Ecological Monitoring System Australia

Datasheets: Plot Description Module



Version 2

4 July 2025

Version control

Readers are advised that this datasheet will undergo revision as the EMSA Monitor app undergoes new refinement and updated versions become available. The names of the fields may vary slightly from the modules and the datasheet during this process.

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| **Datasheet version** | **Date** | **Version update overview** |
| 1.0 | 7 May 2024 | Release of the datasheet matching Monitor version 1.0.0 |
| 2 | 4 July 2025 | Release of the datasheet matching Monitor version 1.0.7 |

Instruction

This datasheet can be used if the Monitor app is not accessible at the time of a field survey. The datasheet has been designed to match the EMSA module manual and the Monitor app workflow. However, there are some minor differences, as capturing the quantity and complexity of the data in hard-copy form is difficult to replicate. At times some additional information or less information is collected on the datasheet. Examples of this are where the app would readily collect the location, date and time information of each input with minimal user input, but the datasheet version only collects the survey start and end location, date and time.

Surveyors must follow the EMSA module manual as though they are using Monitor, i.e. by following the Instructions and Procedures section of the relevant protocol, but instead of entering the data in Monitor, data is entered on the datasheet.

**Surveyors are reminded to check the module manual to ensure that the mandatory pre-survey and prerequisites have been completed prior to undertaking the module.** A key example is where the Plot Selection and Layout Module must be completed prior to undertaking all plot-based protocols.

This datasheet can either be printed and used in the field using a pencil or used digitally on a device.

**Regional Delivery Partners are responsible for manually entering datasheet-collected data into Monitor once the app is fully functional again. The Department of Climate Change, Energy, the Environment and Water require that digital scans of the datasheets be uploaded into MERIT.**

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| **Have you completed the Plot Selection and Layout Module?** – If no, please undertake this module first before proceeding |
| Survey details |
| Context\* |
| Project\* | Plot\* | Visit\* |
|  |  |  |
|  |  |  |
| Observer name/s\* | Start date(dd/mm/yyyy) & time (24 hr)\* | End date(dd/mm/yyyy) & time (24 hr)\* |
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| Plot Description Enhanced (start)**Landform Elements** |  |  |
| Slope (˚)\* | Aspect (˚)\* | Slope not uniform across plot☑ | Relief\* (required if slope is uniform) | Modal slope\* |
|  |  |  |  |  |
|  |  |  |
| Landform pattern\* | Landform element\* | Outcrop lithology | Nearest infrastructure | Land-use |
|  |  |  |  |  |
|  |  |  |
| Coarse fragments  |
| Type | Abundance | Size |
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| Vegetation |
| Growth stage\* | Fire history\* | Structural formation\* |
| known/unknown\* | year of last fire |
|  |  |  |  |
|  |
| Homogeneity measure (m)\* | Site disturbance\* | Introduced plant species impact |
|  |  |  |
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| Plant Species Life-stage |
| Species | Life stage | Mass flowering event ☑ |  | Species | Life stage | Mass flowering event ☑ |
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| Comments |
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| **PLOT DESCRIPTION ENHNACED (START) - DROPDOWN FIELD OPTIONS** |
| **Slope class** |  | **Slope degrees** |  | **Relief** |  | **Modal slope** |  | **Coarse fragment** |
|  |  |  |  | **Abundance** |  | **Size** |
| Level |  | 0–0°35 |  | Very high(>300) |  | Level |  | No coarse fragments |  | Fine gravelly or small pebbles (2-6mm) |
| Very gently inclined |  | 0°36–1°45 |  | High(90-300 m) |  | Very gently inclined |  | Very slightly or very few (< 2%) |  | Medium gravelly or medium pebbles (6-20 mm) |
| Gently inclined |  | 1°46–5°45 |  | Low (30-90 m) |  | Gently inclined |  | Slightly or few (2-10%) |  | Coarse gravelly or large pebbles(20-60 mm) |
| Moderately inclined |  | 5°46–18° |  | Very low (9-30 m) |  | Moderately inclined |  | No qualifier or common (10 - 20%) |  | Cobbly or cobbles(60-200mm) |
| Steep |  | 18–30° |  | Extremely low(<9 m) |  | Steep |  | Very or abundant (50 - 90%) |  | Stony or stones (200-600mm) |
| Very steep |  | 30–45° |  |  |  | Very steep |  | Moderately or many(20 - 50%) |  | Bouldery or boulders (600-2000mm) |
| Precipitous  |  | 45–72° |  |  |  | Precipitous |  | Extremely or abundant (> 90%) |  | Large Boulders (>2000mm) |
| Cliffed |  | >72° |  |  |  | Cliffed |  |  |  |  |

