Initial Environmental Examination

January 2016

LAO: Greater Mekong Subregion Biodiversity Conservation Corridors Project

Prepared by Department Of Forest Resource Management. Ministry Of Natural Resources And Environment (MONRE) for the Asian Development Bank.

CURRENCY EQUIVALENTS
(as of 31 January 2016)

Currency unit	–	Lao Kip (LAK)
LAK1.00	=	$0.0059
$1.00	=	LAK8,150.00

ABBREVIATIONS

DAFO	–	district agriculture and forestry office
EMP	--	Environmental Management Plan
IC	--	infrastructure consultant
IEE	--	Initial Environmental Examination
LAR	--	land acquisition and resettlement
NPAs	–	national protected areas

NOTE

In this report, "$" refers to US dollars, unless otherwise stated

Appendix 1
Ban Kietngong Internal Village Roads Environmental Screening and Initial Environmental Examination (IEE)

ENVIRONMENTAL IMPACTS SCREENING CHECKLIST

Subproject No:		15
Subproject Name:		Internal village roads
Province	:	Champasak
District	:	Pathoumphone
Village	:	Kietngong

Background Explanation: The Small-scale infrastructure component of the GMS Biodiversity Conservation Corridors Project focuses on community participation in the identification, design and implementation with an inclusive strategy of making the infrastructure improvements implemented more environmentally friendly as well as being closely matched to the needs of the community. The following types of subprojects are planned for:

i. roads (access and internal village roads);
ii. village water supply;
iii. buildings which can include school, health clinics, market place, village meeting hall, school building / teachers' house, and patrolling house;
iv. irrigation and irrigation repairs;
v. sanitation;
vi. bridge or ford (causeway), and
vii. paddy field and bund development

Environmental assessment helps planners to think constructively about ways of protecting and improving the environment. The first step in the environmental assessment process determines the scope and level of analysis for the rest of the assessment and is called scoping and is important to ensure the important issues receive appropriate attention, and provides data for subproject evaluation and design.

Using the following checklists, the survey and data collection teams will identify and collect the information required to allow the environmental impacts to be fully assessed as the subproject design proceeds.

Description of the Environment:
Kietngong village, Pathoumphone district, Champasak province is a targeted village under project of Biodiversity conservation corridors project, output 3 - small scale infrastructure. It is located from district center about 18 km toward the southeast. Existing access to the village is a laterite road, it can access to both the rainy and dry seasons. However, during the rainy season access to the village has been difficult due to the poor condition of the local village road from the adjacent road 18A to and through the village. Kietngong village is located in flat area and surrounded by forest, paddy field, and wetland to the west. Formerly, the internal road was built by the local people, to allow movement during the rainy season. Subsequently, it was improved and widened by the community participation fund and local labor. Few years ago, this road was rehabilitated by using the fund from the project of biodiversity protection corridors Donghuasao and Xepean. Currently, this road is damaged again and travel within the village and nearby is again difficult during the wet season. In order to follow the social-economic aims for the district, improving internal village roads is important to local economic development and for facilitating the transport of goods and agricultural produce. Therefore, the local authority has requested funding from the BCC project to rehabilitate and improve the village's internal roads. This road has a total of 2,000 meter length, maximum width of 4 meters, and minimum width of 3.5 meters.

Potential Environmental Impact:

Based on the feasibility study field surveys and village meeting the result show that the potential environmental impact related to project location is minor and can be mitigated through a simple environmental management plan (EMP). No widening the existing internal road is proposed and the proposed subproject will not impact to the environment and society.

Mitigation Measures:

The detailed survey and design will be aligned along the existing road and right-of-way to avoid and mitigate any perceived or potential environmental impacts related to the subproject alignment. Subsequently, the survey and design will inform the local authority and people who may be affected by the activities and will be used as the basis for further consultation.

1. Check List for Identification of likely Environmental Impacts

Potential Environmental Effects (Likely impacts if any, on)	What the Effect is Likely to Be	Is it Significant (Y/N)
Environmental Considerations Due to Subproject Location		
Residential, agricultural and common property land.	Roadside slopes may have a minor encroachment where the levels between some village plots and the road are graded to fit. No land acquisition or compensation will be required.	Minor, if at all
Effects on vegetation.		N
Effects on wildlife.		N
Effects on fisheries.		N
Effects on cultural property or artefacts.		N
Influence on current land uses.		N
Influence on economic activities.		N
Relation to other plans (national or local development, environmental, conservation plans etc).	Note; Subproject cannot conflict with, or be provided for in other development plans. If this conflict exists move to the subproject which is the next village priority. There is no conflict with other plans or projects	
Land tenure problems or land use conflicts.	Note: If land tenure or land use problems are identified the subproject cannot be accepted. Proceed as above. The social safeguards are assessed as Category C. No land acquisition of resettlement is required; a LAR plan is also not required.	
Ethnic minorities.		None
Environmental Considerations for Subproject Design Response		
Choice of materials for construction and their sources (e.g. timber products).	Explore and survey nearest laterite source in order to avoid transport through the site	Minor
Quarries and borrow pits for laterite and fill materials.	Transport laterite from borrow pits to project site	Minor
Land drainage and drainage facilities.	Water from existing culverts and drains may be diverted to new culverts and drains which will be designed so there are no negative impacts or risk of erosion or washout	Minor
Land formation, construction of bunds and		N

