; development and registration status as of December 2013). However; the percentage of the female employment would be less because types of the female works on sites are not available and their voluntary contribution of time for the Subproject activities.

- The meetings in each subprojects at different level; including Female APs, It was confirmed by female representatives that they have been encouraged to involve/participate in the project activities.

- It was confirmed by the PPO, DCO and village authorities that the Involvement of female participant in study tour is considered below the percentage required. The fact is that the females were being busy with the farming activities, taking care of family's activities particularly house works which are mainly responsible by women; including taking care of their children.

5.3 Community Development

Discussions with PPO, DCO, village authorities and consultation with villagers were made regarding the community development activities. It seems more activities has been progressively implemented in Subprojects, but less implementation in Subprojects; particularly where the Subprojects are on operation as the 2-year support programs were completed. More number of households are willing to join the programs of the projects e.g. mainly are SRI cultivation, chicken raising and dry season crops". The reason would be that the people have realized that the production/yield from the demonstration in the first pilot projects was high and better than the traditional way; in particularly the for rice production. Some of these people joining the programs are vulnerable people (indigenous people, female-head households, landless families and other vulnerable people) which are prioritized as targeted groups for the project support. However; the chicken raising activity is generally not well implemented due to difficulty import of chicken, bird flu phenomena and more technique requirement than traditional way. The details of the households engaged in the demonstrations of SRI and Chicken raising are summarized in the table 5-4 below.

Table 5-4 Information of HHs involved in SRI and Chicken raising

No.	Province	District	Subproject Name	SRI*		Chicken Raising	
				HHs	Area(ha)	HH	chicken
1	Bokeo	Houayxai	Nam Tin Irrigation	23	4.25	-	-
			Nam Pouk Irrigation	-	-	-	-
2		Paktha	Houay Xo Irrigation	17	2.64	10	600
			Nam Sat Irrigation	8	1.28	-	-
3		PhaOudom	Nam Haad Right Bank Irrigation	22	3.52	-	-
			Nam Haad Left Bank Irrigation	-	-	-	-
4	Luang Namtha	Long	Nam Ma Oune Irrigation	8	1.28	-	-
			Nam Bak Irrigation	8	1.28		
5		Namtha	Hong Kong Irrigation	8	1.28	10	900
			Nam Gnang Irrigation	8	1.28		
6		Sing	Nam Dai (V) and (VI) Irrigation	8	1.28	-	-
			Nam Gna6-HouayLuang	7	2.12	-	-
7	Phong-Saly	Boun Tai	Nam Lan Irrigation	47	18.50		
			Nam Gnaene Irrigation	-	-	-	-
8		NhotOu	Nam Ou Irrigation	15	30		
			Nam Thae Irrigation	-	-	-	-
9		Phongsaly	Mong Chao – Koman Road	-	-	33	1650
			Kormaen-Phongsak Road	-	-	-	-

* Note: it was reported by the DCO and PPO

Moreover; the local people in the beneficiary area; where the improved irrigation scheme operated, happily said that they will get more income because they can utilize the water from newly-constructed irrigation scheme during the dry season by growing the other crops e.g. sweet corn, tomato, soybean, water melon, pumpkin and chilli.

Apart from the demonstration through agriculture practices, several trainings related to communities development activities have been continuously conducted by the PPO and DCO for the local villagers on the technical knowledge and skills. these include:

- The training on marketing and financial management conducted by PPOs and DCOs
- Poultry raising (chicken): training for the new members who will join the chicken raising will be trained and the new batch of chicken will be provided to the pilot households.
- Pilot projects for demonstrations of System of Rice Intensification (SRI) in Subprojects of year 1 and 2. This includes: Nam Haad, Nam Dai, Hongkong, Huay Xo, Nam Lan, Nam Tin and Nam Ou.
- Water user groups in subprojects which established since early stage of the project implementation are still trained regularly especially the trainings on water utilities; operation and maintenance have been continuously conducted by the GIC consultant team, PPOs and DCOs to build the capacity within their community for sustainable use of their schemes.
- Training for most of the WUGs of year 2 Subprojects has not been implemented; it is anticipated to be conducted soon.

- The committee on road maintenance has been established at village level for Mongchao-Koman road rehabilitation subproject and training on management and maintenance of the road is planned to be conducted in August 2013 for committee.

5.4 Employment

As mentioned in the previous monitoring reports that even through the regulations on local employment of Lao PDR and relevant policies of ADB are included in the contractual document for the Contractor and the advertisement by Contractors for recruitment are regularly practiced, but still the engagement of local labours in the construction works in Subprojects are still low. Most of the works that local people undertaken are subcontracting works for some specific tasks e.g. concrete lining and frameworks, but only in the Subprojects where skilled labours available.

With the discussions made during the Mission with Contractors, local people, village authorities, DCO and PPOs, the team got the facts for such reasons that: a). limited requirement of workforce for construction works (e.g. road rehabilitation which required more machines than human working); b). the low wage comparing to their daily agriculture/crop production (tea collecting and selling or growing rice or other crops can provide more money than labouring) and the period of employment is temporal; c). People think that the construction work must be hard for them and need some skills; comparing to their daily agricultural practice or working for banana or rubber plantation.

However; the good example of local employment was observed in few Subprojects e.g. Nam Haad Left and Right Bank, Houay Xo and Namn Pouk; where the local people have been subcontracted to work for most of the skilled and unskilled construction works instead of individual labour with daily fee. The employees and sub Contractors are happy to work through this way.

5.5 Public Consultation and Information Disclosure

Further public consultations regarding RAPs, GAPs, and EGDPs have been regularly implemented. The consultations were participated by villagers in the beneficiary villages within Subprojects and local authorities with proportional involvement of female participants. The consultations were conducted with the communities and the individuals (owners of lands and assets) prior any implementations of the subprojects started; including during the operation. The examples of the consultations are the Mongchao-Kormoen Road Subproject where the landslide has been occurred and the consultations have been conducted for solution with the participation of land owner, PPO, DCO and village authorities. Another example is the Nam Sat Irrigation Subproject where one of the land loss owners would lose his land >5%, the consultations and grievance has been undertaken and the revision of designs has been made and the problem will be solved based on the agreed solutions. The meeting minutes for these 2 cases were made prior the monitoring mission between PPO, DCO and village authorities with the affected HHs and during the safeguard monitoring, the other minutes of the meeting were again made to update the progress of the remediation and mitigation.

6 Capacity Building for the PPOs and DCOs on Environmental and Social Safeguard

The capacity building for environmental and social safeguard has been mainly implemented in direct ways. The PPO, DCO, DCO, PONRE and DONRE has involve in IEE feasibility studies, social impact assessment studies, consultations and fieldworks. Besides, the officer of PPO, DCO, PONRE and DONRE has also involve in the independent safeguard monitoring in each mission. Moreover, the trainings activities associated with environmental and social safeguard have been implemented in subprojects. This includes gender, hygiene and proper chemical use. with such trainings to PPO, DCO with involvement of PONRE and DONRE have enhance the capacity to the their office and extend of such knowledge to village level.

It was found that good examples of the outcomes of capacity building from the project are: a). Independent monitoring of PONRE and DONREs in Luang namtha province with support from PPO, and similar practice has been recommended to PONRE s and DONREs of Phongsaly and Bokeo provinces, b). more interested and active engagement of DONRE and PONRE representatives in the Independent Safeguard Monitoring Mission and c). The PONRE and DONRE representatives have engaged in other trainings and consultations together with PPOs and DCOs.

7 Conclusion, Recommendation and Follow up Actions

7.1 Conclusion

Up to now, there are 8 Subprojects of year 1 completed (only Houay Xo being constructed), 7 out of 9 Subprojects of year 2 being progressively constructed and other 2 Subprojects have not been started (Nam Bak and Nam Gngang). However, the monitoring of environmental compliance to EMP and socially-related aspects was undertaken in all Subprojects.

In overall, there were no significant environmental and social issues observed and no complaints or concerns raised by local communities in Subprojects. However, as raised in the latest ADB Mission Report, the case of landslide on tea plantation of 2 HHs in Mongchao village along the Mongchao-Kormaen road should be continuously followed up by the Project, which is now being on the process of grievance and consultation.

Regarding Houay Sat Irrigation Subproject in Bokeo province, it has been reported that there was an exceptional case, where one of affected HHs would lose more than 5% (based on preliminary design). However, it was finally found that when the productive lands outside of the project area are included/counted as his total productive lands, the percentage of his affected land would be reduced from 13% to 2.2%. Presently, the PPO re-submitted the application form for contribution of the land to NPMO for revising/updating the LACP of Houay Sat subproject and final approval by ADB.

Through the field monitoring with environmental and social checklists, the implementation of the EMP, GAP, EGDP and other aspects are acceptable, even though a few issues were observed, and can be mitigated and minimized. These include potential erosion hazard and sediment transport in a few subproject areas caused by earthworks along the canal alignment and hazardous handling.

The key findings on environmental and social issues observed during the mission and results of the public consultation can be summarized as follow:

A. Environmental Safeguard Issues:

- The IEEs of 18 Subprojects were officially approved by the PONREs in each province during late 2013 and early 2014. The IEE certificates for 9 subprojects of year 2 are presented in the Annex 1. For the IEE of 9 subprojects of year 1 were included in the Third Safeguard Monitoring report of year 1.
- Erosion is the main environmental concerning issue comparing to other ones; particularly during wet season in construction sites. However; most of the year 1 Subprojects have been completed and the problem become minor (excepting for Mongchao-Kormaen). There are a few Subprojects subject to erosion concerns, these are Kormaen-Phongsak, Nam Haad Left Bank due to the topographical locations and slope. For the other subprojects are considered as minor, mainly associated with the material disposed along sides the canal alignments but in the flat and low terrain areas which would be less subject to erosion. Other than the Mongchao-Kormaen case, there have not been complaints received from other Subprojects of year 1 and 2.

- In-stream sediment transport was observed in most of the subprojects during the wet season with high flow particularly in Nam Ou, Nam Ma Oune and Nam Dai. There often are some other development projects at upstream within the catchment/watershed areas of these Subprojects with less proper watershed management. However; there were no complaints or concerns raised by local communities regarding the sediment transport as it is considered as normal condition in wet season and no disturbance on their water use.
- In general the waste management in most of the Subprojects have been well implemented as no scattering domestic and construction waste found. Only a little construction waste was observed in Nam Ma oune (to be removed soon as the construction had just finished) and in Nam Gnaene for domestic waste. The advice was given to the Contractor engineer for housekeeping and site rehabilitation.
- No observation of the improper storage and handling of chemical and hazardous material and waste in most of construction site. Almost in all Subprojects, the diesel, hydraulic oil and other chemical was delivered from the stations nearby and no spillage/leakage was found. Only a few drums were founded at Houay Sat which are under the plastic cover and a few empty containers at Nam Ma Oune.
- Based on the results of the water quality monitoring, the condition of the water quality in streams where the construction works of subprojects existed is still in good condition which is realistic with the wet season water quality of the streams and comparing the surface water quality standard of Lao PDR. Even though the TSS values of water samples collect at downstream of in some Subprojects are quite high both upstream and downstream, but not significant and no standard is set for the TSS in the national standard. The variance of the water quality parameters both upstream and downstream of Subprojects would be less contributed by the Subproject activities, but mainly influenced by other activities in the region.

Concerning the agro-chemical level in Nam Ma Oune, The required parameters are: i) Pessticides Organochlorine (Dieldrin, Heptachlor, Heptachlor epoxide, Lindane, Total DDT) ii) 2,4-D iii) ATRAZINE (Laddock) iv) Chlordane v) Pestixides Phosphate group vi) Pesticides Pyrethroid group vii) Pesticides Carbarmate group. The results show no detection of substance load in the samples. This seems realistic as the samples were collected during wet season with high flow stream, thereby low concentration due to high dilution. Analysis report sheet for agrochemical parameters is presented in annex 2.

- There are no activities related constructions works of subprojects that would cause the additional negative impacts to the terrestrial resources as almost all facilities were already existed on sites. in addition, in the vicinity of the subprojects areas are mostly surrounded with agricultural land and plantations (banana and rubber). Therefore, no concerns raised by the villagers on terrestrial impacts.
- As It was wet season, no disturbance on water flow was observed on construction sites that would cause impact on water use of local communities.

- The aquatic resources study with LKS method and field observation was conducted to assess the potential impact of subproject activities on fish migration and habitat. It was found that almost all the subprojects aim the improvement of the runoff weirs, the activities of which would not cause additional potential impact on aquatic resources, especially the fish migration and their habitat. The water can flow over both dry and wet season, and the gate will be regularly opened to release the sediment out from the upstream weir basin. However; weir structures for Houay Xo is new, but they are good model of weir that can allow the fish and other aquatic resources migrate up and down, as the design of the gates/desilting gate can facilitate for fish migration both wet and dry season.

It was reported by the DCOs, PPOs and village authorities in some Subprojects (e.g. Nam Ma Oune, Houay Xo, Houay Luang, Nam Ou, Nam Tin and Nam Haad) that the conservation zones have been allocated to protect the f aquatic resources. Regular fish fingerling release is practiced annually in those subprojects. However, some of these conservation zones have not yet well implemented due to limited enforcement of regulations.

- It was confirmed by the local communities that there has not been accidents and concerns on traffic from each construction site.
- No dust and noise problem are concerned by the local communities and no potential sources of such pollution would happen to the villagers.
- For long term water availability for the improved facilities, it was found that the watershed/catchment areas of Subprojects (Nam Lan, Nam Gnaene, Nam Gna6-Houay Luang, Houay Pouk) are gradually converted into the other types of land uses e.g. banana and rubber plantations even though the regulations on watershed management are existed. The enforcement and implementation needs to be actively supported and promoted.
- Safe chemical use and handling in the some subproject areas has become concerned by village authorities and DCO even though the awareness has been raised. Despites the regulation on import of chemicals in the targeted villages, but mostly for the shops and sellers only, some of the farmers still use in high percentage. With this concern, more awareness raising activities should be continuously enhanced and introducing alternative approaches to minimize the health risk and environmental impacts.
- More engagement of the DONREs and PONREs in the Safeguard Monitoring was actively supported as seen during this monitoring. As per recommendation in the previous Safeguard Monitoring Reports that the independent monitoring by the DONREs and PONREs in each Subproject is supported and enhanced, It was confirmed by the PONRE and PPO of Luang Namtha that the quarterly-based monitoring of PONRE and DONRE has been regularly carried out. This activity will increase the capacity of PONREs and DONREs for environmental management for development projects in their provinces and districts.

B. Social Safeguard Issues:

As mentioned in the previous independent safeguard monitoring reports that the land acquisition, resettlement and compensation are considered as main parts of the social safeguard issues (particular for those who are indigenous, female-headed and vulnerable households who are affected from the project).

The details of the social aspects can be summarized as followings:

- Apart from the case in Mongchao-Kormaen Road, all other subprojects have no significant issues raised by the communities. All minor loss of agricultural lands and trees are voluntarily donated by the owners in subprojects. Some of the affected areas are temporarily use purpose during the construction period and all temporary impacts on land will be remediated and rehabilitated for all subprojects upon the completion of construction work on site.
- Through the discussions and consultations with communities and authorities at different levels, It was confirmed that the implementations of EGDP, GAP and community development programs have been progressively implemented through different activities on ground. These include the SRI pilots, chicken raising, study tours, Trainings on several topics e.g. HIV, chemical use, hygiene, gender issues, WUG and financial and marketing management as well as employment. The enhancement of minority groups of people, vulnerable and female groups have been actively promoted to participated in community development activities.
- From the visual observation on sites and consultations with the communities in subprojects, it was confirmed that no complaints or concerns were raised by the communities regarding the subproject activities (excepting Mongchao-Kormaen road). On the contrary, the people are waiting for strong support by the Project and the completion of the subprojects so that they can utilize the improved structures.
- Regarding the EGDP, the minority groups of people in the subproject are still strongly encouraged and supported to engage in the project activities through the community development pilot programs. More number of households join the SRI pilot project this season, on-job training and delivering of knowledge on sanitation & hygiene, HIV/AIDs and gender issues still are continued.
- Involvement of the minority, female and vulnerable groups has been strongly prioritized. However, some challenge and difficulties are still existed due to role and responsibilities of female, traditional way of living, labour force, technique requirement and limited capability.
- Employment opportunities have been targeted for beneficiary villages. However, only some villagers in some of these villages are interested and being able to work for subprojects due to hard working environment, labouring fee, alternative jobs available in the areas . Villagers have preference on their own agricultural production. It was found that the subcontracting works only can attract the local employment in some subprojects as currently practiced.
- Meeting with the WUGs of subprojects which are operational, it was told that the water sharing and use in subprojects is not concerned. Only a few individual land owners in

Hong Kong and Nam Lan Subprojects want to have the inlets of water for their own paddy fields, but the issues has been discussed for solution by the WUG with advice from DCO and PPO. Further, there are concerns on water use and sharing between local farmers and Chinese developers for banana plantations which relying on the same water sources e.g. Nam Dai5-6, Nam Ma Oune and Houay Pouk.

