## E. Preparation of the Environmental Management Plan (EMP)

	GU	IDE ON HOW TO USE THE TEMPLATE FOR PROJECT DESCRIPTION/							
I		NTAL MANAGEMENT PLAN (PD/EMP) FOR FARM-TO-MARKET (FMR) ROADS							
A. G	ENERAL GU	IDANCE							
1.	<ul><li>which are no</li><li>30:</li><li>For new</li><li>For reha</li></ul>	<ul> <li>For new construction: Less than 2 kms</li> <li>For rehabilitation/improvement: &lt;50% increase in capacity (in terms of length/ width)</li> </ul>							
2.	<ul> <li>Selection</li> <li>Identification</li> <li>social satisfication</li> </ul>	P Template is designed and intended to be used primarily for the following purposes: a of the most environmentally and socio-culturally acceptable FMR location and design; and ation of the requirement of other relevant Philippine regulations, and the environmental and feguard requirements of Financing Institutions (FIs) (for proposals which passed the loan- y screening of the FI).							
3.	DENR-EMB application fe	P Template may also be used to secure a Certificate on Non-Coverage (CNC) from the /LLDA/DENR-ARMM. However, the CNC is NOT a government requirement, thus, or a CNC is at the OPTION/REQUEST of the Proponent for whatever purpose it may serve.							
B. G	UIDANCE OI	N SPECIFIC SECTIONS							
4.	<ul> <li>PROJECT a) Project Name: REHABILITATION OF BUAL - TALITAY FMR.</li> <li>ID b) Project Cost : P4,459,085.22</li> <li>SECTION c) Project Location: <ul> <li>Barangay Bual, Isulan, Sultan Kudarat (see attached vicinity map/location map</li> <li>When rehabilitated, the road shall be an all-weather, gravel-type with 2000 square meters concrete paved, a designed road width of 6 meters, carriageway of 4 meters and with 1 meter shoulders both sides. Aggregate sub-base course and base course materials will be provided, each with a designed thickness of 0.10 and 0.15 meters, respectively.</li> <li>See attached DED</li> </ul> </li> </ul>								
5.	NENT ID SECTION	Project I.D. No. R.I-06-ISU-SKP-12 Municipal Government of Isulan, Sultan Kudarat, represented by the Hon. Diosdado G. Pallasigue, 064-201-3526/064-201-3424							
6.	PROJECT DESIGN & SPECIFI- CATIONS SECTION	Project Length = 1.425 KilometersDirect Road Influence Area = 713 hectares,Project Beneficiaries = 1,380 population, male = 694, Female = 686 with Number of HHs =468Total Project Cost : P4,459,085.22and Sharing: World Bank Loan Proceeds:P3,567,268.17 or 80% of Project CostLGU Equity:P445,908.52 or 10% of Project CostGOP Equity:P445,908.52 or 10% of Project Cost							
7.		The LGU committed to allocate the counterpart of the projects on its 20% Development Fund. At the same time Barangay Government committed also their share in their 20% Development Fund for the monitoring and maintenance of the project.							
8.	ENVIRON -MENTAL MANAGE- MENT &	Check the relevant impacts, mitigating measures* and monitoring parameters* per project phase: Pre-construction, Construction and Operation & Maintenance Phases. Check the appropriate responsible unit and identify the specific lead entity. Provide a project-specific estimate of the mitigation and monitoring cost. Assumptions & calculations may be attached, particularly for social measures.							

	PLAN SECTION	*The measures and monitoring parameters are intended to be implemented by the Proponent under its self-regulation program. For FI-assisted projects, the same may be used by the					
		Project Management Office (PMO) or implementing Government Agency (GA) for the monitoring & evaluation (M&E) of the Proponent's performance. The PD/EMP M&E shall					
		be consolidated with the Project M&E for an integrated evaluation of performance & not					
		incur additional costs.					
9.	SIGNATO-	Proponent checks either of the "Yes" or "No" box if it has a) reevaluated Project Design vis-					
	RY	a-vis the PD/EMP results, & b) has actually integrated of the Mitigating/Monitoring Costs in					
	SECTION	the Final Project Cost. If "Yes" to both questions, the Proponent staff who prepared the					
		PD/EMP signs off the appropriate space, followed by the endorsement signature of the					
		Proponent's authorized representative. For loan applications, the PD/EMP is submitted with					
		the loan package to the PMO/GA* for review/approval.					
		*The PMO or GA Reviewer and Approving Authority consecutively sign-off the space					
		provided in the revised & final version of the PD/EMP Template.					

