

## FISHERY / AQUACULTURE PROJECTS

## II. ENVIRONMENTAL IMPACTS AND CLIMATE CHANGE RISK MANAGEMENT PLAN

| Possible Environmental/Social Impacts                         | Baseline Environment   | Preventive/Mitigating Measures   | Monitoring Parameters/ Implementation  | Remarks |
|---|--|--|--|---------|
|   |  | <input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost   |  |         |
| <b>LAND</b>   |  |  |  |         |
| <input checked="" type="checkbox"/> Consistency with land use | <p>Current land use w/in 1km radius (as per zoning ordinance):</p> <p><input type="checkbox"/> Residential</p> <p><input type="checkbox"/> Commercial/ Institutional</p> <p><input type="checkbox"/> Industrial</p> <p><input type="checkbox"/> Agricultural/ Recreational</p> <p><input type="checkbox"/> Protected Areas</p> <p><input type="checkbox"/> Others, specify</p><br><p>Actual land uses w/in 1km radius:</p> <p><input type="checkbox"/> Residential</p> <p><input type="checkbox"/> Commercial/ Institutional</p> <p><input type="checkbox"/> Industrial</p> <p><input type="checkbox"/> Agricultural/ Recreational</p> <p><input type="checkbox"/> Protected Areas</p> <p><input type="checkbox"/> Others, specify</p> | <p><input checked="" type="checkbox"/> See attached proof of compatibility with land use</p> <p><input checked="" type="checkbox"/> Limit project activities to what is compatible to the land use</p> | <p>Actual land uses w/in 1km radius:</p> <p><input type="checkbox"/> Residential</p> <p><input type="checkbox"/> Commercial/ Institutional</p> <p><input type="checkbox"/> Industrial</p> <p><input type="checkbox"/> Agricultural/ Recreational</p> <p><input type="checkbox"/> Protected Areas</p> <p><input type="checkbox"/> Others, specify</p> |         |

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|---|---|---|---|---------|
|   |   | <input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost  |   |         |
| <input type="checkbox"/> Disturbance to wildlife due to vegetation clearing   | Existing vegetation in the area:<br><input type="checkbox"/> Forestland<br><input type="checkbox"/> Marshland<br><input type="checkbox"/> Grassland<br><input type="checkbox"/> Mangrove<br><input type="checkbox"/> Wetland<br><input type="checkbox"/> Others, specify  | <input checked="" type="checkbox"/> Comply with conditions of DENR/LGU SLUP, Tree Cutting Permit, ROW, PCA Permit<br><input checked="" type="checkbox"/> Limit land clearing as much as possible<br><input checked="" type="checkbox"/> Provide temporary fencing for vegetation that will be retained<br><input checked="" type="checkbox"/> Promote restoration of damaged or destroyed vegetation where possible (e.g., tree planting)<br><input type="checkbox"/> Provide adequate buffer zone                                      | <input checked="" type="checkbox"/> Annual inspection of area replanted/ re-vegetated<br><input type="checkbox"/> Others, specify   |         |
| <input type="checkbox"/> Change in surface landform/ topography/ terrain/slope<br><input type="checkbox"/> Soil Erosion | Slope:<br><input type="checkbox"/> Flat (0-3%)<br><input type="checkbox"/> Gently sloping to rolling (3-18%)<br><input type="checkbox"/> Steep (>18%)<br><br>Is the project site located in an area identified by MGB/PAG-ASA/ PHIVOLCS as hazard prone?<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | <input type="checkbox"/> Employ appropriate soil erosion control and slope protection measures (e.g. contour farming, hedgerow planting, etc.) considering the natural hazards and climate projections in the area<br><input type="checkbox"/> Stabilization of embankment with grasses or other soil cover<br><input type="checkbox"/> Construct during dry season<br><input type="checkbox"/> Others, specify<br><br><input type="checkbox"/> Comply with the DENR Administrative Order No. 2003-30 and DENR Administrative Order No. | <input type="checkbox"/> Regular inspection of slope protection measures in erosion-prone areas<br><input type="checkbox"/> Regular inspection for new eroded areas near the site<br><input type="checkbox"/> Others, specify |         |