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| **Landform Element** |  | **Lithology** |
| Alcove | Estuary | Residual rise | Adamellite | Gneiss | Quartzite |
| Backplain | Fan | Risecrest | Agglomerate | Granite | Quartz porphyry |
| Bank (stream bank) | Fil-top | Riseslope | Alcrete (bauxite) | Granodiorite | Quartz sandstone |
| Bar (stream bar) | Floodout | Rock flat | Amphibolite | Granulite | Red-brown hardpan |
| Barchan dune | Footslope | Rock platform | Andesite | Gravel | Rhyolite |
| Beach | Foredune | Scald | Anhydrite | Graywacke | Sand |
| Beach ridge | Gully | Scarp | Aplite | Greenstone | Sandstone |
| Bench | Hillcrest | Scarp-footslope | Arkose | Gypsum | Chemical or organic sedimentary rock |
| Berm | Hillslope | Scroll | Ash (fine) | Halite | Pyroplastic sedimentary rock |
| Blow-out | Hummocky | Scroll plain | Ash (sandy) | Hornfels | Schist |
| Breakaway | Intertidal flat | Solution doline | Basalt | Igneous rock (unidentified) | Scoria |
| Channel bench | Lagoon | Stream bed | Bombs (volcanic) | Jasper | Serpentinite |
| Cirque | Lake | Stream channel | Breccia | Limestone | Shale |
| Cliff | Landslide | Summit surface | Calcarenite | Marble | Silcrete |
| Cliff-footslope | Levee | Supratidal flat | Calcareous mudstone | Marl | Silt |
| Collapse doline | Linear or longitudinal dune | Swale | Calcareous sand | Metamorphic rock (unidentified) | Siltstone |
| Cone (volcanic) | Lunette | Swamp | Calcilutite | Microdiorite | Slate |
| Crater | Maar | Talus | Calcirudite | Microgranite | Syenite |
| Cut face | Mound | Terrace Flat | Calcrete | Microsyenite | Trachyte |
| Cut-over surface | Ox-bow | Terrace plain | Chert | Migmatite | Tuff |
| Dam | Parabolic dune | Tidal creek | Clay | Mudstone | Unconsolidated material (unidentified) |
| Deflation basin | Pediment | Tidal flat | Coal | Mylonite | Volcanic breccia |
| Drainage depression | Pit | Tor | Conglomerate | Pegmatite | Volcanic glass |
| Dune | Plain | Trench | Consolidated rock (unidentified) | Peridotite | Not Collected |
| Dune crest | Playa/pan | Tumulus | Detrital sedimentary rock (unidentified) | Phonolite | Same as Substrate Lithology |
| Dune slope | Prior stream | Valley flat | Diorite | Phyllite | Ironstone |
| Embankment | Reef flat |  | Dolerite | Porcellanite | Shells |
|  |  |  | Dolomite | Porphyry | Charcoal |
|  |  |  | Ferricrete | Pyroxenite | Pumice |
|  |  |  | Gabbro | Quartz | Opalised Wood |

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| **Structural formation** |
| Closed forest | Isolated shrubs | Chenopod shrubland | Isolated clumps of hummock grasses | Open sedgeland | Forbs |
| Open forest | Isolated clumps of shrubs | Open chenopod shrubland | Hummock Grasses | Sparse sedgeland | Closed fernland |
| Woodland | Shrubs | Sparse chenopod shrubland | Closed tussock grassland | Isolated sedges | Fernland |
| Open woodland | Closed mallee shrubland | Isolated chenopod shrubs | Tussock grassland | Isolated clumps of sedges | Open fernland |
| Isolated trees | Mallee shrubland | Isolated clumps of chenopod shrubs | Open tussock grassland | Sedges | Sparse fernland |
| Isolated clumps of trees | Open mallee shrubland | Chenopod Shrubs | Sparse tussock grassland | Closed rushland | Isolated ferns |
| Trees | Sparse mallee shrubland | Closed samphire shrubland | Isolated tussock grasses | Rushland | Isolated clumps of ferns |
| Closed mallee forest | Isolated mallee shrubs | Samphire shrubland | Isolated clumps of tussock grasses | Open rushland | Ferns |
| Open mallee forest | Isolated clumps of mallee shrubs | Open samphire shrubland | Tussock Grasses | Sparse rushland | Closed bryophyteland |
| Mallee woodland | Mallee Shrubs | Sparse samphire shrubland | Closed grassland | Isolated rushes | Bryophyteland |
| Open mallee woodland | Closed heathland | Isolated samphire shrubland | Grassland | Isolated clumps of rushes | Open bryophyteland |
| Isolated mallee trees | Heathland | Isolated clumps of samphire shrubs | Open grassland | Rushes | Sparse Bryophyteland |
| Isolated clumps of mallee trees | Open heathland | Sampphire Shrubs | Sparse grassland | Closed forbland | Isolated bryophytes |
| Mallee Trees | Sparse heathland | Closed hummock grassland | Isolated grasses | Forbland | Isolated clumps of bryophytes |
| Closed shrubland | Isolated heath shrubs | Hummock grassland | Isolated clumps of grasses | Open forbland | Bryophtyes |
| Shrubland | Isolated clumps of heath shrubs | Open hummock grassland | Other Grasses | Sparse forbland |  |
| Open shrubland | Heath Shrubs | Sparse hummock grassland | Closed sedgeland | Isolated forbs |  |
| Sparse shrubland | Closed chenopod shrubland | Isolated hummock grasses | Sedgeland | Isolated clumps of forbs |  |

