

IBRA region name	IBRA Subregion Name	IBRA Subregioncode	Description	Total area (hectares)
Arnhem Coast	Arnhem Coast P1	ARC1	This subregion covers a small mainland area and several islands associated with Croker Island. The elevation is generally less than 60 m. It is dominated by mixed Eucalypt open-forest on massive earth soils low in nutrients. It lies in the Money Shoal Basin. Rainfall is influenced by the northwest monsoon winds from December to March and the annual average is 1200 to 1400 mm.	109673
Arnhem Coast	Arnhem Coast P2	ARC2	The Arnhem P2 subregion extends along the northern Arnhem Land coast and inland to the slopes of the Arnhem Plateau. Dominant vegetation of the coastal plains is mixed Eucalypt open-forest and woodland with many stands of Melaleuca forest around wetter areas. The western end of the subregion overlies the Money Shoal and Pine Creek Basins, while the central and eastern end overlies the Arafura Basin, with shallow sandy soils covering most of the subregion. The climate is monsoonal with most rain falling between December and March. The annual average rainfall varies from 1200 to 1600 mm with higher rainfall occurring in the eastern area. The coastal plain is largely below 50 m and is dissected by many large perennial rivers which have their origins in the Arnhem Plateau, and form large coastal floodplains. Extensive mangroves fringe much of the coast. The subregion includes Goulbourn Islands and the Crocodile Islands (Milingimbi) and associated smaller islands.	1725191
Arnhem Coast	Arnhem Coast P3	ARC3	This subregion covers much of the Gove Peninsula in north east Arnhem Land, extending south to Blue Mud Bay. The area is relatively flat with elevation up to 130 m asl. The climate is monsoonal with most rain falling between December and April, and some rain falling in the dry season. The annual average rainfall varies south to north between 1000 to 1600 mm. The vegetation in this subregion is predominantly Eucalyptus open-forests and woodlands and large areas of littoral habitats. Soils are massive earths low in nutrients over the McArthur and Carpentaria Basins and the Arnhem Inlier. The subregion has few major rivers although there are numerous minor creek lines.	1149217
Arnhem Coast	Arnhem Coast P4 Groote	ARC4	The Arnhem Coast P4 subregion includes Groote Eylandt, Bickerton Island and numerous small islands in the western Gulf of Carpentaria. The topography of most of Groote Eylandt and Bickerton Island is rugged, consisting of deeply dissected, predominantly sandstone hills, with elevation up to 220 m. The subregion incorporates both the McArthur and Carpentaria Basins. The climate is monsoonal with annual rainfall between 1000 to 1400 mm. Vegetation is predominantly mixed Eucalyptus open-forest and low open-woodland on shallow sandy soils. Drainage on the islands is sparse.	267180
Arnhem Coast	Arnhem Coast P5 Wessels	ARC5	The Arnhem Coast P5 subregion includes the Wessel, Conningham, Brumby and English Company Island groups off the north east Arnhem coast. They form a narrow chain extending over 100 km into the Arafura Sea from the mainland. Most of the islands have low relief, with some islands reaching 100 m. However, most islands comprise rugged sandstone. Others (especially in the Conningham group) are mostly lateritic, and some small islands in the Bromby group are residues of sand and coral. The climate is monsoonal with rainfall occurring from December to April under the influence of the north west monsoon. The annual average is between 1400 and 1600 mm. Vegetation on the islands is mostly Eucalyptus low open-woodland on shallow sandy soils. Watercourse development on the low, narrow islands is	48887

			almost negligible. There is no permanent human population in this subregion, but around 5 outstations are used intermittently by Aboriginal people.	
Arnhem Plateau	Arnhem Plateau P1	ARP1	The Arnhem Plateau P1 subregion includes most of the escarpment areas of the western Arnhem Plateau and several large outliers of the plateau. Elevation ranges from 8 m on the northern floodplains to over 550 m at the highest point of the plateau. It covers the northern section of the McArthur basin and sections of the Pine Creek Orogen. Soils are shallow and sandy throughout the subregion. Vegetation is dominated by mixed Eucalyptus woodland and low open woodland, and significant areas of closed forest occur along the escarpment. The climate is monsoonal with rainfall occurring predominantly between the months of December and April, with a distinct dry season from May to November. Annual rainfall varies from 1000 mm in the south to 1400 mm in the north of the subregion. It includes the upper reaches of the South Alligator and East Alligator Rivers and Jim Jim Creek.	1038639
Arnhem Plateau	Arnhem Plateau P2	ARP2	The Arnhem Plateau P2 subregion contains most of the Arnhem Plateau area. It is a large and deeply divided sandstone plateau, forming the highest land in the Top End of the Northern Territory, and as such many large rivers flowing east, west and north have their origins upon the plateau. Elevation reaches 450 m although much of the plateau sits above 300 m. The northern section of the subregion includes the Arafura fall where elevation is mostly below 150 m. The climate is monsoonal with rainfall occurring predominantly between the months of December and April, with a distinct dry season from May to November. Annual rainfall varies from 1000 mm in the south to 1400 mm in the north of the subregion. Vegetation is dominated by mixed Eucalyptus woodland and low open woodland, with a hummock grass understorey on the escarpment and with a tussock grass understorey on the plateau. The subregion lies predominantly on the McArthur Basin, with small sections of the Dunmurra Basin and Pine Creek Orogen occurring in the south.	1267426
Australian Alps	New South Wales Alps	AA1	Australian Alps subregion is composed of Block faulted granites and Palaeozoic metamorphic rocks. Small areas of Tertiary basalt with buried river gravels and lake sediments occur. Quaternary glacial landforms and sediments occur above 1800m, and more extensive periglacial features are present above 1200m. Low relief high plains with steep margins sloping into fault aligned river valleys, with deep gorges and waterfalls. Relic cirque glaciers, blockstreams and periglacial solifluction lobes occur in the highest regions. Soils change with altitude. At lower levels in forests, texture contrast profiles are the norm. In the sub-alpine snow gum areas deep gradational profiles with moderate amounts of organic matter are common. Above the tree-line, wet, alpine humus soils with abundant organic matter are widespread. Steep slopes have stonier, shallow profiles. Vegetation changes with altitude, aspect, cold air drainage and soil saturation. Low elevations with dry aspects support red stringybark, white gum, broad-leaved peppermint, candlebark and brittle gum. Moist sites have alpine ash, mountain gum, narrow-leaved peppermint, manna gum, brown barrel, with tree ferns, blackwood and sassafras in gullies. Between 1000 and 1500m, alpine ash and mountain gum dominate and abruptly change to sub-alpine snow gum woodlands, heath, grasslands and bogs between 1500 and 1800m. Common species include snow grasses, leafy bossiaea, yellow kunzea, alpine pepper, sphagnum bogs with candle heath and swamp heath. Alpine herbfield and rare feldmark communities occur above the tree line at 1800m. Here, common species include prickly snow grass, alpine wallaby grass, silver snow daisy, ribbony	502360

			grass, white purslane, eye-brights, gentians and buttercups. Most alpine species have a limited range.	
Australian Alps	Victorian Alps	AA2	Victorian Alps province consists of a series of high plateaus and peaks along the Great Dividing Range. The Palaeozoic deposits predominantly of granitic and basaltic origin give rise to friable leached earths, loams and peaty soils (Tenosols and Organosols). The vegetation associated with the subalpine plateaus are Sub-alpine Woodland, Treeless Sub-alpine Mosaic and Sub-alpine Grassland ecosystems and the upper slopes and generally surrounding sub-alpine areas are dominated by Montane Dry Woodland, Montane Damp Forest, Montane Wet Forest and Montane Grassy Woodland ecosystems.	323549
Avon Wheatbelt	Avon Wheatbelt 1	AW1	Area of ancient drainage dissecting a Tertiary plateau in the Yilgarn Craton. Gently undulating landscape of low relief. The eastern part of the bioregion is an ancient peneplain with low relief. There is no connected drainage; salt lake chains occur as remnants of ancient drainage systems that now only function in very wet years. Lateritic uplands are dominated by yellow sandplain. Proteaceous scrub-heaths, rich in endemics, on residual lateritic uplands and derived sandplains; mixed eucalypt, Allocasuarina huegeliana and Jam-York Gum woodlands on Quaternary alluvials and eluvials. Semi-arid (Dry) Warm Mediterranean.	6524100
Avon Wheatbelt	Avon Wheatbelt 2	AW2	Zone of re-juvenated drainage: Erosional surface of gently-undulating rises to low hills with abrupt breakaways. Continuous stream channels that flow in most years. Colluvial processes are active. soil formed in colluvium or in-situ weathered rock. Includes woodland of Wandoo, York Gum and Salmon Gum with Jam and Casuarina and some areas of proteaceous scrub-heaths, rich in endemics, on residual lateritic uplands and derived sandplains.	2992891
Ben Lomond	Ben Lomond	BEL	Ben Lomond is situated in Tasmania's inland northeast. The Ben Lomond horst and mountains to its north rise to >1200 metres above sea level and are capped by Jurassic dolerite with shallow gradational soils. Devonian to Cambrian Mathinna Bed sedimentary rocks with gradational soils constitute a substantial part of the lower hills, and have been intruded by Devonian granite in three main bodies. Eucalyptus amygdalina open forest and woodland is widespread across the region: it is replaced at higher altitudes by Eucalyptus delegatensis open forest and in high-rainfall, fire-protected areas by Nothofagus cunninghamii closed forest.	657503
Brigalow Belt North	Townsville Plains	BBN1	Townsville Plains is predominantly Quaternary alluvial and alluvial plains fringed in the east by coastal and estuarine deposits and in the west by Devonian sediments and igneous rocks. There are minor outcrops of volcanic rocks that form low hills. Soils are predominantly duplex soils and alluvial clays, loams and sands. Vegetation consists of poplar gum (Eucalyptus platyphylla) woodland with narrow-leaved ironbark (E. crebra), Dallachy's gum (Corymbia dallachiana — formerly referred to as E. papuana) and paperbarks. Marine sands near the coast support Moreton Bay ash (Corymbia tessellaris), forest red gum (Eucalyptus tereticornis), (E. platyphylla) and paperbark woodlands with scattered beach scrub species and salt marsh and saltwater couch (Sporobolus virginicus) on finer marine sediments.	719278
Brigalow Belt North	Basalt Downs	BBN10	Basalt Downs is formed almost entirely on Tertiary basalts. It occurs as two separate parts: a northern section, which is dominantly undulating and contains areas of lower catena Tertiary sediments; and a southern section which is predominantly hilly and contains areas of outcrop of Permian sediments. The more undulating areas carry a blue grass (Dichanthium sericeum) grassland with mountain coolibah (Eucalyptus orgadophila) on hillier areas, often with silver-	1238537

			leaved ironbark ( <i>E. melanophloia</i> ) and red bloodwood ( <i>Corymbia erythrophloia</i> ). Coolibah ( <i>Eucalyptus coolabah</i> ) occurs on flood plains. In the north, on Tertiary weathered basalts, gidgee ( <i>Acacia cambagei</i> ) scrub and brigalow ( <i>A. harpophylla</i> ) scrub are common, belah ( <i>Casuarina cristata</i> ) often occurring with the latter. Narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ) forms woodlands with silver-leaved ironbark ( <i>E. melanophloia</i> ) and red bloodwood ( <i>C. erythrophloia</i> ) on rugged basalt areas. On the Permian sediments narrow-leaved ironbark or poplar box ( <i>Eucalyptus populnea</i> ) form open or shrub woodlands.	
Brigalow Belt North	Isaac - Comet Downs	BBN11	Isaac - Comet Downs is an extensive but diverse subregion that does not readily lend itself to further subdivision. It is a largely undulating subregion dominated by Tertiary and other Cainozoic deposits, with mid-catena deposits being slightly more prominent. Tablelands and dissected remnants of the upper Tertiary surface are widespread, carrying a narrow-leaved ( <i>Eucalyptus crebra</i> ) woodland on the earths of undulating plateaus, and bendee ( <i>Acacia catenulata</i> ) or lancewood ( <i>A. shirleyi</i> ) on the rocky hills and mesas. The lower parts of the Tertiary surface are dominated by brigalow ( <i>Acacia harpophylla</i> ) and Dawson gum ( <i>Eucalyptus cambageana</i> ) — brigalow communities on undulating clay or tenure contrast soils. These communities dominate the subregion. Alluvium is also prominent, and the predominantly fine textured soils carry brigalow or open woodland of coolibah ( <i>Eucalyptus coolabah</i> ). Fine grained Permian sediments are exposed in some areas, giving rise to grasslands, open woodland and areas of brigalow.	2701119
Brigalow Belt North	Nebo - Connors Ranges	BBN12	Nebo - Connors Ranges is essentially a rugged subregion that lies on the eastern edge of the Bowen Basin and is dominated by Permian and Devonian–Carboniferous volcanics. There are small areas of granitic intrusives and Permian sediments. The vegetation is dominated by silver-leaved ironbark ( <i>Eucalyptus melanophloia</i> ) — bloodwood ( <i>Corymbia</i> spp.) and forest red gum ( <i>E. tereticornis</i> ) woodlands with vine forests in sheltered areas along the eastern ranges.	542091
Brigalow Belt North	South Drummond Basin	BBN13	South Drummond Basin is formed on Devonian and Carboniferous sediments of the Drummond Basin. It has a spine formed by extensive sandstone ranges and hills, with narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ) on coarser soils and silver-leaved ironbark ( <i>E. melanophloia</i> ) on finer soils. Most of the remainder of the subregion is lowlands with low strike ridges, carrying silver-leaved ironbark woodlands and areas of brigalow ( <i>Acacia harpophylla</i> ).	1018601
Brigalow Belt North	Marlborough Plains	BBN14	Marlborough Plains is an undulating to hilly subregion with a complex geology. Bedrock includes Devonian, Carboniferous, Permian and Cretaceous sediments, Permian volcanics and a variety of igneous rocks. The subregion is dominated by alluvial plains and colluvial slopes, usually carrying a woodland of poplar gum ( <i>Eucalyptus platyphylla</i> ), ghost gum ( <i>Corymbia dallachiana</i> ), forest red gum ( <i>E. tereticornis</i> ) and tea tree ( <i>Melaleuca</i> spp.), with low rises carrying narrow-leaved ironbark ( <i>E. crebra</i> ). Hillier areas carry an open forest or woodland which includes lemon-scented gum ( <i>C. citriodora</i> ), bloodwood ( <i>Corymbia</i> spp.) and narrow-leaved ironbark ( <i>E. crebra</i> ), with supple jack ( <i>Lophostemon</i> sp. aff. <i>L. confertus</i> ) nearer to the coast and silver-leaved ironbark ( <i>E. melanophloia</i> ) inland. There are also extensive saline coastal littoral communities.	1125200
Brigalow Belt North	Bogie River Hills	BBN2	Bogie River Hills is formed by igneous rocks and Permian volcanics. It is an undulating hilly area with duplex and shallow stony soils. The vegetation consists of ironbark bloodwood open	1061100