PD/EMP Template	:	
No./Ver		
Project Type	:	FARM-TO-MARKET ROADS
DAO 03-30 Non-	:	a) For new construction: Less than 2 kms
Covered Project Limits		b) For rehabilitation/improvement: <50% increase in capacity (in terms of length /
		width)

1.0 Project ID					
1.1 Project Name/Title	:	Construction / x Rehabilitation of BUAL - TALITAY FMR (Name of FMR)			
1.2 Project Cost	:	<b>P4,459,085.22</b> % Loan: FI:			
1.3 Project Location	:	Barangay Bual, , Isulan, Sultan Kudarat, Region XII (Sitio/Zone, Barangay, Municipality/City, Province, Region)			
Attachment 1: Location/Vicinity map of 1:10,000 scale, indicating the FMR location and showing major landmarks in the vicinity Attachment 2: Site photos facing N, S, E, W of the site					

2.0	Proponent ID	:	
2.1	Name of Proponent	:	HON. DIOSDADO G. PALLASIGUE, Municipal Mayor
2.2	Address of Proponent	:	Municipal Government of Isulan, Sultan Kudarat, Region XII (Sitio/Zone, Barangay, Municipality/City, Province, Region)
2.3	Contact Person	:	OVETTE C. VIRAY MRDP Focal Person (Rural Infrastructure) 064-201-3470 / 09065860046 / denvette2000@gmail.com (State Name, Position, Landline, Cell phone, Fax and/or Email address)

3.0	Project Design & Specifications (Instructions: Check applicable box/es & input specs on space provided. Attach supplemental information where deemed necessary for planning/costing purposes)					
3.1	Length: [] construction: m [x] rehabilitation/improvement: 1425 meters (% of total FMR length of m)					
3.2	Width:       [] construction:       m       [] rehabilitation/improvement:       6 meters (% of total         FMR width of m)       []					
3.3	Road Material: []earth [x]gravel [] asphalt [x] concrete					
3.4	Bank stabilization: []Left Bank:m []Right Bank:m Type: []vegetative [] mechanical/riprap					
3.5	Drainage Description:					
3.6	Temporary Facilities:					
	[x] Basecamp/admin/canteen/sanitary facilities [] Construct [x] Lease Area: 50 m2					
	[x] Staging/Motorpool [] Construct [x] Lease Area: 50 m2					
	[x] Solid Waste Disposal Facility Area:m2, locatedm, []N []S []E					

	[ ]W of the site
3.7	Construction Equipment and Ancillary Facilities:
	[x] Transport vehicles: (quantity)
	[ x ] Heavy equipment : (quantity)
	[ x ] Generator Set : (quantity) ; horsepower or kW
	[ ] Fuel Tank : (quantity) ; liters (volume)

## 4.0 Commitment Section

We are committed to:

- a) Comply with all mitigating measures necessary to minimize negative impacts & address enhancement measures to maximize positive impacts, as presented in Section 5.0 of the PD/EMP Template below;
- b) Comply with other applicable rules, regulations, guidelines and criteria; and
- c) Properly inform the contractor, residents of the barangay and other stakeholders on the PD/EMP commitments and other public agreements in connection with the project.