7.2 Recommendation

With the information and evidences obtained from the Mission of safeguard monitoring, the team would recommend following issues to improve the future implementation of the Subprojects:

- Engagement of female participants in the WUG in some subprojects should be enhanced to achieve the target of 30% as proposed in the implementation plan of the Project.
- PONRE and DONREs of Luang Namtha have carried out independent monitoring for subprojects in their province in coordination with PPO. This good example should also be implemented in other two provinces. the PPOs should introduce and coordinate with PONREs and DONREs as the periodic monitoring of Independent Safeguard Monitoring is regularly undertaken only every two quarters. This will improve the effective monitoring and EMP implementation. They would also gain more practical experience and knowledge on environmental and social safeguard monitoring for other projects and serving long-terms capacity building.
- Trying to stop of agro-chemical use is challenge and taking time. Thus, more awareness trainings on safe and proper chemical use and handling should be given to the villagers in the beneficiary villages; in coordination with PONREs and DONREs and more effective control of agrochemical substances.
- PPO and DCO in coordination with PAFO and DAFO, should review the demand of water use for irrigation (to supply for paddy fields and other crops) and water for banana plantations in the adjacent areas in some Subprojects where the water in the streams or canals diverted into the banana plantation e.g. Nam Dai5 and 6, Nam Phouk and Nam Ma Oune. This is to make sure that sufficient water is available for the designed supplying areas for paddy fields both wet and dry seasons.
- Watershed Management in Subprojects need to be reviewed (for existed watershed management plans), planed and manage to maintain the condition of watershed area to ensure for the long-term water availability for the irrigation facilities. This would include the zoning of the watershed area as protected forest area of province or district with coordination between PAFO, DAFOs and PONRE or DONREs.
- To enhance the local employment, the subcontracted method would be applicable in some project as this method is being used in Nam Haad subproject. This is to ensure that the employment opportunities are provided to local people through different ways.
- The rehabilitation of the areas disturbed during the construction (temporary impact), particularly disposed materials on the along the sides of canal alignments shall be continued when the construction is completed.

7.3 Follow up Actions of Monitoring Team

Next Safeguard Monitoring Mission of year 2014 will be undertaken during mid-November 2014. The key issues to be monitored and evaluated will be:

- Water quality monitoring for subprojects where the construction works started and operated.
- Site visit for the construction sites and camps facilities to check the further progression of the implementation of environmental management plan after instructions were given in this Mission.
- The reinstatement/rehabilitation of the sites where the construction works expected to completed soon
- Following up the indigenous and gender action plans in other subprojects that have not been started of construction works.
- Progress of the grievance and solutions for the case of landslide on tea plantation of 2 HHs at Mongchao-Kormaen road and Houay Sat Irrigation.
- The independent monitoring of PONRE and DONRE in Bokeo and Phongsaly provinces for Subprojects.

Annex1 IEE Certificates for 9 Subprojects



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

ແຂວງບໍ່ແກ້ວ

ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ

ເລກທີ 016 /ພຊສ-ບກ

ບໍ່ແກ້ວ, ລົງວັນທີ 15 OCT 2013

ໃບຢັ້ງຢືນ

- ສິ່ງຕາມ ກົດໝາຍວ່າດ້ວຍ ການປົກປັກຮັກສາສິ່ງແວດລ້ອມ ສະບັບເລກທີ 29/ ສພຊ ລົງວັນທີ 18 ກັນຍາ 2012.
- ສິ່ງຕາມ ດຳລັດ ຂອງທ່ານນາຍົກລັດຖະມົນຕີ ວ່າດ້ວຍ ການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ສະບັບເລກທີ 112/ນຍ, ລົງວັນທີ 16 ກຸມພາ 2010.
- ສິ່ງຕາມ ຜົງສື່ສະເໜີຂອງ ພະແນກກະສິກຳ ແລະ ປ່າໄມ້ແຂວງ ຫ່ວຍງານຄຸ້ມຄອງໂຄງການ ພຊສ ສະບັບເລກທີ 0664/ ພຊສ.ບກ ລົງວັນທີ 30 ກັນຍາ 2013.

ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງບໍ່ແກ້ວ:

1. ເປັນຕົ້ນສຳຄັນຂອງ ເອົາບົດລາຍງານ ການສຶກສາສິ່ງແວດລ້ອມເບື້ອງຕົ້ນ ສະບັບ ເດືອນກຸມພາ 2013. ຂອງໂຄງການ ຊົນລະປະທານ ຫ້ວຍໂຊຍ ເມືອງປາກທາ ແຂວງບໍ່ແກ້ວ.
2. ໃຫ້ຕື່ມຂໍ້ມູນໂຄງການປະຕິບັດຕາມເງື່ອນໄຂດັ່ງນີ້:
- ກ. ສັບຜິດຊອບໂດຍກົງຕໍ່ການສຶກສາ ແລະ ຂໍ້ມູນທີ່ໄດ້ກຳນົດໄວ້ໃນບົດລາຍງານ ການສຶກສາສິ່ງແວດລ້ອມເບື້ອງຕົ້ນ ໃນກໍລະນີ ມີຜົນກະທົບທາງດ້ານສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ເກີດຂຶ້ນ ທີ່ບໍ່ໄດ້ສຶກສາໄວ້ ໃນບົດລາຍງານດັ່ງກ່າວ ຕື່ມຂໍ້ມູນໂຄງການຕ້ອງສັບຜິດຊອບເພີ່ມເຕີມ ໃນການກຳນົດມາດຕະການຫຼຸດຜ່ອນ ແລະ ແກ້ໄຂບັນຫາເຫຼົ່ານັ້ນ ພ້ອມທັງສັບປະກັນໃຫ້ເປັນປະມານພຽງພໍ.
- ຂ. ໃຫ້ເອົາໃຈໃສ່ເປັນພິເສດ ໃນການຈັດຕັ້ງປະຕິບັດຕາມມາດຕະການປ້ອງກັນ ແລະ ຫຼຸດຜ່ອນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ເປັນຕົ້ນແມ່ນ ການກຳຈັດສິ່ງເສດເຫຼືອ, ຂີ້ປຸ້ນ, ບັນຫາການເຊາະເຈືອນຂອງດິນ, ຄຸນນະພາບນ້ຳ, ຄຸນນະພາບບັນເຄື່ອງ ແລະ ສິ່ງ ຕ້ອງເຮັດໃຫ້ຖືກຕາມເຕັກນິກ, ກຳຈັດຢູ່ໃນຂອບເຂດທີ່ກຳນົດໄວ້ ແລະ ໃຫ້ມີຜົນກະທົບໜ້ອຍທີ່ສຸດ.
- ຄ. ໄລຍະກໍ່ສ້າງ ແລະ ພາຍຫຼັງການກໍ່ສ້າງສຳເລັດ ເຈົ້າຂອງໂຄງການຕ້ອງປົວແປງ ແລະ ພົ້ນຜູ້ສະພາບແວດລ້ອມຕ່າງໆ ທີ່ຖືກຜົນກະທົບຈາກການກໍ່ສ້າງ ໃຫ້ຄືນສູ່ສະພາບທີ່ສາມາດນຳໃຊ້ໄດ້.
- ງ. ເຮັດບົດສະຫຼຸບລາຍງານປະຈຳ 3 ເດືອນ, 6 ເດືອນ ແລະ ປະຈຳປີ ກ່ຽວກັບການຈັດຕັ້ງປະຕິບັດມາດຕະການຫຼຸດຜ່ອນ ແລະ ແກ້ໄຂຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ຂອງໂຄງການ ສົ່ງໃຫ້ພະແນກ ຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງ ແລະ ຂະແໜງການທີ່ກ່ຽວຂ້ອງເພື່ອຊາບ.

ໃບຢັ້ງຢືນສະບັບນີ້ມີຜົນນຳໃຊ້ໄດ້ນັບແຕ່ວັນລາຍເຊັນເປັນຕົ້ນໄປ.

ຫົວໜ້າພະແນກ ຊັບພະຍາກອນທຳມະຊາດ



ສົມພອນ ວັນນະສີ



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

ຂອງບໍ່ແກ້ວ

ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ

ເລກທີ 015 ກຸມສ-ບກ

ບໍ່ແກ້ວ, ລົງວັນທີ 15-06-2013

ໃບຍັງຢືນ

- ສິ່ງຕາມ ກົດໝາຍວ່າດ້ວຍ ການປົກປັກຮັກສາສິ່ງແວດລ້ອມ ສະບັບເລກທີ 29/ ສພຊ ລົງວັນທີ 18 ທັນວາ 2012.
- ສິ່ງຕາມ ດຳລັດ ຂອງທ່ານນາຍົກລັດຖະມົນຕີ ວ່າດ້ວຍ ການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ສະບັບເລກທີ 112/ບບ, ລົງວັນທີ 16 ກຸມພາ 2010.
- ສິ່ງຕາມ ຜົງສະເໜີຂອງ ພະແນກກະສິກຳ ແລະ ປ່າໄມ້ຂອງ ຫວ່ຍງານຄຸ້ມຄອງໂຄງການ ພຣຊ ສະບັບເລກທີ 0664/ ພຊຊ.ບກ ລົງວັນທີ 30 ກັນຍາ 2013.

ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມຂອງບໍ່ແກ້ວ:

- ເປັນຕົ້ນຂອງ ເອົາບົດລາຍງານ ການສຶກສາສິ່ງແວດລ້ອມເບື້ອງຕົ້ນ ສະບັບ ເດືອນກຸມພາ 2013. ຂອງໂຄງການ ຊົນລະປະທານ ນຳຫາດ ເມືອງຫາດຊຸ້ມ ຂອງບໍ່ແກ້ວ.
- ໃຫ້ຕັ້ງຂັດທະນາໂຄງການປະຕິບັດຕາມເງື່ອນໄຂດັ່ງນີ້:
 - ສັບສົດຊອບໂດຍກົງຕໍ່ການສຶກສາ ແລະ ຂໍ້ມູນທີ່ໄດ້ກຳນົດໄວ້ໃນບົດລາຍງານ ການສຶກສາສິ່ງແວດລ້ອມເບື້ອງຕົ້ນ, ໃນກໍລະນີ ມີຜົນກະທົບທາງດ້ານສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ເກີດຂຶ້ນ ທີ່ບໍ່ໄດ້ສຶກສາໄວ້ ໃນບົດລາຍງານດັ່ງກ່າວ ຕັ້ງຂັດທະນາໂຄງການຕ້ອງສັບສົດຊອບເພີ່ມເຕີມ ໃນການກຳນົດມາດຕະການຫຼຸດຜ່ອນ ແລະ ແກ້ໄຂບັນຫາເຫຼົ່ານັ້ນ ພ້ອມທັງສັບປະກັນໃຫ້ມີຊີວິດປະມານທຽງຄູ່.
 - ໃຫ້ເອົາໃຈໃສ່ເປັນສິເຫດ ໃນການຈັດຕັ້ງປະຕິບັດຕາມມາດຕະການປ້ອງກັນ ແລະ ຫຼຸດຜ່ອນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ເປັນຕົ້ນແມ່ນການກຳຈັດສິ່ງເສດເຫຼືອ, ບັນຫາການເຊາະເຈືອນຂອງດິນ, ຄຸນນະພາບນ້ຳ, ຄາບນ໌ດີອັກໄຊ ແລະ ສິ່ງ ຕ້ອງເຮັດໃຫ້ຜູ້ກ່ຽວຂ້ອງຕາມເປົ້າໝາຍ, ກຳຈັດຢູ່ໃນຂອບເຂດທີ່ກຳນົດໄວ້ ແລະ ໃຫ້ມີຜົນກະທົບໜ້ອຍທີ່ສຸດ.
 - ໂດຍທຳອິດ ແລະ ພາຍຫຼັງການກຳລັງສຳເລັດ ເຈົ້າຂອງໂຄງການຕ້ອງປິດແບ່ງ ແລະ ຂຶ້ນພູສະພາບແວດລ້ອມຕ່າງໆ ທີ່ຜູ້ກ່ຽວຂ້ອງຮັບຜິດຊອບຈາກການກຳລັງ ໃຫ້ສິນຄ້ສະພາບທີ່ສາມາດນຳໃຊ້ໄດ້.
 - ເຮັດບົດສະຫຼຸບລາຍງານປະຈຳ 3 ເດືອນ, 6 ເດືອນ ແລະ ປະຈຳປີ ກ່ຽວກັບການຈັດຕັ້ງປະຕິບັດມາດຕະການຫຼຸດຜ່ອນ ແລະ ແກ້ໄຂຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ຂອງໂຄງການ ສົ່ງໃຫ້ພະແນກ ຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມຂອງ ແລະ ຂະແໜງການທີ່ກ່ຽວຂ້ອງເພື່ອຊາບ.

ໃບຍັງຢືນສະບັບນີ້ມີຜົນນຳໃຊ້ໄດ້ນັບແຕ່ວັນລາຍຊື່ນເປັນຕົ້ນໄປ.

ຫົວໜ້າພະແນກ ຊັບພະຍາກອນທຳມະຊາດ



ສົມພອນ ວັນນະສີ



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນາຖາວອນ

ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງ

ເລກທີ 34/ພຊຂ
ບໍ່ແກ້ວ, ວັນທີ 27-2-2014

ໃບຢັ້ງຢືນ

- ສິ່ງຕາມ : ກົດໝາຍ ວ່າດ້ວຍການປົກປັກຮັກສາສິ່ງແວດລ້ອມ ສະບັບປັບປຸງ ເລກທີ 29/ສພຊ ນະຄອນຫຼວງວຽງຈັນ, ວັນທີ 18 ທັນວາ 2012
- ສິ່ງຕາມ : ດຳລັດ ຂອງທ່ານນາຍົກລັດຖະມົນຕີ ວ່າດ້ວຍ ການປະເມີນ ຕົ້ນສະຫຼັບຕໍ່ສິ່ງແວດລ້ອມ ສະບັບເລກທີ 112/ນຍ ລົງວັນທີ 16/2/2010.

- ສິ່ງໃຫ້ມາ : ທົ່ງສີສະເໜີ ຂອງພະແນກກະສິກຳ - ປ່າໄມ້ແຂວງ ຫວ່າຍງານຄຸ້ມຄອງໂຄງການ ພຄສ ສະບັບ ເລກທີ 110/ພຊຄ. ລົງວັນທີ 25 ກຸມພາ 2014.

ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງຄຳລັງ :

- ເຫັນດີ ສັບຮອງເອົາບົດລາຍງານ ການສຶກສາສິ່ງແວດລ້ອມເບື້ອງຕົ້ນ ສະບັບເດືອນ ກຸມພາ ປີ 2014 ຂອງ ໂຄງການຍອມ ນຳປຸກ ປີ 02 ເມືອງ ຫ້ວຍຊາຍ ແຂວງບໍ່ແກ້ວ.
- ໃຫ້ຜູ້ພັດທະນາໂຄງການ ປະຕິບັດ ຕາມເງື່ອນໄຂດັ່ງນີ້ :
 - ສັບຮັບຊອບໂດຍກົງ ຕໍ່ການສຶກສາ ແລະ ການກຳນົດສົມມຸມ ທີ່ໄດ້ກຳນົດໄວ້ ໃນບົດລາຍງານ ການສຶກສາສິ່ງແວດລ້ອມເບື້ອງຕົ້ນ ໃນກໍລະນີເກີດມີຜົນກະທົບທາງດ້ານສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ເກີດຂຶ້ນທີ່ບໍ່ໄດ້ສຶກສາໄວ້ໃນບົດລາຍງານດັ່ງກ່າວ ຜູ້ພັດທະນາໂຄງການຕ້ອງໄດ້ສັບຮັບຊອບເພີ່ມເຕີມ ໃນການກຳນົດມາດຕະການຫຼຸດຜ່ອນ ແລະ ແກ້ໄຂບັນຫາເຫຼົ່ານັ້ນ ພ້ອມທັງສັບປະກັນໃຫ້ມີຊີວປະມານພຽງພໍ ໃນການລົງກວດກາສິ່ງແວດລ້ອມ ຢູ່ພາກສະໜາ.
 - ໃຫ້ເອົາໃຈໃສ່ ໃນການຈັດຕັ້ງປະຕິບັດ ມາດຕະການປ້ອງກັນ ແລະ ຫຼຸດຜ່ອນ ຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມເປັນຕົ້ນ ແມ່ນການກຳນົດສິ່ງເສດເຫຼືອບັນຫາການເຊາະເຈືອນຂອງໜ້າດິນ,ຄຸນນະພາບນ້ຳ, ຄາບນ໌ດອກເຄື່ອງແລະ ອື່ນ ໆ ຕ້ອງເຮັດໃຫ້ຖືກຕາມເຕັກນິກ ໃນການກຳນົດ ໃນຂອດເສດຖີກຳນົດໄວ້ ແລະ ໃຫ້ມີຜົນກະທົບໜ້ອຍທີ່ສຸດຕໍ່ສັງຄົມ.
 - ໃນໄລຍະກຳລັງ ແລະ ພາຍຫຼັງ ກຳລັງສຳເລັດເຈົ້າຂອງໂຄງການຕ້ອງໄດ້ປິດແປງ ແລະ ສົ່ງສູ່ ສະພາບສິ່ງແວດລ້ອມ ຕ່າງໆ ທີ່ຕິດຜົນກະທົບ ຈາກການກຳລັງ ໃຫ້ກັບຄືນສູ່ ສະພາບທີ່ນຳໃຊ້ໄດ້
 - ຜູ້ພັດທະນາໂຄງການ ຕ້ອງເຮັດບົດສະຫຼຸບ ລາຍງານປະຈຳ 6 ເດືອນ, ປະຈຳປີ ກຽວກັບການຈັດຕັ້ງປະຕິບັດ ແລະ ມາດຕະການຫຼຸດຜ່ອນ ແລະ ແກ້ໄຂຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ແລະ ສັງຄົມຂອງໂຄງການ ສົ່ງໃຫ້ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ແລະ ສະແຫວງການທຶນງົວຮ້ອງຂາຍ.

