

MANAGEMENT UNIT (MU) (LOCATION)	MANAGEMENT OBJECTIVES	MANAGEMENT STRATEGIES	ISSUE/IMPORTANCE/REASON	RESPECTIVE RESPONSIBLE AGENCIES
MU10	<b>Setback</b> <ul style="list-style-type: none"> <li>Necessary deviations to allow for existing infrastructures and predicted movement of shorelines.</li> </ul>	<ul style="list-style-type: none"> <li>Setback have been determined based on the coastal features and important infrastructure. Generally, the DID guidance of landward of the tree line 400m for mangroves and 60m landward of the Highest Astronomical Tide contour for sandy beaches is followed. However, deviations were necessary to allow for existing infrastructures such as roads and bunds where the authorities will be required to maintain the line. In such cases, the setback is placed landward of the infrastructure (see Appendix Bund Mangrove Cover and Setback).</li> <li>The DSS should be used to determine the setback required for future developments.</li> </ul>	<ul style="list-style-type: none"> <li>Allow for movement of the shoreline.</li> </ul>	<ul style="list-style-type: none"> <li>JPS</li> </ul>
	<b>Sea Level Rise</b> <ul style="list-style-type: none"> <li>Developments along the shoreline must take into account Sea Level Rise.</li> </ul>	<ul style="list-style-type: none"> <li>Determine practical setbacks along the coastal area.</li> <li>To include the sea level rise value (aside from wind setup, storm surge and wave runup) in the calculation of the platform/finish level of a design.</li> </ul>	<ul style="list-style-type: none"> <li>Coastal development</li> </ul>	

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MU10	<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 infrastructure at Sg. Gelam fish landing point.</li> </ul>	<ul style="list-style-type: none"> <li>Lack of fisheries infrastructure at Sg. Gelam fish landing points</li> </ul>	<ul style="list-style-type: none"> <li>Lembaga Kemajuan Ikan Malaysia (LKIM)</li> </ul>
	<ul style="list-style-type: none"> <li>To improve the navigation of fishing vessels at the affected areas.</li> </ul>	<ul style="list-style-type: none"> <li>Undertake maintenance dredging with proper planning and mitigation measures.</li> </ul>	<ul style="list-style-type: none"> <li>Siltation problem at Sg. Gelam have prevented safe passage for fishing vessel during low tides.</li> </ul>	<ul style="list-style-type: none"> <li>JPS</li> <li>Marine Department</li> <li>Department of Fisheries</li> </ul>
	<ul style="list-style-type: none"> <li>To promote sustainable fishing methods and practices.</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen the surveillance and enforcement.</li> </ul>	<ul style="list-style-type: none"> <li>Utilization of unsustainable fishing gear as a common fishing method practice.</li> </ul>	<ul style="list-style-type: none"> <li>Malaysian Maritime Enforcement Agency</li> <li>Department of Fisheries</li> </ul>

	<b>Aquaculture</b> <ul style="list-style-type: none"> <li>• To minimize the potential of water quality degradation from aquaculture activities.</li> <li>• To promote sustainable aquaculture practice.</li> </ul>	<ul style="list-style-type: none"> <li>• Provision of proper wastewater treatment facilities at aquaculture farms to reduce discharge of untreated water directly into the river.</li> <li>• Regular maintenance of the wastewater treatment facilities.</li> <li>• Encourage aquaculture farmers to get MyGAP certification.</li> </ul>	<ul style="list-style-type: none"> <li>• Degradation of water quality due to the untreated wastewater discharge from brackishwater pond culture.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Fisheries</li> </ul>
	<b>Recreational Fisheries</b> <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 (Pasir Panjang).</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 infrastructure &amp; portable toilets</li> </ul>	<ul style="list-style-type: none"> <li>• Local Authority</li> <li>• Department of Fisheries</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>• Promote public awareness by organizing environmental talks on coastal cleanliness and protection of coastal habitats.</li> <li>• Prohibit fishing tournament/competitions at the turtle landing site during nesting season.</li> </ul>	<ul style="list-style-type: none"> <li>• Potential disturbance towards turtle landing/nesting areas due to recreational fisheries activities especially during fishing competitions</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Fisheries</li> <li>• Local Authority</li> </ul>