5.0 Environmental Management and Monitoring Plan (Instructions: Check applicable box/es &/or input data where asked. Attach supplemental information where deemed necessary for planning/costing purposes)

Project Phase / Activities	Possible Environmental Impacts	Mitigating Measures	Monitori ng Paramet ers	Respo nsible Agency / Unit	Cost of Mitigati on/ Monitori ng
		Selection, Planning/Design, l	Procurement,		
1.1 Sit		□ Consider alternative site		🗆 LGU	
e Selecti	in Protected Areas/	or design to be			
on and	natural/critical	compatible with the PA zoning			
Plannin	habitats (e.g.	Zohnig			
g/Desi	mangrove/forest	□ Secure PAMB			
gn	ecosystems,	Resolution for PA		□ PO/N	
0	coral reefs, &			GO	
	other aquatic				
	ecosystems)				
	with protected				
	area zoning □ Damage to flora	□ Consider alternative site		🗆 LGU	
	and disturbance	or design to reduce			
	to fauna in	effects on flora and			
	forest	fauna			
	areas/other	□ Secure Special Land Use			
	critical habitats	Permit, Tree Cutting			
		Permit and/or Right-of-		$\Box$ PO/N	
		Way Permit from		GO	
		DENR-FMB and			
		permits from PAWB for affected wildlife			
	√Land	□ Consider alternative site		□ LGU	
	acquisition,	with less or no			
	ROW conflict,	involuntary resettlement			
	resettlement,	issues			
	structure and	✓ Secure Deed of			P20,000.00
	crops damage,	Donation or Quit Claim			
	business loss	on land		$\Box$ PO/N	
		Prepare compensation package, e.g. Land		GO	
		package, e.g. Lallu			

Project Phase / Activities	Possible Environmental Impacts	Mitigating Measures	Monitori ng Paramet ers	Respo nsible Agency / Unit	Cost of Mitigati on/ Monitori ng
	<ul> <li>Encroachment in areas with IPs/lands with Ancestral Domain Claim</li> </ul>	Acquisition, Resettlement & Rehabilitation Plan (LARRP) or Resettlement Action Plan (RAP) thru prior consultation with Project Affected Persons (PAPs) Identify resettlement site (if selected as option) and subject the RAP to consultation with host community Implement the LARR/RAP, including payments of compensation, at least a month prior to start of Construction Works Reroute FMR if possible to lessen impacts, unless the IPs are among the beneficiaries of the FMR Apply for FBI and secure FPIC from the IPs thru the NCIP		□ LGU □ PO/N GO	
	<ul> <li>Damage or cause disturbance to adjacent or nearby sites of Cultural Heritage</li> </ul>	<ul> <li>Change the FMR location or design to avoid or lessen probability of damage</li> <li>Secure NHI clearance &amp; coordinate on design/ construction works</li> </ul>		□ LGU   □ PO/N GO	

Project Phase / Activities	Possible Environmental Impacts	Mitigating Measures	Monitori ng Paramet ers	Respo nsible Agency / Unit	Cost of Mitigati on/ Monitori ng
	✓ Unstable or disturbed slopes/ banks may cause damage to FMR	✓ Include in the design appropriate erosion control, slope stabilization and protection measures		□ LGU □ LGU □ □ PO/N GO	c/o D.E.D
	✓ Negative reactions from the public due to lack of information and coordination	✓ Hold consultative meetings with project beneficiaries and affected persons on the project components and mgt plan		□ LGU □ LGU □ PO/N GO	P5,000.00
	✓ Damage existing utilities and structures, resulting in disruption of service	<ul> <li>✓ Re-locate or redesign road route to avoid or minimize damage</li> <li>✓ Conduct prior coordination with utility companies and undertake timely information to the public to minimize inconvenience for loss of service</li> </ul>		□ LGU □ LGU □ PO/N GO	c/o Barangay
1.2 Procurem	✓Possible illegal or	✓ Procure construction materials from licensed			