ສາຍເສດ :
ບໍລິກິດພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ວຽງຈັນ

ຫົວໜ້າພະແນກຊັບພະຍາກອນທຳມະຊາດ



ສົມພອນ ວັນນະສີ


ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນາຖາວອນ
໐໐໐໐໐໐໐໐
ແຂວງຜົ້ງສາລີ
 ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ

ເລກທີ 131/ທຊສ
 ວັນທີ 13 NOV 2012

ໃບຢັ້ງຢືນ

**ຮັບຮອງບົດປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມເບື້ອງຕົ້ນຂອງໂຄງການກໍ່ສ້າງເສັ້ນທາງ
 ແຕບ້ານ ກໍ່ແມນ-ບ້ານ ຜົ້ງແຊກ, ເມືອງຜົ້ງສາລີ, ແຂວງຜົ້ງສາລີ.**

- ອີງຕາມດຳລັດວ່າດ້ວຍການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມຢູ່ ສ ປປ ລາວ, ສະບັບເລກ ທີ 112/ນຍ, ລົງ
ວັນທີ 16/02/2010.
- ອີງຕາມກົດໝາຍວ່າດ້ວຍການປົກປັກຮັກສາສິ່ງແວດລ້ອມສະບັບເລກທີ 29/ສພຊ, ວັນທີ 18/12/2012
- ອີງໃສ່ຂໍ້ຕົກລົງຂອງລັດຖະມົນຕີວ່າການກະຊວງຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມສະບັບ
ເລກທີ 1467/ກຊສ, ລົງວັນທີ 9/3/2012 ວ່າດ້ວຍການຈັດຕັ້ງ ແລະ ການເຄື່ອນໄຫວຂອງພະແນກຊັບ
ພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງ, ນະຄອນຫຼວງ.
- ອີງໃສ່ບົດປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມເບື້ອງຕົ້ນຂອງໂຄງການກໍ່ສ້າງເສັ້ນທາງ ແຕບ້ານ ກໍ່ແມນ-ບ້ານ
ຜົ້ງແຊກ, ເມືອງຜົ້ງສາລີ, ແຂວງຜົ້ງສາລີ.

ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ແຂວງຜົ້ງສາລີ ໄດ້ອອກໃບຢັ້ງຢືນຮັບຮອງບົດປະ
 ເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມເບື້ອງຕົ້ນຂອງໂຄງການກໍ່ສ້າງເສັ້ນທາງແຕບ້ານກໍ່ແມນ-ບ້ານຜົ້ງແຊກ, ເມືອງຜົ້ງສາ
 ລີ ໃຫ້ແກ່ພະແນກກະສິກຳ-ປ່າໄມ້ແຂວງ (ໜ່ວຍງານ ສຸຂຄ ຂັ້ນແຂວງ) ໂດຍອີງໃສ່ບົດປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດ
 ແວດລ້ອມເບື້ອງຕົ້ນ ແລະ ຈາກການກວດກາເນື້ອໃນບົດລາຍງານພາສາສະໜາມຂອງໂຄງການກໍ່ສ້າງເສັ້ນທາງດັ່ງ
 ກ່າວແມ່ນຖືກຕ້ອງຕາມລະບຽບກົດໝາຍ.

ດັ່ງນັ້ນ, ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງຜົ້ງສາລີ, ຈຶ່ງອອກໃບຢັ້ງຢືນດ້ານ
 ສິ່ງແວດລ້ອມສະບັບນີ້ໄວ້ ເພື່ອເປັນຫຼັກຖານໃນການຈັດຕັ້ງປະຕິບັດຂັ້ນຕໍ່ໄປ.

 ທິວໜ້າພະແນກ
 ຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ

 ສາຍິນ ສີແກ້ວ

• ໝາຍເຫດ:
 1/ ໃບຢັ້ງຢືນສະບັບນີ້ສຳມາດໃສ່ສູ່ສັນຍາໃບໃຊ້ ຫ້າມຂາດແຫຼ່ງ
 ຢ່າງເດັດຂາດ ແລະ ໃບຢັ້ງຢືນສະບັບນີ້ສາມາດນຳໃຊ້ໄດ້ສອງປີ
 2/ ຕົວຈິງຕ້ອງໄດ້ສົມໄສດຕາມລະບຽບກົດໝາຍຂອງ ສ ປປ ລາວ.



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ

ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນາຖາວອນ

○○○○○○○○○○

ແຂວງຜົ້ງສາລີ

ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ

ເລກທີ 500 /ພຊສ
ຈັນທິ ... 20-MAR-2014

ໃບຢັ້ງຢືນສິ່ງແວດລ້ອມ

ເພື່ອຮັບຮອງບົດປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມເບື້ອງຕົ້ນຂອງໂຄງການຍ່ອຍປັບປຸງຊົນລະປະທານນ້ຳແຖ ຢູ່ເມືອງຍອດອູ, ແຂວງຜົ້ງສາລີ.

- ອີງຕາມກົດໝາຍວ່າດ້ວຍການປົກປັກຮັກສາສິ່ງແວດລ້ອມສະບັບເລກທີ 29/ສພຊ, ລົງວັນທີ 18/12/2012
- ອີງໃສ່ຂໍ້ຕົກລົງຊອງລັດຖະມົນຕີວ່າການກະຊວງຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ສະບັບເລກທີ 1467/ກຊສ, ລົງ ວັນທີ 9/3/2012 ວ່າດ້ວຍການຈັດຕັ້ງ ແລະ ການເຕືອນໄຫວຂອງພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງ, ນະຄອນຫຼວງ
- ອີງໃສ່ການກວດກາບົດປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມເບື້ອງຕົ້ນຂອງໂຄງການຍ່ອຍປັບປຸງຊົນລະປະທານນ້ຳແຖ ຢູ່ເມືອງຍອດອູ, ແຂວງຜົ້ງສາລີ.

ຜ່ານການຕົ້ນຕໍວາພິຈາລະນາບົດປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມເບື້ອງຕົ້ນຂອງໂຄງການຍ່ອຍປັບປຸງຊົນລະປະທານນ້ຳແຖ ຢູ່ເມືອງຍອດອູ, ແຂວງຜົ້ງສາລີ ເຫັນວ່າ: ໂຄງການຍ່ອຍປັບປຸງມີຜົນປະໂຫຍດໂດຍກົງຕໍ່ການດຳລົງຊີວິດຂອງປະຊາຊົນເນື່ອງຈາກປະຊາຊົນໄດ້ນຳໃຊ້ນ້ຳເຂົ້າໃນການຜະລິດກະສິກຳ, ສ່ວນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມແມ່ນມີໜ້ອຍເພາະເປັນການປັບປຸງຊົນລະປະທານເກົ່າຄືນ ແຕ່ໃຫ້ເຈົ້າຂອງໂຄງການປະຕິບັດຕາມບົດປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມເບື້ອງຕົ້ນຢ່າງເຂັ້ມງວດ, ໃນນີ້ຫາກມີບັນຫາຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມເກີດຂຶ້ນທີ່ບໍ່ໄດ້ລະບຸໄວ້ໃນບົດປະເມີນຜົນກະທົບສິ່ງແວດລ້ອມແມ່ນໃຫ້ເຈົ້າຂອງໂຄງການຮັບຜິດຊອບໂດຍກົງ.

ດັ່ງນັ້ນ, ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງຜົ້ງສາລີຈຶ່ງເຫັນດີອອກ ໃບຢັ້ງຢືນສະບັບນີ້ໄວ້ເປັນຫຼັກຖານ ໃນການຈັດຕັ້ງປະຕິບັດໃນຂັ້ນຕໍ່ໄປ, ໃບຢັ້ງຢືນສະບັບນີ້ ມີອາຍຸການນຳໃຊ້ (2 ປີ) ແລະ ມີຜົນສັກສິດນັບແຕ່ວັນລົງລາຍເຊັນເປັນຕົ້ນໄປ.

ຫົວໜ້າພະແນກ
ຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ



ແສນທອງ ແກ້ວນາລີ
Senethong KEONALY

ໝາຍເຫດ :

1. ໃບຢັ້ງຢືນສະບັບນີ້ຖືກນຳໃຊ້ເພື່ອສິ້ນບຳໃຊ້ ແລະ ຫ້າມຢອມແປງຢ່າງບັດຂາດ
2. ຕົວກະທຳຜິດຕ້ອງໄດ້ຮັບໂທດຕາມລະບຽບກົດໝາຍຂອງ ສປປ ລາວ



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນາຖາວອນ

ແຂວງຫຼວງນ້ຳທາ
 ສະໝັກ ຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ

ເລກທີ...../ສສຊ
 ຫຼວງນ້ຳທາ, ວັນທີ 17/12/2013

ໃບຢັ້ງຢືນດ້ານສິ່ງແວດລ້ອມ

- ສິ່ງຕາມ: ກົດໝາຍ ວ່າດ້ວຍ ການປົກປັກຮັກສາສິ່ງແວດລ້ອມ, ສະບັບເລກທີ 29/ສສຊ, ວັນທີ 18/12/2012.
 - ສິ່ງຕາມ: ດຳແນະນຳຂະບວນການສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມຈາກໂຄງການລົງທຶນ ແລະ ກິດ
 ທະການຕ່າງໆ ສະບັບເລກທີ 0029/ກສຊ, ລົງວັນທີ 17/12/2013.

**ຫົວໜ້າ ສະໝັກ ຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງ
 ປະທານຄະນະກຳມະການສິ່ງແວດລ້ອມ ແຂວງຫຼວງນ້ຳທາ ຕົກລົງເຫັນດີ**

1. ຮັບຮອງເອົາບົດລາຍງານການສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ຂອງໂຄງການ ຊົນລະປະທານ ນ້ຳບົກ
 ບ້ານ ນ້ຳບົກໂພນຄຳ, ເມືອງລອງ, ສະບັບເດືອນ ມີນາ ປີ 2014 ຂອງ ສະໝັກກະສິກຳ ແລະ ປ່າໄມ້ແຂວງຫຼວງນ້ຳທາ
 ໂດຍໃຫ້ຜູ້ພິດທະພາໂຄງການ ປະຕິບັດຕາມເງື່ອນໄຂ ແລະ ສັນທະທີ່ລະບຸໄວ້ ດ້ານຫລັງ ຂອງ ໃບຢັ້ງຢືນ ສະບັບນີ້.

2. ມອບໃຫ້ ສະໝັກ ແລະ ຫ້ອງການ ຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ເມືອງລອງ ສົມທົບກັບຫ້ອງການທີ່
 ກ່ຽວຂ້ອງ ເພື່ອຫາທິ ຕິດຕາມກວດກາ ການຈັດຕັ້ງປະຕິບັດ ມາດຕະການປ້ອງກັນ ແລະ ຫຼຸດຜ່ອນ ຜົນກະທົບຕໍ່ສິ່ງແວດ
 ລ້ອມ ຂອງໂຄງການ ຊົນລະປະທານ ນ້ຳບົກ.

ໃບຢັ້ງຢືນສະບັບນີ້ ມີຜົນນຳໃຊ້ໄດ້ ນັບແຕ່ວັນລົງລາຍເຊັນເປັນຕົ້ນໄປ.

**ຫົວໜ້າ ສະໝັກ ຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ
 ປະທານຄະນະກຳມະການສິ່ງແວດລ້ອມ ແຂວງຫຼວງນ້ຳທາ**



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ

ສຳເນົານຳສົ່ງ:

1. ສະໝັກ ຊຸສ	1 ສະບັບ
2. ຫ້ອງການ ຊຸສ ເມືອງ	1 ສະບັບ
3. ໂຄງການ	1 ສະບັບ
4. ສຳເນົາ	1 ສະບັບ



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະສານ ວັດທະນາຖາວອນ

ແຂວງຫຼວງນ້ຳທາ

ພະແນກ ຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ

ເລກທີ...../ທຊສ

ຫຼວງນ້ຳທາ, ວັນທີ

ໃບຢັ້ງຢືນດ້ານສິ່ງແວດລ້ອມ

- ສິ່ງຕາມ: ກົດໝາຍ ວ່າດ້ວຍ ການປົກປັກຮັກສາສິ່ງແວດລ້ອມ, ສະບັບເລກທີ 29/ສທສ, ວັນທີ 19/12/2012.
- ສິ່ງຕາມ: ຄຳແນະນຳຂະບວນການສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມຈາກໂຄງການລົງທຶນ ແລະ ຕົກ
ຈະການຕ່າງໆ ສະບັບເລກທີ 0029/ກຊສ, ລົງວັນທີ 17/12/2013.

**ຫົວຫນ້າ ພະແນກ ຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງ
ປະທານຄະນະກຳມະການສິ່ງແວດລ້ອມ ແຂວງຫຼວງນ້ຳທາ ຕົກລົງເຫັນດີ**

1. ຮັບຮອງອຳນວຍການສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ຂອງໂຄງການ ຊັບພະຍາກອນ ທຳມະຊາດ ທີ່ 6 + ຫ້ວຍຫຼວງ, ບ້ານນາໃໝ່, ເມືອງສິງ, ສະບັບເດີອນ ມີນາ ປີ 2014 ຂອງ ພະແນກສຶກສາ ແລະ ປ່າໄມ້ແຂວງຫຼວງນ້ຳທາ ໂດຍໃຫ້ດູສົດທາງໂຄງການ ປະຕິບັດຕາມເງື່ອນໄຂ ແລະ ສົນທະທີ່ລະບຸໄດ້ ດ້ານຫລັງ ຂອງໃບຢັ້ງຢືນ ສະບັບນີ້.
2. ມອບໃຫ້ ພະແນກ ແລະ ຫ້ອງການ ຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ເມືອງສິງ ສົມທົບກັບ ຫ້ອງການທີ່ກ່ຽວຂ້ອງ ເຮັດໜ້າທີ່ ຕິດຕາມກວດກາ ການຈັດຕັ້ງປະຕິບັດ ມາດຕະການປ້ອງກັນ ແລະ ຫຼຸດຜ່ອນ ຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ຂອງໂຄງການນຳຫນ້າ 6 + ຫ້ວຍຫຼວງ

ໃບຢັ້ງຢືນສະບັບນີ້ ມີຜົນນຳໃຊ້ໄດ້ ໂດຍແຕ່ວັນລົງລາຍຜັງນັບຕົ້ນໄປ.

ຫົວຫນ້າ ພະແນກ ຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ
ປະທານຄະນະກຳມະການສິ່ງແວດລ້ອມ ແຂວງຫຼວງນ້ຳທາ



ສຳເນົານຳສົ່ງ:

- | | |
|----------------------|---------|
| 1. ພະແນກ ຊຸສ | 1 ສະບັບ |
| 2. ຫ້ອງການ ຊຸສ ເມືອງ | 1 ສະບັບ |
| 3. ໂຄງການ | 1 ສະບັບ |
| 4. ສຳເນົາ | 1 ສະບັບ |



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນາຖາວອນ

ແຂວງຫຼວງນ້ຳທາ
ພະແນກ ຊັບສະບາຍອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ

ເລກທີ.../ສຊສ
ຫຼວງນ້ຳທາ, ວັນທີ .../.../...

ໃບຢັ້ງຢືນດ້ານສິ່ງແວດລ້ອມ

- ຮີງຕາມ: ກົດໝາຍ ດ້ານລະບົບ ການປົກປັກຮັກສາສິ່ງແວດລ້ອມ, ສະບັບເລກທີ 29/ສຊສ, ວັນທີ 18/12/2012.
- ຮີງຕາມ: ຕໍາແນນຳຂະບວນການສຶກສາປ້ອງກັນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມຈາກໂຄງການລົງທຶນ ແລະ ກິດຈະການຕ່າງໆ ສະບັບເລກທີ 8029/ກຊສ, ລົງວັນທີ 17/12/2013.

**ຫົວໜ້າ ພະແນກ ຊັບສະບາຍອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງ
ປະທານຄະນະກຳມະການສິ່ງແວດລ້ອມ ແຂວງຫຼວງນ້ຳທາ ຕົກລົງເຫັນດີ**

1. ສົມຄວນອີງຕາມລາຍງານການສຶກສາປ້ອງກັນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ຂອງໂຄງການ ຊົນລະປະທານ ໂທ່ນງຸບນ້ຳກຳແຈ້ງ, ເມືອງຫຼວງນ້ຳທາ, ສະບັບເລກທີ ມີນາ ປີ 2014 ຂອງ ພະແນກສຶກສາ ແລະ ບຳນົດແຂວງຫຼວງນ້ຳທາ ໂດຍໃຫ້ຜູ້ມີເອກະລາດໂຄງການ ປະຕິບັດຕາມເງື່ອນໄຂ ແລະ ສົມຄວນທີ່ລະບຸໄວ້ ດ້ານຫນຶ່ງ ສະບັບນີ້.

2. ມອບໃຫ້ ພະແນກ ແລະ ຫ້ອງການ ຊັບສະບາຍອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ເມືອງຫຼວງນ້ຳທາ ສົມຄວນກັບ ຫ້ອງການທີ່ກ່ຽວຂ້ອງ ເຮັດໜ້າທີ່ ຕິດຕາມກວດກາ ການຈັດຕັ້ງປະຕິບັດ ມາດຕະການປ້ອງກັນ ແລະ ຫຼຸດຜ່ອນ ຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ຂອງໂຄງການ ຊົນລະປະທານ ໂທ່ນງຸບນ້ຳ.

ໃບຢັ້ງຢືນສະບັບນີ້ ມີຜົນກັບໃຊ້ໄດ້ ນັບແຕ່ວັນລົງລາຍເຊັນວັນຕໍ່ໄປ.

