

Coastal & River

MANAGEMENT UNIT (MU)	ISSUE/IMPORTANCE	OBJECTIVE	ACTION/STRATEGY	RESPONSIBLE AGENCIES
MU10	Reclamation	<ul style="list-style-type: none"> <li>Stabilize shorelines &amp; existing revetments and reduce erosion rates while preserving the natural sediment transport and coastal dynamics.</li> <li>Prevent or minimize flooding in reclaimed areas, especially during heavy rainfall and monsoon seasons.</li> <li>Improve the capacity and functionality of drainage systems to prevent inland flooding and manage stormwater effectively</li> </ul>	<ul style="list-style-type: none"> <li>Frequents observation</li> <li>Hard Engineering Solutions, i.e., Groynes, Breakwaters &amp; Revetment</li> <li>Strengthening the existing revetments.</li> <li>Safe Platform Levels for buildings</li> <li>Stormwater Management and Flood Control, i.e., Flood Barriers, Polder Systems &amp; Flood Storage Areas</li> <li>Permeable Surfaces</li> <li>Advanced Forecasting and Warning Systems</li> <li>Upgrade Drainage Infrastructure, i.e., Expand Drainage Capacity &amp; Green Infrastructure</li> <li>Pumping Stations</li> <li>Regular Maintenance</li> <li>Monitor and maintain tidal gates and channels regularly.</li> </ul>	JPS Melaka JPS Daerah
	<ul style="list-style-type: none"> <li>Increased erosion/accretion and altered coastal dynamics</li> <li>Increased flooding risk in reclaimed areas, especially during monsoons.</li> <li>Strain on drainage systems leading to inland flooding</li> <li>Risk from sea-level rise, with reclaimed land close to sea level.</li> <li>Dispersion of Suspended Sediments</li> </ul>			

### Fisheries and Aquaculture

The proposed development management strategies for marine capture fisheries and recreational fisheries at MU10 are as follow.

MANAGEMENT UNIT (MU) (LOCATION)	MANAGEMENT OBJECTIVES	MANAGEMENT STRATEGIES	ISSUE/IMPORTANCE/REASON	RESPECTIVE/ RESPONSIBLE AGENCIES
<ul style="list-style-type: none"> <li>MU10 (Padang Temu)</li> </ul>	<b>Marine Capture Fisheries</b> <ul style="list-style-type: none"> <li>To ensure high standards of fish quality, enhanced food safety and nutritional value through provision of better fisheries infrastructures and facilities.</li> </ul>	<ul style="list-style-type: none"> <li>Upgrade the fisheries infrastructures at Padang Temu fish landing point.</li> </ul>	<ul style="list-style-type: none"> <li>Lack of fisheries infrastructures at Padang Temu fish landing point.</li> </ul>	<ul style="list-style-type: none"> <li>Department of Fisheries.</li> <li>LKIM.</li> <li>Melaka State Government.</li> </ul>
<ul style="list-style-type: none"> <li>MU10 (Kompleks LKIM Sg. Duyong and Padang Temu)</li> </ul>	<ul style="list-style-type: none"> <li>To improve the navigation of fishing vessels at Kompleks LKIM Sg. Duyong and Padang Temu.</li> </ul>	<ul style="list-style-type: none"> <li>Undertake maintenance dredging at Sg. Melaka river mouth.</li> </ul>	<ul style="list-style-type: none"> <li>Siltation issues prevented safe passage for fishing vessel during low tides.</li> </ul>	<ul style="list-style-type: none"> <li>Department of Drainage and Irrigation.</li> </ul>
	<ul style="list-style-type: none"> <li>To ensure food security and safety.</li> </ul>	<ul style="list-style-type: none"> <li>Deployment of artificial reefs and Fish Aggregating Devices (FADs).</li> <li>Promote sustainable coastal development through enhancement of fisheries habitat (eco-engineering structures).</li> <li>No new coastal reclamation projects allowed from Parit Cina to Sg. Duyong.</li> </ul>	<ul style="list-style-type: none"> <li>Coastal development such as reclamation can cause adverse impacts on fisheries resources and fishermen income.</li> </ul>	<ul style="list-style-type: none"> <li>Department of Forestry,</li> <li>Department of Fisheries,</li> <li>Developers.</li> </ul>
<ul style="list-style-type: none"> <li>MU10 (Padang Temu)</li> </ul>	<b>Recreational Fisheries</b> <ul style="list-style-type: none"> <li>To improve recreational fisheries infrastructures and facilities.</li> </ul>	<ul style="list-style-type: none"> <li>Upgrade the recreational fisheries infrastructures.</li> <li>Upgrade/Provision of septic tanks/toilets.</li> </ul>	<ul style="list-style-type: none"> <li>Limited recreational fisheries infrastructures and facilities.</li> </ul>	<ul style="list-style-type: none"> <li>Melaka State Government</li> <li>MOTAC Melaka</li> <li>Majlis Bandaraya Melaka Bersejarah (MBMB).</li> </ul>
	<ul style="list-style-type: none"> <li>To promote good fishing practices in recreational fishing activities.</li> </ul>	<ul style="list-style-type: none"> <li>Provision of sufficient garbage bins and portable toilets at the recreational beaches.</li> <li>Promote public awareness by organizing environmental talks on coastal cleanliness and protection of coastal habitats.</li> </ul>	<ul style="list-style-type: none"> <li>Lack of solid waste disposal infrastructures and portable toilets.</li> </ul>	<ul style="list-style-type: none"> <li>Department of Fisheries,</li> <li>Melaka State Government</li> <li>NGOs</li> </ul>