Project Phase / Activities	Possible Environmental Impacts	Mitigating Measures	Monitori ng Paramet ers	Respo nsible Agency / Unit	Cost of Mitigati on/ Monitori ng
ent	unauthorized sourcing of raw/constructio n materials	sources, i.e. for sand and gravel, from those with valid MGB/EMB permits; for timber resources, from those with valid FMB/EMB permits		Baranga y Council, Contract or, LGU	c/o B.A.C
1.3 Hi ring of labor and other manpo wer service s	<ul> <li>Increased employment opportunity and community income</li> <li>Entry of external workforce</li> </ul>	✓ Give hiring preference to qualified local community residents, particularly those who will be displaced		Baranga y Govern ment & LGU Isulan	
2.0 Constru	iction Phase				
2.1 Mobilizat ion/Temf acil /Bridge Construct ion/Demo b	✓ Soil erosion and landslides due to clearing/ excavation operations	<ul> <li>✓ Provide slope protection through bank compaction, rip-rapping on critical sections, or vegetative stabilization</li> <li>□ Designate a Spoils Storage Area, with topsoil set aside for later use and allow maximum re-use of spoils</li> </ul>	<ul> <li>✓ Presen ce of eroded areas near the site</li> <li>□ Occurre nce of landslid e</li> </ul>	Contractor :	
	<ul> <li>Removal of vegetation and disturbance to wildlife</li> </ul>	<ul> <li>Secure prior DENR Tree Cutting Permit (TCP)</li> <li>Do replacement planting with double purpose of serving as vegetation buffers for disturbed wildlife</li> <li>In forest roads, put up wildlife conservation signs, and set guidelines</li> </ul>	<ul> <li>Presenc         <ul> <li>e of</li> <li>FMB</li> <li>TCP</li> <li>Area</li> <li>replante</li> <li>d</li> <li>Presenc</li> <li>e of</li> <li>signages</li> </ul> </li> </ul>	Contractor :	c/o contractor

Project Phase / Activities	Possible Environmental Impacts	Mitigating Measures	Monitori ng Paramet ers	Respo nsible Agency / Unit	Cost of Mitigati on/ Monitori ng
	✓Dust suspension from spoils stockpiles, vehicle movement in	<ul> <li>with corresponding IEC</li> <li>for workers to prohibit</li> <li>wildlife collection,</li> <li>hunting, poaching, with</li> <li>meaningful</li> <li>consequences for</li> <li>violation such as</li> <li>employment termination</li> <li>✓ Compact spoils storage</li> <li>areas</li> <li>✓ Wet areas of dust</li> <li>sources to minimize</li> <li>discomfort to nearby</li> </ul>	<ul> <li># of violatio ns to set guidelin es</li> <li># public complaint s received by</li> </ul>	Contractor :	c/o contractor
	unpaved roads & construction works	✓ Control of vehicle speed to lessen suspension of road dust	Proponen t/ Contracto r	O & M	
	✓ Obnoxious gas & particulate emissions from vehicles, heavy equipment & genset	<ul> <li>Regular equipment M&amp;R</li> <li>Contractor to present proof of compliance with emission standards as part of the annual vehicle registration process</li> </ul>	<ul> <li>Presence of black smoke from constructi on sources</li> </ul>	Contractor :  O & M	
	✓ Noise generation from heavy equipment & genset operations	<ul> <li>Schedule equipment movement during non- peak hours of daytime vehicular traffic</li> <li>Minimize nor preferably no night-time construction activities</li> <li>Provide housing for gensets, if near residences</li> <li>Provide silencers/mufflers for</li> </ul>	□ # public complaint s received by Proponen t/ Contracto r	Contractor : 	c/o contractor

Project Phase / Activities	Possible Environmental Impacts	Mitigating Measures	Monitori ng Paramet ers	Respo nsible Agency / Unit	Cost of Mitigati on/ Monitori ng
		heavy equipment			
	✓ Increased river turbidity & siltation, causing inconvenience in community use of the affected river water	<ul> <li>✓ Set up sediment traps along rivers and/or gabions along banks to filter out eroded sediments</li> <li>✓ Same measures above for erosion control and slope stabilization</li> </ul>	□# public complaint s received by Proponen t/ Contracto r	Contractor : 	c/o contractor
	✓ Oil & grease contamination of water bodies due to poor equipment M & R & refuelling	<ul> <li>□ Provide oil &amp; grease traps in stilling ponds</li> <li>✓ Provide ring canals around fuelling tanks/ motorpool/ maintenance areas</li> <li>✓ Collect used oils in containers</li> </ul>	<ul> <li>Presence         <ul> <li>of oil</li> <li>film on</li> <li>water</li> <li>surface;</li> <li># public</li> <li>complaint</li> <li>s</li> <li>received</li> <li>by</li> <li>Proponen</li> <li>t/</li> <li>Contracto</li> <li>r</li> </ul> </li> </ul>	Contractor : 	c/o contractor
	✓ Decreased public access through the construction area	✓ Designate an alternate route for pedestrian and vehicles in coordination with the LGU or provide safe passageway thru the construction site	□# public complaint s received by Proponen t/ Contracto r	Contractor : 	
	✓ Increased traffic due to frequent heavy equipment/	✓ Schedule vehicle movement during lean daytime traffic hours or at night.	□ Presence of traffic signs □# of	Contractor :	c/o