			woodlands narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ), red bloodwood ( <i>Corymbia erythrophloia</i> ) with Dallachy's gum ( <i>C. dallachiana</i> ), poplar gum ( <i>E. platyphylla</i> ), beefwood ( <i>Grevillea striata</i> ) and ironbark low woodland on lower slopes. There are scattered patches of vine thicket in sheltered areas in the south and fringing saltmarsh along the coast.	
Brigalow Belt North	Cape River Hills	BBN3	Cape River Hills consists of Devonian and Carboniferous sediments and volcanics obscured in many places by duricrusts. The landforms include linear hills and mesas and breakaways. Soils are predominantly shallow loams, sands and duplex soils. The vegetation comprises lancewood and bendee ( <i>Acacia shirleyi/catenulata</i> ) scrubs, ( <i>Eucalyptus persistens</i> ) low woodlands and small areas of brigalow and/or blackwood ( <i>Acacia harpophylla</i> ), ( <i>A. argyrodendron</i> ) low open forest.	735490
Brigalow Belt North	Beucazon Hills	BBN4	Beucazon Hills consists of fine grained Devonian sediments and metasediments that form undulating to mountainous country. There are also areas of igneous rocks. Soils are mostly duplex shallow and rocky. The vegetation includes ironbark ( <i>Eucalyptus crebra</i> ) woodlands and lancewood ( <i>Acacia shirleyi</i> ) low open forest with ( <i>E. persistens</i> ), poplar box ( <i>E. populnea</i> ), mountain coolibah ( <i>E. orgadophila</i> ) and silver-leaved ironbark ( <i>E. melanophloia</i> ) on lower slopes, and forest red gum ( <i>E. tereticornis</i> ) and coolibah ( <i>E. coolabah</i> ) along watercourses.	102219
Brigalow Belt North	Wyarra Hills	BBN5	Wyarra Hills is predominantly upper Carboniferous volcanics mantled in places by Tertiary duricrust. The topography includes a fringing core of low hills with duplex soils and lateritic mesa tops and breakaways with shallow rocky soils. Vegetation comprises silver-leaved ironbark ( <i>Eucalyptus melanophloia</i> ) woodland with bloodwoods ( <i>Corymbia</i> spp.) and lancewood ( <i>Acacia shirleyi</i> )/bendee ( <i>A. catenulata</i> ) on scarps and mesas and ( <i>Eucalyptus persistens</i> ), poplar box ( <i>E. populnea</i> ) on lower slopes. There are also scattered small patches of blackwood ( <i>Acacia argyrodendron</i> ).	376445
Brigalow Belt North	Northern Bowen Basin	BBN6	Northern Bowen Basin contains the major areas of outcrop of the Triassic and Permian sediments of the Bowen Basin. There are also areas of basalt and Tertiary sediments. The landscape is predominantly undulating with brigalow ( <i>Acacia harpophylla</i> ) and Dawson gum ( <i>Eucalyptus cambageana</i> ) — brigalow communities dominant on the clay soils, and an open woodland of narrow-leaved ironbark ( <i>E. crebra</i> ) or poplar box ( <i>E. populnea</i> ) often with a shrubby understorey, on the shallower texture contrast soils. There are also areas of blue grass ( <i>Dichanthium sericeum</i> ) downs. The range areas of sandstone are dominated by narrow-leaved ironbark and bloodwood ( <i>Corymbia</i> spp.). Streams in the east of the subregion are often fringed by black ironbox ( <i>Eucalyptus raveretiana</i> ).	1338049
Brigalow Belt North	Belyando Downs	BBN7	Belyando Downs is an extensive undulating subregion dominated by lower strata of the Tertiary deposits. Fine textured soils support brigalow ( <i>Acacia harpophylla</i> ) and gidgee ( <i>A. cambagei</i> ) communities. Plateau remnants of the upper Tertiary surface are widespread, their red and yellow earth soils supporting silver leaved ironbark ( <i>Eucalyptus melanophloia</i> ) woodlands. Where the underlying Paleozoic rocks outcrop, lancewood ( <i>Acacia shirleyi</i> ) and bendee ( <i>A. catenulata</i> ) occur on the rockier hills and cypress ( <i>Callitris glaucophylla</i> ) or ironbark on deeper soils. Poplar box ( <i>Eucalyptus populnea</i> ) woodlands occur on areas of the middle strata of the Tertiary surface, and there are also areas of blue grass ( <i>Dichanthium sericeum</i> ) downs. Alluvial deposits are also widespread, and carry poplar box and brigalow communities.	1800649
Brigalow Belt North	Upper Belyando Floodout	BBN8	Upper Belyando Floodout lies within the Galilee Basin and is dominated by Tertiary deposits. These form undulating plains with deep texture contrast soils, carrying poplar box ( <i>Eucalyptus</i>	438648

			populnea) woodland and areas of Dawson gum—brigalow ( <i>E. cambageana</i> — <i>Acacia harpophylla</i> ) forest. Broad alluvial plains carry poplar box woodland on the coarser soils, and gidgee ( <i>Acacia cambagei</i> ) scrub or coolibah ( <i>Eucalyptus coolabah</i> ) woodland on the finer soils.	
Brigalow Belt North	Anakie Inlier	BBN9	Anakie Inlier has two distinct parts — a northern rugged area of Cambrian–Ordovician fine grained metamorphic rocks, and a southern undulating area of Devonian granites that have intruded into them. On the metamorphics the steeper areas have lancewood ( <i>Acacia shirleyi</i> ) or bendee ( <i>A. catenulata</i> ) scrub, or narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ) woodlands. The woodlands may have a dense understorey or rosewood ( <i>Acacia rhodoxylon</i> ). The granites have silver-leaved ironbark ( <i>Eucalyptus melanophloia</i> ) woodland, usually with red bloodwood ( <i>Corymbia erythrophloia</i> ).	355547
Brigalow Belt South	Claude River Downs	BBS1	Claude River Downs an undulating to hilly subregion formed on Triassic and Permian sediments in the southern part of the Galilee Basin. The subregion is predominantly undulating with brigalow-wilga <i>Acacia harpophylla</i> - <i>Geijera parviflora</i> and softwood communities. Hillier areas have narrow-leaved ironbark <i>Eucalyptus crebra</i> communities on shallower soils and cypress-silver-leaved ironbark <i>Callitris glaucophylla</i> - <i>E. melanophloia</i> communities on deeper soils on lower slopes. There are also moderate areas of bluegrass <i>Dicanthium sericeum</i> downs.	1053243
Brigalow Belt South	Carnarvon Ranges	BBS10	Carnarvon Ranges an extensive belt of predominantly coarse sand stones that form the north-eastern margin of the Great Artesian Basin. These have been partly dissected to form an undulating to hilly surface with areas of deep valleys and gorges. Soils are predominantly coarse, with deep sands or with deep sandy-surfaced texture contrast soils on less steep areas. A mixed Eucalypt woodland or forest, usually with a shrubby understorey, is the most widespread vegetation type, the dominant tree species being narrow-leaved ironbark <i>Eucalyptus crebra</i> , spotted gum <i>Corymbia citriodora</i> , and bloodwoods <i>Corymbia</i> spp. Cypress pine <i>Callitris glaucophylla</i> is common on the deeper soils of undulating areas, whereas rusty gum ( <i>Angophora leiocarpa</i> ) is common in valleys.	2298941
Brigalow Belt South	Taroom Downs	BBS11	Taroom Downs is an undulating subregion formed on the argillaceous sediments of the Injune Downs Group of the Great Artesian Basin. The vegetation is dominated by brigalow ( <i>Acacia harpophylla</i> ), with areas of vine thicket and blue grass ( <i>Dichanthium sericeum</i> ) downs.	644090
Brigalow Belt South	Southern Downs	BBS12	Southern Downs an extensive and complex subregion that is difficult to subdivide further. Basis of province are the Jurassic and Cretaceous sediments that outcrop around the rim of the Great Artesian Basin. These are predominantly fine grained forming a low, hilly landscape including the watershed formed by the Great Dividing Range. In the southern part there are extensive Late Cainozoic flood-outs/clay plains, while minor areas of Tertiary volcanics are scattered throughout the subregion. Vegetation includes belah ( <i>Casuarina cristata</i> ), brigalow ( <i>Acacia harpophylla</i> ), poplar box ( <i>Eucalyptus populnea</i> ) and narrow-leaved ironbark ( <i>E. crebra</i> ) communities and less extensively spotted gum ( <i>Corymbia citriodora</i> , dusky leaved ironbark ( <i>E. fibrosa</i> subsp. <i>nubila</i> ), semi-evergreen vine thicket, <i>Astrebla</i> and <i>Acacia</i> communities.	4269566
Brigalow Belt South	Barakula	BBS13	Barakula consists primarily of dissected low Jurassic sandstone and lateritised sandstone hills, plateau remnants and scarps, interspersed with, and surrounded by undulating plains. It is centred on the Barakula area with a tongue extending north to Monto. In low hilly country, the predominant vegetation is an open forest/woodland of narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ), spotted gum ( <i>Corymbia citriodora</i> ), cypress pine ( <i>Callitris glaucophylla</i> ) and bulloak ( <i>Allocasuarina luehmannii</i> ) with dusky leaved ironbark ( <i>E. fibrosa</i> subsp. <i>nubila</i> ), narrow-	1295654

			leaved white mahogany ( <i>E. tenuipes</i> ), Tom Russell mahogany ( <i>Lysicarpus angustifolius</i> ) and thready-barked she-oak ( <i>Casuarina inophloia</i> ) characteristic of crests and scarps. ( <i>Corymbia citriodora</i> ) forms near pure stands along the crest of the Great Dividing Range. Plateau remnants with deep red soils in the north-east of the subregion support patches of tall open forest in which Gympie messmate ( <i>E. cloeziana</i> ) is locally dominant. Silver-leaved ironbark ( <i>E. melanophloia</i> ) and patches of semi-evergreen vine thicket were also widespread prior to extensive clearing on low to undulating hills in the north of the subregion. Several communities are associated with different soils and local landforms on the undulating plains; brigalow ( <i>Acacia harpophylla</i> ) — belah ( <i>Casuarina cristata</i> ) open forest was most extensive on deep, grey cracking clay soils with poplar box ( <i>E. populnea</i> ) and river red gum ( <i>E. camaldulensis</i> ) woodland on alluvial plains, narrow-leaved ironbark ( <i>E. crebra</i> ), rusty gum ( <i>Angophora leiocarpa</i> ), bulloak ( <i>Allocasuarina luehmannii</i> ), yellow jacket ( <i>E. bloxomei</i> ) on sandy textured solodic soils and gum-topped box ( <i>E. microcarpa/moluccana</i> ) or ( <i>E. populnea</i> ) or ( <i>E. crebra</i> ), ( <i>Allocasuarina luehmannii</i> ) on heavier textured solodics.	
Brigalow Belt South	Dulacca Downs	BBS14	Dulacca Downs comprises undulating to low, hilly country on deeply weathered and dissected fine grained Cretaceous sediments and associated colluvium and alluvium. Plains and lower slopes are predominantly brigalow ( <i>Acacia harpophylla</i> ), belah ( <i>Casuarina cristata</i> ) and/or poplar box ( <i>Eucalyptus populnea</i> ) communities, with communities containing narrow-leaved ironbark ( <i>E. crebra</i> ), dusky leaved ironbark ( <i>E. fibrosa</i> subsp. <i>nubila</i> ), <i>Acacia</i> spp. on dissected lateritised sediments of hilltops, crests and scarps.	162271
Brigalow Belt South	Weribone High	BBS15	Weribone High contains downs and low ridges on the Cretaceous Griman Creek Formation lithic sandstones, fine grained sediments, with areas of flood-out. Soils include earths, texture contrast soils and cracking clays. The vegetation of downs and plains is predominantly belah ( <i>Casuarina cristata</i> ), brigalow ( <i>Acacia harpophylla</i> ) and poplar box ( <i>Eucalyptus populnea</i> ) communities with narrow-leaved ironbark ( <i>E. crebra</i> ) and bendee ( <i>Acacia catenulata</i> ) on ridges and residuals. Mulga ( <i>Acacia aneura</i> ) occurs in south-west of subregion.	993821
Brigalow Belt South	Tara Downs	BBS16	Tara Downs is a gently undulating landscape formed by deep weathering, erosion and deposition of the Cretaceous Griman Creek Formation to produce extensive clay plains interspersed with scattered lateritised residuals. Dissection of the clay sheet is occurring along watercourses and on margins. Soils are predominantly cracking grey clays with minor areas of lateritic earths on residuals and coarse textured sands deposited over the clay sheet. Vegetation of the clay plains is mostly open forest of brigalow ( <i>Acacia harpophylla</i> ) and/or belah ( <i>Casuarina cristata</i> ) with molly box ( <i>Eucalyptus pilligaensis</i> ) and black tea-tree ( <i>Melaleuca bracteata</i> ) sometimes present. Poplar box ( <i>Eucalyptus populnea</i> ) woodlands grow near drainage lines dissecting the clay plain and narrow-leaved ironbark ( <i>E. crebra</i> ) ± silver-leaved ironbark ( <i>E. melanophloia</i> ) woodlands are associated with the residual crests and scarps.	449466
Brigalow Belt South	Eastern Darling Downs	BBS17	Eastern Darling Downs comprises spurs and foothills of Main Range along eastern boundary of bioregion, low hills in the south and the Condamine River plain in the central and western parts. Substrates include Tertiary basalt in the extreme east, Jurassic sediments in the south-east, Triassic — Jurassic sediments in the north-east and alluvial soils of varying age along the Condamine River plain. The basalt vegetation communities are predominantly woodlands of narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ), yellow box ( <i>E. melliodora</i> ), forest red gum ( <i>E.</i>	1639276