ຫົວໜ້າ ພະແນກ ຊັບສະບາຍອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ
ປະທານຄະນະກຳມະການສິ່ງແວດລ້ອມ ແຂວງຫຼວງນ້ຳທາ



ສຳເນົາເກົ່າສົ່ງ:

1. ພະແນກ ຊຸສ	1 ສະບັບ
2. ຫ້ອງການ ຊຸສ ເມືອງ	1 ສະບັບ
3. ໂຄງການ	1 ສະບັບ
4. ສຳເນົາ	1 ສະບັບ

ບັນດາເງື່ອນໄຂ ແລະ ພື້ນຖານສິ່ງແວດລ້ອມ ແລະ ສິ່ງຄົມ ຂອງຜູ້ຊົດທະນາໂຄງການ

1. ສົບຜົນສຸຂ່າຍໂດຍທັງດ້ານສຶກສາ ແລະ ຂໍ້ມູນ ທີ່ໄດ້ກຳນົດໄວ້ໃນບົດລາຍງານ ການສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ: ໃນກໍລະນີ ທີ່ມີຜົນກະທົບທາງກົນສິ່ງແວດລ້ອມ ແລະ ສິ່ງຄົມ ເກີດຂຶ້ນທີ່ບໍ່ໄດ້ສຶກສາໄວ້ໃນບົດລາຍງານດັ່ງກ່າວຜູ້ ຈົດທະນາໂຄງການ ຕ້ອງອັບຜິດຊອບເພີ່ມເຕີມໃນການ ກຳນົດມາດຕະການປ້ອງກັນ ແລະ ຫຼຸດຜ່ອນຜົນກະທົບເຫຼົ່ານັ້ນ ສົມຄືກັບ ສົມປະກັນ ໃຫ້ມີກຸ້ມປະມານສູງກວ່າ ໃນການຈັດຕັ້ງປະຕິບັດ ມາດຕະການ ດັ່ງກ່າວ.
2. ຈັດຕັ້ງປະຕິບັດທຸກມາດຕະການປ້ອງກັນ ແລະ ຫຼຸດຜ່ອນ ຜົນກະທົບຕໍ່ ສິ່ງແວດລ້ອມ ແລະ ສິ່ງຄົມ ທີ່ໄດ້ກຳນົດໄວ້ໃນບົດລາຍງານ ການສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ຢ່າງຂໍ້ມູນດັ່ງ ພ້ອມທັງສ້າງລະບົບການຕິດຕາມກວດກາຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ແລະ ລະບົບການລາຍງານ ຫຼາຍໃນອ່າງມີປະສິດທິພາບ;
3. ສ້າງບົດລາຍງານ ປະຈຳເດືອນ, 3 ເດືອນ ແລະ ປະຈຳປີ ກ່ຽວກັບ ການຈັດຕັ້ງປະຕິບັດ ວຽກງານ ສິ່ງແວດລ້ອມ ຂອງໂຄງການ ສິ່ງໃໝ່ ທີ່ແນະນຳຂັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ແຂວງຫຼວງນໍ້າທາ ແລະ ຂະແໜງການທີ່ກ່ຽວຂ້ອງ ຊາຍ ແລະ ດິດຕາມ.
4. ຖ້າມີຄວາມຈຳເປັນ, ຜູ້ຊົດທະນາໂຄງການ ຕ້ອງປະຕິບັດຕາມ ເງື່ອນໄຂ ແລະ ພື້ນຖານອື່ນໆ ຕາມການສະເໜີ ຂອງລະບົບສັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ແຂວງຫຼວງນໍ້າທາ (ຂະແໜງສິ່ງແວດລ້ອມ).

Annex 2 Water Quality Analysis Result

Annex 2 Water Quality Analysis Results



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

ຕົ້ນສະບັບ

ກະຊວງສາທາລະນະສຸກ
ສູນວິໄຈອາຫານ ແລະ ຢາ



1843-14
ເລກທີ: ສອຍ
ນະຄອນຫຼວງວຽງຈັນ, ວັນທີ: 28 JUL 2014

ໃບຢັ້ງຢືນຜົນການວິໄຈ

(ໃບຢັ້ງຢືນນີ້ຮັບຮອງຜົນສະເພາະແຕ່ຕົວຢ່າງທີ່ໄດ້ວິໄຈເທົ່ານັ້ນ)

1. ຊື່ຕົວຢ່າງວິໄຈ: ນ້ຳບາດານ
2. ຂະໜາດບັນຈຸ: 600 ml ຈຳນວນຕົວຢ່າງ: 06
3. ເຈົ້າຂອງຕົວຢ່າງ/ຜູ້ຜະລິດ: ໂຄງການ NRI (ທ່ານ ກັນຍາ ສຸກສະກຸນ)
4. ທີ່ຢູ່ປັດຈຸບັນ, ບ້ານ: ໜອງວຽງຄຳ ເມືອງ: ໄຊທານີ ແຂວງ: ນະຄອນຫຼວງວຽງຈັນ
5. ໜ່ວຍງານ/ຜູ້ສົ່ງຕົວຢ່າງ: ໂຄງການ NRI (ທ່ານ ກັນຍາ ສຸກສະກຸນ)
6. ໃບສະເໜີ/ນຳສົ່ງເລກທີ: ແບບຟອມສູນວິໄຈອາຫານແລະຢາ ລົງວັນທີ: 23.06.2014
7. ຈຸດປະສົງການກວດວິໄຈ: ກວດກາຄຸນນະພາບນ້ຳ
8. ເລກທີຂາເຂົ້າ: 388/14 ຕຢ ສອຍ ລົງວັນທີ: 23.06.2014
9. ວັນທີຮັບຕົວຢ່າງຈາກລູກຄ້າ: 23.06.2014 ວັນສຳເລັດການວິໄຈ: 25.07.2014
10. ເລກລະຫັດວິໄຈ: GW.14.06.23.110
11. ຜົນການວິໄຈ:

ລ/ດ	ລາຍການວິໄຈ	ຜົນການວິໄຈ	ຂອບເຂດອະນຸຍາດ	ວິທີທົດສອບແລະເອກະສານອ້າງອີງ
11.1	ດ້ານກາຍຍະພາບ	ມີຕະກອນຢູ່ກິ່ນຕຸກ ແລະມີເສັ້ນຂີ້ຝຸ່ນ	ເປັນນ້ຳບໍ່ມີສີ,ບໍ່ມີກິ່ນ,ບັນຈຸໃສ່ຕຸກຢ່າງທີ່ມີຜ່າອັດແຈບດີ.	
11.2	ດ້ານເຄມີ			- AOAC 18 th Edition 2005 method 990-06 Chapter 10,P20-22 -AOAC 18 th Edition 2005 method 990-06 Chapter 10,P46-47
	Organo Chloride	ບໍ່ພົບ	0.01ppm	
	Organo Phosphorus	ບໍ່ພົບ	0.01ppm	
	Synthetic	ບໍ່ພົບ	0.01ppm	
	Carbamate	ບໍ່ພົບ	0.01ppm	

12. ສະຫຼຸບ: ບັນລຸ ບໍ່ບັນລຸ ບໍ່ສະຫລຸບ
13. ຂໍ້ແນະນຳ:

ຫົວໜ້າສູນວິໄຈອາຫານ ແລະ ຢາ

 ສູນວິໄຈອາຫານແລະຢາ

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Water Analysis report



Vientiane Capital City
Nam PaPa Nakhonluang
Chinalmo Water Treatment Plant Laboratory
Tel.: 312564 or Mobile 2204693

Sampling Place: Northern Rural Infrastructure

Location: Northern Provinces

Testing Date: 16/6/2014 ~ 11/7/2014

N.	Description of analysis	units	N.1	N.2	N.3	N.4	N.5	N.6	N.7	N.8	N.9	N.10	Index Water Quality standard of WSSA
	Sampling Name		D1	D2	NH1	NH2	HX1	HX2	NT1	NT2	HS1	HS2	
1.	Temperature of water	C	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	N
2.	pH	-	8.21	8.18	8.01	7.92	8.11	8.14	8.23	7.85	8.31	8.22	5-9
3.	Dissolved Oxygen (DO)	mg/l	6.34	6.59	5.15	5.08	7.47	7.86	6.12	6.01	5.88	5.31	6.0
4.	Biochemical Oxygen Demand (BOD ₅)	mg/l	0.60	0.43	2.13	0.77	0.39	1.16	1.10	1.33	1.09	0.30	1.5
5.	Chemical Oxygen Demand (COD _{Mn})	mg/l	7.74	7.06	2.65	2.84	5.12	2.27	6.07	6.83	4.17	5.12	5.0
6.	Total Suspended Solids (TSS)	mg/l	56.35	50.51	20.50	78.00	17.5	12.00	11.50	38.50	15.50	12.00	-
7.	Feecal Coliform	MPN/100ml	>23	>23	>23	>23	>230	>230	>230	>230	>230	>230	<1000

Remarks: # ພຽງບໍ່ທັນມີເຊື້ອ ທາງລັດວິສະຫະກິດບັງບໍ່ທັນມີມາດຕະຖານບັງຄັບໃຊ້.

Chief Chinalmo Laboratory:

Mrs. Khavacath E.

Chief Chinalmo WTP:

ສາມ ສາມສາມ

General Manager NPNL:

ສາມສາມ ສາມສາມ

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Water Analysis report:



Vientiane Capital City
Nam PaPa Nakhonluang
Chinalmo Water Treatment Plant Laboratory
Tel.:312564 or Mobile 2204-693

Sampling Place: Northern Rural Infrastructure

Location: Northern Provinces

Testing Date: 16/6/2014 ~ 11/7/2014

N.	Description of analysis	units	N.11	N.12	N.13	N.14	N.15	N.16	N.17	N.18	N.19	N.20	Water Quality Standard of NWQS
	Sampling Name		NB1	NB2	NGH1	NGH2	HK1	HK2	NTH1	NTH2	NGN1	NGN2	
1.	Temperature of water	C	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	N
2.	pH	-	8.31	8.12	8.22	8.42	8.77	8.40	8.31	8.21	8.50	8.72	5-9
3.	Dissolved Oxygen (DO)	mg/l	6.96	7.09	5.16	5.08	7.10	6.31	5.12	6.79	7.22	5.81	6.0
4.	Biochemical Oxygen Demand (BOD ₅)	mg/l	1.36	0.93	1.55	1.77	3.40	3.17	1.10	1.36	2.18	2.30	1.5
5.	Chemical Oxygen Demand (COD _{Mn})	mg/l	4.74	5.06	5.50	5.84	6.26	6.40	5.47	5.12	3.41	4.12	5.0
6.	Total Suspended Solids (TSS)	mg/l	18.15	19.01	36.00	35.70	84.00	98.00	4.50	3.50	13.41	25.00	-
7.	Feecal Coliform	MPN/100ml	>23	>23	>23	>23	>230	>230	>230	>230	16	>230	<1000

Remarks: # ແຫຼ່ງນ້ຳທຳມະຊາດ ທາງລິດເວີສະຫຍາກົດຍັງບໍ່ໄດ້ມີມາດຕະຖານຍັງຄົບໃຊ້.

Chief Chinalmo Laboratory :

Miss Khattasavanh K.

Chief Chinalmo WCC:

ສິມ ສາຍທິພອນ

General Manager NPSL:

ດຽວທາຍ ວິນມະສາວາ

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Water Analysis report:



Vientiane Capital City
Nam PaPa Nakhonluang
Chinalmo Water Treatment Plant Laboratory
Tel:312564 or Mobile 2204693

Sampling Place: Northern Rural Infrastructure

Location: Northern Province

Testing Date: 16/6/2014 ~ 11/7/2014

N.	Description of analysis	units	N.21	N.22	N.23	N.24	N.25	N.26	N.27	N.28	N.29	N.30	N.31	Surface Water Quality Standard of WSPA
	Sampling Name		NY1	NY2	NO1	NO2	NL1	NL2	NP1	NP2	MO1	MO2	NGna6_up	
1.	Temperature of water	C	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	N'
2.	pH	-	8.14	8.42	8.47	8.57	8.17	8.32	8.23	7.85	8.38	8.34	8.47	5-9
3.	Dissolved Oxygen (DO)	mg/l	4.31	5.39	6.18	6.25	4.10	3.99	3.12	6.01	4.31	5.45	6.18	6.0
4.	Biochemical Oxygen Demand (BOD ₅)	mg/l	2.67	2.13	1.94	1.78	1.44	1.36	1.10	1.33	0.32	2.62	1.94	1.5
5.	Chemical Oxygen Demand (COD _{Mn})	mg/l	5.50	5.16	3.79	3.34	3.24	3.77	6.06	6.83	3.60	3.79	3.79	5.0
6.	Total Suspended Solids (TSS)	mg/l	119.45	129.01	43.20	45.70	24.06	37.32	11.01	38.50	30.50	43.50	43.20	-
7.	Feecal Coliform	MPN/100ml	>23	>23	>23	>23	>230	>230	>23	>230	18	>230	>23	<1000

Remarks: # ແຫຼ່ງນ້ຳທຳມະຊາດ ທາງລົດລົດສະຫຍາຍກິດຍັງບໍ່ທັນມີມາດຕະຖານບັນທຶກໃຊ້.

Chief Chinalmo Laboratory :

Miss Kheutrasanti K.

Chief Chinalmo WTE:

Mr. Sengphet

General Manager NPNLI

Mr. Sengphet

Annex 3 Minutes of the meeting and photos of Activities during the mission

Annex 3 Minutes of the meeting and photos of Activities during the mission

Summary of Independent Safeguard Monitoring		
1. Name of Reporter: Kanya Souksakoun; Environment Specialist		
2. Field work Team member		
• Mr. Souphab Kkougwichit	Safeguards	Team leader
• Mr. Kanya Souksakoun		Environment specialist
• Mrs. Ampai Darasouk		Resettlement and Social specialist
3. Purpose of the Field Work:		
Objectives		
The main objectives of first safeguards monitoring of year 2014 are to:		
<ol style="list-style-type: none"> 1. Visit and observe the progress of each subproject implementation for the Environment and Social aspects in accordance with ADB policy in Subprojects of year 1 and 2; 2. Conduct ground truth of spatial change /impact and progress of sub project implementation in terms of Environmental compliance, compensation, resettlement; 3. Take photo for evidence of the occurrence and progress; 4. Conduct Water sampling and testing,; including one sample from Nam Ma Oune for agro-chemical parameters 5. Identify any potential significant land/asset/ cultural impacts 6. Meet with PPO, DCO, village authorities and villagers as well as PONRE management to discuss on the progress of safeguards implementation; 7. Check the actions carried out by the Contractors based on the instructions given during the previous missions of year 2013. 		
Methodology		
<ul style="list-style-type: none"> • Conducting filed observation to identify key issues and remediation which have been taken place within the subprojects with the checklists; • Meeting with construction contractor camps representatives to discuss EMP implementation; • Collecting water sample and transferring to Lab in Vientiane; • Biodiversity observation (e.g. vegetation disturbance, aquatic environment, etc.); • Aquatic resources study with local knowledge based approach • Physical environmental observation (Hydrology, erosion, air emission, etc.); • Conducting the meeting with stakeholders, Group discussion and Interview with some AHs through the checklist. • Meeting with PPO, DCO and village authorities to hear the progress of Subprojects' activities • Meeting with senior management of PONREs for comments and opinion on Subproject activities. 		
Participants		
The participants were composed of the technical staff of PPO, DCO, DONRE and PONRE (50 %)		
The participants from the village's authority (including Village heads, and Lao Women's Union and water group member) in 9 subprojects: Total participants of 257 attended during the field visit, among which approximately 170 were female.		
Table of Participants from village level		
Province	Total No. Participants	Male
Phongsaly	49	19

Luang Numtha	123	48
Bokeo	117	34
Toal	289	101

Table Participants from PCO & DCO

Province	PPO	DCO	Female
Phongsaly	2	9	4
Luang Numtha	3	8	4
Bokeo	4	9	5
Toal	9	26	13

4. Detailed Activities (including Venue and Participants)

9 June 2014:

Meeting with PPO and DCO of Phongsaly

- Overview on the purpose and Safeguard Monitoring Mission of year 2014 and activities to be undertaken in Phongsaly;
- Discuss on the progress of the construction works of 6 subprojects in Phongsaly province;
- The team asked about the IEE certificates approval for 3 subprojects of year 2;
- The progress of EMP, GAP and EGDP implementation since 3rd mission of year 1
- Discussion on the communities development programs in Subprojects;
- Discussion on the progress of grievance and remedial measures for 2 AHs in Mongchao whose tea plantations have been affected by the landslide due to improvement of Mongchao-Kormaeen road;
- Progress of establishment of WUGs in Irrigation Subprojects; and
- Possibility for the independent monitoring of PONRE and DONREs in Subprojects in coordination with PPO.



Meeting with PPO and DCO of Phongsaly province

Meeting with PONRE of Phongsaly:

The team met with the Deputy Director General (Mr. Souliya Saengdala) and head of environment section (Mr. Khamphet Boutanavong) of Phongsaly PONRE, who were met during the third Mission of year 1. The details of the items discussed are summarized as followings:

- Overview of the Safeguard Monitoring Mission for year 2014, ADB safeguard monitoring policy for project, objectives of the field survey and work plan;
- Brief introduction of the construction works in subprojects; particularly for year 2 Subprojects;
- The coordination between PPO, DCO and PONRE/DONREs since the start of the project. It was confirmed by the PONRE that the closer coordination has been undertaken and representatives from PONRE and DONREs have been invited in Subproject activities e.g. monitoring, consultation and trainings;
- Regarding the independent monitoring of PONRE and DONREs, the PONRE will propose the plan and consult with PPO for any possibility; and
- It was also confirmed that the PONRE will strongly support the PPO and DCO for the project implementation; particularly with the IEE study, certification and monitoring activities.

Meeting with DCO and Villages Authorities of Mongchao and Pasay

The meetings were taken place in Mongchao and Pasay villages:

- Overview of the safeguard monitoring, objective and team introduction;
- Monitoring team asked questions about the project implementation, environment and social concerns from the Subproject activities and the benefits that villagers have got;
- Potential impact to their plantations. It was confirmed by the villagers are happy and satisfied with the new improved access road because they can now use the road without troubles as in the past and no dust from the road in the residential area; and
- No concerns on daily transportation from their villages to others;
- It was confirmed by the village head of Mongchao that the complaint was received from one of the AHs about the tea plantation loss due to landslide. During the Mission, the consultation with the 2 AHs was conducted and minute of the meeting was taken

		
Meeting with PONRE of Phongsaly province	Meeting with village authority and villagers at Pasay village	Meeting with village authority, AHs and villagers at Mongchao

		village
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10 June 2014:Meeting with DCO of Nhot Ou District

The discussion during the meeting are outlined in the followings:

- overview of the Safeguard Monitoring Mission of year 2, objective and team introduction;
- Discussion on the progress of the construction works of Nam Ou and Nam Thae and EMP implementation since the start of the construction works;
- The Community development programs in villages mainly on SRI cultivation have been well implemented and planning for year 2;
- It was told that so far no concerns/complaints raised by the villagers for both Nam Ou and Nam Thae;
- The DCO also explained about the involvement of the ethnic groups and women in the project activities. He mentioned that all ethnic groups are happy to see the progress of the work;
- Up to now, there have not been any complaints letters received by the district and provincial committees from 2 Subprojects regarding social and environmental concerns;
- Representative from DONRE engage in all consultations and meetings for these two subproject, but no independent monitoring has carried out by DONRE.