Project Phase / Activities	Possible Environmental Impacts	Mitigating Measures	Monitori ng Paramet ers	Respo nsible Agency / Unit	Cost of Mitigati on/ Monitori ng
	vehicle movement	<ul> <li>✓ Provide traffic aides/flagmen (e.g. thru barangay), traffic signs to help ensure the free and safe flow of traffic</li> <li>✓ Maintain &amp; Repair temporary alternative route of vehicles &amp; pedestrians</li> </ul>	public complaint s received by Proponen t/ Contracto r □Occurren ce of traffic build-up		contractor
	✓ Increased community hazards of vehicular accidents and construction works	<ul> <li>✓ Provide appropriate warning signs, lighting and barricades, whenever practicable</li> <li>✓ Observe traffic rules, e.g. vehicle speed</li> <li>✓ Observe proper housekeeping during construction and demobilization to clear site of construction debris</li> <li>✓ Provide on-site medical services and supplies for any emergency, thru institutional and administrative arrangements with the barangay health unit</li> </ul>	<ul> <li>Presence of signages</li> <li># of accidents</li> <li>Presence of scattered constructi on debris</li> </ul>	Contractor :	c/o contractor and O & M
	✓ Occupational health hazards to workers	<ul> <li>✓ Require all workers to strictly observe safety standards</li> <li>✓ Put up safety signs along the road construction route</li> <li>✓ Provide potable water</li> </ul>	<ul> <li>Presence of signage's</li> <li>Quality of water source</li> <li>Presence</li> </ul>	Contractor : 	c/o contractor

Project Phase / Activities	Possible Environmental Impacts	Mitigating Measures	Monitori ng Paramet ers	Respo nsible Agency / Unit	Cost of Mitigati on/ Monitori ng
		& sanitary facilities for construction workers	of adequate sanitary facilities □# of medical complaint s or cases		
	✓ Increased micro- economic activity within the area	<ul> <li>✓ Coordinate with the LGU on management of traffic &amp; handling of solid waste</li> <li>✓ Comply with city/town ordinances</li> </ul>	<ul> <li>□#</li> <li>businesse</li> <li>s</li> <li>□ Presence</li> <li>of clean</li> <li>commerci</li> <li>al area</li> <li>□ Low</li> <li>traffic</li> </ul>	Contractor : 	c/o contractor
	<ul> <li>Damage to cultural property which may be traversed or encountered during construction</li> </ul>	<ul> <li>Reroute road, if possible</li> <li>If not possible to reroute, observe reporting and conservation protocols based on prior coordination with the NHI/NM</li> </ul>	□ Presence of clearance □# of public complaint s received by Proponen t & Contracto r	Contractor : 	c/o contractor
	✓ Impact to IPs, women & other vulnerable groups who may be affected by the road construction, including those	<ul> <li>✓ Addressed by measures to prevent water quality impacts</li> <li>✓ Prior consultation &amp; coordination to minimize disruption on daily domestic activities &amp; avoid violation of human rights</li> </ul>	□# of public complaint s received by Proponen t & Contracto r	Contractor : 	c/o contractor and LGU O & M