			tereticornis), white box ( <i>E. albens</i> ) or mountain coolibah ( <i>E. orgadophila</i> ). The sandstone hills support narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ) woodland with gum-topped box ( <i>E. moluccana/microcarpa</i> ) and poplar box ( <i>E. populnea</i> ) woodland on lower slopes and valleys. There are also some areas of semi-evergreen vine thicket/( <i>Araucarian microphyll</i> ) rainforest, particularly in the south-east and brigalow ( <i>Acacia harpophylla</i> ) open forest and vine thicket in the north-east. Heavy cracking clays and black earths of the Condamine River plain supported prior to clearing bluegrass ( <i>Dichanthium sericeum</i> ) grassland and grassy woodlands of poplar box ( <i>E. populnea</i> ) with forest red gum/river red gum ( <i>E. tereticornis/camaldulensis</i> ), rough-barked apple ( <i>Angophora floribunda</i> ) adjacent to drainage lines. In the eastern part of the Condamine River plain, the black earths appear to have supported a grassy woodland of ( <i>E. tereticornis</i> ), ( <i>Angophora floribunda</i> ) rather than the <i>Dichanthium</i> grasslands and ( <i>E. populnea</i> ) woodlands of the central and western parts.	
Brigalow Belt South	Inglewood Sandstones	BBS18	Inglewood Sandstones consists of undulating to low hilly country on deeply weathered and lateritised Jurassic–Cretaceous sandstone with associated colluvial lower slopes and alluvial plains. Major vegetation types include narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ) on hillsides, ( <i>E. crebra</i> ), cypress pine ( <i>Callitris glaucophylla</i> ) and bulloak ( <i>Allocasuarina luehmannii</i> ) on solodic soils in gently undulating parts and poplar box ( <i>E. populnea</i> ) on lower slopes and flats. There are also minor areas of brigalow ( <i>Acacia harpophylla</i> ) — belah ( <i>Casuarina cristata</i> ).	1327718
Brigalow Belt South	Moonie R. - Commoron Creek Floodout	BBS19	Moonie R. - Commoron Creek Floodout is level to gently undulating country on Quaternary alluvium derived from sandstone to east, and overlying the Griman Creek Formation. These are also areas of partly consolidated Tertiary alluvial deposits. Soils include grey clays, brown clay loams, sandy solodics and solodised solonetz. Major vegetation types include brigalow ( <i>Acacia harpophylla</i> ) and/or belah ( <i>Casuarina cristata</i> ) open forest often with molly box ( <i>Eucalyptus pilligaensis</i> ) and narrow-leaved ironbark ( <i>E. crebra</i> ) cypress pine ( <i>C. glaucophylla</i> ) open forest/woodland.	802963
Brigalow Belt South	Woorabinda	BBS2	Woorabinda is based on the Expedition and Dawson ranges and the colluvium and alluvium derived from them. The sandstone ranges carry mixed eucalypt communities dominated by narrow-leaved ironbark <i>Eucalyptus crebra</i> and bloodwood <i>Corymbia</i> spp., with lancewood <i>Acacia shirleyi</i> on rockiest areas. The outwash to the north carries shrub woodlands and open forests dominated by narrow-leaved ironbark and bloodwoods, with gum-topped box <i>Eucalyptus moluccana</i> or lemon-scented gum <i>C. citriodora</i> on the finer-textured soils. The central outwash has extensive areas of cypress <i>Callitris glaucophylla</i> and bulloak <i>Allocasuarina luehmannii</i> on finer soils and rusty gum <i>Angophora leiocarpa</i> , forest red gum <i>Eucalyptus tereticornis</i> and narrow-leaved white mahogany <i>E. tenuipes</i> on coarser soils. This central area has a very diverse vegetation. In the north-east there area also areas of tablelands formed on laterised Tertiary deposits with narrow-leaved ironbark and bloodwood communities.	763822
Brigalow Belt South	Moonie - Barwon Interfluve	BBS20	Moonie - Barwon Interfluve consists of level to gently undulating landscape. Geology is predominantly coarse Quaternary sediments with some deeply weathered Cretaceous sediments o Griman Creek Formation. Soils include massive earths, cracking clays and texture contrast soils. Woodlands/open forests of poplar box ( <i>Eucalyptus populnea</i> ) and brigalow ( <i>Acacia harpophylla</i> )—belah ( <i>Casuarina cristata</i> ) are the major vegetation communities.	721059
Brigalow Belt South	Northern Basalts	BBS21	Northern Basalts subregion consists of Tertiary basalts over Jurassic quartz sandstones and alluvial sediments derived from these with landforms characterised by undulating low stony	545396



			hills, long slopes with sandy wash and heavy clays in the valley floors. Black loams are present on basalt ridges, while deep sands exist on sandstone and texture contrast soils on slopes. Heavy grey clay occurs on alluvial flats. Brigalow, belah, whitewood, wilga, budda and poplar box occur on basalt hills while silver-leaved ironbark, spotted gum and smooth-barked apple occur on stony hills. River red gum, belah myall and poplar box are present on basalt flats. Silver-leaved ironbark and white cypress pine occur in sandstone rocks, with smooth-barked apple, white cypress, Blakely's red gum, Moreton Bay ash, poplar box, wilga, rough-barked apple, bull oak, on lower sandstone slopes. White box, with silver-leaved ironbark, white wood, bull oak and brigalow occur on alluvial clays. River red gum grown along all streams.	
Brigalow Belt South	Northern Outwash	BBS22	Northern Outwash subregion consists of Tertiary and Quaternary alluvial fans and stream terraces while characteristic landforms are generally sloping plains with alluvial fans that are coarser and steeper than the Gwydir Fans downstream. Typical soils are red loams and heavy brown clays while vegetation is characterised by poplar box with white cypress pine, wilga and budda on red soils, belah and brigalow on brown clays.	700495
Brigalow Belt South	Pilliga Outwash	BBS23	Pilliga Outwash subregion consists of Quaternary alluvial fans largely derived from Jurassic quartz sandstone. Landforms occur as long slopes broken by sandy abandoned stream channels, patches of heavy grey clay and incised stream channels. Deep texture contrast soils with harsh clay subsoils are present along with grey clay with gilgai. Poplar box, pilliga box, Blakely's red gum, white cypress pine and mugga occur on coarser soils with belah, brigalow, yarran, budda, wilga, whitewood and rosewood on heavier soils. River red gum in creek lines, occasional silver-leaved ironbark, white box and fuzzy box occur in run-on sites.	534948
Brigalow Belt South	Pilliga	BBS24	Pilliga subregion consists of horizontal Jurassic quartz sandstones, limited shales, Tertiary basalt caps and plugs plus the sediments derived from these rocks. Landforms of the subregion consist of stepped sandstone ridges with low cliff faces and high proportion of rock outcrop. Long gentle outwash slopes intersected by sandy stream beds and prior stream channels. A few patches of heavy clay also occur. The subregion includes the spectacular mountain landscape of volcanic domes, plugs and dykes in the Warrumbungles. Shallow black earths and red loams occur on basalts. Extensive harsh texture contrast soils, linear patterns of deep yellow sand and stony red brown earths also occur. White box with white cypress pine and kurrajong occur on the basalt hills. Blue-leaved ironbark, white gum, black cypress pine, whitewood, and rough-barked apple are present on stony sandstone plateau and streams. Narrow-leaved ironbark, white cypress pine, red stringy bark, patches of mallee and broom heath occur on gentler sandstone slopes. Pilliga box with grey box, poplar box, fuzzy box, bull oak, rosewood, wilga and budda are present on heavier soils in the west and north. River red gum lines all streams.	1733674
Brigalow Belt South	Liverpool Plains	BBS25	Liverpool Plains subregion consists of Quaternary alluvial plains and outwash fans derived from Tertiary basalts. Permian and Triassic quartz sandstones occur with minor basalt caps. The subregion contains undulating hills and sloping plains with alluvial channels and floodplains, while typical soils are extensive black earths on low angle slopes, brown clays, alluvial soils and red or brown texture contrast soils on slopes below sandstone. Plains grass, panic, windmill grass and blue grass occur on black earths with occasional white box, yellow box, poplar box and wilga. White box and white cypress pine with rough barked apple, hill red gum, occasional belah and mulga are present on texture contrast hillslope soils.	938859

Brigalow Belt South	Liverpool Range	BBS26	Liverpool Range subregion consists of multiple Tertiary basalt flows with intervening sediments and ash fall material, overlying Jurassic quartz sandstones and shale. Characteristic landform is an undulating plateau with steep margins grading to long footslopes. Stony red brown loams occur on ridges with shallow stony clay soils on steep slopes grading to deep black earths on lower slopes. Plateau vegetation consists of open forest of silvertop stringybark, manna gum and mountain gum with snow gum in cold air drainage hollows and tallow wood, blackbutt and blue gum on eastern slopes, and small areas of vine forest. On the slopes occurs white box with rough barked apple and belah in the creeks on northern aspects. Yellow box and Blakely's red gum occur on slopes with southern aspects.	511758
Brigalow Belt South	Talbragar Valley	BBS27	Talbragar Valley subregion consists of near horizontal Mesozoic quartz sandstone, conglomerates and shales with minor Tertiary basalt caps and extensive alluvial wash plains. Residual rocky hills, undulating long slopes and wash plains characterise the subregion, with wide valley floors with sandy streams. Thin stony loams and texture contrast soils over most of the landscape with deeper sands and brown earths on valley floors. Narrow-leaved ironbark, white cypress pine and white box occur on hills and slopes. Patches of black cypress pine, hill red gum, occasional kurrajong and scrubby acacia are present in rocky outcrops. Grey box, yellow box, rough-barked apple are found on valley floors. River red gum occur on larger streams and river oak on tributaries.	205343
Brigalow Belt South	Boomer Range	BBS3	Boomer Range is a hilly to mountainous province formed on Permian volcanics and sediments, with areas of Devonian-Carboniferous sediments. The vegetation is dominated by narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ) and rosewood ( <i>Acacia rhodoxylon</i> ) communities, with silver-leaved ironbark ( <i>E. melanophloia</i> ) on erosional lower slopes, and forest red gum ( <i>E. tereticornis</i> ) and Moreton Bay ash ( <i>Corymbia tessellaris</i> ) on alluvium. Areas of vine thicket occur on some hill slopes and in sheltered locations.	211286
Brigalow Belt South	Mount Morgan Ranges	BBS4	Mount Morgan Ranges is a rugged to hilly province formed on the Paleozoic rocks of the coastal ranges from inland of Rockhampton extending south to the Eidsvold area. The dominant rocks are volcanics, with areas of igneous rocks and small areas of folded metasediments. The steeper areas are dominated by narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ) woodlands with red bloodwood ( <i>Corymbia erythrophloia</i> ), spotted gum ( <i>C. citriodora</i> ) and rosewood ( <i>Acacia rhodoxylon</i> ). Silver-leaved ironbark ( <i>Eucalyptus melanophloia</i> ) forms a woodland on erosional lower slopes and gum-topped box ( <i>E. moluccana</i> ) forms a woodlands on colluvial slopes. Forest red gum ( <i>Eucalyptus tereticornis</i> ) and Moreton Bay ash ( <i>Corymbia tessellaris</i> ) occur on alluvial soils.	1293528
Brigalow Belt South	Callide Creek Downs	BBS5	Callide Creek Downs is an undulating river valley dominated by lower catena Tertiary deposits, with extensive areas of outcrop of underlying argillaceous rocks and smaller areas of low dissected tablelands of upper catena Tertiary deposits. Brigalow ( <i>Acacia harpophylla</i> ) communities are dominant, with areas of softwood scrub. Shrubby woodlands dominated by narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ) occur on the dissected tablelands and the alluvial areas are dominated by forest red gum ( <i>Eucalyptus tereticornis</i> ).	298166
Brigalow Belt South	Arcadia	BBS6	Arcadia if formed primarily on Triassic sediments of the Bowen Basin, with minor areas of Permian sediments in the east. Eastern, southern and western areas are predominantly rugged on coarse sandstones with narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ) and bloodwood ( <i>Corymbia</i> spp.) communities. The central and northern areas are more undulating and largely	707868

			contained within a broad valley. Clay soils carry brigalow ( <i>Acacia harpophylla</i> ) communities with areas of softwood scrub, while the shallow texture contrast soils have a narrow-leaved ironbark ( <i>E. crebra</i> ) woodland, with areas of poplar box ( <i>E. populnea</i> ). Poplar box dominates alluvial areas.	
Brigalow Belt South	Dawson River Downs	BBS7	Dawson River Downs is an essentially undulating subregion in which outcrop of sediments of the Bowen Basin and Tertiary sediments occur in about equal proportions. The dominant Tertiary surfaces are of the lower catena. The Tertiary soils form undulating to flat plains dominated by brigalow ( <i>Acacia harpophylla</i> ) and softwood communities. Exposed rocks of the underlying sedimentary basin form plains or hills with softwood scrub.	987664
Brigalow Belt South	Banana - Auburn Ranges	BBS8	Banana - Auburn Ranges has a complex geology but is dominated by granodiorites and other igneous rocks. It has two distinct parts centred on the Auburn Range in the north with a smaller area west of Proston-Wondai. The landscape is predominantly hilly. Silver-leaved ironbark ( <i>Eucalyptus melanophloia</i> ) woodlands are widespread, usually with red bloodwood ( <i>Corymbia erythrophloia</i> ). Narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ) is dominant on steeper areas with shallow soils. Colluvial and alluvial areas carry woodlands of poplar box ( <i>Eucalyptus populnea</i> ) or forest red gum ( <i>E. tereticornis</i> ) and Moreton Bay ash ( <i>C. tessellaris</i> ) and bulloak ( <i>Allocasuarina luehmannii</i> ). There are small areas of brigalow ( <i>Acacia harpophylla</i> ) scrub and vine thicket.	1535116
Brigalow Belt South	Buckland Basalts	BBS9	Buckland Basalts has a series of high dissected basalt tablelands with the underlying sediments, predominantly of Permian and Triassic age, exposed in the intervening valleys and gorges. The vegetation is predominantly a grassy open woodland dominated by silver-leaved ironbark ( <i>Eucalyptus melanophloia</i> ), mountain coolibah ( <i>E. orgadophila</i> ), bloodwood ( <i>Corymbia erythrophloia</i> ), forest red gum ( <i>E. tereticornis</i> ), yellow box ( <i>E. melliodora</i> ) and grey gum ( <i>E. sp. aff. E. longirostrata</i> ) with disjunct populations of silvertop stringybark ( <i>E. laevopinea</i> ) and Sydney blue gum ( <i>E. saligna</i> ) on the moister most elevated areas. The underlying sediments are dominated by an open woodland of silver-leaved ironbark, bloodwood and narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ). In the north-west, slumped basalts and the underlying shale carry brigalow ( <i>Acacia harpophylla</i> ) and vine thicket.	290363
Broken Hill Complex	Barrier Range	BHC1	Barrier Range subregion consists of Ancient gneiss, schists, amphibolite, granites and pegmatites with north-east structural trends, overlain by Cambrian sediments with north-west trends. Characteristic landforms are steep, low rocky ranges oriented to bedrock structure and prominent fault scarps. Eroded footslopes extend to outwash fans. The subregion contains a high proportion of rock outcrop with shallow stony soil on the crests. Soils become deeper and finer downslope. Texture contrast profiles are common and quality differs according to rock type. Limited mulga, dead finish and bluebush occur on the ridges. Denser shrubs including belah, whitewood, turpentine, prickly wattle, punty bush with bluebush, grasses and forbs are present on the lower slopes. River red gums line larger creeks, while shrubs and grasses increase on the outwash fans. Curly mallee occurs on limestone outcrops.	2781095
Broken Hill Complex	Mootwingee Downs	BHC2	Mootwingee Downs subregion consists of Ordovician and Devonian conglomerates, sandstones and siltstones with north-west structural trends. Late pre-Cambrian sandstone, chert and schist lie under the rocks of the ranges. Cretaceous sandstones form tabletops on the eastern edge of the sub-region. Asymmetric stony ridges formed by resistant bedrocks are cut by deep gorges and alternate with soil and debris filled valleys. Larger streams deliver sand	654524

