

A. Social Safeguard Aspects

The Social Assessment section of the FS should provide the following information:

1. **Project Beneficiaries** - Barangay Mabuhay has a total population of 1,425 residents and these are direct beneficiaries of this project, dominantly are Ilonggo by 70% of the total populace. Barangay Mabuhay is an agricultural area that is why 85% of the residents earned their living out of farming and the remaining 15% are belongs to professionals and business sectors. On religious affiliation, 60% are Roman Catholic, 40% are combination of Protestant religion, so far there are no Muslim or Indigenous religious groups in the area, except the residents in the project influence area where there are residents that belongs to IP, the Manobo tribe but in significant number.
2. **Indigenous Cultural Community/Indigenous Peoples (ICC/IP)** - Generally barangay Mabuhay is peaceful, they are industrious, have a strong Christian faith and because of this, they live in harmony and united as community. As to their Socio Economic status, 60% are still belong to poverty threshold income, at the moment the farmers are highly dependent on mono-cropping particularly on rice production, however, there are farmers in the area that shift to diversified farming by utilizing their vacant land into rubber, coconut and banana.

The facilities and services available at barangay Mabuhay are the following: Barangay Hall, Barangay Health Center, Day Care Center, complete Elementary School and Potabale Water Supply Level-II.

As part of the program of the LGU on Good Governance is the Participatory, Transparent and Accountabille governance. Among others, there was a massive consultative meetings conducted in every barangays from January 2010, the Consultative meeting at barangay Mabuhay was done November 3, 2010 at barangay stage and attended by all barangay officials, leaders and residents. Total number of participants is 158, 100 women and 58 men.

The meeting started at 9:30 AM, with prayer, national anthem followed by welcome address of barangay captain Joseph Escaro. The floor was given to the team. First was the orientation on the concept and mechanics and purpose of the meeting, what is all about participatory situational analysis. This was followed by a workshop, this involved the listing of problem, causes of problem, its affect if the problem is not addressed, person affected. This was followed by another workshop, the possible solution and strategies, output, input as intervention to resolve the issues and concerns. Next was the ranking using on the criteria which is the basis of rating and ranking of programs/projects/activities. After the consolidation it came out that Potable Water Supply ranks 1, Flood Control Dike ranks 2, FMR ranks 3 so on and so forth. Women are also represented in the assembly, out of 158 participants, 100 are women.

2. The project is not located or traversed ancestral domain area. Barangay Mabuhay is purely Christian community and dominantly is Ilonggo from Panay and Negros by 90%, all the rest are Cebuano and people from Luzon. There is no IP/IEC that will be affected of the project.
3. The Proposed Project is an existing road, it is not an all weather road because some of the portion is earth road and it is in this particular road section that easily destroyed. The project traverses titled land which the road right of way is one of the problems that must be given utmost concern in this case, the involvement of the barangay officials necessary. During the consultation, each land owners was requested to air their opinions and they voluntarily signified their willingness and allowed to utilize their land for the project by signing a Waiver of Rights and Deed of Donation.
4. During the actual physical assessment of the existing road it was found that the width is less than the standard design requirements of 8.0 meters, hence, there is a need of widening work. As noted there are several number of trees that are subject to be removed and it is described as follows:
5. With regards to infrastructure such as houses, structure or person that will be affected of displaced because of the project, there are no structure, houses or person that will be affected, however, there will be a temporary disturbance and inconvenience on the commuters because there are portion of roads that are subject to be closed because of concreting, because of this, there is a need for a detour so that the mobility of the commuters will not be totally hampered.
6. As explained earlier that no person are displaced only a small portion of land will be utilized due to excavation and widening of roads.

B. Environmental Safeguard Aspects:

1. Natural Habitat – the proposed FMR traversed an irrigated rice field and plain land and classified as agricultural area with respect to land uses. The project has a total length of 2.85kms and only about 1 km are located in the hilly with slightly sloping. Terrain starting at Sta. 01+088 from National Highway to Sta 02+380 of about 1.2 kms. Both sides of this portion are planted with Gemelina, Mahogany and rubber trees, however, only little number of trees are subject for removal as presented by Table above. All the rest of the road sides are planted by rice. The proposed FMR does not traverse habitat or critically protected area.
2. Physical Cultural Resources – with regards to significant cultural structure or any form of structures as described by the Manual, there is no such structure that are found in the area, therefore it is concluded that the proposed FMR does not cause any adverse effect to the above mentioned sites.
3. Terrain, Soil Types and Rainfall – as explained earlier that there are portions of road that is located in the hilly and slightly sloping terrain with a clay loam type of soil with strong

holding type of soil. Barangay Mabuhay is also known with high rain frequency but there is no record so far of land slide in the area. The project also included slope protection item in a portion of the road that is deemed necessary all other portion of the project is considered not critical.