Project Phase / Activities	Possible Environmental Impacts	Mitigating Measures	Monitori ng Paramet ers	Respo nsible Agency / Unit	Cost of Mitigati on/ Monitori ng
	who may be inconvenience d in their use of the river downstream for domestic works. ✓ Over-flooding	✓ Provision of adequate	□ Pools of	Contractor	
	of the roadway due to excessive accumulation of rainwater and undiverted waterways	drainage system and proper road grading so that roadway will not be prone to flooding & erosion	water on the road after rains	: 	c/o contractor
2.2 Monitorin g of	✓ Poor M&E or lack of it can result to sub-	✓ Regular Project M&E integrates environmental M&E on	□ Occurren ce of damages	Contractor :	
quality of constructi on works 3.0 Operati	standard construction or use of sub- standard materials, potentially resulting to structural damages which can unnecessarily expose FMR users to hazards and accidents ✓Good Maintenance result to Quality Assurance for sustainability of FMR	conformance to original design/specs ✓Allocation of sufficient budget for project M&E ✓Designate, deputize or enter into an agreement with the barangay LGU or local community for transparent M&E of construction works ✓Provision for Contractor's performance bond or withholding final payment until repairs are done before turn- over by the Contractor to the LGU/PO/NGO	during constructi on Visual presence of sub- standard materials % completio n per schedule and budget	□LGU: □ LGU: □ P O/N GO □ 0 Local Communit y Rep: □ 0 Local	c/o Barangay and LGU

Project Phase / Activities	Possible Environmental Impacts	Mitigating Measures	Monitori ng Paramet ers	Respo nsible Agency / Unit	Cost of Mitigati on/ Monitori ng
	✓ Unsustained FMR operations at optimum capacity due to structural damages	<ul> <li>✓ Prepare and implement an acceptable O &amp; M Plan</li> <li>✓ Sustained and regular monitoring and maintenance &amp; repair of FMR structure</li> <li>✓ Allocate sufficient budget for M&amp;E and maintenance and repair</li> <li>✓ Designate, deputize or enter into an agreement with the barangay LGU or local community for M&amp;E of the FMR status</li> <li>✓ Provide appropriate load limit sign at FMR approach to lessen/prevent passing of overloaded vehicles</li> </ul>	<ul> <li>□ No. of accurate reports on O&amp;M status</li> <li>□ No. of back-jobs</li> <li>□ % repaired cracks</li> </ul>	□ LGU:      Local Communit y Rep:        Local Communit y Rep:   	c/o BROMTE AM, M.& E, Brangay official and beneficiarie S
	• Obstruction of water flow and aggregation of garbage	✓ Regular removal of debris and other materials clogging the road culverts upstream of the FMR that may obstruct water flow	<ul> <li>v Occurre nce of accumula ted garbage upstream of the FMR</li> <li>□ Occurren ce of damming</li> </ul>	□ EGU  □ PO/N GO 	c/o contractor
	✓Exposure of FMR users to vehicular hazards	✓ Provide appropriate vehicular safety warning signs at FMR approach	□ # of accident s	□ LGU   □ PO/N GO	P10,000.00

Project Phase / Activities	Possible Environmental Impacts	Mitigating Measures	Monitori ng Paramet ers	Respo nsible Agency / Unit	Cost of Mitigati on/ Monitori ng

	IMPORTANT REMINDER! HAVE YOU DONE THE FOLLOWING BEFORE FINALIZING YOUR PROJECT DESIGN & LOAN DOCUMENTS?				
		YES	NO		
a)	Have you re-evaluated the Project Design and integrated the relevant mitigating measures identified in the PD/EMP above ?	/			
b)	Have you actually integrated the corresponding mitigating/monitoring costs into the Final Project Cost?		/		

Prepared by:	Endorsed by:
OVETTE C. VIRAY	DIOSDADO G. PALLASIGUE
(Signature over Printed Name)	(Signature over Printed Name)
LGU: ISULAN, SULTAN KUDARAT	LGU: ISULAN, SULTAN KUDARAT
PO/NGO:	PO/NGO:
(Date signed)	(Date signed)

Based on the submitted loan application documents:

Final PD/EMP Reviewed by:

Reviewed PD/EMP Approved by:

(Signature over Printed Name) PMO:	(Signature over Printed Name) PMO:
GA :	GA :
(Date signed)	(Date signed)

Distribution of approved copies:

Proponent - original

PMO - copy

GA- copy