			to the fans and plains. Tablelands and mesas of Cretaceous sandstone occur in the east and northeast. There is very limited soil on the ranges. Stony sands on the lower slopes extend to deep gravels and sands in the streamlines and floodouts. In situ brown to grey green clayey sands are present on Cretaceous rocks. Mulga is common on the hills with white pine and numerous shrubs. River red gums line the creeks. Denser mulga, patches of belah, occasional beefwood, and dense prickly wattle, and other shrubs occur in the valleys. Bluebush and saltbush, with patches of belah and occasional gidgee occur on the tablelands and slopes.	
Broken Hill Complex	Scopes Range	BHC3	Scopes Range subregion consists of Ordovician quartz sandstone with north-east trend and low angle dips and landforms characterised by low rounded hills with a high proportion of rock outcrop. Faulted edge against a cemented gravel apron of Tertiary age occurs on the eastern side. Soils are present as shallow stony profiles on crests and slopes extending to sandy outwash fans. Open mulga, patches of belah and bluebush occur on the hills. Bluebush and saltbush communities occur on the slopes extending to grasses and saltbush on the plains. River red gums occur on the larger creek lines.	299809
Broken Hill Complex	Barrier Range Outwash	BHC4	Barrier Range Outwash, Fans and Plains subregion consists of Quaternary colluvial and alluvial slope deposits, floodplain and fan sediments, and aeolian sands. Stream channels and floodplains, low angle alluvial fans and floodouts, extending to extensive sandplains and dune fields with lakes and claypans are typical landforms. There is limited lunette development. Deep red sands occur on sandplains and dunes, with clayey sands in floodouts extending to dark coloured cracking clays in swamps and lake beds. Brown loamy sands occur on lunettes. River red gums and some black box occur on the larger creek lines. Mulga, belah, rosewood with occasional nelia and leopardwood and an understorey of grasses and bluebush occur on the sandplains and dunes. Some porcupine grass is present. Canegrass chenopods and some lignum occurs on lake beds with fringing black box. Mulga, turpentine and bluebush are present on lunettes.	1967473
Burt Plain	Burt Plain P1	BRT1	The Burt Plain P1 subregion lies over the Arunta Province, Tenant Inlier, and small areas of Georgina, Wiso and Ngalia Basins, with metamorphic, plutonic, and sedimentary rocks of Precambrian age. Soils are shallow sands and massive earths. Elevation across the undulating plains varies from 400 m to 1100 m in the Reynolds Ranges. The drainage includes several rivers flowing north into the Tanami Desert, including the Hanson, Lander Rivers and Yaloogarrie Creek. The climate is arid with annual rainfall between 300 and 400 mm. Vegetation is dominated by Mulga (Acacia anuera) tall open-shrubland with some Eucalyptus low open woodland and Triodia grassland.	2931097
Burt Plain	Burt Plain P2	BRT2	The Burt Plain P2 subregion lies over the Arunta Province and Ngalia and Georgina Basins with metamorphic, plutonic, and sedimentary rocks of Palaeozoic and Precambrian ages. Soils are shallow sands, massive earths, and red duplex saline soils. The elevation varies between 330 and 800 m, with an undulating plain stretching across the subregion. The subregion is dissected by many rivers originating in the surrounding ranges, including the Sandover, Plenty, Hanson, and Bunday Rivers. The climate is arid with annual rainfall between 300 and 400 mm. Vegetation includes Mulga (Acacia anuera), Ironwood (A. estrophiolata) low open-woodland, and Triodia grassland with Acacia tall shrubland.	3531137
Burt Plain	Burt Plain P3	BRT3	The Burt Plain P3 subregion lies over the Arunta Province, containing metamorphic rocks of Precambrian age. Soils are mainly massive earths, with some shallow sands and cracking clays.	390973

			The elevation is mostly between 550 m and 800 m, with a few peaks reaching 1100 m. The drainage in this small subregion is minor, with a few creeks originating in the West MacDonnell Ranges. The climate is arid with annual rainfall between 300 and 400 mm. Vegetation is mostly Mulga ( <i>Acacia anuera</i> ) tall open-shrubland or tall sparse-shrubland.	
Burt Plain	Burt Plain P4	BRT4	The Burt Plain P4 subregion lies over the Arunta Province and Georgina Basin with metamorphic, plutonic, and sedimentary rocks of Devonian, Cambrian and Precambrian ages. Soils are mostly shallow sands with some massive earths, and red duplex saline soils. The elevation varies between 350 m and 600 m in the Dulcie Ranges. The drainage in this small subregion is restricted to the headwaters of several large rivers, but includes the Marshall and Bunday Rivers. The climate is arid with annual rainfall between 300 and 400 mm. The vegetation includes areas of <i>Eucalyptus</i> low open woodland, <i>Acacia</i> low open-woodland, and <i>Triodia</i> grassland with tall <i>Acacia</i> sparse shrubland overstorey.	526577
Cape York Peninsula	Coen - Yamba Inlier	CYP1	Coen - Yamba Inlier encompasses the high altitude/high rainfall (>1400mm) areas of Iron and McIlwraith Ranges in the north, and follows the uplifted Great Dividing Range to the drier (<1000mm) inland areas in the south. Relief varies from subdued dissected undulating plains to rises, to steep sided hills and mountains. The geology is dominated by metamorphic rocks and acid intrusive rocks of various ages. Weathered sands, gravels and clays cover the depositional areas. In the high rainfall northern areas, the vegetation is predominantly notophyll vine forests and ( <i>Corymbia tessellaris</i> / <i>C. clarksoniana</i> ) woodlands on the plateaus and ranges, with semi-deciduous mesophyll vine forests on lower slopes and alluvia, and deciduous vine thickets on drier western slopes. ( <i>Eucalyptus cullenii</i> / <i>E. crebra</i> ) woodlands dominate the drier southern ranges, while ( <i>E. tetradonta</i> , <i>Corymbia hylandii</i> ) woodlands are extensive on low hills and erosional plains.	2395283
Cape York Peninsula	Starke Coastal Lowlands	CYP2	Starke Coastal Lowlands receive more than 1400mm annual precipitation, and are dominated by gently undulating plains of weathered, colluvial and alluvial clays, silts and gravels. These areas are vegetated by woodlands dominated by ( <i>Eucalyptus leptophleba</i> ), ( <i>E. platyphylla</i> ) or ( <i>Corymbia nesophila</i> ), with ( <i>C. clarksoniana</i> ) woodlands and ( <i>Melaleuca viridiflora</i> ) low open woodlands occupying the alluvial areas. Heathlands cover the extensive sand plains and dunefields north of Cooktown. The mountainous granitic Melville and Altanmoui Ranges in the north, support ( <i>Eucalyptus crebra</i> , <i>Corymbia hylandii</i> ) woodlands, Araucarian notophyll vine forests and deciduous vine thickets.	423368
Cape York Peninsula	Cape York - Torres Strait	CYP3	Cape York - Torres Strait occupies the northern tip of Cape York Peninsula and the hilly continental Torres Strait Islands, which all receive greater than 1600mm annual precipitation. The geology is dominated by the Torres Strait Volcanics and subsequent intrusions of acid igneous material. These areas are covered with woodlands dominated by Mesozoic to Proterozoic moderately to strongly deformed and metamorphosed sediments and interbedded volcanics. ( <i>Corymbia hylandii</i> subsp. <i>peninsularis</i> ), ( <i>C. nesophila</i> ) or ( <i>C. novoguineensis</i> ), with minor areas of ( <i>Melaleuca viridiflora</i> ) low open woodlands and notophyll vine forest. The gently undulating Carnegie Tableland of ferruginous laterite is vegetated by semi-deciduous notophyll vine forests and ( <i>C. novoguineensis</i> ) woodlands.	67816
Cape York Peninsula	Jardine - Pascoe Sandstones	CYP4	The majority of this subregion receives more than 1600mm annual precipitation with significant dry season precipitation. It is dominated by plains and low rises of Mesozoic sandstones, with the northern extension of the lateritic Weipa Plateau in the west and	1425861

			extensive dunefields of aeolian sands in the east. This subregion supports the most extensive areas of heathlands and sedgeland in the bioregion. ( <i>Eucalyptus tetrodonta</i> ), ( <i>Corymbia nesophila</i> ) woodlands dominate the majority of the landscape. Notophyll vine forest patches are frequent in the east.	
Cape York Peninsula	Battle Camp Sandstones	CYP5	This area of deeply dissected sandstone plateaus and ranges receives more than 1600mm annual precipitation in the east, but rainfall rapidly decreases to less than 1000mm in the western margins. The soils are lithosols and coarse sands. ( <i>Corymbia stockeri</i> ) and ( <i>Eucalyptus tetrodonta</i> ) woodlands are extensive throughout this subregion.	573236
Cape York Peninsula	Laura Lowlands	CYP6	Laura Lowlands receive annual precipitation ranging from 800 to 1400mm, with the majority receiving less than 1200mm. The undulating lowlands are composed of residual weathered sands derived from the Battle Camp sandstones, and flat plains of colluvial and alluvial clays, silts and sands. ( <i>Eucalyptus tetrodonta</i> ) woodlands dominate the sand sheets, while ( <i>E. chlorophylla</i> ) woodlands, ( <i>Melaleuca viridiflora</i> ) low open woodlands and closed tussock grasslands are extensive on the alluvial plains.	1640822
Cape York Peninsula	Weipa Plateau	CYP7	Annual precipitation ranges from 1600mm on the west coast to less than 1000mm in the centre. This undulating plateau surface is dominated by Tertiary laterite vegetated with ( <i>Eucalyptus tetrodonta</i> ) woodlands in the west. The eastern areas are undulating plains of Cretaceous shales and siltstones. In these areas, ( <i>Eucalyptus leptophleba</i> ) and ( <i>Corymbia clarksoniana</i> ) open woodlands are the most extensive with scattered areas of tussock grasslands.	2754561
Cape York Peninsula	(Northern) Holroyd Plain	CYP8	This extensive Tertiary sand sheet is dissected by intricate drainage systems and contains numerous small drainage depressions. Annual precipitation is 1400mm near the coast and less than 1000mm in the east. ( <i>Eucalyptus tetrodonta</i> ) woodlands dominate the sand ridges, while ( <i>Melaleuca viridiflora</i> ) low open woodlands and closed tussock grasslands are extensive in the drainage systems.	2574669
Cape York Peninsula	Coastal Plains	CYP9	These saline clay plains are dominated by tussock grasslands and extensive saltpans. Mangroves line the tidal streams. The beach ridges and chenier plains which lie parallel to the coastline are predominantly vegetated with mixed dune woodlands and less extensive areas of herblands. Annual precipitation throughout the subregion is greater than 1200mm.	262089
Carnarvon	Cape Range	CAR1	Cape Range and Giralia dunefields: northern part of Carnarvon Basin. Rugged tertiary limestone ranges and extensive areas of red aeolian dunefield, Quaternary coastal beach dunes and mud flats. <i>Acacia</i> shrublands over <i>Triodia</i> on limestone ( <i>Acacia startii</i> / <i>bivenosa</i> ) and red dunefields, <i>Eucalyptus</i> woodlands (bloodwood = <i>Corymbia</i> ???) over <i>Triodia</i> on the Cape Range. Extensive hummock grasslands ( <i>Triodia</i> ) on the Cape Range and eastern dunefields. Tidal mudflats of sheltered embayments of Exmouth Gulf support extensive mangroves. Beach dunes with <i>Spinifex</i> communities. An extensive mosaic of saline alluvial plains with samphire and saltbush low shrublands along the eastern hinterland of Exmouth gulf. Islands of the Muiron, Barrow, Lowendal and Montebello groups are limestone-based. Climate is arid, semi-desert to sub-tropical climate, with variable summer and winter rainfall. Cyclonic activity can be significant, and cyclonic systems may affect the coast and hinterland annually.	2353004
Carnarvon	Wooramel	CAR2	Southern and central parts of the Carnarvon Basin. Quaternary alluvial, aeolian and marine sediments overlying Cretaceous strata. Alluvial plains associated with downstream sections	6024018