4. Drainage Situation and Flooding Potential – drainage system must be properly considered because the area are fully irrigated rice land and it is also expected that big volume of water from the field that will accumulate to canals of which possibility of water spilling that may cause scouring.
5. Impact During Construction – Prior to the actual start of the construction, the contractor shall coordinate with the LGU about the schedule of work. The barangay captain of the recipient barangay should be also coordinated. The establishment of motorpool then including bunkhouse will be the first thing to be done. It should be established in the most strategic location, safe, convenient and accessible to the project must be considered and the barangay officials are the most appropriate persons to be consulted on this matter. The site must be fenced with guardhouse for personnel to take charge the recording and checking of in and out activities, person, supplies, materials and equipments on operation.
 - a. Temporary erosion and sediment control – usually erosions and landslide occurred on mountainous areas where the traversed, proper slope of side cuts, not allowing stockpile of earth that cause obstruction of water flow, on portion that needs slope protection shall also be considered in DED.

For areas having loose soil are the ones that easily eroded and cause sedimentation, proper earth moving and clearing of area is necessary. It is most appropriate if the construction operation is done during sunny days. Aside from the clearing of loose soil, planting of deep rooted plants in side cuts that the possibility and occurrence of soil erosions is highly expected.

- b. Construction Noise Mitigation - it is suggested that the location of equipment depot should not be located in areas that are highly and densely populated to avoid disturbance and nuisance caused by heavy equipments during check-up. It is also more appropriate if the operation are scheduled only on day time, no operation during night time. Proper check-up of engines to ensure good condition of equipment before using is also necessary.
 - c. Proper handling of construction waste – there must be a sanitary facilities for human waste, bathroom, comfort room with septic tank and water supply should be made available, in the case of waste from heavy equipment generated during washing is a combination of dust water and oil should not be allowed to flow to creeks, rivers but this will be provided of proper drainage towards its own septic tank. The use of oil generated during change oil should be put on containers for proper storage, there are also buyers of used oil in the barangay for farm equipments' rust protection. Smoke emission can be controlled with regular check

up and proper maintenance of equipment units thereby ensuring the good condition of heavy equipment.

- d. Safety – all workers should be given uniform, head protector, rain coats and boots. Proper log in and out in the morning to ensure that all workers are properly accounted for. Workers that are residents in the area must be allowed to go home in their respective households to lessen overcrowding in bunkhouses and generation of waste will be minimized.

**Mindanao Rural Development Project – Adaptable Loan Program II
Environmental Management Plan Template for Rural/Farm-to-Market Roads**

Name of Road : Rehabilitation of Poblacion-Mabuhay Farm to Market Road
Location : Brgy. Mabuhay, President Roxas, Cotabato
Implementing LGU: Local Government Unit of President Roxas
Estimated number of beneficiaries: 5,582
New or Rehab : Rehabilitation
Estimated Total Cost: P 24,362,832.42

A. Site and Design Consideration

B. Environmental Issues and Mitigation Measures

Issue (Potential Impact)	Assessment (Sample assessments)	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
1. Temporary increase in sedimentation during construction	[√] Topography of the road alignment necessitate massive earthmoving and cutting of clayey or loose topsoils [√] Cut materials will consist mainly of hard rocks and are unlikely to generate significant sediments	[√] Earthmoving/ cutting of slopes to be done during dry months [√] Proper disposal and compaction of spoils [√] No measures required	DED/POW; Contract
2. Potential contamination of surface and groundwater with oil/grease	[√] Waste oil and grease from equipment could contaminate surface water [] There will be no or insignificant	[√] Proper handling and disposal of waste oil and grease	Contract