flood overflows and relief.		
Land stability.		N
Sanitation, receiving environment, separation from households, wells and natural water bodies.		N
Environmental Considerations Related to Construction Stage		
Construction of civil works, pavements and structures.	• Dumping, stockpiling and spreading of road construction materials	Minor
Quarrying and borrow pit operation and remedial works.	• Clearing bushes, removal top soil and restoration after closing the pit	Minor
Bricks and brick making for building construction – source of materials and fuel for brick making.		N
Likely use natural timber poles for scaffolding and the source of the poles.		N
Safety Issues.	• Temporary safety sign installation	Minor
Depots and construction camps.	• Temporary construction camp	Minor
Noise and noise control.	• Construction equipment noise	Minor
Dust nuisance.	• Construction equipment	Minor
Runoff and erosion.		N
Spillage of oils and fuels, etc.	• Spillage of oil and fuels from equipment or workshop	Minor
Environmental Considerations Related to Subproject Operations		
Safety Issues.		Y
Effects of drainage structures.		N
Maintenance Issues.		Minor
Potential Environmental Benefits		
Improved access for agricultural materials (roads and access.)	Provide great social benefits to the poor	Y
Improved and more efficient movement of crops to secure storage of markets (roads and access).	Stimulate agricultural production by providing access to market	Y
Improved cross drainage for irrigation, entrance to cropped areas (roads and access).		
Improved access to health services, education and social services (roads, access, health clinics, school buildings and teacher's housing).	Improve and emergency access to hospitals, increasing the attendance of children in schools, etc.	Y
Improved rural incomes and economy and lifestyles (market places).	Increase income and more benefit to local people	Y

Improved water supplies and community health and wellbeing.		N
Improved sanitation practices and community health and hygiene.		N
Introduction of improved low cost sanitation measures.		N
Improved community health and wellbeing (health clinics).		N
Improved education (school buildings and teacher's houses).		N
Improved food supply (less deficiency) (irrigation rehabilitation and improvements. Paddy field and bund formation).		N
Improved management of NPAs and natural and forest resources (patrolling houses).		N
Improved village cohesion and management / communication of village affairs (village meeting halls).	Improved movement within village during wet season. Improved transportation of harvested crops, post-harvest handling and reduced crop loss. All beneficial impacts	Y

2. Environmental Management Plan (EMP)

The following Environmental Management Plan (EMP) has been developed from the environmental screening of the Kietngong internal village roads small-scale infrastructure subproject. The EMP addresses the potential environmental impacts identified in the above checklist of potential environmental impacts.

Potential Environmental Problem Areas	Potential Environmental Problems	Possible Mitigation Measures	Responsibility for Implementation
Location			
Residential, agricultural and common property land.	Grading of land to align with road levels and provide improved access to village plots.	Cover in specifications for construction. Consultation with land owners to identify appropriate action.	Infrastructure consultant (IC) with district officers.
Influence on economic activity.	Effects on businesses if affected by construction activities.	Cover in specifications for construction. Consult affected businesses and the planning and organization of construction activities to minimize the impacts.	IC with district officers.
Design			
Choice of materials	Using existing laterite	Limit working hours and not	IC consultant with

and their sources.	sources that are allocated by district (use approved by the District Governor).	allowing work at night time. Explore and survey nearest laterite source in order to avoid transport through the site. Laterite transported to project site must be covered. Spray water on stockpiles and exposed laterite construction to layer dust. Timber products for formwork and construction to be sourced from approved (DAFO) suppliers.	district officers.
Adequacy of drainage facilities.	Disruption to local people traveling.	Provision of adequately designed drainage and installation of appropriate warning signs.	IC consultant with district officers and village authority.
Land and site stability, erosion, and inundation.	Unstable land as a result of the subproject design. Unmanaged overland storm flows and erosion. Flooding of site and/or adjacent land as a consequence of the subproject design and implementation.	Provision of adequately designed drainage. Low-cost bio-engineering works to ensure land stability and control erosion and sediment. Design and provision of drainage channels and outlets to prevent/ relieve potential flooding.	IC Consultant with district officers and village authority.
Construction			
Construction of civil works, pavement and building structures.	Noise and vibration nuisance.	Limit working hours and not allowing work at night time. Planning of operations so that people are less disturbed. Avoidance of noisy operations during night times and near important wildlife.	Contractor. IC works inspector.
	Dust nuisance and health risk.	Wetting of surfaces during the dry season.	Contractor. IC works inspector.
	Spillage of oils and fuels, from equipment or workshop.	Cover in specification. Store in bunded and covered area. Check and repair oil, fuel and hydraulic fluid leakages for equipment. Prevent flow to water courses. Have absorbent material (sand or sawdust) available to absorb spillages for safe removal.	Contractor. IC works inspector.