			and deltas of Gascoyne Minilya and Wooramel Rivers. Snakewood scrubs on clay flats. Includes Lake MacLeod and Kennedy Range. Tree to shrub steppe over hummock grasslands on and between aeolian red sand dunefields are extensive in the north and east as well as on top of Kennedy Range. Permian sediments are common in northern parts. Southern areas comprise limestone plateaux overlain by red sand plains. Acacia shrublands (Mulga, Bowgada, Coriacea) over bunch grasses on red sandy ridges and plains. Mangroves confined to small areas around Lake MacLeod and near Carnarvon. Saline alluvial plains with samphire and saltbush low shrublands in near-coastal areas. A seasonal arid climate, tending towards bimodal rainfall. Includes the northern section of the Peron Peninsula.	
Central Arnhem	Central Arnhem P1	CA1	The Central Arnhem P1 subregion stretches from the Arnhem Plateau to the Gulf of Carpentaria and covers the McArthur Basin. The topography is varied from the eastern Arnhem Plateau in the west of the subregion to the Arafura and Gulf fall plains in the north and east. Elevation ranges from 400 m in the west on the Arnhem Plateau to sea level in the east, and most of the subregion is below 200 m. The subregion contains the headwaters of many large rivers, including the Mann, Cadell, Blyth, Goyder, Rose and Wilton Rivers. Vegetation is almost all Eucalyptus forest and woodlands. The sedimentary origin of the soils gives rise to predominantly shallow sandy soils. The climate varies from the coast to inland areas, but is typically monsoonal, with annual rainfall between 1000 to 1400 mm.	3137111
Central Arnhem	Central Arnhem P2	CA2	The Central Arnhem P2 subregion forms a narrow belt along the Parsons and Mitchell Ranges in eastern Arnhem Land, with elevation between 50 to 300 m. The ranges are dominated by Eucalyptus low open-woodland with hummock grass understorey, while the lower areas are covered by Eucalyptus forests and woodland with tussock grass understorey. Soils are predominantly shallow sandy soils. Several rivers have their headwaters in the subregion, including the Koolatong and Walker Rivers. The climate is monsoonal with annual rainfall varying south to north from 1000 to 1600 mm.	324458
Central Kimberley	Pentecost	CK1	<p>This is hilly to mountainous country with parallel siliceous ranges of Proterozoic sedimentary rocks with skeletal sandy soils supporting Triodia spp. hummock grasses with scattered trees, and with earths on Proterozoic volcanic substrates in valleys supporting ribbon grass (Chrysopogon spp.) with scattered trees. Open forests of river red gum (Eucalyptus camaldulensis) and Pandanus spp. occur along drainage lines. The climate is dry hot tropical and sub-humid to semi-arid with summer rainfall.</p> <p>The Pentecost subregion is predominantly middle Pentecost sandstone, with King Leopold and Warton sandstone ranges along its southern peripheries. Large areas are mantled by Cainozoic soils. There is moderate dissection by several rivers (Durack, Chamberlain and Fitzroy). This is the true central Kimberley. Average annual rainfall ranges from 750 mm to 1000 mm. The dominant vegetation is savannah woodland of eucalypts over Triodia spp. Broad scale vegetation mapping of the area describes the following components;</p> <ul style="list-style-type: none"> <li>• Eucalyptus microtheca (coolibah) and/or Eucalyptus spp. +/- Excoecaria parvifolia (gutta percha) grassy low woodland.</li> <li>• Adansonia gregorii (boab), Bauhinia cunninghamii (bauhinia) and Grevillea striata (beefwood) grassy low open-woodland.</li> </ul>	4620577

			<ul style="list-style-type: none"> <li>· Eucalyptus brevifolia (snappy gum) low open-woodland with Triodia spp. (spinifex) hummock grasses or sometimes a hummock grassland without trees.</li> <li>· Eucalyptus tectifica (Darwin Box) +/- Eucalyptus grandifolia (large-leaved cabbage gum) +/- Eucalyptus byrnesii (fan-leaved bloodwood) woodland with Sorghum spp. (sorghum) and Sehima nervosum (white grass) tall grasses.</li> <li>· Astrebla spp. (Mitchell grass) and/or Dichanthium spp. (bluegrass) tussock grassland sparsely wooded with low trees.</li> <li>· Astrebla lappacea (curly Mitchell grass) and/or Astrebla pectinata (barley Mitchell grass) tussock grassland sparsely wooded with Acacia spp. low trees.</li> <li>· Eucalyptus phoenicea (scarlet gum) and Eucalyptus ferruginea subsp. stypophyllal (rusty bloodwood) low woodland with Triodia bitextura (curly spinifex) hummock grassland understorey.</li> <li>· Eucalyptus dichromophloia, Eucalyptus miniata (Northern woollybutt) +/- Eucalyptus tetradonta (Darwin stringybark) open-woodland with Triodia bitextura (curly spinifex) and Sorghum spp. (sorghum) grasses.</li> <li>· Eucalyptus grandifolia (large-leaved cabbage gum) +/- Eucalyptus greeniana (broad-leaved bloodwood) +/- Eucalyptus polycarpa (long-fruited bloodwood) low open-woodland with Triodia bitextura (curly spinifex) hummock grasses or Chrysopogon spp. (ribbon grass) and Dichanthium spp. (blue grass) tussock grasses.</li> <li>· Eucalyptus brevifolia (snappy gum) low open-woodland with Triodia pungens (soft spinifex) and/or Triodia bitextura (curly spinifex) hummock grasses and/or tussock grasses.</li> <li>· Eucalyptus brevifolia (snappy gum) low open-woodland with Triodia bitextura (curly spinifex) hummock grasses +/- Enneapogon spp. (nine-awn grass) short-tussock grasses or sometimes a grassland without trees.</li> </ul>	
Central Kimberley	Hart	CK2	<p>This is hilly to mountainous country with parallel siliceous ranges of Proterozoic sedimentary rocks with skeletal sandy soils supporting Triodia spp. hummock grasses with scattered trees, and with earths on Proterozoic volcanic substrates in valleys supporting ribbon grass (Chrysopogon spp.) with scattered trees. Open forests of river red gum (Eucalyptus camaldulensis) and Pandanus spp. occur along drainage lines. The climate is dry hot tropical and sub-humid to semi-arid with summer rainfall.</p> <p>The subregion has a rugged topography dominated by Hart dolerite exposed along the eastern edge of the Kimberley Craton, where its basement members are folded and exposed. The basement rocks are volcanic and plutonic substrates and sedimentary rocks. This is the driest part of Central Kimberley bioregion with an annual rainfall of 600mm to 700mm. The vegetation is primarily savannah woodland over Triodia spp. and/or bunch grasses. In this subregion are found the headwaters of the Ord, Dunham and Fitzroy Rivers. Broad scale vegetation mapping of the area describes the following components;</p> <ul style="list-style-type: none"> <li>· Astrebla pectinata (barley Mitchell grass) closed-tussock grassland +/- low trees.</li> <li>· Eucalyptus brevifolia (snappy gum) low open-woodland with Triodia bitextura (curly spinifex) hummock grasses or sometimes a Triodia intermedia (winged spinifex) hummock grassland.</li> <li>· Eucalyptus tectifica (Darwin Box) +/- Eucalyptus grandifolia (large-leaved cabbage</li> </ul>	2456606



			<p>gum) +/- Eucalyptus byrnesii (fan-leaved bloodwood) woodland with Sorghum spp. (sorghum) and Sehima nervosum (white grass) tall grasses.</p> <ul style="list-style-type: none"> <li>· Eucalyptus terminalis (desert bloodwood) low open-woodland with Sehima nervosum (white grass) and Chrysopogon fallax (golden beard grass) tussock grasses +/- Triodia spp. (spinifex).</li> <li>· Eucalyptus brevifolia (snappy gum) low open-woodland with Triodia pungens (soft spinifex) and/or Triodia bitextura (curly spinifex) hummock grasses and/or tussock grasses.</li> <li>· Triodia wiseana (limestone spinifex) and Triodia intermedia (winged spinifex) hummock grassland sparsely wooded with Eucalyptus brevifolia (snappy gum) low trees.</li> <li>· Eucalyptus tectifica (Darwin box) +/- Eucalyptus spp. woodland with Chrysopogon spp. (ribbon grass), Sorghum spp. (sorghum) and Triodia bitextura (curly spinifex) grassy understorey.</li> <li>· Cochlospermum fraseri (kapok), Erythrophleum chlorostachys (ironwood) and Terminalia canescens +/- Acacia spp. +/- Eucalyptus spp. Deciduous low open-woodland with sparse-tussock grasses.</li> <li>· Eucalyptus brevifolia (snappy gum) low open-woodland with Triodia bitextura (curly spinifex) hummock grasses +/- Enneapogon spp. (nine-awn grass) short-tussock grasses or sometimes a grassland without trees.</li> </ul>	
Central Kimberley	Mount Eliza	CK3	<p>This is undulating to hilly country with scattered Proterozoic granite domes, gneiss hills, schist ridges, occasional quartz reefs and broad intervening alluvial flats. Drainage patterns are rectangular and incised, reflecting strike belts. Soils are skeletal, often stony, dominated by coarse sands, supporting hummock grasses (Triodia spp.) with scattered trees, many deciduous. Loams in valleys support ribbon grass (Chrysopogon spp.) with open woodlands, dominated by eucalypts.</p> <p>Open forests of river red gum (Eucalyptus camaldulensis) and Terminalia platyphylla occur along drainage lines. The climate is dry hot tropical and sub-humid to semi-arid with summer rainfall.</p> <p>The Mount Eliza subregion is the Southwestern periphery of the Kimberley Craton. It is very rugged with intense folding and exposure of basement strata. The geology includes schists, gneiss, granites, sandstones, dolerites and volcanic substrates. The vegetation is primarily savannah woodland and there are scattered vine thickets towards western end. Annual rainfall is approximately 800 mm. Broad scale vegetation mapping of the area describes the following components;</p> <ul style="list-style-type: none"> <li>· Bauhinia cunninghamii (bauhinia) and/or deciduous species grassy low open-woodland.</li> <li>· Astrebla lappacea (curly Mitchell grass) and/or Astrebla pectinata (barley Mitchell grass) tussock grassland sparsely wooded with Acacia spp. low trees.</li> <li>· Eucalyptus tectifica (Darwin Box), Eucalyptus flavescens (wrinkle-leaved ghost gum) woodland with Chrysopogon spp. (ribbon grass) tussock grasses.</li> <li>· Eucalyptus brevifolia (snappy gum), Eucalyptus cadophora subsp. cadophora (twin-leaved bloodwood) low open-woodland with a Triodia bitextura ((curly spinifex) hummock</li> </ul>	1003969

			grass ground layer. · Cochlospermum fraseri (kapok), Erythrophleum chlorostachys (ironwood) and Terminalia canescens +/- Acacia spp. +/- Eucalyptus spp. Deciduous low open-woodland with sparse-tussock grasses.	
Central Mackay Coast	Whitsunday	CMC1	contains the coastal hills and ranges and drowned coastline east of Proserpine. The geology is primarily intermediate to basic volcanics. The dominant vegetation is notophyll rainforest with a pronounced semi-deciduous element at lower altitudes.	93653
Central Mackay Coast	Proserpine - Sarina Lowlands	CMC2	lies between the uplands of the Clarke–Connors Range subregion and the sea. The subregion consists of alluvial and estuarine sediments interspersed with acid intrusive low hills and bluffs in the east, and foothills and low ranges on intermediate to basic volcanics and metasediments in the west. Prior to clearing for sugar cane and pasture, flatter areas supported paperbark and eucalypt woodlands, while hillier parts support savanna eucalypt woodlands and notophyll rainforest similar to the Whitsunday province.	614458
Central Mackay Coast	Clarke - Connors Ranges	CMC3	contains the higher moister parts of the Clarke and Connors Ranges from just west of St Lawrence in the south to the headwaters of the Proserpine River in the north. The geology is predominantly granite. The characteristic vegetation types of the province include red and white Eungella satinash (Acmena resa and Syzygium wesa) and Mackay tulip oak (Argyrodendron actinophyllum subsp. diversifolium) notophyll rainforests and eucalypt forests and woodlands.	520575
Central Mackay Coast	Byfield	CMC4	is low to steep hilly country on a mix of geologies including acid, intermediate and basic volcanics and metasediments. The vegetation is predominantly eucalypt forest with scattered patches of notophyll rainforest.	193886
Central Mackay Coast	Manifold	CMC5	contains high parabolic dunes and sand plains north of Yeppoon. The major vegetation types associated with the Manifold subregion are shrublands and paperbark forests.	20218
Central Ranges	Mann-Musgrave Block	CR1	The Mann-Musgrave Block subregion (NT) lies in the south west corner of the Northern Territory. The Mann and Musgrave Ranges occur just south of the border in South Australia. Elevation in the subregion is generally above 500 m, ranging up to 1000 m along the South Australian border. The area lies over the Musgrave Block and small areas of the Amadeus Basin. Soils in the subregion are mainly shallow sands and massive earths. The climate is arid with annual rainfall below 300 mm. Vegetation is hummock grassland (Triodia spp.) and sparse Acacia shrubland. Minor drainage occurs around the Petermann Ranges, including Docker and Hull Rivers.	9175894
Central Ranges	Wataru	CR2	Inselbergs rising abruptly above the surrounding sandplain and dunes. Major vegetation types are Eucalyptus spp., Triodia basedowii, Acacia aneura and Aristida contorta tall shrubland on red earthy sands; Triodia basedowii, Aristida contorta and A. holathera var. holathera hummock grassland on red siliceous sands and Acacia kempeana, low shrubland on red massive earths.	423360
Central Ranges	Everard Block	CR3	Hills and ridges on a variety of rock types including sandstone, separated by undulating plains. There is a mixed cover of Acacia aneura / A. cibaria low open woodland with a shrub and hummock grass understorey on red massive earths and red earthy sands, and Triodia clelandii / T irritans open hummock grassland and Acacia kempeana low shrubland on reddish firm siliceous sands.	518495
Channel Country	Toko Plains	CHC1	The Toko Plains subregion lies over the Georgina Basin on Cambrian sedimentary rocks,	2821685