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|---|---|--|--|---------|
|   |   | <input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost   |  |         |
|   |   | 2000-28, Implementing Guidelines on Engineering Geological and Geo-hazard Assessment (EGGA).   |  |         |
| <input type="checkbox"/> Impairment of visual aesthetics<br><input type="checkbox"/> Devaluation of land values | Presence of visually significant landforms/landscape/structures?<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | <input type="checkbox"/> Implement landscaping and other beautification measures<br><input type="checkbox"/> Provide adequate buffer<br><input type="checkbox"/> Compensate adjacent property owners<br><input type="checkbox"/> Others, specify | <input type="checkbox"/> Regular inspection of landscaping and other beautification activities<br><input type="checkbox"/> Regular monitoring of buffer zones<br><input checked="" type="checkbox"/> Regular monitoring for presence/absence of complaints from adjacent property owners |         |

| Possible Environmental/Social Impacts  | Baseline Environment  | Preventive/Mitigating Measures  | Monitoring Parameters/ Implementation   | Cost of Mitigation/ Monitoring  |           |                              |   |                                |   |                             |   |  |   |  |
|--|---|---|---|---|-----------|------------------------------|---|--------------------------------|---|-----------------------------|---|--|---|--|
| <b>WATER</b>   |   |   |   |   |           |                              |   |                                |   |                             |   |  |   |  |
| <input type="checkbox"/> Water quality degradation<br><input type="checkbox"/> Others, specify | <p>Current Water Use:</p> <p><input type="checkbox"/> Fishery</p> <p><input type="checkbox"/> Tourist Zone / Park</p> <p><input type="checkbox"/> Recreational</p> <p><input type="checkbox"/> Industrial</p> <p><input type="checkbox"/> Agricultural</p> <p>Distance of project area to the nearest well used:</p> <p><input type="checkbox"/> 0 to less than 0.5 km</p> <p><input type="checkbox"/> 0.5 to 1 km</p> <p><input type="checkbox"/> More than 1 km</p> <p>Use of nearest well:</p> <p><input type="checkbox"/> Drinking/Domestic</p> <p><input type="checkbox"/> Industrial</p> <p><input type="checkbox"/> Agricultural</p> | <input checked="" type="checkbox"/> Set up proper and adequate sanitary facilities<br><input checked="" type="checkbox"/> Strictly observe proper waste handling and disposal | <p>Regular (ocular) inspection of:</p> <p><input type="checkbox"/> Drainage / canal systems</p> <p><input type="checkbox"/> Water treatment facility (i.e., grease trap, septic tank, etc.)</p> <p>Regular monitoring of the following:</p> <table border="1"> <thead> <tr> <th>Parameter</th><th>frequency</th></tr> </thead> <tbody> <tr> <td><input type="checkbox"/> BOD</td><td> <input type="checkbox"/> Annual<br/> <input type="checkbox"/> Semi-annual<br/> <input type="checkbox"/> Quarterly<br/> <input type="checkbox"/> Monthly               </td></tr> <tr> <td><input type="checkbox"/> Color</td><td> <input type="checkbox"/> Annual<br/> <input type="checkbox"/> Semi-annual<br/> <input type="checkbox"/> Quarterly<br/> <input type="checkbox"/> Monthly               </td></tr> <tr> <td><input type="checkbox"/> pH</td><td> <input type="checkbox"/> Annual<br/> <input type="checkbox"/> Semi-annual<br/> <input type="checkbox"/> Quarterly<br/> <input type="checkbox"/> Monthly               </td></tr> <tr> <td><input type="checkbox"/> TSS concentration</td><td> <input type="checkbox"/> Annual<br/> <input type="checkbox"/> Semi-annual<br/> <input type="checkbox"/> Quarterly<br/> <input type="checkbox"/> Monthly               </td></tr> </tbody> </table> | Parameter   | frequency | <input type="checkbox"/> BOD | <input type="checkbox"/> Annual<br><input type="checkbox"/> Semi-annual<br><input type="checkbox"/> Quarterly<br><input type="checkbox"/> Monthly | <input type="checkbox"/> Color | <input type="checkbox"/> Annual<br><input type="checkbox"/> Semi-annual<br><input type="checkbox"/> Quarterly<br><input type="checkbox"/> Monthly | <input type="checkbox"/> pH | <input type="checkbox"/> Annual<br><input type="checkbox"/> Semi-annual<br><input type="checkbox"/> Quarterly<br><input type="checkbox"/> Monthly | <input type="checkbox"/> TSS concentration | <input type="checkbox"/> Annual<br><input type="checkbox"/> Semi-annual<br><input type="checkbox"/> Quarterly<br><input type="checkbox"/> Monthly |  |
| Parameter  | frequency   |   |   |   |           |                              |   |                                |   |                             |   |  |   |  |
| <input type="checkbox"/> BOD   | <input type="checkbox"/> Annual<br><input type="checkbox"/> Semi-annual<br><input type="checkbox"/> Quarterly<br><input type="checkbox"/> Monthly   |   |   |   |           |                              |   |                                |   |                             |   |  |   |  |
| <input type="checkbox"/> Color   | <input type="checkbox"/> Annual<br><input type="checkbox"/> Semi-annual<br><input type="checkbox"/> Quarterly<br><input type="checkbox"/> Monthly   |   |   |   |           |                              |   |                                |   |                             |   |  |   |  |
| <input type="checkbox"/> pH  | <input type="checkbox"/> Annual<br><input type="checkbox"/> Semi-annual<br><input type="checkbox"/> Quarterly<br><input type="checkbox"/> Monthly   |   |   |   |           |                              |   |                                |   |                             |   |  |   |  |
| <input type="checkbox"/> TSS concentration   | <input type="checkbox"/> Annual<br><input type="checkbox"/> Semi-annual<br><input type="checkbox"/> Quarterly<br><input type="checkbox"/> Monthly   |   |   |   |           |                              |   |                                |   |                             |   |  |   |  |
| <input type="checkbox"/> Increased occurrence of flooding                                      | <p>Is the project site located in an area identified by MGB/PAGASA as flood prone?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>   | <input type="checkbox"/> Use appropriate design for project facilities<br><input type="checkbox"/> Implement appropriate drainage system                                      | <input checked="" type="checkbox"/> Regular monitoring for presence/absence of complaints<br><input checked="" type="checkbox"/> Regular coordination with concerned agencies   | <input checked="" type="checkbox"/> Cost integrated in the construction/ operation cost |           |                              |   |                                |   |                             |   |  |   |  |