Recommendation by Safeguard Monitoring Team at the meeting

- Independent monitoring of DONRE for Subprojects of Nam Ou and Nam Thae and The role of the PPO and DCOs to monitor the construction activities of the subprojects in terms of environmental and social issues, compensation, participation of the ethnic minorities to the project and community development programs;
- Ensure the enforcement and compliance of the EMP and SMP to construction contractors; in particularly worker's camps and construction sites;
- Maintaining the engagement of female participants in Subproject activities;
- More awareness raising of safe and proper chemical fertilizer use and handling

Meeting with Villages Chief of Villages and WUGs

The discussion during the meeting are outlined in the followings:

- Overview of the safeguard monitoring, objective and team introduction;
- Discussion on the issues related the construction activities and negative and positive impacts to the villagers (e.g. Water use concerns during the construction period, water quality, aquatic resources, pollution, public safety and the community development programs);
- The village chiefs of villages authorities and WUGs briefed on the project activities and the concerns from villagers raised;
- The village authority confirmed that so far there has not been any concerns/complaints raised from the villagers. people are happy to see the construction work has been started;

- No water use conflict occurred for Nam Ou Subproject which has been in operational and the WUGs request the DCO to check the water sufficiency for the irrigation command areas;
- Complaint and grievance: So far there have not been written complaints from the communities to each village authority. The contractor will coordinate and consult with village authorities and WUGs to set up the plan for water release for agriculture production during dry season;
- Perception of the villagers to the project implementation: In general, people in the villages are very happy with the implementation of the project and the progress of the work.

		
Meeting with DCO of Nhot Ou district and village heads and WUGs at DCO office	Meeting with village authority, villager	

11 June 2014:

Meeting with DCO of Bountai District:

The discussion during the meeting are outlined in the followings:

- overview of the Safeguard Monitoring Mission of year 2, objective and team introduction;
- Discussion on the progress of the construction works of Nam Lan and Nam Gnaen and EMP implementation since the start of the construction works;
- The Community development programs in villages mainly on SRI cultivation have been well implemented and planning for year 2;
- It was told that so far no concerns/complaints raised by the villagers for both Nam Lan and Nam Thae;
- The DCO also explained about the involvement of the ethnic groups and women in the project activities. He mentioned that all ethnic groups are happy to see the progress of the work;
- Up to now, there have not been any complaints letters received by the district and provincial committees from 2 Subprojects regarding social and environmental concerns;
- Representative from DONRE engage in all consultations and meetings for these two subproject, but no independent monitoring has carried out by DONRE;
- Watershed management for Nam Lan and Nam Gnaen was discussed and the DCO reported that the plan was existed but challenges for implementation.

Recommendation by Safeguard Monitoring Team at the meeting

- Independent monitoring of DONRE in coordination with DCO should be planned and implemented to monitor the construction activities of the subprojects in terms of environmental and social issues, compensation, participation of the ethnic minorities to the project and community development programs.
- Ensuring the participation of the relevant sectors at provincial and district levels in the monitoring programs.
- Effective planning and implementation of watershed management plan should be in place in coordination with PAFO, DAFO, PONRE and DONRE for long term water availability for the systems
- Increase awareness raising for the proper and safe chemical use and handling of the farmers.

Meeting with district and village authority, WUG and villagers of Nawai :

The discussion during the meeting are outlined in the followings:

- Overview of the safeguard monitoring, objective and team introduction;
- The monitoring team asked questions related the construction activities and negative and positive impacts to the villagers of Nawai (e.g. Water use concerns during the construction period, water quality, aquatic resources, pollution, public safety and the community development programs).
- The village chief briefed on the project activities and the concerns from villagers raised.
- The village authority confirmed that so far there has not been any concerns/complaints raised from the villagers. people are happy to see the construction work has been started. However; it was proposed by the villagers that they would like the DCO or PPO to recheck the water distribution system to make sure that all proposed command areas being received the water.
- Compliant and grievance: So far there have not been any written complaints from the communities to each village authority.
- Perception of the villagers to the project implementation: In general, people in the villages are very happy with the implementation of the project and the progress of the work.



Meeting with DCO in Bountai district



Meeting with village authority and WUG of Nawai village



Meeting with villagers in Nawai village

12 June 2014:**Meeting With PPO For Feedback**

Upon the completion of the mission in Phongsaly the team met with PPO to recommend and suggest concerning the key findings during the mission. the recommended issues are followings:

- Process of grievance and compensation for affected land due to landslide in Mongchao village based on the minutes of the meetings.
- Regular monitoring of the erosion prone areas for Kormaen-Phongsak road and making sure that the spoil disposal is taken place in the proper and designated areas only to avoid the impact on agricultural land of villagers.
- Recheck of the water distribution and sufficiency for the proposed command areas as planned for the Subprojects being operated e.g. Nam Ou and Nam Lan.
- Rehabilitation of the areas disturbed during the construction particularly along sides of the canals for Nam Thae and Nam Gnaene Subprojects.
- Proper waste management and proper storage and handling of hazardous material for the temporary camp of Nam Gnaene Subproject.
- Possibility of independent monitoring of PONRE and DONREs for Subprojects with support and coordination with PPO.
- More awareness raising of safe and proper chemical use and handling of chemical fertilizer and pesticides for the communities in the Subprojects.
- Plan for watershed management and land use planning for Nam Lan and Nam Thae Subprojects.

13 June 2014:**Meeting with PPO and DCO of Luang Namtha**

- Overview on the purpose and Safeguard Monitoring Mission of year 2014 and activities to be undertaken in Luang Namtha.
 - Discuss on the progress of the construction works of 6 subprojects in Luang Namtha province.
 - The team asked about the IEE certificates approval for 3 subprojects of year 2.
 - Water use situation for the Subprojects of year 1 being operated e.g. Nam Dai 5&6 and HongKong
 - The progress of EMP, GAP and EGDP implementation in Subprojects
 - Discussion on the communities development programs in Subprojects.
 - Progress of establishment of WUGs in Irrigation Subprojects
 - Possibility for the independent monitoring of PONRE and DONREs in Subprojects in coordination with PPO.
 - Additional water sampling for agro-chemical parameters for Nam Ma Oune Subproject
 - Status of PONRE and DONREs' engagement for Subprojects' activities particularly monitoring on environmental and social concerns. With this regard, the PONRE and DONRE confirmed that the independent monitoring of PONRE and DONREs has been undertaken in quarterly basis with support from PPO.
-

Meeting with PPO, DCO, DONRE, PONRE and village authorities at Ban Nam Ngaen

The discussion during the meeting are outlined in the followings:

- Overview of the Safeguard Monitoring Mission, objective and team introduction;
- As the construction work for Hong kong Subproject has been completed and being operated, discussion on water use and potential conflict was conducted.
- Discussion on environmental and social issues due to construction activities of Nam Gngang and Hong kong Subprojects.
- Discussion on the community development activities. e.g. SRI harvesting and production and chicken raising.
- Villagers raised no concerns on environmental and social issues, but minor concerns on water use as individual owner of the paddy field want to have their own water inlet to their paddy field causing insufficient water use for others.
- As the main canal passes the residential area of Nam Ngaene village, at some sections of the canal the water is overflowed causing flooding. With this concern, villagers requested the PPO to increase the height of the canal.
- In general the communities still maintain strong support for the Project and no any complaints have been received by the village authorities.

		
Meeting with PONRE and DONRE of Luang Namtha	Meeting village authorities at Ban Nam Ngaen	Site visit of operated Hong Kong Irrigation

14 June 2014:

Meeting with DCO of Sing District,

- Overview on the purpose and Safeguard Monitoring Mission of year 2014 and activities to be undertaken in Sing district.
- Discuss on the progress of the construction works of Nam Gna-Houay Luang6.
- Water use situation for the Subprojects of year 1 being operated e.g. Nam Dai 5&6
- The progress of EMP, GAP and EGDP implementation in Subprojects
- Discussion on the communities development programs in Subprojects.
- Progress of establishment of WUGs in Irrigation Subprojects

Meeting with village authorities of Gngangphieng, Siriheuang and NamKeo luang

- Overview of the third safeguard monitoring, objective and team introduction;
- Discussion on the operation of the system, water use and potential conflict.
- It was reported by the village authorities and villagers that they are worried about the insufficient water for their paddy fields as the banana plantations at upstream divert

and use water for the plantations and less water will be available for downstream paddy fields and requested the DCO and PPO to find the proper resolutions.

- The village chiefs confirmed that the areas disturbed during the construction period were rehabilitated
- The village chiefs of 3 villages briefed on the project activities, the village authority confirmed that so far there has not been any concerns/complaints raised from the villagers regarding construction and operation of the system.
- The people also confirmed that they can grow the crops in both dry and wet seasons after the structures completed.
- Compliant and grievance: So far there have not been any written complaints from the communities to each village authority on Subproject activities.

Meeting with village authorities of 7 villages for Nam Gna6-HouayLuang

- Overview of the third safeguard monitoring, objective and team introduction;
- Discussion on the construction activities and potential impacts.
- Community development programs, gender issue, participation of the communities.
- The village chiefs briefed on the project activities, the village authority confirmed that so far there has not been any concerns/complaints raised from the villagers regarding environmental and social issues from construction activities.

Compliant and grievance: So far there have not been any written complaints from the communities to each village authority on Subproject activities.

- It was confirmed that the villagers strongly support the implementation of the Subproject

		
Meeting with DCO of Sing district	Meeting with village authorities and villagers of 3 villages at Gnan pieng village for Nam Dai 5&6 Subproject	Meeting with village authorities and villagers of 7 villages at Namai village for Nam Gna6-HouayLuang Subproject

15 June 2014:

Meeting with DCO of Long District.

The discussion during the meeting are outlined in the followings:

- overview of the Safeguard Monitoring Mission of year 2, objective and team introduction;
- Discussion on the progress of the construction works of Nam Ma Oune and Nam Bak and EMP implementation since the start of the construction works;
- Community development programs in villages SRI cultivation and planning for year 2;

- It was told that so far no concerns/complaints raised by the villagers for both Nam Ma Oune and the construction work for Nam Bak has not been started;
- The DCO mentioned about the involvement of the ethnic groups and women in the project activities and participation of the communities.
- Awareness raising on safe and proper chemical fertilizer/pesticides use and handling for the communities in the Subproject areas;
- Up to now, there have not been any complaints letters received by the district and provincial committees from 2 Subprojects regarding social and environmental concerns;
- It was confirmed by the DONRE and PONRE that the environmental and social monitoring has been implemented by the PONRE and DONRE.

Meeting with village authority of Ban Thad

- Overview of the Safeguard Monitoring Mission, objective and team introduction;
- Discussion on the issues related to the construction activities and negative and positive impacts to the villagers (e.g. Water use concerns during the construction period, water quality, aquatic resources, pollution, public safety and the community development programs);
- The village chief briefed on the project activities, the village authority confirmed that so far there has not been any concerns/complaints raised from the villagers as the construction work is almost completed and rehabilitation of the disturbed areas being rehabilitated.
- Compliant and grievance: So far there have not been any written complaints from the communities to each village authority and villagers are happy with the progress of construction work.

Meeting with PONRE of Luang Namtha:

The team met with the Deputy Director General of Luang Namtha PONRE, and the details of the items discussed are summarized as followings:

- Overview of the Safeguard Monitoring Mission for year 2014, ADB safeguard monitoring policy for project, objectives of the field survey and work plan;
- Brief introduction of the construction works in subprojects; particularly for year 2 Subprojects;
- The coordination between PPO, DCO and PONRE/DONREs since the start of the Project. it was confirmed by the PONRE that the closer coordination has been undertaken and representatives from PONRE and DONREs have been invited in Subproject activities e.g. monitoring, consultation and trainings;
- It was confirmed by the PONRE that the independent monitoring of PONRE and DONREs, the PONRE has been carried out in quarterly basis and involved in different activities of the Project;
- It was also confirmed that the PONRE will continue support PPO and DCO for the project implementation; particularly concerning the environmental and social issues.

Meeting with PPO and PONRE for feedback

- Review of water use and sharing among the farmers for HongKong Subproject as the individual farmers want to install the inlet for their paddy fields; making sure sufficient water for

the proposed command areas as planned;

- Rehabilitation and waste collection is needed for the Nam Ma Oune Subproject upon the completion of the construction work;
- Regular monitoring of PONRE and DONREs shall be continued;
- Coordination with DCO of Sing district and owner of banana plantations concerning the water use for different stakeholders for appropriate solution;
- More awareness raising of safe and proper chemical and pesticide use and handling for the communities in the Subproject areas;
- Planning for watershed management and land use planning for Nam Gna6-Houay Luang.



Meeting with DCO of Long District

Meeting with village authority of Ban That

Meeting with PPO and PONRE for feedback

17 June 2014:

Meeting with PPO of Bokeo Province

- Overview on the purpose and Safeguard Monitoring Mission of year 2014 and activities to be undertaken in Bokeo.
- Discuss on the progress of the construction works of 6 subprojects in Bokeo province.
- Progress of resolution for the one affected household regarding the land to be affected from the canal alignment of Mr. Mai Inh;
- Approval of IEE certificates for 3 subprojects of year 2.
- Water use and potential conflict for Nam Tin, Nam Haad Right Bank Irrigation Subprojects;
- Progress of EMP, GAP and EGDP implementation in Subprojects
- Discussion on the communities development programs in Subprojects.
- Progress of establishment of WUGs in Irrigation Subprojects with more engagement of female members;
- Possibility for the independent monitoring of PONRE and DONREs in Subprojects in coordination with PPO.
- Status of PONRE and DONREs' engagement for Subprojects' activities particularly monitoring on environmental and social concerns.
- The monitoring team advised the PPO to continue the regular monitoring on EMP implementation in coordination with PONRE and DONRE.

Meeting with Village Authorities in Nam Tin and Nam Pouk Subprojects:

The consultation with village authorities, villagers and WUGs was undertaken at Houayxai Noi; including the following issues:

- Overview of the Safeguard Monitoring Mission, objective and team introduction;
- Discussion on the issues related to the construction activities and negative and positive impacts to the villagers from Nam Pouk and Nam Tin Subprojects;
- Water use and potential conflict for Nam Tin Subproject. It was confirmed by the WUG that there has not been any problems on water use/sharing.
- Community development programs and involvement of different ethnic groups;
- The village chief briefed on the project activities, the village authority confirmed that so far there has not been any concerns/complaints raised from the villagers; the improvement of Nam Tin was completed.
- Compliant and grievance: So far there have not been any written complaints from the communities to each village authority and villagers are happy with the progress of construction work.
- Villagers raised issue concerning the new approved banana plantations nearby the weir structure of Nam Pouk. It was assumed that the plantations will take the water from the Nam Pouk and would cause problem on water use of the local farmers. With this regards, the PPO confirmed to check and finding the appropriate solution in coordination with PAFO, DAFO and PONRE.



Meeting with PPO of Bokeo province



Meeting with village authorities, WUGs and villagers of Ban Xaychaleun, Nam Pouk and Houayxai Noi



Site visit of Nam Pouk construction site

18 June 2014:

Meeting with Village Authorities for Nam Haad Left and Right Bank Subprojects

The consultation with village authorities, villagers and WUGs was undertaken at Phonexai village; including the following issues:

- Overview of the Safeguard Monitoring Mission, objective and team introduction;
- Discussion on the issues related to the construction activities and negative and positive impacts to the villagers from Nam Haad Left and Right Banks;
- Water use and potential conflict for Nam Nam Haad Right Bank Subproject. It was confirmed by the WUG that there has not been any problems on water use/sharing.
- Community development programs and involvement of different ethnic groups;
- Village chiefs briefed on the project activities, the village authorities confirmed that so far there has not been any concerns/complaints raised from the villagers;
- Compliant and grievance: So far there have not been any written complaints from the communities to each village authority and villagers are happy with the progress of construction work.

		
Meeting with village authorities at Phonexai village		Site visit at Nam Haad Left and Right Banks

19 June 2014:Meeting with Village Authorities in Houay Xo Subproject

The consultation with village authorities, villagers and WUGs was undertaken at Ban Dong village; including the following issues:

- Overview of the Safeguard Monitoring Mission, objective and team introduction;
- Discussion on the issues related to the construction activities and negative and positive impacts to the villagers from Houay Xo Subproject;
- Community development programs and involvement of different ethnic groups;
- Village chiefs briefed on the project activities, the village authorities confirmed that so far there has not been any concerns/complaints raised from the villagers;
- Compliant and grievance: So far there have not been any written complaints from the communities to each village authority and villagers are happy with the progress of construction work.
- Village authorities requested the PPO and DCO to rehabilitate the area disturbed during the construction particularly along sides the canal alignment.

	
Meeting with village authorities of 3 villages	

20 June 2014:Meeting with Village Authority of Haddonkeo for Houay Sat Subproject

The consultation with village authorities, villagers and WUGs was undertaken at Haddonkeo village; including the following issues:

- Overview of the Safeguard Monitoring Mission, objective and team introduction;

- Discussion on the issues related to the construction activities and negative and positive impacts to the villagers from Houay Sat Subproject;
- Progress of grievance and solutions for the proposed affected land of Mr. Mai Inh; it is confirmed through the second minute of the meeting that the owner of the land voluntarily contribute the proposed affected land for Subproject activities
- Community development programs and involvement of different ethnic groups;
- Besides the case of Mr. Mai Inh, village authority confirmed that so far there has not been any concerns/complaints raised from the villagers;
- Village authorities requested the PPO and DCO to rehabilitate the area disturbed during the construction particularly along sides the canal alignment.