			overlain by massive earths and shallow sandy soils. Elevation is between 180 m and 400 m, with much of the area covered by plains and minor relief provided by the Tarlton and Toko Ranges. Drainage in the subregion includes the Marqua, Arthur and Lucy Creeks and plains of the Sandover River. The climate is arid with hot summers and mild winters, with most of the 300 to 400 mm of rain falling in summer months. Vegetation is predominantly Triodia grassland and Acacia tall open-shrubland.	
Channel Country	Core Ranges	CHC10	Core Ranges subregion is composed of Pre-Cambrian and Cambrian schist, slate and volcanics intruded by Devonian granodiorite and also fringing Jurassic sandstones. Landforms are typically low ranges and rounded hills. Strong control by geology has produced prominent rounded tors on the granodiorite. Low angle stony slopes and dendritic drainage also occur. Soils consist of shallow stony profiles on ranges, along with contour banded and gibber covered lower slopes. Vegetation is typically open bluebush with sandalwood, dead finish, western pittosporum, copperburr and sparse mulga.	139047
Channel Country	Bulloo	CHC11	Bulloo overflow subregion consists of Quarternary clays and sands of the Bulloo River floodout characterised by channels and floodplains, clay playas with beaches and lunettes, marginal sandplains and dunes. Typical soils are saline cracking grey clays. Siliceous sands occur on dunes, more complex but poorly known loams and sands are present on lunettes. Canegrass and ephemerals occur on clays. Canegrass, lignum with some black box are present on lake margins. Sparse mulga, whitewood and old man saltbush occur on sands.	1075303
Channel Country	Sturt Stony Desert	CHC2	An undulating gibber pavement with occasional dunes and small isolated silcrete capped mesas and hills. The plains support a low open shrubland of Acacia tetragonophylla and Eremophila spp. And a tall open shrubland of A. aneura, Senna spp. And Eremophila spp on crusty red duplex soils, while the dunes are dominated by a low open woodland of Hakea leucoptera, Zygochloa paradoxa over Aristida contorta and A. holathera var. holathera on red siliceous sands.	7012292
Channel Country	Goneaway Tablelands	CHC3	is underlain by weathered Cretaceous sediments and covered by remnant Tertiary deposits, forming dissected low hills and tablelands with shallow soils supporting Acacia shrublands. The tablelands are interspersed with undulating stony clay plains supporting Mitchell grass (Astrebla spp.) Grasslands and gidgee (Acacia cambagei) shrublands on mantled pediments.	5383828
Channel Country	Diamantina-Eyre	CHC4	A broad floodplain with sinuous channels and low levees, partly overlain by dunes. The floodplain is dominated by Eucalyptus coolabah ssp.arida low woodland over Muehlenbeckia florulenta and Lysiphyllum gilvum on grey self-mulching cracking clays. Channels are dominated by Sporobolus mitchellii grassland and Chenopodium auricomum shrubland on red firm siliceous sands. A hummock grassland of Zygochloa paradoxa, Triodia basedowii over Aristida contorta and A. holathera var. holathera dominates the red siliceous dunes.	3293906
Channel Country	Cooper Plains	CHC5	is dominated by the floodplains of the Cooper Creek. The Cooper creek floodplains is surrounded by extensive areas of hummock grassland on sandplains and/or dunefields. Further from the floodplain are vast areas of clay soils mantle with stones or 'gibbers' supporting Mitchell grass (Astrebla spp.) grass/herblands. Areas of Gidgee (A. cambagei) shrublands on low ranges supporting sparse shrublands are scattered across the subregion.	1844455
Channel Country	Coongie	CHC6	A field of parallel dunes and an extensive system of interconnected claypans periodically flooded by Cooper Creek. The pans are dominated by chenopod shrubland of Chenopodium auricomum and Atriplex nummularia on grey self-mulching cracking clays and, to a lesser	2096956

			extent, <i>Eucalyptus coolabah</i> ssp. <i>arida</i> , <i>Muehlenbeckia florulenta</i> low woodland. On the dunes an <i>Acacia ligulata</i> , <i>Atalaya hemiglauc</i> , <i>Hakea</i> spp. tall shrubland dominates the red siliceous sands, while the whitish siliceous sands support <i>Zygochloa paradoxa</i> , <i>Triodia basedowii</i> hummock grassland. In interdunal areas a chenopod shrubland of <i>Chenopodium auricomum</i> , <i>Atriplex nummularia</i> occupies the red massive earths along with smaller areas of <i>Aristida contorta</i> , <i>Eragrostis</i> spp. grassland, while on the floodplains a low woodland of <i>Eucalyptus coolabah</i> ssp. <i>arida</i> over <i>Muehlenbeckia florulenta</i> and <i>Lysiphyllum gilvum</i> is found on grey self-mulching cracking clays along with smaller areas of <i>E. camaldulensis</i> woodland.	
Channel Country	Lake Pure	CHC7	Outwash plains from an abutting stony table land.	1054219
Channel Country	Noccundra Slopes	CHC8		2507327
Channel Country	Tibooburra Downs	CHC9	Tibooburra Downs, Central Downs, Fringing Tablelands and Downs subregion is composed of Cretaceous claystones and Cretaceous sandstones capped by Tertiary silcrete. Quaternary slope mantles and alluvium also occur. Landforms occur as undulating plains with defined creek lines extending to floodouts as well as plateaus, tablelands and mesas with prominent low scarps of silicified rock. Low colluvial slopes to floodout areas occur also. Soils are deep brown loamy clays and sticky grey green clays, some texture contrast soils. Stony, contour banded lower slopes. Brown and grey clays and texture contrast soils occur in alluvium. Mitchell grass and forbs are present on slopes in good seasons although subregion is often bare. Coolabah, river red gum, gidgee, black box, river cooba and chenopods occur along creeks and in floodouts. Sparse mulga, gidgee and belah with bluebush and saltbush occur on tablelands.	1246426
Cobar Peneplain	Boorindal Plains	CP1	Boorindal Plains subregion is composed of a Quaternary alluvial blanket over weathered Ordovician and Silurian low grade metamorphosed sedimentary rocks, such as phyllite. Landforms consist of undulating plains with wide valleys and occasional low stony rises. Gilgai is widespread in depressions and swamps. Soils are generally red earths and red texture contrast soils with stony lag gravels on slopes. Brown clays and harsh texture contrast soils occur in depressions and swamps. Dense mulga, ironwood, poplar box and red box with dense shrubs occur on ridges and slopes. Dense poplar box with lignum, budda, emu bush, narrow-leaf hop bush and grasses are present on lower slopes and depressions.	388728
Cobar Peneplain	Barnato Downs	CP2	Barnato Downs subregion is composed of Devonian quartzose sandstones in ridges and finer sedimentary rocks under the plains often covered by a mantle of Quaternary alluvium. Steep ridges and rocky slopes controlled by bedding and joints in bedrock characterise the subregion. Relief extends to 150m, with the length of ranges up to 40km. Undulating low ridges and stony rises on softer rocks are present with a mantle of Quaternary colluvium and alluvium. Sands and minor clay deposits occur in streamlines. Lakes are also present at Barnato. Typical soils are thin, discontinuous stony profiles on ridges, thickening downslope to stony, red, texture contrast soils and red earths on the plains. Valleys generally contain texture contrast soils with calcium carbonate in subsoil, and small areas of cracking brown clays or red sands. Mulga, red box and grey mallee on crests, white cypress pine and poplar box occur on slopes while red box, mulga, white cypress pine and polar box are present on plains. Areas of belah rosewood and yarran occur with pointed mallee in the south. Woody shrubs are widespread.	1778446
Cobar Peneplain	Canbelego Downs	CP3	Canbelego Downs subregion consists of fine grained Ordovician and Silurian metasedimentary	1974971

			and sedimentary rocks, such as phyllite, slate and chert with landforms appearing as an undulating plateau with low stony ridges and stony rises, with relief to 20m. Long low angle slopes and wide (>500m) valleys. Some central sandy channels exist as well as a few swamps. Shallow red loams or stony loams occur on crests merging to red earths on slopes, plains and through the valley floors of the subregion. Minor sand deposits occur along streams, with yellow texture contrast soils present in swamps. Mulga with green mallee, red box and numerous woody shrubs are present on ridges and slopes. Poplar box, white cypress pine, yarran shrubs and grasses occur in the valleys. River red gum and polar box with sedges, lignum and nardoo occurs in swamps and larger creeks.	
Cobar Peneplain	Nymagee-Rankins Springs	CP4	Nymagee - Rankins Springs subregion is composed of Ordovician to Devonian granites, quartzose sandstones, phyllites, slates and acid volcanics. Quaternary aeolian sands and alluvium also present. Low hills and ridges with steep slopes characterise the subregion. Form is controlled by rock type, and includes rounded hills with tors on granite and asymmetric strike ridges in sedimentary rocks. Sandplains from adjacent bioregions lap onto lower slopes. Soils are gritty red and yellow earthy sands on granite. Stony red earths and texture contrast soils on sedimentary rocks. Calcareous red earths in sandplains, minor earths and grey clays in alluvium. Dwyer's mallee gum, white cypress pine, kurrajong and golden wattle are present on granite crests, with poplar box and red box on slopes and creeks. White cypress pine, red box, belah with mallee, western wattle grey box and rosewood occur on crests and slopes of sedimentary rocks. Mallee communities are present on sandplains. Dense poplar box and white cypress pine occur in creek lines.	2069909
Cobar Peneplain	Lachlan Plains	CP5	Lachlan Plains subregion is composed of Devonian quartz sandstone and conglomerate, small areas of granite, and Quaternary colluvial slope mantles and alluvium. Landforms are characterised by strike ridges of resistant rocks often following fold patterns. Low rounded hills of granite with sparse outcrop occur, as do wide short valleys connecting to Lachlan floodplains. Shallow stony or gritty red earths occur on crests and slopes, thickening downslope as rubbly mantles often with a texture contrast. Deep sandy alluvial soils occur in valleys with small areas of grey clay in swamps. Dense currawang, Dwyer's mallee gum and white cypress pine occur on rocky crests. Red ironbark, mallee broombush, hill tea-tree and poplar box occur on slopes. Poplar box, white cypress pine, mallee, kurrajong, yarran and wilga are present in valleys. Poplar box and black box occur in minor swamps.	1138067
Coolgardie	Mardabilla	COO1	: Granite strata of Yilgarn Craton with Archaean Greenstone intrusions in parallel belts. Drainage is occluded. Mallees and scrubs on sandplains associated with lateritised uplands, playas and granite outcrops. Diverse woodlands rich in endemic eucalypts, on low greenstone hills, valley alluvials and broad plains of calcareous earths. In the west, the scrubs are rich in endemic Proteaceae, in the east they are rich in endemic acacias. Arid to Semi-arid Warm Mediterranean. Eocene marine limestone plain, on a granite basement in its western parts. Red-brown loams and aeolian sands over sheet and nodular kankar. Eucalyptus woodland over broomebush/greybush, bluebush and saltbush. Arid climate, with 250-300mm of winter rainfall.	1843109
Coolgardie	Southern Cross	COO2	The sub-region has subdued relief, comprising gently undulating uplands dissected by broad vallys with bands of low greenstone hills. It lies on the 'Southern Cross Terranes' of the Yilgarn Craton. The granite strata of Yilgarn Craton are interrupted by parallel intrusions of Archaean	6010777

			<p>Greenstone. Drainage is occluded. It has an arid to semi-arid Warm Mediterranean climate with 250-300mm of mainly winter rainfall.</p> <p>Valleys have Quaternary duplex and gradational soils, and include chains of saline playa-lakes. Diverse Eucalyptus woodlands (<i>Eucalyptus salmonophloia</i>, <i>E. salubris</i>, <i>E. transcontinentalis</i>, <i>E. longicornis</i>) rich in endemic eucalypts occur around these salt lakes, on the low greenstone hills, valley alluvials and broad plains of calcareous earths. The salt lake surfaces support dwarf shrublands of samphire. The granite basement outcrops at mid-levels in the landscape and supports swards of <i>Borya constricta</i>, with stands of <i>Acacia accuminata</i> and <i>Eucalyptus loxophleba</i>. Upper levels in the landscape are the eroded remnants of a lateritic duricrust yielding yellow sandplanes, gravelly sandplains and laterite breakaways. Mallees (<i>Eucalyptus leptapoda</i>, <i>E. platycorys</i> and <i>E. scyphocalyx</i>) and scrub-heaths (<i>Allocasuarina corniculata</i>, <i>Callitris preissii</i>, <i>Melaleuca uncinata</i> and <i>Acacia beauverdiana</i>) occur on these uplands, as well as on sand lunettes associated with playas along the broad valley floors, and sand sheets around the granite outcrops. The scrubs are rich in endemic acacias and Myrtaceae.</p>	
Coolgardie	Eastern Goldfield	COO3	<p>Coolgardie 3 lies on the Yilgarn Craton's 'Eastern Goldfields Terranes'. The relief is subdued and comprises of gently undulating plains. The underlying geology is of gneisses and granites eroded into a flat plane covered with tertiary soils and with scattered exposures of bedrock. Calcareous earths are the dominant soil group and cover much of the plains and greenstone areas. A series of large playa lakes in the western half are the remnants of an ancient major drainage line. The vegetation is of Mallees, Acacia thickets and scrub-heaths on sandplains. Diverse Eucalyptus woodlands occur around salt lakes, on ranges, and in valleys. Salt lake support dwarf shrublands of samphire. Woodlands and Dodanaea scrub occur on granites of the Fraser Range. The area is rich in endemic Acacias. The climate is Arid to Semi-arid with 200-300 mm of rainfall, sometimes in summer but usually in winter.</p>	5058201
Daly Basin	Daly Basin	DAB	<p>This subregion covers the Daly Basin and incorporates the confluence of several large rivers which flow into the Daly River, including the Katherine, King, Flora, Edith, Fergusson, and Douglas Rivers. Elevation of the subregion is below 200 m, with most of the riparian areas below 100 m. The subregion is dominated by Eucalyptus woodland with a grass understorey. <i>Eucalyptus tectifica</i>, <i>E. latifolia</i>, <i>E. tetradonta</i> and <i>E. miniata</i> are the dominant species. Soils in the area are predominantly massive earths and shallow sandy soils, with some coarsely structured clays. Rainfall varies from 800 to 1600 mm annually.</p>	2092256
Dampierland	Fitzroy Trough	DL1	<p>There are four basic components to the subregion that comprises;</p> <ul style="list-style-type: none"> <li>• Quaternary sandplain overlying Jurassic and Mesozoic sandstones with Pindan. There are hummock grasslands on hills.</li> <li>• Quaternary marine deposits on coastal plains, with mangal, samphire – <i>Sporobolus</i> spp. grasslands, <i>Melaleuca acacioides</i> low forests, and <i>Spinifex</i> spp. – <i>Crotalaria</i> spp. strand communities.</li> <li>• Quaternary alluvial plains associated with the Permian and Mesozoic sediments of Fitzroy Trough support tree savannahs of ribbon grass (<i>Chrysopogon</i> spp.) – bluegrass (<i>Dichanthium</i> spp.) grasses with scattered coolibah <i>Eucalyptus gymnoteles</i> - <i>Bauhinia</i></li> </ul>	3614096