| Possible Environmental/Social Impacts  | Baseline Environment  | Preventive/Mitigating Measures   | Monitoring Parameters/ Implementation   | Cost of Mitigation/ Monitoring |
|--|---|--|---|--------------------------------|
|  |   | <input type="checkbox"/> Regularly remove debris and other materials that may obstruct water flow<br><input type="checkbox"/> Use appropriate technology (e.g., raised hand-pumps) to protect drinking water from flood contamination<br><input type="checkbox"/> Others, specify  | <input checked="" type="checkbox"/> Regular monitoring for increased frequency of flooding<br><input type="checkbox"/> Others, specify  |                                |
|  |   |  |   |                                |
| <input type="checkbox"/> Displacement of residents in the project site and within its vicinity<br><input type="checkbox"/> Displacement of Indigenous Peoples<br><input type="checkbox"/> Enhanced employment and/or livelihood opportunities<br><input type="checkbox"/> Reduced employment and/or livelihood opportunities<br><input type="checkbox"/> Increased revenues for LGU<br><input type="checkbox"/> Disruption/ Competition in delivery of public services (e.g., education, peace and order, etc.)<br><input type="checkbox"/> Enhanced delivery of | Size of population of host barangay:<br><input type="checkbox"/> ≤ 1,000 persons<br><input type="checkbox"/> >1,000 and ≤ 5,000 persons<br><input type="checkbox"/> >5,000 persons<br><br>Classification of host barangay:<br><input type="checkbox"/> Urban<br><input type="checkbox"/> Rural<br><br>Available services within/near the host barangay:<br><input type="checkbox"/> Schools (e.g. elementary, high school, college)<br><input type="checkbox"/> Health facilities (e.g., clinics, hospitals, etc.)<br><input type="checkbox"/> Peace and order (e.g., police outpost, Brgy. Tanod, etc.)<br><input type="checkbox"/> Recreation and sports facilities<br><input type="checkbox"/> Others, specify | <input type="checkbox"/> Provide relocation/disturbance compensation packages<br><input checked="" type="checkbox"/> Prioritize local residents for employment<br><input checked="" type="checkbox"/> Promptly pay local taxes and other financial obligations<br><input checked="" type="checkbox"/> Regular coordination with LGU<br><input type="checkbox"/> Prior consultation and coordination to minimize disruption on daily domestic activities & to ensure respect for IP rights and cultural practices<br><input type="checkbox"/> Ensure participation of IPs in consultations and dialogues<br><input type="checkbox"/> Provide appropriate traffic/warning signs, lighting, etc<br><input type="checkbox"/> Others, specify | <input checked="" type="checkbox"/> Presence/Absence of complaints<br><input checked="" type="checkbox"/> Regular coordination with LGU<br><input type="checkbox"/> Others, specify |                                |

| Possible Environmental/Social Impacts   | Baseline Environment | Preventive/Mitigating Measures | Monitoring Parameters/ Implementation | Cost of Mitigation/ Monitoring |
|---|----------------------|--------------------------------|---------------------------------------|--------------------------------|
| <p>public services (e.g., education, peace and order, etc.)</p> <p><input type="checkbox"/> Increase in traffic volume and worsening of traffic flow</p> <p><input type="checkbox"/> Depletion of local fish populations by stocking of wild fry/fingerlings in ponds</p> |                      |                                |                                       |                                |