5. Achievements

1. Completed third monitoring and site visit 18 subprojects year 1 and 2 of in districts of 3 Provinces for site observation, water sampling and public consultation.
 2. The field trip was well supported by PPO, PONRE, DCO and DONRE from each Provinces, district and villages authorities
 3. The team was well supported with good answers, document and well organized for the consultations, meetings in all villages and site visits.
 4. Completed site visits contractor camps and giving the instructions to the site engineers
 5. Meetings with PPOs, DCOs, PONREs, DONREs, village authorities, WUGs, AHs as well as villagers in Subprojects.
 6. Completed water sampling in 16 subprojects year 1 and 2 of 3 Provinces
 7. Provision of feedback to the PPOs at the end of Mission in each province to follow up for further improvement.
-

Annex4 Registration of the Meetings During First Monitoring in 3 province

Annex4 Registration of the meetings during second monitoring in 3 province

Registration form - PPO + DCO of Nantla

No.	Name and surname	Position	Organization	Contact No	Signature
1	ນັກວິຊາການ	ສະມາຊິກ	NOVL	22333328	[Signature]
2	ນັກວິຊາການ	ສະມາຊິກ	NOVL	22326870	[Signature]
3	ນັກວິຊາການ	ສະມາຊິກ		22391085	[Signature]
4	ນັກວິຊາການ	ສະມາຊິກ	ນະຄອນລາວ	55686453	[Signature]
5	ນັກວິຊາການ	ສະມາຊິກ	ນະຄອນລາວ	22999803	[Signature]
6	ນັກວິຊາການ	ສະມາຊິກ	ນະຄອນລາວ	96873222	[Signature]
7	ນັກວິຊາການ	ສະມາຊິກ	ນະຄອນລາວ	56161461	[Signature]
8	ນັກວິຊາການ	ສະມາຊິກ	ນະຄອນລາວ	22390672	[Signature]
9					
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Safeguard Monitoring Plan for Northern Rural Infrastructure Package 7-2, year 2014

Registration form

No.	Name and surname	Position	Organization	Contact No.	Signature
1	Dr. Anon Chantana	Supervisor	NOVL	22326230	[Signature]
2	Dr. Anon Chantana	Supervisor	NOVL	22333228	[Signature]
3	Dr. Anon Chantana	Supervisor	NOVL	22391329	[Signature]
4	Dr. Anon Chantana	Supervisor	NOVL	54443121	[Signature]
5	Dr. Anon Chantana	Supervisor	NOVL	22999503	[Signature]
6	Dr. Anon Chantana	Supervisor	NOVL	96875222	[Signature]
7	Dr. Anon Chantana	Supervisor	NOVL	97643646	[Signature]
8	Dr. Anon Chantana	Supervisor	NOVL	55241394	[Signature]
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Safeguard Monitoring Plan for Northern Rural Infrastructure, Package 7-2, year 2014

Registration form DCO of long district

No.	Name and surname	Position	Organization	Contact No	Signature
1	ທິມະທິນ ວິໄສ ກຸມ	ຮັກສາຄຸນນະພາບ	NOUL	22333328	<i>[Signature]</i>
2	ປະສານ ວິໄສ ກຸມ	ຮັກສາຄຸນນະພາບ	NOUL	22222330	<i>[Signature]</i>
3	ທ. ສິດສິດ	ຮັກສາຄຸນນະພາບ	NOUL	55222221	<i>[Signature]</i>
4	ທ. ສິດສິດ ວິໄສ ກຸມ	ຮັກສາຄຸນນະພາບ	NOUL	22999503	<i>[Signature]</i>
5	ທ. ສິດສິດ	ຮັກສາຄຸນນະພາບ	NOUL	96273222	<i>[Signature]</i>
6	ທ. ສິດສິດ ວິໄສ ກຸມ	ຮັກສາຄຸນນະພາບ	NOUL	55112902	<i>[Signature]</i>
7	ທ. ສິດສິດ ວິໄສ ກຸມ	ຮັກສາຄຸນນະພາບ	NOUL	22924663	<i>[Signature]</i>
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ລາຍຊື່ຜູ້ເຂົ້າຮ່ວມປະຊຸມ ວຽກສົ່ງແວດລ້ອມ ທີ່ໂຄງການຍ່ອຍ ນ້ຳມະອຸ່ນ

ຄັ້ງວັນທີ 15/06/2014 ທີ່ ບ້ານ ຫາດ, ເມືອງລອງ

ລ/ດ	ຊື່ ແລະ ນາມສະກຸນ	ຊົນເຜົ່າ	ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
1	ທ. ວຽງໃຈ ວຽງໂພງ	ໂຕ	ກະສິກຳ/ເສີ	22998663	<i>[Signature]</i>
2	ທ. ວຽງ ວິໄລ	ໂຕ	ບ້ານ ຫາດ		ທ. ວຽງ ວິໄລ
3	ທ. ວຽງ ວິໄລ	ໂຕ	ບ້ານ ຫາດ		ທ. ວຽງ ວິໄລ
4	ທ. ວຽງ ວິໄລ	ໂຕ	ບ້ານ ຫາດ	95504107	ທ. ວຽງ ວິໄລ
5	ທ. ວຽງ ວິໄລ	ໂຕ	ບ້ານ ຫາດ		ທ. ວຽງ ວິໄລ
6	ທ. ວຽງ ວິໄລ	ໂຕ	ບ້ານ ຫາດ	59494489	<i>[Signature]</i>
7	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ	55117002	<i>[Signature]</i>
8	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ	22390798	<i>[Signature]</i>
9	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ	22999803	<i>[Signature]</i>
10	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ	2233328	<i>[Signature]</i>
11	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ	22326830	<i>[Signature]</i>
12	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ	95596773	<i>[Signature]</i>
13	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ	5688821	<i>[Signature]</i>
14	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ	54137630	<i>[Signature]</i>
15	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ	22200913	<i>[Signature]</i>
16	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ	50210859	<i>[Signature]</i>
17	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ	56805366	<i>[Signature]</i>
18	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ	98036398	<i>[Signature]</i>
19	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ	55177180	<i>[Signature]</i>
20	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ	59484236	<i>[Signature]</i>
21	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ	96273222	<i>[Signature]</i>
22	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ		ທ. ວຽງ ວິໄລ
23	ທ. ວຽງ ວິໄລ	ໂຕ	ກະສິກຳ/ເສີ		ທ. ວຽງ ວິໄລ

[Red circular stamp with text: ສະໜັບສະໜູນ ບາດບ້ານ ບ້ານ ຫາດ ຫາດ]
[Handwritten signature]

ລາຍຊື່ຜູ້ເຂົ້າຮ່ວມປະຊຸມ ວຽກສົ່ງເວດລົມ ທີ່ໂຄງການຍ່ອຍ ນໍ້າດ້າຍ 5 - 6
 ຄັ້ງວັນທີ: 14 / 06 / 2014 ທີ່ບ້ານ ຍາງພຽງ ເມືອງສົງ

ລ/ດ	ຊື່ ແລະ ນາມສະກຸນ	ຊົນເຜົ່າ	ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
1	ນ. ເັນທິວິ	ລື	ກະສິກໍາເມັດສົງ	97643646	Ky
2	ພິມ ເລີ້	ລື	ຝັງພຽງ	56645678	ພິມ ເລີ້
3	ໄພ່ ເລີ້	ລື	ຝັງພຽງ	58216448	ໄພ່ ເລີ້
4	ທ. ພອນສຸກ	ລື	—	—	ທ. ພອນສຸກ
5	ທ. ພອນສຸກ	ລື	—	91197616	Cast
6	ທ. ພອນສຸກ	ລື	—	55865345	ທ. ພອນສຸກ
7	ທ. ພອນສຸກ	ລື	—	55982885	ທ. ພອນສຸກ
8	ນ. ບໍວາ. ຫວັດ	ລື	—	—	ນ. ບໍວາ. ຫວັດ
9	ໄພ່ ເລີ້/ ວິມ	ລື	—	—	ໄພ່ ເລີ້/ ວິມ
10	ທ. ພອນສຸກ	ລື	—	86479856	ທ. ພອນສຸກ
11	ທ. ພອນສຸກ	ລື	—	54631643	ທ. ພອນສຸກ
12	ທ. ພອນສຸກ	ລື	—	49146890	ທ. ພອນສຸກ
13	ທ. ພອນສຸກ	ລື	—	98608098	ທ. ພອນສຸກ
14	ທ. ພອນສຸກ	ລື	—	56040494	ທ. ພອນສຸກ
15	ນ. ພິມ ຫວັດ	ລື	—	—	ນ. ພິມ ຫວັດ
16	ນ. ສິມ ຫວັດ	ລື	—	—	ນ. ສິມ ຫວັດ
17	ທ. ພອນສຸກ	ລື	—	02056802598	ທ. ພອນສຸກ
18	ນ. ໄພ່	ລື	—	—	ນ. ໄພ່
19	ນ. ພິມ ຫວັດ	ລື	ກະສິກໍາເມັດສົງ	91873222	ນ. ພິມ ຫວັດ
20	ນ. ພິມ ຫວັດ	ລື	ກະສິກໍາເມັດສົງ	55241394	ນ. ພິມ ຫວັດ
21	ນ. ໄພ່	ລື	ຝັງພຽງ	—	ນ. ໄພ່
22	ນ. ພິມ ຫວັດ	ລື	NOUL	22326820	ນ. ພິມ ຫວັດ
23	ທ. ພອນສຸກ	ລື	NOUL	22200913	ທ. ພອນສຸກ
24	ທ. ພອນສຸກ	ລື	ທ. ພອນສຸກ	54443141	ທ. ພອນສຸກ
25	ທ. ພອນສຸກ	ລື	ທ. ພອນສຸກ	22999803	ທ. ພອນສຸກ
26	ທ. ພອນສຸກ	ລື	ທ. ພອນສຸກ	22391329	ທ. ພອນສຸກ
27	ນ. ພິມ ຫວັດ	ລື	ຝັງພຽງ	78724022	ນ. ພິມ ຫວັດ
28	ນ. ພິມ ຫວັດ	ລື	—	—	ນ. ພິມ ຫວັດ

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ນາມ ພອນສຸກ

ລາຍຊື່ຜູ້ເຂົ້າຮ່ວມປະຊຸມ ວຽກສົ່ງແວດລ້ອມ ທີ່ໂຄງການຍ່ອຍ ນ້ຳຫຍ້າ - ຫ້ວຍຫຼວງ

ຄັ້ງວັນທີ 14/06/2014 ທີ່ ບ້ານ ນາໂພ່, ເມືອງສິງ

ລ/ດ	ຊື່ ແລະ ນາມສະກຸນ	ຊົນເຜົ່າ	ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
1	ງົມ ລຽມ	ລື	ບ.ນາໂພ່	59197844	ງົມລຽມ
2	ທາ ສຽງ ແກ້ວ	ລື	ບັນ ນາໂພ່	59483440	ທາ ສຽງ
3	ໃຈວິໄນ ແກ້ວວາດ	ລື	ວາງ ນາໂພ່	54139066	ໃຈວິໄນ
4	ນ. ຂັນນັບ	ລື	ບັນ ນາໂພ່	99795511	ຂັນນັບ
5	ນ. ລຽມ	ລື	ບັນ ນາໂພ່	5447582	ນ. ລຽມ
6	ນ. ສິມສາ	ລື	ບັນ ນາໂພ່	55886592	ນ. ສິມສາ
7	ໃຈວິໄນ ນາໂພ່	ລື	ບັນ ນາໂພ່	5572799	ໃຈວິໄນ
8	ງົມ ລຽມ	ລື	ບັນ ນາໂພ່	5572699	ງົມ ລຽມ
9	ທາ ສຽງ ແກ້ວ	ລື	ບັນ ນາໂພ່	54143121	ທາ ສຽງ
10	ນ. ສິມສາ 1997	ລື	ນອນ	22200913	ນ. ສິມສາ
11	ທາ ສຽງ ແກ້ວ	ລື	ນອນ	22391329	ທາ ສຽງ
12	ທ. ສິມສາ ອື່ນນະໂຍ	ລື	ອື່ນນະໂຍ	99999503	ທ. ສິມສາ
13	ທ. ສິມສາ ອື່ນນະໂຍ	ລື	ອື່ນນະໂຍ	22333328	ທ. ສິມສາ
14	ນ. ສິມສາ ອື່ນນະໂຍ	ລື	ອື່ນນະໂຍ	22321830	ນ. ສິມສາ
15	ນ. ສິມສາ	ລື	ອື່ນນະໂຍ		ນ. ສິມສາ
16	ນ. ສິມສາ	ລື	ອື່ນນະໂຍ	96873222	ນ. ສິມສາ
17	ນ. ສິມສາ	ລື	ອື່ນນະໂຍ	97643648	ນ. ສິມສາ
18	ນ. ສິມສາ	ລື	ບ. ນາໂພ່	54353159	ນ. ສິມສາ
19	ນ. ສິມສາ	ລື	ບ. ນາໂພ່		ນ. ສິມສາ



ໃຈວິໄນ ແກ້ວວາດ

ລາຍຊື່ຜູ້ເຂົ້າຮ່ວມປະຊຸມ ວຽກສົ່ງແວດລ້ອມ ທີ່ ໂຄງການຍ່ອຍ ຮ່ອງກົງ

ຕັ້ງວັນທີ 13/06/2014 ທີ່ ບ້ານ ນ້ຳແງຽນ, ເມືອງຫລວງນໍ້າທາ

ລ/ດ	ຊື່ ແລະ ນາມສະກຸນ	ຊົນເຜົ່າ	ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
1	ທ. ສິນທິພອນ ສິນທິພອນ	ລາວ	ອົງການປະຊຸມ	27390577	ສິນທິພອນ
2	ສ. ສາສອນພູມປະເມີນ	ໄຕ້ລາວ	—	55686453	ສາສອນ
3	ສ. ສິນທິພອນສິນທິພອນ	ໄຕ້ລາວ	ອົງການປະຊຸມ	28838603	ສິນທິພອນ
4	ສ. ສິນທິພອນສິນທິພອນ	ໄຕ້ລາວ	ອົງການປະຊຸມ	99141269	ສິນທິພອນ
5	ສ. ສິນທິພອນ	—	—	95602828	ສິນທິພອນ
6	ສ. ສິນທິພອນ	—	—	28919988	ສິນທິພອນ
7	ສ. ສິນທິພອນ	—	—	28822159	ສິນທິພອນ
8	ສ. ສິນທິພອນ	—	—		ສິນທິພອນ
9	ສ. ສິນທິພອນ	—	—		ສິນທິພອນ
10	ສ. ສິນທິພອນ	—	—		ສິນທິພອນ
11	ສ. ສິນທິພອນ	—	—	55761654	ສິນທິພອນ
12	ສ. ສິນທິພອນ	—	—	22394710	ສິນທິພອນ
13	ສ. ສິນທິພອນ	—	—	96582254	ສິນທິພອນ
14	ສ. ສິນທິພອນ	—	—	97371648	ສິນທິພອນ
15	ສ. ສິນທິພອນ	—	—	58572552	ສິນທິພອນ
16	ສ. ສິນທິພອນ	—	—	96752905	ສິນທິພອນ
17	ສ. ສິນທິພອນ	—	—	98932385	ສິນທິພອນ
18	ສ. ສິນທິພອນ	—	—	22913210	ສິນທິພອນ
19	ສ. ສິນທິພອນ	—	—	54214900	ສິນທິພອນ
20	ສ. ສິນທິພອນ	—	—		ສິນທິພອນ
21	ສ. ສິນທິພອນ	—	—	96873222	ສິນທິພອນ
22	ສ. ສິນທິພອນ	—	—		ສິນທິພອນ
23	ສ. ສິນທິພອນ	—	—	55292592	ສິນທິພອນ
24	ສ. ສິນທິພອນ	—	—	28832538	ສິນທິພອນ



ລາຍຊື່ຜູ້ເຂົ້າຮ່ວມປະຊຸມ ວຽກສົ່ງແວດລ້ອມ ທີ່ ໂຄງການຍ່ອຍ ຮ່ອງກົງ

ຕັ້ງວັນທີ່ 13/06/2014 ທີ່ ບ້ານ ນ້ຳແງ້ນ, ເມືອງຫລວງນ້ຳທາ

ລ/ດ	ຊື່ ແລະ ນາມສະກຸນ	ຕື່ມເຕົ້າ	ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
25	ຂົງ ຂາງ	ໂທລາກໍ	ຂົງແກ້ວ		ຂົງ ຂາງ
26	ສົມ ສິມ	ໂທລາກໍ	-		ສົມ ສິມ
27	ທ. ສິມ	ໂທລາກໍ	-		ທ. ສິມ
28	ນ. ໂພນວິນ	ໂທລາກໍ	-		ນ. ໂພນວິນ
29	ທ. ວິໄນຍະວິນ	-	-		ທ. ວິໄນຍະວິນ
30	ບຸນ ພັນ	ໂທລາກໍ	-		ບຸນ ພັນ
31	ໂປ່ງ ນອງ	ໂທລາກໍ	-		ໂປ່ງ ນອງ
32	ທ. ອີ	-	-		ທ. ອີ
33	ນ. ວິໄນຍະ	-	-		
34	ທ. ວິໄນຍະວິນ	ສິມ	ທ. ວິໄນຍະວິນ	56161461	
35	ສິມ ສິມ ພັນ	ໂທລາກໍ	ສິມ ສິມ ພັນ	82991989	
36	ທ. ສິມ ສິມ ພັນ	ໂທລາກໍ	ສິມ ສິມ ພັນ	82999803	
37	ນ. ສິມ ສິມ ພັນ	ສາວ	ນ. ສິມ ສິມ ພັນ	22200913	
38	ອຸ ສິມ ສິມ ພັນ	ສາວ	ອຸ ສິມ ສິມ ພັນ	2833328	
39	ອຸ ສິມ ສິມ	ສາວ			

Safeguard Monitoring Plan for Northern Rural Infrastructure; Package 7-2, year 2014