		<p>cunninghamii. There are riparian forests of river red gum (<i>Eucalyptus camaldulensis</i>) and Cadjeput (<i>Melaleuca</i> spp.) fringe drainages.</p> <ul style="list-style-type: none"> <li>Devonian reef limestone in the north and east support sparse tree steppe over winged spinifex (<i>Triodia intermedia</i>) and <i>T. wiseana</i> hummock grasses.</li> </ul> <p>The climate is described as dry hot tropical and semi-arid with summer rainfall. The average annual rainfall is between 500 – 800 mm.</p> <p>The Fitzroy Trough is the semi-arid northern periphery of Canning Basin containing the middle and lower catchment of the Fitzroy River. It includes the alluvial plains associated with this river (mainly erosion products from Central Kimberley, but also from the South Kimberley Interzone via Christmas Creek), and areas of sandplain and eroded dune surfaces derived from the Canning Basin. Extensive coastal mud flats are associated with the Fitzroy delta. Devonian limestone barrier reef structures are preserved along its northern and eastern peripheries. Woodlands of Pindan, Boab (<i>Adansonia gregorii</i>) and <i>Eucalyptus</i>, rainforest patches and hummock grassland on limestone.</p> <p>Broad scale vegetation mapping of the area describes the following components;</p> <ul style="list-style-type: none"> <li>Mangroves.</li> <li>Saline tidal mudflats +/- samphire.</li> <li><i>Eucalyptus gymnoteles</i> (coolibah) and/or <i>Eucalyptus</i> spp.</li> <li><i>Astrelia pectinata</i> (barley Mitchell grass) closed-tussock grassland +/- low trees.</li> <li><i>Dichanthium fecundum</i> (curly bluegrass) and <i>Chrysopogon fallax</i> (golden beard grass) tussock grassland sparsely wooded with low trees.</li> <li>Swamps, lakes and lagoons, frequently ephemeral +/- fringing woodlands, shrublands, herblands and sedgelands.</li> <li><i>Eucalyptus miniata</i> (Darwin woollybutt) +/- <i>Eucalyptus</i> spp. +/- <i>Livistona</i> spp. (fan palms) woodland with a ground layer of tussock grasses and <i>Triodia bitextura</i> (curly spinifex).</li> <li><i>Adansonia gregorii</i> (boab), <i>Bauhinia cunninghamii</i> (bauhinia) and <i>Grevillea striata</i> (beefwood) grassy low open-woodland.</li> <li><i>Eucalyptus dampieri</i> (pindan bloodwood) low open-woodland with <i>Acacia</i> spp. Shrubs and <i>Triodia pungens</i> (soft spinifex) and <i>Triodia bitextura</i> (curly spinifex) hummock grasses.</li> <li><i>Eucalyptus dampieri</i> (pindan bloodwood) and <i>Eucalyptus zygomorpha</i> (rough-leaved bloodwood) low open-woodland with <i>Acacia eriopoda</i> (pindan wattle) shrubs and <i>Triodia</i> spp. (spinifex) hummock grasses or <i>Adansonia gregorii</i> (boab), <i>Grevillea striata</i> (beefwood) and <i>Bauhinia cunninghamii</i> (bauhinia) low open-woodland.</li> <li><i>Acacia ancistrocarpa</i> (Fitzroy wattle) and/or <i>Acacia eriopoda</i> (pindan wattle) and/or <i>Acacia monticola</i> (red wattle) tall shrubland with <i>Triodia intermedia</i> (winged spinifex) and <i>Triodia pungens</i> (soft spinifex) hummock grasses.</li> <li><i>Triodia pungens</i> (soft spinifex) and/or <i>Triodia intermedia</i> (winged spinifex) and/or <i>Triodia bitextura</i> (curly spinifex) hummock grassland wooded with <i>Eucalyptus</i> spp or <i>Bauhinia cunninghamii</i> (bauhinia) low trees.</li> <li><i>Triodia wiseana</i> (limestone spinifex) open-hummock grassland wooded with low trees of <i>Terminalia</i> spp. or <i>Adansonia gregorii</i> (boab).</li> </ul>	
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Dampierland	Pindanland	DL2	<p>There are four basic components to the subregion that comprises;</p> <ul style="list-style-type: none"> <li>· Quaternary sandplain overlying Jurassic and Mesozoic sandstones with Pindan. There are hummock grasslands on hills.</li> <li>· Quaternary marine deposits on coastal plains, with mangal, samphire – <i>Sporobolus</i> spp. grasslands, <i>Melaleuca acacioides</i> low forests, and <i>Spinifex</i> spp. – <i>Crotalaria</i> spp. strand communities.</li> <li>· Quaternary alluvial plains associated with the Permian and Mesozoic sediments of Fitzroy Trough support tree savannahs of ribbon grass (<i>Chrysopogon</i> spp.) – bluegrass (<i>Dichanthium</i> spp.) grasses with scattered coolibah <i>Eucalyptus gymnoteles</i> - <i>Bauhinia cunninghamii</i>. There are riparian forests of river red gum (<i>Eucalyptus camaldulensis</i>) and Cadjeput (<i>Melaleuca</i> spp.) fringe drainages.</li> <li>· Devonian reef limestone in the north and east support sparse tree steppe over winged spinifex (<i>Triodia intermedia</i>) and <i>T. wiseana</i> hummock grasses.</li> </ul> <p>The climate is described as dry hot tropical and semi-arid with summer rainfall. The average annual rainfall is between 450 – 700 mm, slightly lower than the Fitzroy Trough subregion.</p> <p>The Pindanland subregion comprises sandplains of the Dampier Peninsular and western part of Dampier Land, including the hinterland of the Eighty Mile Beach. Fine-textured sand-sheet with subdued dunes and includes paleodelta of Fitzroy River. Pindan vegetation. This is the coastal, semi-arid, northwestern margin of the Canning Basin.</p> <p>Broad scale vegetation mapping of the area describes the following components;</p> <ul style="list-style-type: none"> <li>· Mangroves.</li> <li>· Coastal dune communities.</li> <li>· Ephemeral herblands and/or grasslands with scattered low trees.</li> <li>· Mixed species tussock grasslands or sedgelands +/- emergent <i>Pandanus</i> spp. (screw palm).</li> <li>· <i>Eucalyptus tectifica</i> (Darwin box), <i>Eucalyptus flavescens</i> (wrinkle-leaved ghost gum) woodland with <i>Acacia tumida</i> (pindan wattle) open-scrub and <i>Chrysopogon</i> spp. (ribbon grass) and <i>Triodia bitextura</i> (curly spinifex) grasses.</li> <li>· <i>Eucalyptus tetradonta</i> (Darwin stringybark), <i>Eucalyptus miniata</i> (Darwin woollybutt)</li> </ul>	5196904



			<p>+/- Eucalyptus spp. +/- Livistona spp. (fan palms) woodland with a ground layer of tussock grasses and Triodia bitextura (curly spinifex).</p> <ul style="list-style-type: none"> <li>· Melaleuca acacioides? (Lemon-scented teatree) and Melaleuca spp. (paperbark) low woodland with sparse Chrysopogon fallax (golden beard grass) tussock grasses.</li> <li>· Adansonia gregorii (boab), Lysiphyllum cunninghamii (bauhinia) and Grevillea striata (beefwood) grassy low open-woodland.</li> <li>· Eucalyptus dampieri (pindan bloodwood) low open-woodland with Acacia spp. Shrubs and Triodia pungens (soft spinifex) and Triodia bitextura (curly spinifex) hummock grasses.</li> <li>· Eucalyptus brevifolia (snappy gum) low open-woodland with Triodia spp. (spinifex) hummock grasses or sometimes a hummock grassland without trees.</li> <li>· Acacia ancistrocarpa (Fitzroy wattle) and/or Acacia eriopoda (pindan wattle) and/or Acacia monticola (red wattle) tall shrubland with Triodia intermedia (winged spinifex) and Triodia pungens (soft spinifex) hummock grasses.</li> <li>· Grevillea refracta (silverleaf grevillea) +/- Hakea lorea (corkwood) open-shrubland with Triodia pungens (soft spinifex) hummock grasses.</li> <li>· Triodia pungens (soft spinifex) and/or Triodia schinzii (feathertop spinifex) hummock grassland wooded with low trees and Acacia spp. Shrubs.</li> </ul>	
Darling Riverine Plains	Culgoa-Bokhara	DRP1	<p>Balonne - Culgoa Fan subregion occurs on clay plains of the alluvial fans of the Culgoa and Bokhara Rivers and features all fine sediments of Quaternary age. Landforms consist of channels, floodplains, and swamps of past and present river systems while soils are typically grey clays on almost all landscapes. The vegetation consists of Coolabah, river cooba and lignum along channels along with some river red gum. Widespread Mitchell grass occurs on the clay plains with some saltbush, patches of gidgee, wilga, leopard wood and poplar box.</p>	1052448
Darling Riverine Plains	Pooncarie-Darling	DRP10	<p>Pooncarie - Darling subregion is similar to the Great Darling Anabranch subregion, being a Quaternary alluvial complex of river and lake sediments with associated aeolian landforms. Channel and floodplain features occur with overflow lakes, lunettes and extensive sandplains and low dunes. In contrast to the Great Darling Anabranch, this system carries low level Darling River flows. Grey clay soils occur in channels, floodplains and lake beds. There are limited areas of red sands and texture contrast soils occurring as well as lunettes of white or pale yellow sand alternating with layers of pale brown pelleted clay. River red gum is present on channels, with black box and river cooba widespread on floodplains. Lignum and black occur on lake margins. Belah, white cypress pine, prickly wattle and bluebush are present on lunettes.</p>	89083
Darling Riverine Plains	Narran-Lightning Ridge	DRP2	<p>Narran - Lightning Ridge subregion consists of Cretaceous sandstones and claystones on the ridges, terminal lake basins, extensive floodplains of grey clay and limited sands of Quaternary age. The characteristic landforms are low ridges on the sandstones, with relief to 20m as well as channels, floodplains, lakes and lunettes swamps of past and present river systems. These channels carry level flows in the Balonne and Maranoa Rivers. Typical soils are stony red earths on the ridges and grey clays over most of the plains with sandy soils and some texture contrast soils on levees, low sand dunes and lunettes. Vegetation is characterised by silver leaf ironbark, white cypress pine, western bloodwood and mulga on the ridges. Poplar box occurs on lower slopes with loamy soil. Coolabah, river red gum are present on channels and lake margins while lignum occurs in swamps and open water in Narran lakes.</p>	533873

Darling Riverine Plains	Warrambool-Moonie	DRP3	Warrambool - Moonie subregion consists of an alluvial fan and plains constructed by high level overflows from the Balonne River and includes fine sediments of Quaternary age. Landforms are typically channels, floodplains, and swamps of past and present river systems. These channels are usually dry but can be filled by high level flows in the Moonie and Balonne Rivers. Soils consist of grey clays on almost all landscapes within the subregion while vegetation is characterised by coolabah, river cooba, eurah and lignum along channels with some river red gum. Coolabah woodland with poplar box, belah, budda, wilga and myall occur on the plains while rare sandy soils support limited white cypress pine.	1087989
Darling Riverine Plains	Castlereagh-Barwon	DRP4	Macintyre - Weir Fan subregion consists of extensive plains on overlapping low angle alluvial fans of several rivers. Sediment derived from Jurassic sandstones are present on the Castlereagh fan and from basalts on the Namoi fan. The structure is the same as for Bogan-Macquarie with channels, floodplains, crevasse splays, levees, source bordering dunes and through flow swamps of past and present river systems. Grey and brown clays occur on the plains and depressions with brown loamy sands, pale yellow or red sands, and texture contrast soils on the low rises of former levees and channels. The vegetation of the subregion features river red gum on larger streams. Coolabah with occasional myall, river cooba, whitewood belah and clumps of river paperbark also occur. Mitchell grass with few trees occur on clay plains while poplar box with wilga, whitewood, belah, white cypress pine, silver-leaf ironbark and occasional brigalow occur on higher red soils.	4394293
Darling Riverine Plains	Bogan-Macquarie	DRP5	Bogan - Macquarie subregion is composed of Bogan and Macquarie River alluvial fans of Quaternary age. The western margin is bedrock of the Cobar bioregion. Alluvial sediments from mixed Palaeozoic bedrock bury basement rock to 100m. Underlying sediments of Cretaceous and Jurassic age form part of the Great Artesian Basin. Landforms consist of channels, floodplains, and through flow swamps of past and present river systems, while characteristic soils are grey and brown clays on the plains and depressions with texture contrast soils on the low rises of former levees and channels. The vegetation of the subregion consists of river red gum and river cooba on the channels. White cypress pine and poplar box occur on coarser levees, while black box, belah, myall and lignum are present on floodplains. Complex patterns of common reed, cumbungi, and water couch occur depending on water levels in marshes. Poplar box woodland with wilga, budda, white pine, grey box, yellow box and Blakeleys red gum occur on red soils on fan margins.	2097454
Darling Riverine Plains	Louth Plains	DRP6	Louth Plains subregion is situated in the alluvial plains of the mid-Darling valley, confined between the Cobar Peneplain and Mulga Lands bioregions and contains shallow Quaternary alluvial sediments over bedrock. Landforms are based on channel and floodplain features with anabranch streams rare and occasional small dunes. Soils are typically grey clays from channels to backplains with limited areas of higher red soils and patchy sands probably representing alluvial terraces. Coolabah, river red gum, river cooba and some black box occur along the channels. Canegrass and lignum occur in depressions, with saltbush, bluebush and grasses on backplains. Poplar box, rosewood and some black box occur on red soils and valley margins.	287584
Darling Riverine Plains	Wilcannia Plains	DRP7	Wilcannia Plains subregion is also situated in the alluvial plains of the mid-Darling valley, confined between the Cobar peneplain and Mulga lands bioregions and contains shallow Quaternary alluvial sediments over bedrock. Landforms consist of channel and floodplain	463754

