Regional ecosystem details for 12.2.7

Regional ecosystem	12.2.7
Vegetation Management Act class	Least concern
Wetlands	Palustrine
Biodiversity status	No concern at present
Subregion	9, 4, 8, (10)
Estimated extent[1]	Pre-clearing 30000 ha; Remnant 2021 18000 ha
Short description	Melaleuca quinquenervia or rarely M. dealbata open forest on sand plains
Structure code	Open Forest
Description	Melaleuca quinquenervia or rarely M. dealbata open forest. Other species include Eucalyptus tereticornis, Corymbia intermedia, E. bancroftii, E. latisinensis, E. robusta, Lophostemon suaveolens and Livistona decora. A shrub layer may occur with frequent species including Melastoma malabathricum subsp. malabathricum or Banksia robur. The ground layer is sparse to dense and comprised of species including the ferns Pteridium esculentum and Blechnum indicum the sedges Schoenus brevifolius, Baloskion tetraphyllum subsp. meiostachyum, Machaerina rubiginosa and Gahnia sieberiana and the grass Imperata cylindrica. Occurs on Quaternary coastal dunes and seasonally waterlogged sandplains usually fringing drainage system behind beach ridge plains or on old dunes, swales and sandy coastal creek levees. Palustrine. (BVG1M: 22a).

	Vegetation communities in this regional ecosystem include: 12.2.7a: Melaleuca quinquenervia low woodland with Gahnia sieberiana ground layer. Occurs on Quaternary coastal sand dunes fringing swamps. Palustrine. (BVG1M: 22a). 12.2.7b: Whipstick Melaleuca quinquenervia. Occurs at base of frontal dunes on Quaternary coastal dunes and beaches. Palustrine. (BVG1M: 22a). 12.2.7c: Melaleuca quinquenervia, Eucalyptus robusta, Melicope elleryana open forest with understorey of Todea barbara. Occurs along watercourses on Quaternary coastal dunes and beaches and seasonally waterlogged sandplains. Palustrine. (BVG1M: 22a). 12.2.7d: Eucalyptus bancroftii woodland. Other canopy species include Lophostemon suaveolens and Melaleuca quinquenervia. A shrub layer may occur with frequent species including Melaleuca nodosa, Hakea actites and Melaleuca pachyphylla. The ground layer is sparse to dense and comprised of heath species. Minor wet depressions sometimes occur and sedges dominate these areas. Occurs on Quaternary coastal dunes and seasonally waterlogged sandplains. Palustrine. (BVG1M: 22a).
Supplementary description	Ryan, T.S. (ed.) (2012); Bean et al. (1998), B7a, C2, C3
Protected areas	Great Sandy NP, Bribie Island NP, Naree Budjong Djara NP, Burrum Coast NP, Gheebulum Kunungai (Moreton Island) NP, Southern Moreton Bay Islands NP, Eurimbula NP, Eurimbula RR, Noosa NP, Curtis Island NP, Great Sandy CP, Maroochy River CP, South Stradbroke
Special values	12.2.7: Habitat for threatened plant species including Phaius australis, P. bernaysii and near threatened species including Durringtonia paludosa. This ecosystem is also known to provide suitable habitat for koalas (Phascolarctos cinereus). 12.2.7a: This ecosystem is known to provide suitable habitat for koalas (Phascolarctos cinereus). 12.2.7c: This ecosystem is known to provide suitable habitat for koalas (Phascolarctos cinereus).
Fire management guidelines	SEASON: Late summer to mid-winter (after rain). INTENSITY: Planned and occasional unplanned burns (typically of higher intensity) influence the ecology of melaleuca ecosystems. INTERVAL: Heath 8-12 years, Sedge 12-20 years, Mixed grass/shrub 6-20 years. INTERVAL_MIN: 6. INTERVAL_MAX: 20. STRATEGY: Aim for a 25-70% burn mosaic (in association with surrounding ecosystems, as melaleuca ecosystems often just occur in patches or along natural drainage lines). Fires may, depending on the conditions and type of vegetation, burn areas larger than just the melaleuca ecosystem. Ensure secure boundaries from non fire-regime adapted ecosystems, particularly foredune and beach ridge communities. Consider the needs of melaleuca ecosystems based on understorey (i.e., heath dominated, sedge dominated or mixed grass/shrub) when planning burns. High soil moisture (or presence of water on the ground) is required, as avoidance of peat-type fires must be maintained. ISSUES: Fire regimes for melaleuca ecosystems require further fire research. Melaleuca forests are fire-adapted, but too high an intensity or frequent fire will slow or prevent regeneration and lead to lower species richness (since these communities contain numerous obligate seed regenerating species that require sufficient fire intervals to produce seed). High intensity fires may kill trees and lead to whipstick regeneration. Too frequent fire may result in a net loss of nutrients over time from an already nutrient poor system. Fire associations are significantly influenced by understorey composition.

	Melaleuca communities with a heath understorey should burn in a similar way to coastal heath (8-12 years). Sedge understorey communities will burn in association with the surrounding ecosystems (so will often burn with them but sometimes not, such that these communities have a slightly less fire frequency). Mixed understorey communities burn in a similar way to dry sclerophyll, in association with the surrounding dry sclerophyll, though somewhat less frequently due to the additional moisture present in melaleuca communities.
Comments	12.2.7: Naturalised species associated with this regional ecosystem include *Baccharis halimifolia. Dense stands may occur as a tall shrub understorey. 12.2.7a: Largely restricted to southern sand mass islands. 12.2.7b: Largely restricted to southern sand mass islands. 12.2.7c: Largely restricted to southern sand mass islands.

[1] Estimated extent is from version 13.1 pre-clearing and 2021 remnant regional ecosystem mapping. Figures are rounded for simplicity. For more precise estimates, including breakdowns by tenure and other themes see remnant vegetation in Queensland (https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/remnant-vegetation/).

Access vegetation management regional ecosystem descriptions

The Queensland Herbarium REDD lookup tool searches for information on regional ecosystems for a range of planning and management applications. If you're looking for vegetation management information you can use the vegetation management regional ecosystems description database (VM REDD (https://www.qld.gov.au/environment/land/management/vegetation/maps/regional-ecosystems-lookup))

(https://creativecommons.org/licenses/by/4.0/)

Last updated 10 November 2025

Copyright (https://www.qld.gov.au/legal/copyright/)
Disclaimer (https://www.qld.gov.au/legal/disclaimer/)
Privacy (https://www.qld.gov.au/legal/privacy/)
Right to information (https://www.qld.gov.au/right-to-information/)

© The State of Queensland 1995–2025

Queensland Government (https://www.qld.gov.au/)