Issue (Potential Impact)	Assessment (Sample assessments)	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
	amount of waste oil/grease		
3. Potential contamination with human waste	<input checked="" type="checkbox"/> Construction workers would be temporarily housed in a base camp <input checked="" type="checkbox"/> Workers would be mostly locals and are expected to go home to their respective houses after works	<input type="checkbox"/> Set up adequate latrine/toilet facility at the base camp	Contract
4. Potential disruption of traffic flow	<input checked="" type="checkbox"/> The access road and/or segments to be rehabilitated need is vital to daily activities of the residents and farmers and need to be kept open to traffic during construction <input checked="" type="checkbox"/> The construction will not affect daily movement of residents and farmers	<input checked="" type="checkbox"/> Keep the road open to traffic flow and minimize disruptions along the access road and/or construction area; Provide adequate warning signs and traffic personnel when necessary; <input checked="" type="checkbox"/> Undertake regular maintenance measures on the passable portions of the roads <input checked="" type="checkbox"/> Provide temporary detour in portions of the road as needed <input type="checkbox"/> No measures needed	Contract
5. Potential dust/mud nuisance during construction	Roads could become powdery during dry days and muddy during rainy days of the construction period <input type="checkbox"/> Access road and/or the construction/	<input checked="" type="checkbox"/> Undertake sprinkling of road (including access roads) during dry days, and filling up of potholes during rainy days, especially in residential areas <input type="checkbox"/> Set up speed limits for	Contract

Issue (Potential Impact)	Assessment (Sample assessments)	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
	rehabilitation works passes through a populated area <input type="checkbox"/> Access road and/or construction/rehabilitation does not pass through any populated area	vehicles, especially within residential areas <input type="checkbox"/> No measures needed	
6. Landslide/ erosion of exposed road sides resulting in sedimentation of waterways	<input checked="" type="checkbox"/> The road will traverse a mountainous area necessitating deep cuts on mountainsides, particularly between station 0+800 to sta. 1+300, etc (check DED for deep cuts)... <input type="checkbox"/> The exposed slopes will likely consist of highly erodible loose materials <input type="checkbox"/> The cut slopes will be hard materials that would resist erosion <input checked="" type="checkbox"/> The road passes through a relatively benign terrain, cuts will be minimal <input checked="" type="checkbox"/> The rehabilitation work does not involve additional road cuts	<input type="checkbox"/> Include slope protection works at the following stations: there is no slope protection only concrete lining at sta. 0+800 to sta. 1+300 (Specify the type/s of slope protection to be applied at each section- Consult with the Municipal Engineer: <input type="checkbox"/> Bioengineering with geomat and cover crop <input checked="" type="checkbox"/> Fast growing shrub species <input type="checkbox"/> Riprap <input type="checkbox"/> Gabions <input type="checkbox"/> Terracing <input checked="" type="checkbox"/> Concrete protection wall <input type="checkbox"/> Others _____)	DED/POW LGU Commitment Letter
7. Inadequate drainage resulting in	<input checked="" type="checkbox"/> The road will block runoff,	<input checked="" type="checkbox"/> Installation of cross drain RCCP and Box	DED

Issue (Potential Impact)	Assessment (Sample assessments)	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
flooding or ponding	resulting in flooding on one side of the road during rainy days. [] Drainage issues unlikely	Culvert at Stations 0+040, 0+130, 0+180, 1+808, 1+012, 1+360, 1+725, 1+880, 2+185, 2+500, 2+617, 2+720, 2+840,	
8. Potential increase use of pesticides due to intensification of cash crop production in the area	[√] There is an ongoing IPM program of DA in the service area [√] Farmers in the service area have not been trained on IPM	[] DA to continue to support IPM program [] LGU to Coordinate with DA on IPM training	Capacity Building Plan O&M Plan; Capacity Building Plan
9. Potential acceleration of denudation of the upland/hilly areas due to intensification of crop production	[√] The proposed road will connect to the market an upland/hilly area where farmers are currently practicing erosive farming techniques. The road could help accelerate the denudation of the upland/hillsides rendering them unproductive in a few years. [] The road connects only lowland farms to the market	[√] DA to coordinate with LGU for the introduction of sustainable upland farming systems in the area [] No measure required [√] Intensify planting of permanent crops provide support to agricultural programs to the farmers with zero fertilizers	O&M Plan; Capacity Building Plan
10. Potential increased in encroachments of human activities	[] The proposed road will improve human access to the nearby public forest,	[] Coordinate with DENR for the enactment of ordinance deputizing the local community to enforce	O&M Plan; Capacity Building Plan

Issue (Potential Impact)	Assessment (Sample assessments)	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
into the nearby public forest	resulting in increase slash and burn cultivation, illegal logging and poaching. [] The proposed road does not improve access to a public forest	forestry laws [] No measure required	
10. Local employment	[] Construction will provide local employment opportunities [] Construction does not provide any local employment opportunities	[] Hiring priority shall be given to qualified local residents; Implement RI Manual on local hiring [] No measures required	Contract
<others issues>.			

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