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MU10	<ul style="list-style-type: none"> <li>Accelerate the growth of industry, tourism, agriculture, and commerce</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of specialized industrial zones for industrial activities</li> </ul>	<ul style="list-style-type: none"> <li>Specify the type and activities of industry according to the area.</li> <li>Strengthen the function and activities of the industry in Manjung District.</li> <li>Coordinate PKNP and MPM planning on new industrial development.</li> <li>To ease prospective investor and existing player on industry in conducting their business in the Manjung district.</li> </ul>	<ul style="list-style-type: none"> <li>Manjung Municipal Council</li> </ul>
		<ul style="list-style-type: none"> <li>Enhancing turtle conservation programs</li> </ul>	<ul style="list-style-type: none"> <li>Reduce the risk of turtle death and extinction.</li> <li>The availability of these natural assets will strengthen the development of eco-tourism of the district</li> </ul>	<ul style="list-style-type: none"> <li>Department of Fisheries Malaysia</li> <li>Manjung Municipal Council</li> <li>Tourism Perak</li> <li>Tourism Malaysia</li> </ul>
		<ul style="list-style-type: none"> <li>Creating tourism zone</li> </ul>	<ul style="list-style-type: none"> <li>Zon Teluk Senangin dan Segari <ul style="list-style-type: none"> <li>Island and Beaches</li> <li>Eco-tourism</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Manjung Municipal Council</li> <li>Tourism Perak</li> <li>Tourism Malaysia</li> </ul>
	<ul style="list-style-type: none"> <li>Improving the quality of liveability</li> </ul>	<ul style="list-style-type: none"> <li>Provide adequate, quality and easily accessible community facilities (religious facilities)</li> </ul>	<ul style="list-style-type: none"> <li>Improve the Al-Aliah Mosque's facilities and restore the damage that has been discovered.</li> <li>Based on the proposed development project of the Perak SUK Office.</li> </ul>	<ul style="list-style-type: none"> <li>Manjung Municipal Council</li> </ul>

	<ul style="list-style-type: none"> <li>• Conserve resources in an integrated and sustainable manner</li> </ul>	<ul style="list-style-type: none"> <li>• Protect and Preserve Agar Turtle Landing Area (<i>Chelonia Mydas</i>) On Pasir Panjang Beach</li> </ul>	<ul style="list-style-type: none"> <li>• The west coast's Pasir Panjang coastal area is known for the uncommon <i>Agar</i> turtle (<i>Chelonia mydas</i>) landing place.</li> <li>• This turtle species has chosen Pasir Panjang Beach to lay its eggs due to the suitability of the sand.</li> <li>• Attraction for the tourism sector.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Fisheries Malaysia</li> <li>• Manjung Municipal Council</li> <li>• Tourism Perak</li> <li>• Tourism Malaysia</li> </ul>
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The significant area in MU10 is turtle landing area on Pasir Panjang coastal area. According to subtopic on turtle nesting beaches, MU10 consist of eight area of turtle landing area that need to protect and preserve. There also Segari Turtle Sanctuary in MU10 but seems like not well-maintained and currently is closed for renovation. Aside from that, agriculture, namely oil palm plantation, dominates MU10. Similar to MU04, the plantation must adhere to MSPO standards in the long run.

Industry activities in MU10 is the largest industrial site within study area which can be the centre for industrial activities. However, it is very important to consider the impact of industrial activities to turtle landing area. Turtle is very sensitive to any human activities and in particular the lighting effect which could disoriented the turtle movement.