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| **Growth stage** |  | **Life-stage** |  | **Site disturbance** |  | **Nearest Infrastructure** |  | **Land history** |
| Early Regeneration |  | Seedling |  | None |  | Access tracks |  | Nature conservation |
| Advanced Regeneration |  | Sapling |  | None except LIGHT grazing by hoofed animals |  | Quarry |  | Strict nature reserves |
| Mixed Age |  | Buds |  | None except MEDIUM grazing by hoofed animals |  | Drain |  | Wilderness area |
| Mature Age |  | Flowers |  | None except HEAVY grazing by hoofed animals |  | Fence line |  | National park |
| Senescent Age |  | Immature Fruit |  | Limited clearing |  | Power line |  | Natural feature protection |
|  |  | Mature |  | Extensive clearing |  | Road |  | Habitat/species management area |
|  |  | Recently Shed |  | Complete clearing; pasture; never cultivated |  | Watering point |  | Protected landscape |
|  |  | Dead/dormant |  | Complete clearing; pasture; has been cultivated |  | Homestead |  | Other conserved area |
|  |  | Regenerating |  | Cultivated; rain fed |  |  |  | Managed resource protection |
|  |  | Vegetative |  | Cultivation; has been irrigated |  |  |  | Biodiversity |
|  |  |  |  | Highly disturbed |  |  |  | Surface water supply |
|  |  |  |  | Not Collected |  |  |  | Groundwater |
|  |  |  |  |  |  |  |  | Landscape |
|  |  |  |  |  |  |  |  | Traditional Indigenous uses |
|  |  |  |  |  |  |  |  | Other minimal use |
|  |  |  |  |  |  |  |  | Defence land - natural areas |
|  |  |  |  |  |  |  |  | Stock route |
|  |  |  |  |  |  |  |  | Residual native cover |
|  |  |  |  |  |  |  |  | Rehabilitation |
|  |  |  |  |  |  |  |  | Grazing native vegetation |
|  |  |  |  |  |  |  |  | Production native forests |
|  |  |  |  |  |  |  |  | Plantation forests |
|  |  |  |  |  |  |  |  | Grazing modified pastures |

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| **Have you completed the Plot Selection and Layout Module?** – If no, please undertake this module first before proceeding |
| Survey details |
| Context\* |
| Project\* | Plot\* | Visit\* |
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| Observer name/s\* | Start date(dd/mm/yyyy) & time (24 hr)\* | End date(dd/mm/yyyy) & time (24 hr)\* | Reason for revisit\* |
|  |  |  | \* |

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| Plot Description Standard (start)Vegetation |
| Growth stage\* | Fire history\* | Structural formation\* |
| known/unknown\* | year of last fire |
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| Homogeneity measure (m)\* | Site disturbance\* | Introduced plant species impact |
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| Plant Species Life-stage |
| Species | Life stage | Mass flowering event ☑ |  | Species | Life stage | Mass flowering event ☑ |
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| Comments |
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| **PLOT DESCRIPTION ENHNACED (START) - DROPDOWN FIELD OPTIONS** |
| **Structural formation** |
| Closed forest | Isolated shrubs | Chenopod shrubland | Isolated clumps of hummock grasses | Open sedgeland | Forbs |
| Open forest | Isolated clumps of shrubs | Open chenopod shrubland | Hummock Grasses | Sparse sedgeland | Closed fernland |
| Woodland | Shrubs | Sparse chenopod shrubland | Closed tussock grassland | Isolated sedges | Fernland |
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| **Reason for revisit** |  | **Growth stage** |  | **Life-stage** |  | **Site disturbance** |  | **Nearest Infrastructure** |  | **Land history** |
| Phenological event |  | Early Regeneration |  | Seedling |  | None |  | Access tracks |  | Nature conservation |
| Seasonal change |  | Advanced Regeneration |  | Sapling |  | None except LIGHT grazing by hoofed animals |  | Quarry |  | Strict nature reserves |
| Major disturbance |  | Mixed Age |  | Buds |  | None except MEDIUM grazing by hoofed animals |  | Drain |  | Wilderness area |
| Climactic event |  | Mature Age |  | Flowers |  | None except HEAVY grazing by hoofed animals |  | Fence line |  | National park |
| Ongoing monitoring |  | Senescent Age |  | Immature Fruit |  | Limited clearing |  | Power line |  | Natural feature protection |
| Other (specify) |  |  |  | Mature |  | Extensive clearing |  | Road |  | Habitat/species management area |
|  |  |  |  | Recently Shed |  | Complete clearing; pasture; never cultivated |  | Watering point |  | Protected landscape |
|  |  |  |  | Dead/dormant |  | Complete clearing; pasture; has been cultivated |  | Homestead |  | Other conserved area |
|  |  |  |  | Regenerating |  | Cultivated; rain fed |  |  |  | Managed resource protection |
|  |  |  |  | Vegetative |  | Cultivation; has been irrigated |  |  |  | Biodiversity |
|  |  |  |  |  |  | Highly disturbed |  |  |  | Surface water supply |
|  |  |  |  |  |  | Not Collected |  |  |  | Groundwater |
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