Registration form

No.	Name and surname	Position	Organization	Contact No	Signature
1	ທ. ສິມ ສິມ ພັນ	ສິມ ສິມ ພັນ	NUOL	22200913	
2	ທ. ສິມ ສິມ ພັນ	ສິມ ສິມ ພັນ	NUOL	5447882	
3	ທ. ສິມ ສິມ ພັນ	ສິມ ສິມ ພັນ	DDO/NAI	55625556	
4	ທ. ສິມ ສິມ ພັນ	ສິມ ສິມ ພັນ	NUOL	2233328	
5	ທ. ສິມ ສິມ ພັນ	ສິມ ສິມ ພັນ	ສິມ ສິມ ພັນ	56358066	
6	ທ. ສິມ ສິມ ພັນ	ສິມ ສິມ ພັນ	DDO/NAI	23904322	
7	ທ. ສິມ ສິມ ພັນ	ສິມ ສິມ ພັນ	ສິມ ສິມ ພັນ	28960209	
8	ທ. ສິມ ສິມ ພັນ	ສິມ ສິມ ພັນ	ສິມ ສິມ ພັນ	28761318	
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Safeguard Monitoring Plan for Northern Rural Infrastructure; Package 7-2; year 2014

Registration form

No	Name and surname	Position	Organization	Contact No	Signature
1	Kanya Soukwan	Environ specialist	NOOL	22333328	
2	Amphai Parawan	Resistant Specialist	NEOL	22320230	
3					
4	Surb unwan	squrwan	p-shad/ing	55621650	
5	n. J. S. S. S. S.	squrwan	ppo	59625556	
6	squrwan	squrwan	W392	54472227	
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Safeguard Monitoring Plan for Northern Rural Infrastructure, Package 7-2, year 2014

Registration form *၂၀၁၄ ခုနှစ်*

No	Name and surname	Position	Organization	Contact No	Signature
1	<i>ဒေါ် မိုးညို</i>	<i>၂၃</i>	<i>၂၀၁၄</i>		
2	<i>ဒေါ် မိုးညို</i>	<i>၂၃</i>	<i>၂၀၁၄</i>		
3	<i>ဒေါ် မိုးညို</i>	<i>၂၃</i>	<i>၂၀၁၄</i>		
4	<i>ဒေါ် မိုးညို</i>	<i>၂၃</i>	<i>၂၀၁၄</i>		
5	<i>ဒေါ် မိုးညို</i>	<i>၂၃</i>	<i>၂၀၁၄</i>	<i>၀၅၀၉၃၂၆၀၂၀</i>	
6	<i>ဒေါ် မိုးညို</i>	<i>၂၃</i>	<i>၂၀၁၄</i>		
7	<i>ဒေါ် မိုးညို</i>	<i>၂၃</i>	<i>၂၀၁၄</i>	<i>၉၅၅၅၅၅၅၅</i>	
8	<i>ဒေါ် မိုးညို</i>	<i>၂၃</i>	<i>၂၀၁၄</i>	<i>၅၅၅၅၅၅၅၅</i>	
9	<i>ဒေါ် မိုးညို</i>	<i>၂၃</i>	<i>၂၀၁၄</i>	<i>၂၂၃၃၃၃၃၃</i>	
10	<i>ဒေါ် မိုးညို</i>	<i>၂၃</i>	<i>၂၀၁၄</i>	<i>၂၂၃၃၃၃၃၃</i>	
11	<i>ဒေါ် မိုးညို</i>	<i>၂၃</i>	<i>၂၀၁၄</i>	<i>၂၂၃၃၃၃၃၃</i>	
12	<i>ဒေါ် မိုးညို</i>	<i>၂၃</i>	<i>၂၀၁၄</i>	<i>၉၅၅၅၅၅၅၅</i>	
13	<i>ဒေါ် မိုးညို</i>	<i>၂၃</i>	<i>၂၀၁၄</i>	<i>၅၅၅၅၅၅၅၅</i>	
14	<i>ဒေါ် မိုးညို</i>	<i>၂၃</i>	<i>၂၀၁၄</i>	<i>၅၅၅၅၅၅၅၅</i>	
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Handwritten signature and notes in Burmese script.

DCO လုပ်ငန်းစဉ်

M/C/MP

Safeguard Monitoring Plan for Northern Rural Infrastructure Package 7-2, year 2014

Registration form

No.	Name and surname	Position	Organization	Contact No.	Signature
1	ကျော် ဦးဝင်း	ဥက္ကဋ္ဌ	NUOL	2233328	[Signature]
2	မ. ဦးစိုးလှိုင်	အမှုဆောင်	APC/NRI	9966556	[Signature]
3	မ. ဦးစိုးမင်း	အမှုဆောင်	APC/NRI	23901825	[Signature]
4	ဒေါ်ခင်အေး	အမှုဆောင်	NUOL	54143227	[Signature]
5	မ. ဦးစိုးမင်း	အမှုဆောင်	NUOL	2232623	[Signature]
6	မ. ဦးစိုးမင်း	အမှုဆောင်	DCO/NRI	23761567	[Signature]
7	မ. ဦးစိုးမင်း	အမှုဆောင်	NUOL	99730157	[Signature]
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ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

ແນວກະສິກໍາ ແລະ ປ່າໄມ້ແຂວງ

ງານ ພັດທະນາ ໂຄງລ່າງ ຊຸມນະບົດ ພາກເໜືອ

ບັນຊີລາຍຊື່ເຂົ້າຮ່ວມກອງປະຊຸມພ້ອມລົງກວດກາ ແລະ ປົກປ້ອງສັງຄົມຂອງສັງຄົມ

ບຸກຄົນ ບ້ານ... ວັງ... ແຂວງ... ແຂວງບໍ່ແກ້ວ, ຕົ້ງວັນທີ 18/16/.....2014

ດ	ຊື່ ແລະ ນາມສະກຸນ	ໜ້າທີ່ຮັບຜິດຊອບ	ເພດ		ມາຈາກພາກສ່ວນ	ໂທລະສັບ	ລາຍເຊັນ
			ຊາຍ	ຍິງ			
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ	55028870	
	ບ. ຂຸນຊຳ	ບ. ຂຸນຊຳ			ບ. ອົງ		
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ	54076466	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ	59324779	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ສ. ຍ. ມ.	91126044	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ທ. ຂຸນຊຳ	92388810	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ	58081093	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ	59045555	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ທ. ຂຸນຊຳ	66503377	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ທ. ຂຸນຊຳ		ທ. ຂຸນຊຳ
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ	58080856	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ທ. ຂຸນຊຳ	54516895	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ	54076466	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ	54076301	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ	55436785	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ	5442906	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ	56921758	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ		
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ	0	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ		
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ	58103505	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ	46907730	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ບ. ອົງ	56463136	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			PPO	22080000	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			PPO	99792689	
	ທ. ຂຸນຊຳ	ທ. ຂຸນຊຳ			ພ. ອ. ມ.	55598635	



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

ະແນກກະສິກໍາ ແລະ ປ່າໄມ້ແຂວງ

ຄງການ ພັດທະນາ ໂຄງລ່າງ ຊົນນະບົດ ພາກເໜືອ

ບັນຊີລາຍຊື່ເຂົ້າຮ່ວມກອງປະຊຸມພ້ອມລົງກວດກາ ແລະ ປົກປ້ອງສັງຄົມຂອງສັງຄົມ

ຢູ່ທີ່ ບ້ານ... ເມືອງ... ແຂວງ... ຕັ້ງວັນທີ... 2014

№	ຊື່ ແລະ ນາມສະກຸນ	ໜ້າທີ່ຮັບຜິດຊອບ	ເພດ	ມາຈາກພາກສ່ວນ	ໂທລະສັບ	ລາຍເຊັນ
1	ທ. ພິມ ສິດພອນ	ທ/ນັກງານ	ຊາຍ	ນອນ	22380798	
2	ທ. ສິມພອນ	ທ/ນັກງານ	ຍິງ	ນອນ	22290912	
3	ທ. ສິມພອນ	ທ/ນັກງານ	✓	ນອນ	56823773	
4	ທ. ສິມພອນ	ທ/ນັກງານ	✓	ນອນ	56772651	
5	ທ. ສິມພອນ	ທ/ນັກງານ		ນອນ	56774104	
6	ທ. ສິມພອນ	ທ/ນັກງານ	✓	ນອນ	22333328	
7	ທ. ສິມພອນ	ທ/ນັກງານ	✓	ນອນ	22328330	
3						
3						



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

ແນວກະສິກໍາ ແລະ ປ່າໄມ້ແຂວງ
ງານ ພັດທະນາ ໂຄງລ່າງ ຊຸມນະບົດ ພາກເໜືອ

ບັນຊີລາຍຊື່ເຂົ້າຮ່ວມກອງປະຊຸມພ້ອມລົງກວດກາ ແລະ ປົກປ້ອງສິ່ງຄົມຂອງສິ່ງຄົມ
ຢູ່ທີ່ ບ້ານ... ເມືອງ... ແຂວງບໍ່ແກ້ວ, ຄັ້ງວັນທີ 19/6/2014

ດ	ຊື່ ແລະ ນາມສະກຸນ	ໜ້າທີ່ຮັບຜິດຊອບ		ເພດ	ມາຈາກພາກສ່ວນ	ໂທລະສັບ	ລາຍເຊັນ
		ຊາຍ	ຍິງ				
	ທ່ານ ທ້າວ ສິມສິມ	ທ່ານ ທ້າວ			ພາກສ່ວນ ຫ່ວງ	94567603	
	ທ້າວ ຈອນ	ທ້າວ	✓		ພາກສ່ວນ ຫ່ວງ	58193681	
	ທ້າວ ພາຍ	ທ້າວ	✓		ທ້າວ		
	ທ້າວ ຈິນ	ທ້າວ	✓		ພາກສ່ວນ ຫ່ວງ		
	ທ້າວ ພິມ	ທ້າວ	✓		ພາກສ່ວນ ຫ່ວງ	56527590	
	ທ້າວ ສິມສິມ	ທ້າວ	✓		ທ້າວ	56867006	
	ທ້າວ ຈອນ	ທ້າວ	✓		ທ້າວ		
	ທ້າວ ສິມ	ທ້າວ	✓		ທ້າວ	36532827	
	ທ້າວ ສິມ	ທ້າວ	✓		ທ້າວ	58611174	
	ທ້າວ ສິມ	ທ້າວ	✓		PPO	22380410	
	ທ້າວ ສິມ	ທ້າວ	✓		ພາກສ່ວນ ຫ່ວງ	55698350	
	ທ້າວ ສິມ	ທ້າວ	✓		ນ.ຄ. ມ.	9126444	
	ທ້າວ ສິມ	ທ້າວ	✓		ທ້າວ	56927144	
	ທ້າວ ສິມ	ທ້າວ	✓		ທ້າວ	92322810	
	ທ້າວ ສິມ	ທ້າວ	✓		ທ້າວ	22200913	
	ທ້າວ ສິມ	ທ້າວ	✓		NUOL	22326830	
	ທ້າວ ສິມ	ທ້າວ	✓		NUOL	22333398	
	ທ້າວ ສິມ	ທ້າວ	✓		ທ້າວ	22780798	
	ທ້າວ ສິມ	ທ້າວ	✓		PPO	22390885	
	ທ້າວ ສິມ	ທ້າວ	✓		ພາກສ່ວນ ຫ່ວງ	55598625	
	ທ້າວ ສິມ	ທ້າວ	✓		ພາກສ່ວນ ຫ່ວງ	56543773	



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

ພະແນກກະສິກໍາ ແລະ ປ່າໄມ້ແຂວງ

ໂຄງການ ພັດທະນາ ໂຄງລ່າງ ຊຸມນະບົດ ພາກເໜືອ

ບັນຊີລາຍຊື່ເຂົ້າຮ່ວມກອງປະຊຸມພ້ອມລົງກວດກາ ແລະ ປົກປ້ອງສັງຄົມຂອງສັງຄົມ

ບຸກຄົນ ບ້ານ..... ວັດທະນະ ເມືອງ..... ແຂວງບໍ່ແກ້ວ, ຄັ້ງວັນທີ 17/6/.....2014

ລ/ດ	ຊື່ ແລະ ນາມສະກຸນ	ໜ້າທີ່ຮັບຜິດຊອບ	ເພດ	ມາຈາກພາກສ່ວນ	ໂທລະສັບ	ລາຍເຊັນ
1	ທ. ດຸກໄຊ	ຫົວໜ້າໂຄງການ	ຊາຍ	ຍີງ	090 75 8 2	090 75 8 2
2	ທ. ສິມພອນ	ສື່/ໂຮງຮຽນ	✓	ພ. ຈ. ສ.	555 986 25	
3	ທ. ສິມພອນ	ນາຍ ບາຍ	✓	ບາຍ ພາອຸດົມ	903 6 5 2 2	
4	ທ້າວ ຫຼີ	ບາຍ ນາຍ ສິມມິ	L	ບ້ານ ສິມມິ (ເມັດ)		ທ້າວ ຫຼີ
5	ທ້າວ ສິມມິ	ນາຍ ບາຍ ສິມມິ		ພ. ຈ. ສ. ສິມມິ		ທ້າວ ສິມມິ
6	ທ້າວ ສິມມິ	ບ້ານ ສິມມິ		ພ. ຈ. ສ. ສິມມິ		ທ້າວ ສິມມິ
7	ທ້າວ ສິມມິ	ບ້ານ ສິມມິ		ບ້ານ ສິມມິ		ທ້າວ ສິມມິ
8	ທ້າວ ສິມມິ	ບ້ານ ສິມມິ		ບ້ານ ສິມມິ		ທ້າວ ສິມມິ
9	ທ້າວ ສິມມິ	ບ້ານ ສິມມິ		ບ້ານ ສິມມິ		ທ້າວ ສິມມິ
10	ທ້າວ ສິມມິ	ບ້ານ ສິມມິ		ບ້ານ ສິມມິ		ທ້າວ ສິມມິ
11	ທ້າວ ສິມມິ	ບ້ານ ສິມມິ		ບ້ານ ສິມມິ		ທ້າວ ສິມມິ
12	ທ້າວ ສິມມິ	ບ້ານ ສິມມິ		ບ້ານ ສິມມິ		ທ້າວ ສິມມິ
13	ທ້າວ ສິມມິ	ບ້ານ ສິມມິ	L	ບ້ານ ສິມມິ		ທ້າວ ສິມມິ
14	ທ້າວ ສິມມິ	ບ້ານ ສິມມິ	✓	ບ້ານ ສິມມິ		ທ້າວ ສິມມິ
15	ທ້າວ ສິມມິ	ບ້ານ ສິມມິ	✓	ບ້ານ ສິມມິ	22381556	ທ້າວ ສິມມິ
16	ທ້າວ ສິມມິ	ບ້ານ ສິມມິ	✓	ບ້ານ ສິມມິ	02091514983	ທ້າວ ສິມມິ
17	ທ້າວ ສິມມິ	ບ້ານ ສິມມິ		ບ້ານ ສິມມິ		ທ້າວ ສິມມິ
18	ທ້າວ ສິມມິ	ບ້ານ ສິມມິ		ບ້ານ ສິມມິ		ທ້າວ ສິມມິ
19	ທ້າວ ສິມມິ	ບ້ານ ສິມມິ		PPO	22380440	ທ້າວ ສິມມິ
20	ທ້າວ ສິມມິ	ບ້ານ ສິມມິ		NOVL	22200913	ທ້າວ ສິມມິ
21						
22						



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

ພະແນກກະສິກໍາ ແລະ ປ່າໄມ້ແຂວງ

ໂຄງການ ພັດທະນາ ໂຄງລ່າງ ຊຸມນະບົດ ພາກເໜືອ

ບັນຊີລາຍຊື່ເຂົ້າຮ່ວມກອງປະຊຸມພ້ອມລົງກວດກາ ແລະ ປົກປ້ອງສັງຄົມຂອງສັງຄົມ

ຢູ່ທີ່ ບ້ານ... ເມືອງ... ແຂວງ... ຄັ້ງວັນທີ... 2014

ລ/ດ	ຊື່ ແລະ ນາມສະກຸນ	ໜ້າທີ່ຮັບຜິດຊອບ	ເພດ	ມາຈາກພາກສ່ວນ	ໂທລະສັບ	ລາຍເຊັນ
1	ທາງ ສາມາດ ພະ ວິ		ຊາຍ	ຍິງ	ບາດ ພຸ ດ.	
2	ຂາວ ນາ ສິ ດ ສາ ດ	1024 ຫມ/ພ	✓	ຂາວ ນາ ສາ ດ ສາ ດ	97730680	
3	ສິ ດ ສາ ດ ສາ ດ	1024 ຫມ/ພ	✓	ບາດ ພຸ ດ.	99622305	
4	ວິ ດ ສາ ດ ສາ ດ	ຂາວ ນາ ສາ ດ	✓	ສິ ດ ສາ ດ	98022045	
5	ພາ ດ ສາ ດ	1024 ຫມ/ພ	✓	ບາດ ພຸ ດ.		
6	ສິ ດ ສາ ດ	1024 ຫມ/ພ	✓	ບາດ ພຸ ດ.	58722768	
7	ບາດ ພຸ ດ.	1024 ຫມ/ພ	✓	ບາດ ພຸ ດ.	988245699	
8	ສິ ດ ສາ ດ	ຂາວ ນາ ສາ ດ	✓	ບາດ ພຸ ດ.		
9	ສິ ດ ສາ ດ	ຂາວ ນາ ສາ ດ	✓	ບາດ ພຸ ດ.	98065685	
10	ບາດ ພຸ ດ.	ຂາວ ນາ ສາ ດ	✓	ບາດ ພຸ ດ.		
11	ບາດ ພຸ ດ.	ບາດ ພຸ ດ.		ບາດ ພຸ ດ.	97473963	
12	ບາດ ພຸ ດ.	ບາດ ພຸ ດ.		ບາດ ພຸ ດ.		
13	ບາດ ພຸ ດ.	ບາດ ພຸ ດ.	✓	ບາດ ພຸ ດ.		
14	ບາດ ພຸ ດ.	ບາດ ພຸ ດ.	✓	ບາດ ພຸ ດ.	22381551	
15	ບາດ ພຸ ດ.	ບາດ ພຸ ດ.	✓	NUOL	22333328	
16	ບາດ ພຸ ດ.	ບາດ ພຸ ດ.	✓	NUOL	22326830	
17						