Quarrying	Dust, nuisance and health risks as above.	Planning of operations so that people are less disturbed. Avoidance of noisy operations during night times and nearby important wildlife.	Contractor. IC works inspector.
	Using existing laterite source of district.	Cover in specifications. Explore and survey nearest laterite source in order to avoid transport through the site. Careful siting of borrow pits.	IC consultant with district officers.
Safety Issues	Dangers to workers and local people.	Contractor's Safety Plan. Safety provisions in contract. Issuance of safety apparel.	Contractor. IC works inspector.
Depots and Construction camps	Nuisance to local people. Spread of infectious diseases from construction workers to local people.	Provisions for high standard of management in Construction camp and at all depots or temporary parking or storage sites. Dumping, stockpiling and spreading of road construction materials in safe locations.	Contractor. IC works inspector.
Operation			
Safety issue	Accident may occur after completion of project.	Install warning sign and speed limit at intersections and within village environs.	Contractor. IC works inspector.
Maintenance Issues	Overload trucks or vehicle may damage road. Lacking budget for maintenance.	Limit load of vehicle to travel through this road. Provision for maintenance and repair as necessary.	Contractor. IC works inspector with district officers.

3. Environmental Monitoring Plan

Impacts to be Monitored	Parameters	Location	Measurements	Frequency	Responsibilities
Construction Phase					
Implementation of construction mitigation measures detailed in the EMP.	Noise & vibration nuisance. Dust nuisance and health risk.	Works site. Works site and exposed areas of excavation.	Reasonableness and hours of work Dust layers by wetting or other approved measures.	Ongoing throughout work period. Ongoing throughout work period.	IC works inspector. IC works inspector.

Impacts to be Monitored	Parameters	Location	Measurements	Frequency	Responsibilities
	Spillage of oils and fuels, from equipment or workshop.	Equipment storage area and workshop.	No spillage and all materials stored as specified. Accidental spillage blinded and cleanup for safe disposal immediately. All equipment maintained and operating without leaks.	Ongoing throughout work period.	IC work's inspector. IC environmental specialist during frequent inspection of works.
	Quarrying dust, nuisance and health risks as above.	Quarry and borrow pit site(s).	Dust layers by wetting or other approved measures.	Ongoing throughout work period.	IC Work's inspector. IC environmental specialist during frequent inspection of works.
	Dangers to workers and local people.	Works site.	Warning signs in place. Excavations adequately barricaded.	Ongoing throughout work period.	IC works inspector.
	Depots and construction camps - Nuisance to local people. Spread of infectious diseases from construction workers to local people.	Works Depots and construct'n camp.	Workers briefed on risks of HIV AIDS and related responsibilities. Depots and camps maintained in a clean and hygienic state. Refuse and organic wastes collected in hygienic manner and removed regularly and disposed of in approved manner.	Ongoing throughout construction period. Construction camps dismantled and area cleaned and reinstated following works completion.	IC works inspector. District officers and village authority. IC environmental specialist in regular works site visits.
Complaints					
Operation Phase	Culvert cleaned and maintained.	Culvert location	Clearance of culvert.	Before and following storms. Regular three monthly inspections and clearance.	Villagers – organised by village chief and road maintenance committee.

Impacts to be Monitored	Parameters	Location	Measurements	Frequency	Responsibilities
Drainage maintained in effective operating condition.	Roadside drains maintained and cleaned.	Roadside drains.	Clearance of roadside drains.	Before and following storms. Regular monthly inspection and clearance.	Villagers – organised by village chief and road maintenance committee.

4. Reporting of Environmental Monitoring Results

The IC's national Environment Specialist will report on the environmental safeguards on a three monthly basis. The reporting of EMP and monitoring results shall cover the information and the progress and results of mitigation (monitoring reports and feedback from the IC works inspector, district staff and the village authority). Issues identified will be included in the supervision report together with the steps being taken for full mitigation of the identified issues. The environmental and monitoring report formats are provided herewith.

Table A8-2-2b: Summary of Compliance with Environmental Mitigation Measures

Specific Mitigation Measures)	*Compliance Attained (Yes, No, Partial)*	*Comment on Reasons for Non-Compliance*	*Issues for Further Action*
1.			
2.			
3.			

Table A8-2-2c: Issues for Further Action

Issue	*Cause*	*Required Action*	*Responsibility*	*Timing*	*Resolution*
Old Issues from Previous Reports					
1.					
2.					
New Issues from this Report					
1.					
2.					
3.					
Report prepared by:					

Complaints (if applicable) will be reported as follows

a. Provide details of any complaints that have been raised by the local population and other stakeholders (who, what, where, when).
b. Document how the complaints were addressed or will be addressed, who are the responsible project staff, specific actions and dates.

Compliance with EMP

a. Determine if the required mitigation measures are sufficient or still appropriate considering current site conditions and on-going site works.
b. Describe any difficulties related to the implementation of the proposed mitigation measures. Indicate any changes proposed by the contractor to improve environmental protection.