## Water Quality

MANAGEMENT UNIT (MU) (LOCATION)	MANAGEMENT OBJECTIVES	MANAGEMENT STRATEGIES	ISSUE/IMPORTANCE/REASON	RESPECTIVE RESPONSIBLE AGENCIES
MU10	<p>Waste Control</p> <ul style="list-style-type: none"> <li>Solid waste and Scheduled Waste Control</li> </ul> <p>Erosion and Sediment Control</p> <ul style="list-style-type: none"> <li>Control the sedimentation</li> </ul> <p>Sewage Discharge</p> <ul style="list-style-type: none"> <li>Control of sewage discharge</li> </ul>	<ul style="list-style-type: none"> <li>New activities that fall under the Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 2015 must submit the EIA report to the Department of Environment for approval.</li> <li>New activities that do not fall under the Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 2015 shall submit their development proposal to the Local Authority and conditions on discharge should be imposed on the operators.</li> <li>Provision of Erosion and Sediment Control (ESCP) for land clearing activities</li> <li>Submission of the ESCP plan to the Department of Irrigation and Drainage (DID) for approval prior to start of land clearing and earthwork activities</li> <li>Provision of septic tanks in remote areas</li> <li>Upgrading of existing sanitary facilities</li> <li>Compliance to Malaysian Marine Water Quality Standard</li> <li>Compliance to Standard Kebangsaan Kualiti Air Rekreasi Semulajadi dan Garispanduan bagi Pemantauan Air Rekreasi Semulajadi</li> <li>Compliance with Environmental Quality (Sewage) Regulations 2009</li> <li>Environmental Quality (Scheduled Waste) Regulations 2005</li> </ul>	<ul style="list-style-type: none"> <li>MU11 has the same land use pattern as MU10, with housing as the largest land use.</li> </ul>	<ul style="list-style-type: none"> <li>Department of Environment</li> <li>Local Council and Authorities</li> <li>Indah Water Konsortium (IWK)</li> <li>National Water Services Commission (Suruhanjaya Perkhidmatan Air Negara, SPAN)</li> </ul>

## Land Use

MANAGEMENT UNIT (MU) (LOCATION)	MANAGEMENT OBJECTIVES	MANAGEMENT STRATEGIES	ISSUE/IMPORTANCE/REASON	RESPECTIVE/ RESPONSIBLE AGENCIES
Human Settlement				
MU10	<ul style="list-style-type: none"> <li>To manage and control any land use changes along the coast</li> </ul>	<ul style="list-style-type: none"> <li>Define coastal zoning categories (including residential, commercial, conservation, and mixed-use areas).</li> <li>Establish zoning regulations</li> <li>Control the allowable density type for any development along the coast.</li> <li>Limit land conversion and approval for TOL permit</li> </ul>	<ul style="list-style-type: none"> <li>Increase of population along the coastline may impact the existing infrastructure (including road, utilities, and traffic)</li> </ul>	<ul style="list-style-type: none"> <li>MBMB</li> <li>PTD Melaka Tengah</li> <li>PTG Melaka</li> <li>JKR</li> <li>JPS</li> <li>IWK</li> <li>SAMB</li> <li>TNB</li> </ul>
	<ul style="list-style-type: none"> <li>To prevent and control erosion.</li> <li>To ensure compliance with environmental regulations regarding hydraulic impact assessments and erosion control.</li> </ul>	<ul style="list-style-type: none"> <li>Construct proper erosion control structures such as retaining walls and sediment control barriers.</li> <li>Conduct regular hydrological studies to identify high-risk erosion zones.</li> <li>Enforce guidelines for land development near water bodies to minimize erosion risks.</li> </ul>	<ul style="list-style-type: none"> <li>Impact from the hydraulic can cause erosion to the settlement</li> </ul>	<ul style="list-style-type: none"> <li>JPS</li> </ul>
	<ul style="list-style-type: none"> <li>To reduce environmental impact caused by the construction activities on the site</li> </ul>	<ul style="list-style-type: none"> <li>Prepare an Environmental Impact Assessment (EIA) for any major projects along the coast (based on the DOE requirements).</li> <li>Manage thorough evaluations of EIA before approving construction projects.</li> <li>Adhere to the Environmental Managing Plan (EMP) recommendations as part of the mitigation major.</li> </ul>	<ul style="list-style-type: none"> <li>Any changes to land use due to construction may affect the environment.</li> </ul>	<ul style="list-style-type: none"> <li>MBMB</li> <li>DOE</li> </ul>

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		<ul style="list-style-type: none"> <li>Conduct periodical inspection during and after construction.</li> </ul>		
	<ul style="list-style-type: none"> <li>To monitor coastal development</li> </ul>	<ul style="list-style-type: none"> <li>Conduct periodical inspection.</li> <li>Regulate the law related to any developments along the coast.</li> <li>Implement sustainable zoning regulations to prevent excessive land reclamation.</li> </ul>	<ul style="list-style-type: none"> <li>Coastal development within Melaka coastline possesses adverse impacts towards adjacent mudflat areas.</li> </ul>	<ul style="list-style-type: none"> <li>MBMB</li> <li>PTD Melaka Tengah</li> <li>PTG Melaka</li> </ul>
Forest and Mangroves				
MU10	<ul style="list-style-type: none"> <li>To regulate human activities in order to minimize environmental impact</li> </ul>	<ul style="list-style-type: none"> <li>Establish guidelines for tourism, aquaculture, and infrastructure development.</li> <li>Enforce regulations to control pollution, illegal logging, and encroachment.</li> </ul>	<ul style="list-style-type: none"> <li>Existence of the human activities within the mangrove forest, and requires proper management</li> </ul>	<ul style="list-style-type: none"> <li>FDPM</li> <li>MBMB</li> </ul>