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MU10	<b>Turtle Nesting Beaches</b> <ul style="list-style-type: none"><li>To conserve and preserve turtle landing sites.</li></ul>	<ul style="list-style-type: none"><li>Gazette the turtle landing sites at Pasir Panjang and Pasir Bogak coastline as protected area.</li></ul>	<ul style="list-style-type: none"><li>Turtle landing/nesting sites along Pasir Panjang coastline.</li></ul>	<ul style="list-style-type: none"><li>Department of Fisheries</li></ul>
	<ul style="list-style-type: none"><li>To conserve and preserve turtle landing sites.</li></ul>	<ul style="list-style-type: none"><li>Promote sustainable coastal development at and close to the turtle nesting beaches.</li><li>Provision of solid waste disposal infrastructures at the turtle nesting beaches.</li><li>Provision of 'Do Not Litter' signboards at the turtle nesting beaches.</li><li>Provide information board on turtle landings at the nesting beaches to create awareness among the public.</li></ul>	<ul style="list-style-type: none"><li>Turtles are susceptible to various stressors from rapid coastal developments and tourism activities i.e., noise disturbance, light spill, and potential solid waste disposal.</li></ul>	<ul style="list-style-type: none"><li>PlaNMalaysia Perak</li><li>Local Authority</li><li>Department of Fisheries</li></ul>
		<ul style="list-style-type: none"><li>Promote sustainable industrial activities close to the turtle nesting beaches.</li><li>Undertake turtle awareness and educational program in collaboration with relevant agencies and private sectors.</li><li>Continuation of research activities so that conservation efforts can be focused where they are most needed.</li></ul>	<ul style="list-style-type: none"><li>Turtle landing/nesting sites in Pantai Segari are vulnerable towards adjacent industrial activities i.e., quarry and power plant operations.</li></ul>	<ul style="list-style-type: none"><li>PlaNMalaysia Perak</li><li>Department of Fisheries</li></ul>
	<b>Marine Mammals</b>			<ul style="list-style-type: none"><li>PlaNMalaysia Perak</li></ul>

	<ul style="list-style-type: none"> <li>To conserve and protect marine mammals.</li> </ul>	<ul style="list-style-type: none"> <li>Minimize large-scale coastal developments and modifications near identified core habitats of cetaceans.</li> <li>Minimize coastal modifications i.e., coastal shrimp farming, coastal reclamation and clearing of fringing mangrove forests in Matang.</li> </ul>	<ul style="list-style-type: none"> <li>Potential marine mammals' disturbance due to coastal developments and modifications.</li> </ul>	<ul style="list-style-type: none"> <li>Department of Fisheries</li> <li>Department of Forestry</li> <li>Land Office</li> </ul>
		<ul style="list-style-type: none"> <li>Gazette the Important Marine Mammal Area (IMMA) as Wildlife Sanctuary.</li> <li>Promote utilization of sustainable fishing gears within the Important Marine Mammal Area (IMMA).</li> </ul>	<ul style="list-style-type: none"> <li>Utilization of unsustainable fishing gear could impose significant threat towards marine mammals within Perak coastline.</li> </ul>	<ul style="list-style-type: none"> <li>Department of Fisheries</li> </ul>
		<ul style="list-style-type: none"> <li>Collect and analyse data to help inform effective mitigation to reduce vessel collisions with marine mammals within MMFR.</li> </ul>	<ul style="list-style-type: none"> <li>Marine mammals are susceptible to injury and mortality from vessel collisions.</li> </ul>	<ul style="list-style-type: none"> <li>Department of Fisheries</li> <li>Marine Department</li> </ul>

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MU10 (Pasir Pendek, Pantai Segari, Pantai Pasir Panjang)	<ul style="list-style-type: none"> <li>To protect the beach area as turtle nesting habitat</li> </ul>	<ul style="list-style-type: none"> <li>Develop a proper visitor management system that consider limiting the number of visitors so that it will not disturb the turtle nesting habitat</li> <li>Prohibit any physical development around the beach area</li> <li>Launch awareness campaign about the turtle</li> </ul>	<ul style="list-style-type: none"> <li>There is a turtle conservation centre at Segari</li> </ul>	<ul style="list-style-type: none"> <li>Department of Fisheries Malaysia</li> <li>Majlis Perbandaran Manjung</li> <li>Tourism Perak</li> <li>Tourism Malaysia</li> </ul>



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MU10	<ul style="list-style-type: none"> <li>Control of effluent and wastewater discharge from industries and agricultural areas.</li> <li>Control of sewage discharge.</li> </ul>	<ul style="list-style-type: none"> <li>Promote the use of biological control and more environmentally friendly/biodegradable fertilizers and pesticides.</li> <li>New industrial, agricultural and residential projects 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 industrial, agricultural and residential projects 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>Existing agricultural activities that are found to cause pollution by discharging untreated wastewater shall be warrant with a stop work order.</li> </ul>	<ul style="list-style-type: none"> <li>Effluent, sewage discharge and wastewater discharge</li> </ul>	<ul style="list-style-type: none"> <li>Department of Environment</li> <li>Department of Agriculture</li> <li>Department of Fisheries</li> <li>Local council</li> <li>Indah Water Konsortium</li> </ul>