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

ພະແນກກະສິກໍາ ແລະ ປ່າໄມ້ແຂວງ

ໂຄງການ ພັດທະນາ ໂຄງລ່າງ ຊຸມນະບົດ ພາກເໜືອ

ບັນຊີລາຍຊື່ເຂົ້າຮ່ວມກອງປະຊຸມພ້ອມລົງກວດກາ ແລະ ປົກປ້ອງສັງຄົມຂອງສັງຄົມ
ຢູ່ທີ່ ບ້ານ.....ໄຊເພີໄຊ..... ເມືອງ...ແອ່ນຊຸ້ນ... ແຂວງບໍ່ແກ້ວ, ຄັ້ງວັນທີ 17/16/.....2014

ລ/ດ	ຊື່ ແລະ ນາມສະກຸນ	ໜ້າທີ່ຮັບຜິດຊອບ	ເພດ		ມາຈາກພາກສ່ວນ	ໂທລະສັບ	ລາຍເຊັນ
			ຊາຍ	ຍິງ			
1							
2	ນ. ສິມສິນ	ຊ/ນ		✓	ພາກເອກອຸດົມ		ນ. ສິມສິນ
3	ນ. ບຸນສິນ	ຊ/ນ		✓	ພາກອຸດົມ		ນ. ບຸນສິນ
4	ນ. ວັນສິດ	ຊ/ນ		✓	ພາກອຸດົມ		ນ. ວັນສິດ
5	ນ. ວັນສິນ	ຊ/ນ		✓	ພາກອຸດົມ		ນ. ວັນສິນ
6	ນ. ບຸນ	ຊ/ນ		✓	ພາກອຸດົມ		ນ. ບຸນ
7	ນ. ວັນສິດ	ຊ/ນ		✓	ພາກອຸດົມ		ນ. ວັນສິດ
8	ນ. ວັນສິນ	ຊ/ນ		✓			ນ. ວັນສິນ
9	ນ. ວັນສິດ	ຊ/ນ	✓				ນ. ວັນສິດ
10	ນ. ວັນສິນ		✓		ສູນກາງ		ນ. ວັນສິນ
11	ນ. ວັນສິນ				ສູນກາງ		ນ. ວັນສິນ
12	ນ. ວັນສິນ	ສະໜັບສະໜູນ		✓	ສູນກາງ		ນ. ວັນສິນ
13	ນ. ວັນສິນ	ສູນກາງ		✓	DEO ພ/ດ	9931044	ນ. ວັນສິນ
14	ນ. ວັນສິນ		✓		PPD	9932289	ນ. ວັນສິນ
15							

Annex 5 Reported Fish Species in Subprojects

Province	District	Subproject	Code	English name
Phongsaly	Phongsaly	Mongchao-Komaen road		
		Komaen-Phongsak		
	NhotOu	Nam-ou irrigation	18,	Acheilognahusdeignani
			22,	Albulichthysalbuloides
23,	Banganaelegans			
28,	Barbonmusgonionotus			
33,	Banganalippus			
30,	Epalzeorhynchosfrenatum			
70,	Esomuslongimana			
72,	Esomusmetallicus			
73,	Garracyclostonmata			
77,	Garratheunensis			
81,	Hampaladispar			
82,	Hampamacrolepidota			
83,	Hypophthalmicthysnobilis			
92,	Mystacoleucuslepturus			
108,	Opsariuspulchellus			
118,	Propuntiuslobocheides			
129,	Rhinogobiusalbimaculatus			
154,	Monotreteabei			
446,	Monotretcambodgiensis			
176,	Monotretcochinchinensis			
478,	Monotretsuvattii			
479,	Monotretturgidus			
		Nam Thae Irrigation	423,	Mastacembelusarmatus
			410,	Dermogenysiamensis
			379,	Clariagariepinus
			393,	Akysisvarius
			391,	Akysisinermis
			376,	Bagariusyarrelli
			346,	Hemilurusmekongensis
			332,	Hemibagruswyckioides
			102,	Labioberbusleptocheila
			103,	Labiobarbussiamensis
			120,	Mystacoleucuslepturus
			118,	Mystacoleucusectypus
			116,	Mystacoleucusatridorsalis
				Mekonginaerythrospila
		114,	Luciosomasetigerum	
		112,	Lobocheilsmelanotearia	

	Bountai	Namlarn irrigation	466, 226,	Trichopsisvittata Botiasidthimunki
		Nam Ngaene Irrigation	103, 107, 112, 117, 119,	Labiobarbussiamensis Mekonginaerythrospila Mystacoleucusgreenwayi Neolissochilusstracheyi Opsariuskoratensis
Luangnamtha	Namtha	Hongkong irrigation	5, 89, 11, 22, 20, 23, 28, 29, 23, 30, 39, 45, 47, 61, 73, 77, 81, 83, 111, 125, 129, 166, 167,	Chitalalopis Henicorhynchusornatipinnis Acrossocheilusxamensis Acheilognathustonkinensis Banganaelegans Banganalemassoni Banganalippus Crossocheilusatrilimes Crossocheilusablongus Daniochrysoetaeniatus Esomusmetallicus Garratheunensis Hampalamacrolepidota Macrochirhchthysmacrochirus Opsariuspulchellus Puntiusbrevis Puntiusjacobusboehlki Puntiusorphoides Acanthopsoidesdelphax Botialongidorsalis Lipidocephalichthysberdmorei Balitoracf.annamitia Schisturabucculenta
		Nam Gngang Irrigation	11, 20, 22, 30, 210, 129, 242, 436,	Clupeichthysaesarnensis Acheilognathustonkinensis Acrossocheilusxamensis Banganalippus Acanthopsoidesdelphax Opsariuspulchellus Balitoracf.annamitia Neodontobutisauramus Anabas testudineus

			457,	Macropodusopercularis Rhinogobiusvermiculatus Trichogatermicrolepis
			460,	Trichogastertrichopterus Channagachua
			455,	Channastrata
	Sing	Namdai Irrigation	22,	Acrossocheilusxamensis Acheilognahusdeignani
			18,	Amblypharyngodonchulabhornae
			24,	Barmonymusgonionotus Banganalippus
			23,	Crossocheilusablongus
			30,	Daniochrysotaeniatus
			47,	Esomusmetallicus Garracyclostomata
			61,	Hampalamacrolepidota Labiobarbussiamensis
			73,	Lobocheilosrhabdoura
			77,	Macrochirhchthysmacrochirus
			83,	Mystacoleucusgreenwayi Mystacoleucusmarginatus
			103,	Opsariuspulchellus
			111,	Balitoracf.annamitia Lepidocephalichthysberdmorei
			117,	Misgurnusanguillicaudatus
			119,	Schisturabucculenta Clariasfuscus
			129,	Clariameladerma Gambusiaaffinis
			228,	Mastacembelusarmatus Monopterusalbus
			231,	Pristolepisfasciata Anabas testudineus
			396,	Trichogatermicrolepis
			399,	Trichogastertrichopterus
			411,	Channastrata
			423,	Monotreteturgidus

		Nam Gna 6 (HouayLuang)		
	Long	Nam Ma Oune Irrigation	45, 57, 60, 61, 107, 129, 166, 173, 176, 191, 194, 205, 211, 228, 242, 259, 261, 262, 263, 264, 416, 461, 461, 464, 481,	Crossocheilus atrilimes Cypinus rubrofucus Danio apopyris Danio chrysoaeniatatus Lobocheilos rhabdoura Opsarius pulchellus Putius brevis Raiamaguttatus Rasbora auroteania Scaphiodonichthys acanthopterus Scaphognathopstheunensis Tor tambroides Acanthopsoides gracilentus Lepidocephalichthys berdmorei Balitorac. annamitia Nemacheilus Meridionalis Schistura aramis Schistura athos Schistura atra Hemibagrus wyckii Monopterus albus Trichogaster microlepis Macropodus opercularis Trichogaster trichopterus Monotreteturgidus Sinogastromyzon frugocauda Vanmaneniaserrilineata Bagarius bagarius Akysis inermis Clarias batrachus Clarias fuscus

			322,	Clariasgariepinus
			324,	Papuligobiusocellatus
		Nam Bak Irrigation	8,	Anguilla marmorata
			13,	Tenualosathibaudeaui
			19,	Acheilognathuslongibarbus
				Acheilognathustonkinensis
			20,	Acrossocheilusxamensis
				Barmonymusgonionotus
				Banganalippus
			22,	
			23,	Crossocheilusatrilimes
				Crossocheilusablongus
			30,	Danioapopyris
				Daniochrysotaeniatus
			45,	Lobocheilosrhabdoura
				Opsariuspulchellus
			47,	
				Puntiusaurotaeniatus
			60,	Scaphiodonichthysacanthopterus
			61,	Balitoracf.annamitia
			107,	Balitorakwangsiensis
				Balitoralancangjiangensis
			129,	Hemimyzonconfluens
				Homalopteraconfuzona
			165,	Micronoemacheilustaeniatus
				Nemacheilusarenicolus
			191,	Nemacheiluslongistriatus
				Nemacheiluspallidus
			242,	
			243,	Nemacheilusplaticps
			244,	Nemacheilus
				Meridionalis
			245,	Pseudogatromyzoncf.daon
				Schisturaamplizona
			249,	Schisturaaramis
			254,	Schisturaathos
				Schisturaatra
			255,	Hemibagruswyckii
				Bagariusbagarius
			256,	Bagariusyarrelli
			257,	Glyptothorasmacromaculatus
			258,	Akysisinermis

			259, 260, 261, 262, 263, 264, 331, 373	Clariasfuscus Xenentodoncanciloides Monopterusalbus Micrognathussp.longsnout Anabas testudineus Trichogastermicrolepis Macropodusopercularis Trichogastertrichopterus Monotreteturgidus
Bokeo	Houayxai	Nam Tin irrigation	5, 17, 22, 32, 33, 73, 83, 87, 128, 129, 137, 165, 172, 227, 228, 329, 343, 356, 397, 409,	Chitalalopis Acheilognathusbarbatulus Acrossocheilusxamensis Barbonymusaltus Barbonmusgonionotus Esomusmetallicus Hampalamacrolepidota Henicorhynchuslineatus Opsariuskoratensis Opsariuspulchellus Osteochiluswaandersii Puntiusaurotaeniatus Puntiusstoliczkaus Cobitislaoensis Lepidocephalichthysberdmorei Hemibagrusaff.nemurus Belodontichthysrunvatus Pterocryptisinusitata Clariagariepinus Xenentodoncanciloides Micrognathussp.longsnout Mastacembelusarmatus Parambassiswolffii Anabas testudineus Trichogastermicrolepis Trichogastertrichopterus Anabas testudineus Channagachua

		Nam Pouk Irrigation		
	Paktha	Houay Xo irrigation	28, 32, 33, 39, 40, 45, 61, 73, 83 93, 128, 129, 137, 165, 172, 227, 228, 329, 343,	Banganaelegans Barbonymusaltus Barbonmusgonionotus Chela laubuca Cirihinuscirrhosus Crossocheilusatrilimes Cyclocheilichthysenoplos Daniochrysotaeniatus Esomusmetallicus Hampalamacrolepidota Hypsibarbuslagleri Opsariuskoratensis Opsariuspulchellus Osteochiluswaandersii Puntiusaurotaeniatus Puntiusstoliczkaus Cobitislaoensis Lepidocephalichthysberdmorei Hemibagrusaff.nemurus Belodontichthysrunvatus Pterocryptisusitata Clariagaripepinus Xenentodoncanciloides Micrognathussp.longsnout Mastacembelusarmatus Parambassiswolffii Anabas testudineus
		Houay Sat Irrigation	5, 6, 7, 8, 16, 22, 17,	Chitalalopsis Chitala ornate Notopterusnotopterus Anguilla marmorata Abbottinarivularis Acrossocheilusxamensis Acheilognathusbarbatulus Amblypharyngodonchulabhornae

			24,	Banganaelegans Barbonymusaltus Banganalippus
			28,	
			33,	Cirihinuscirrhosus
			30,	Crossocheilusatrilimes
			40,	Cyclocheilichthysenoplos Danioapopyris
			45,	Daniolaoensis
			52,	Daniosalmonatus Discherodontusashmeadi
			60,	Henicorrhnchuslineatus
			64,	
				Hypsibarbuslagleri
			68,	Hypsibarbusvernayi
			87,	Labiobarbusleptocheila Laocyprishispida
			93,	Mystacoleucuschilopterus Opsariuskoratensis
			96,	Opsariuspulchellus
			102,	Puntiusaurotaeniatus Putiusbrevis
			104,	Raiamaguttatus Rasboraauroteania
			115,	Scaphiodonichthysacanthopterus Scaphognathopstheunensis
			128,	Tor ater Gyrinocheilusaymonieri
			129,	Acanthopsoidesgracilentus Lepidocephalichthysberdmorei
			165,	Misgurunusanguillicaudatus Balitoracf.annamitia
			166,	Balitorakwangsiensis
			173,	
				Micronoemacheilustaeniatus
			176,	Schisturacoruscans Nemacheilusarenicolus
			191,	Nemacheiluslongistriatus Nemacheiluspallidus
			194,	Nemacheilusplaticeps Physoschisturameridionalis

			203, 208, 211, 228, 231, 241, 242, 254, 255, 256, 257, 258, 259, 313, 314, 315, 316, 317, 318,	Schisturasuber Schistura tenure Schisturatizardi Schisturatubularis Schisturaxhatensis Sectorial heterognathos Clariasbatrachus Plotosuscanius Monopterusalbus Macragnathussemiocellatus Macragnathussiamensis Macragnathussp.long snout Mastacembelusarmatus Papuligobiusocellatus Papuligobiusuniporus Rhinogobiusalbimaculatus Rhinogobiusshonghensis Rhinogobiusleavelli Anabas testudineus Channagachua Channastrata
	PhaOudom	Nam Haad Right bank irrigation	5, 8, 17, 23, 24, 28, 32, 33, 39, 40, 52,	Chitalalopis Anguilla marmorata Acheilognathusbarbatulus Barmonymusgonionotus Amblypharyngodonchulabhornae Banganaelegans Barbonymusaltus Barbonmusgonionotus Chela laubuca Cirihinuscirrhosus Crossocheilusatrilimes Cyclocheilichthysenoplos Daniochrysotaeniatus Esomusmetallicus

			61,	Hampalamacrolepidota Hypsibarbuslagleri
			73,	Hypsibarbusvernayi
			83,	Labiobarbusleptocheila
			93,	Laocyprishispida
			96,	Mystacoleucuschilopterus
				Opsariuskoratensis
			102,	Opsariuspulchellus
				Puntiusaurotaeniatus
			115,	Putiusbrevis
				Raiamaguttatus
			128,	Rasboraauroteania
				Scaphiodonichthysacanthopterus
			165,	Scaphognathopstheunensis
				Tor ater
			166,	Gyrinocheilusaymonieri
			173,	Acanthopsoidesgracilentus
				Lepidocephalichthysberdmorei
			191,	Misgurunusanguillicaudatus
				Balitoracf.annamitia
			194,	Balitorakwangsiensis
			203,	Micronoemacheilustaeniatus
			208,	Schisturacoruscans
				Mystusrhegma
			211,	Micronemaapogon
			228,	Clarias focus
				Monopterusalbus
			231,	Mastacembelusarmatus
		Nam Haad Left bank irrigation		The same to Nam Haad Right Bank

Annex 6 Minute of meeting with the AHs for Mongchao-Kormoen and Houay Sat Subprojects

សម្រាប់: គណៈកម្មាធិការ ប្រឹក្សាភិបាល
 គណៈកម្មាធិការ ប្រឹក្សាភិបាល វិស័យ ធានារ៉ាប់រង
 ប្រតិបត្តិការ ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង

ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង បាន ត្រួតពិនិត្យ លើ របាយការណ៍ ថ្ងៃទី ១៦/៦/២០១៤ ពី លោក ប. ជ័យ អំពី ប្រតិបត្តិការ
 ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង ក្នុង ខណៈ ពេល ដែល ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង បាន រៀបចំ របាយការណ៍ ប្រតិបត្តិការ
 ថ្ងៃទី ១៦/៦/២០១៤ ក្នុង ភាសា ខ្មែរ (ប្រតិបត្តិការ); លើ កិច្ចការ របស់ ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង
 ដែល បាន កំណត់ ដូច ខាង ក្រោម ៖

I ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង - ស្វ័យ គ្រប់គ្រង

- ① ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង
- ② ល. ទាំង គ្រប់ គ្រា

II ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង

- ① ល. ប្រតិបត្តិការ ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង
- ② ល. ប្រតិបត្តិការ
- ③ ក. គ្រប់ គ្រា ប្រតិបត្តិការ

III ទំនាក់ទំនង ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង និង ភ្នាក់ងារ ត្រួតពិនិត្យ

- ① ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង ប្រតិបត្តិការ
- ② ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង
- ③ ល. គ្រប់ គ្រា

ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង និង ភ្នាក់ងារ ត្រួតពិនិត្យ ទំនាក់ទំនង ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង និង ភ្នាក់ងារ ត្រួតពិនិត្យ ដែល បាន កំណត់ ដូច ខាង ក្រោម ៖

- ① ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង បាន រៀបចំ របាយការណ៍ ថ្ងៃទី ២៤/៦/២០១៤ លើ ភ្នាក់ងារ ត្រួតពិនិត្យ ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង ដែល បាន កំណត់ ដូច ខាង ក្រោម ៖
- ② ភ្នាក់ងារ ត្រួតពិនិត្យ បាន រៀបចំ របាយការណ៍ ថ្ងៃទី ១៦/៦/២០១៤ លើ កិច្ចការ របស់ ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង ដែល បាន កំណត់ ដូច ខាង ក្រោម ៖
- ③ ភ្នាក់ងារ ត្រួតពិនិត្យ បាន រៀបចំ របាយការណ៍ ថ្ងៃទី ១៦/៦/២០១៤ លើ កិច្ចការ របស់ ក្រុមហ៊ុន កម្ពុជា ធានារ៉ាប់រង ដែល បាន កំណត់ ដូច ខាង ក្រោម ៖