			features with anabranch streams feeding valley margin lakes. There are also limited areas of dunes and sandplain. Soils are generally grey clays from channels to backplains and on lake beds. Red soils and patchy sands probably represent alluvial terraces. Coolabah, river red gum, river cooba and black box occur along the channels. Canegrass and lignum occur in depressions, with saltbush, bluebush and grasses on backplains. Poplar box, belah, rosewood, black bluebush and black box are present on red soils and valley margins.	
Darling Riverine Plains	Menindee	DRP8	Menindee subregion is a Quaternary alluvial complex of river and lake sediments with associated aeolian landforms such as Channel and floodplain features, well developed anabranch streams and overflow lakes with lunettes and extensive sandplains and low dunes. Soils are typically grey clay and white sand in channels, lake beds and beaches. Brown clays occur on swamps, merging to red sands and some texture contrast soils on sandplains. Lunettes of white or pale yellow sand alternate with layers of pale brown pelleted clay. River red gum, river cooba and black box occur along the channels and lake margins. Canegrass and lignum are present in swamps and depressions. Saltbush, bluebush, turpentine, prickly wattle, and grasses with belah, and rosewood, occur on red soils while bluebush and sandhill canegrass occur on lunettes.	488837
Darling Riverine Plains	Great Darling Anabranch	DRP9	Great Darling Anabranch subregion is a Quaternary alluvial complex of river and lake sediments with associated aeolian landforms. Channel and floodplain features of the Great Darling Anabranch occur with overflow lakes, lunettes and extensive sandplains and low dunes. This system carries high level Darling River flows. Grey clay soils occur in channels, floodplains and lake beds. There are limited areas of red sands and texture contrast soils occurring as well as lunettes of white or pale yellow sand alternating with layers of pale brown pelleted clay. River red gum occurs on channels, with black box and river cooba widespread on floodplains. Lignum and black box are present on lake margins. Belah, white cypress pine, prickly wattle and bluebush occur on lunettes.	157003
Darwin Coastal	Darwin Coastal	DAC	The Darwin Coastal subregion includes coastal areas from the Joseph Bonaparte Gulf in the west to Coburg Peninsula in the east and also includes the city of Darwin. The vegetation is predominantly Eucalyptus open forest and woodland, although significant areas of floodplain and saline tidal flats also occur in the subregion. Soils are largely clays associated with floodplains and massive earths and duplex soils low in nutrients. Elevation is mostly below 50 m. Several geological basins fall in the subregion, from the Bonaparte Basin in the south west to the Daly, McArthur and Money Shoal Basins and Pine Creek Orogen in the north. The climate is monsoonal with most rainfall occurring between the months of December and April, with the annual average between 1200 to 1600 mm.	2801092
Davenport Murchison Ranges	Davenport Murchison Range P1	DMR1	The Davenport Murchison Range P1 subregion covers the Tennant Inlier and small areas of the Georgina and Wiso Basins, with sedimentary rocks of Cambrian and Precambrian age. Soils are a mix of deep and shallow sands, massive earths, and cracking clays. The Murchison Ranges dominate the topography, with elevation varying from 200 m to 400 m. Drainage in the subregion flows either to the Tanami Desert in the west, or towards the Mitchell Grass Downs in the east, and is comprised of many small creeks. The climate is semi-arid with annual rainfall varying between 400 and 500 mm. Vegetation is Eucalyptus low open-woodland with hummock grass understorey.	1218559
Davenport	Davenport	DMR2	The Davenport Murchison Range P2 subregion covers the Tennant Inlier and small areas of the	1589604

Murchison Ranges	Murchison Range P2		Georgina Basin. The area contains sedimentary rocks of Cambrian age and Volcanic rocks of Precambrian age. Soils are mostly massive earths low in nutrients and shallow sands. Elevation ranges from 250 m to 550 m, with a few peaks up to 600 m in the Davenport Ranges. Many creeks and rivers arise in the ranges, with the major drainage Frew and Elkedra Rivers. The climate is arid with annual rainfall 300 to 400 mm. Vegetation in the subregion is dominated by Eucalyptus low open-woodland with Triodia understorey.	
Davenport Murchison Ranges	Davenport Murchison Range P3	DMR3	The Davenport Murchison Range P3 subregion lies over the Georgina Basin and parts of the Tennant Inlier, containing sedimentary rocks of Cambrian age. Soils are dominated by massive earths low in nutrients. The topography is dominated by a large plain, rising to the foothills of the adjoining Davenport Ranges. Elevation varies between 250 m to 350 m. Drainage is restricted to several short creeks arising from the Davenport and Murchison Ranges. The climate is arid with annual rainfall between 300 and 500 mm. Vegetation is dominated by Eucalyptus opaca (Bloodwood) low open-woodland with Triodia understorey and Triodia pungens grassland with Acacia tall sparse-shrubland overstorey.	2996996
Desert Uplands	Prairie - Torrens Creeks Alluvials	DEU1	is dominated by extensive areas of alluvial clay sheet formed on the flood plains of the ancestral Flinders River, and by shallow yellow earths of partly stripped sand plains. Underlying Tertiary silcretes outcrop in central and southern areas and along the western margin, forming low, rounded stony hills. Small areas of shale outcrop in the west and south.  With the exception of Torrens Creek, which has its upper catchment in the Alice Tableland province, all watercourses draining this province originate within it. All are tributaries of the Thomson River and form part of the catchment of Lake Eyre.	1592171
Desert Uplands	Alice Tableland	DEU2	is dominated by sandstone ranges and deep red soils of intact Tertiary sand sheets, and alluvial fans derived from them. Small areas of calcareous sandstone outcrop in valleys in the central east, and there are also significant areas of dunes and sandy alluvials and Cainozoic clay lake deposits. In southern areas, alluvial clay soils are common along the major watercourses.  This is the largest subregion of the bioregion and forms its central core. The generally infertile red and yellow earths that dominate the subregion are largely responsible for the bioregions name.  The northern part of the subregion contains the two large internal drainage basins, Lake Galilee and Lake Buchanan. Drainage is otherwise predominantly westward into the Lake Eyre Basin, although the eastern slopes of the subregion run into the Belyando River, and the far northwest into the Gulf of Carpentaria via the Flinders River. Climate varies between the northern and southern parts of the subregion, reflecting its extensive latitudinal extent, and there are corresponding changes in vegetation. Detailed analysis of recent vegetation surveys (Thompson, in prep.) may result in the creation of a new southern subregion to reflect this variation.	4430894
Desert Uplands	Cape-Campaspe Plains	DEU3	is in the north east of the bioregion, between the Great Basalt Wall and the Cape River. It consists largely of extensive undulating Cainozoic surfaces in its northern part, and alluvial plains in the south. There are also significant areas of Cainozoic lake deposits. Palaeozoic	1009239

			<p>sediments and granodiorites occur as low isolated ranges around the northern and eastern margins of the subregion. An outlier of the Mesozoic sandstones of the Alice Tableland occurs in the east. Red and yellow earths are the dominant soils in the north of this subregion but clay and alluvial soils are common on the plains in the south. The climate and vegetation has similarities with that of the Brigalow Belt and the Einasleigh Uplands bioregions.</p> <p>Most watercourses originate outside the subregion. Just north of the Flinders Highway drainage is into the Burdekin River. Drainage south of the highway is into the Belyando River and then into the Burdekin River.</p>	
Einasleigh Uplands	Georgetown - Croydon	EIU1	contains the most westerly parts of the bioregion, and has an altitude mainly between 200 and 400m ASL. It is dominated by low woodlands of Georgetown box ( <i>Eucalyptus microneura</i> ) on shallow soils of undulating low hills on pre-Cambrian and Palaeozoic rocks. Mesozoic sandstones occur as small plateaus on higher areas, and small areas of alluvium occur along the larger watercourses. The province drains into the Gulf of Carpentaria, and forms a low watershed between the Norman and Gilbert Rivers.	913942
Einasleigh Uplands	Kidston	EIU2	lies east of subregion 1, at higher elevations but on similar geologies. Most of the subregion lies between 500 and 800m ASL. Narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ) dominates the vegetation of these hills and ranges, although small areas of Mesozoic sandstone occur in the west. The subregion lies in the rainshadow of the Great Dividing Range and drains into the Gulf of Carpentaria. It forms the headwaters of the Walsh, Lynd and Einasleigh Rivers.	2990944
Einasleigh Uplands	Hodgkinson Basin	EIU3	occurs in the far north of the bioregion. It is dominated by folded sediments of the Palaeozoic Hodgkinson Formation, intruded in many areas by Permian granites. This finely dissected hilly landscape, in the rainshadow of the coastal ranges of the Wet Tropics bioregion, is dominated by ironbark ( <i>Eucalyptus cullenii</i> ) low woodlands on loamy lithosols. Limestone occurs in a band along the western margin of the subregion, with dry rainforest on areas of outcrop, and Molloy box ( <i>Eucalyptus leptophleba</i> ) grassy woodlands on the surrounding slopes. The subregion lies at around the same altitudes as the Kidston subregion, and with it forms a belt of stony hilly country that stretches from near Cooktown south-west to the Gregory Range. These two subregion form almost the entire upper catchment of the Mitchell and Gilbert Rivers.	1700156
Einasleigh Uplands	Broken River	EIU4	includes most of the south-eastern part of the bioregion. It is dominated by hills and shallow soils on Palaeozoic sediments, but there are also extensive areas of acid volcanics and granites. It is an essentially hilly subregion, with shallow soils dominated by narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ) communities. Reid River box ( <i>Eucalyptus brownii</i> ) woodlands are common in lower parts of the landscape. There are also areas of Tertiary plateaus and sand sheets, and of alluvium. Alluvials reach their greatest development in the bioregion in this subregion, along the Burdekin River. The subregion contains almost the entire upper catchment of the Burdekin River.	3240487
Einasleigh Uplands	Undara - Toomba Basalts	EIU5	contains the four major basalt areas of the bioregion. It includes the McBride, Chudleigh, Sturgeon and Nulla basalt flows (Henderson and Stephenson, 1980). All are characterised by red or black soils dominated by ironbark ( <i>Eucalyptus</i> spp.) woodlands, with varying amounts of open woodlands and grasslands. Specialised habitats associated with this subregion include lava tunnels, springs and spring-fed wetlands. The Toomba basalts of the Nulla flows, and the	2255445

			Kinrara basalts of the McBride shield volcano, are amongst the youngest in Australia. They are characterised by extensive dry rainforests on unweathered lava.	
Einasleigh Uplands	Herberton - Wairuna	EIU6	is largely defined by its high altitude and wetter climate. It occurs in the central east adjacent to the Wet Tropics bioregion. It is dominated by extensive areas of Tertiary plateau, but also includes basalt plains and rugged ranges on folded sediments and igneous rocks. It is dominated by grassy woodlands and open forests. Its plateau surface forms the Great Dividing Range between the Undara shield volcano and the Atherton Plateau. Most of the subregion forms the upper catchment of the Herbert River although in the south it also contains the headwaters of the Burdekin River. Its northern parts drain into the Mitchell River and the Gulf of Carpentaria. Seasonal and permanent lakes in this subregion are the most extensive of the bioregion.	750977
Esperance Plains	Fitzgerald	ESP1	<p>The ESP1 sub-region has variable relief, comprising subdued relief on the sandplains of the coastal region, punctuated with metamorphosed granite and quartzite ranges both inland and on the coastal plain. It lies mainly on the Bremer Sedimentary Basin and the eastern and western sections of the sub-region within the Albany- Fraser Orogen of the Yilgarn Craton. Eocene marine sediment basement with small areas of Gneiss outcropping. Archaen greenstones – sand sheets with varying levels of lateritization. The region is dominated by yellow duplex soils and deep and shallow sands on the plains and dissected areas and by shallow sandy soils on the mountain ranges.</p> <p>Vegetation types are diverse, including scrub heath, mallee heath characterised by Eucalyptus. tetragona, coastal dune scrub, mallee, woodlands on greenstone, Yate and York Gum woodlands on alluvials, and Jarrah/Marri woodlands in the west. Vegetation comprises herbfields and heaths (rich in endemics) on abrupt granite and quartzite ranges that rise from the plain E. redunca, E. incrassata are typical dominants of woodlands occurring in gullies and alluvial foot-slopes. The sub-region has a Temperate Mediterranean climate with 600 – 800mm annual rainfall.</p>	1573431
Esperance Plains	Recherche	ESP2	<p>The ESP2 sub-region has variable relief, comprising the Quaternary coastal sandplains and dunes overlying Proterozoic gneiss and granite as well as Eocene and more recent coastal limestones. Numerous granitic islands occur in the near shore area of this sub-region.</p> <p>Vegetation comprises heath, coastal dune scrub, mallee, mallee-heath and granite heath. Vegetation types are diverse. The climate is Temperate Mediterranean, with 500-700mm annual rainfall.</p>	1333329
Eyre Yorke Block	Southern Yorke	EYB1	This subregion is an undulating calcreted plain rising to a maximum of 200 metres in the centre of the peninsula. A woodland of dryland teatree ( <i>Melaleuca lanceolata</i> ) and drooping sheoak ( <i>Allocasuarina verticillata</i> ) occurs throughout the subregion. In the south, both active and relict coastal dunes are prominent, and coastal mallee scrub ( <i>E. diversifolia</i> ) occurs in the south-west of the subregion. Most native vegetation in the far south west of the subregion remains intact as the white calcareous sands are unsuitable for intensive agriculture. The rest of the subregion has been cleared for agriculture and grazing and only road verges and isolated patches of mallee and woodland remain.	436512
Eyre Yorke Block	St Vincent	EYB2	Most of this region consists of with calcrete development and shallow reddish earths. The	1085599

			plain is mainly dune free but isolated areas are overlain by low indistinct sand dunes. Near the Mt Lofty ranges the plains have a definite westerly gradient and merge eastwards with the alluvial fans from the Mt Lofty ranges. Moderately deep red mallee-yorrell ( <i>E. socialis</i> , <i>E. gracilis</i> ) association occurs throughout the region with some woodland of <i>E. porosa</i> on the plains or <i>E. odorata</i> on the hills and footslopes. The subregion has been extensively cleared and sown to crops or exotic pastures so little of the natural vegetation remains. What does exist on road verges and a few isolated blocks.	
Eyre Yorke Block	Eyre Hills	EYB3	This subregion consists of the southern section of the uplands along the east coast of the Eyre Peninsula, and the undulating to low hilly plains to the west. The uplands rise abruptly from a narrow coastal foreland to altitudes of between 200m and 400m then slope gradually to the west where they merge into the undulating plain. The eastern and highest section of the uplands is formed of metasediments, predominantly quartzite, and is mainly hilly while the slightly lower-lying western part constitutes a dissected laterite plateau. Moderately deep yellow duplex soils with lateritic concretions occur on the uplands and support low open woodland of <i>Eucalyptus cladocalyx</i> , <i>E. odorata</i> and <i>E. leucoxydon</i> . The plains to the south and west are formed predominantly on old alluvium, or on calcarenite near the coastal fringe where some dunes and cliffs occur. Shallow reddish loams with rock outcrops support <i>E. incrassata</i> / <i>Melaleuca uncinata</i> mallee on the plains or <i>Melaleuca lanceolata</i> woodland along the coastal fringe. Lincoln National Park occupies the south eastern tip of the subregion and consists of 15 971ha of coastal mallee. The majority of this subregion is cleared for winter cereal cultivation and grazing livestock.	1171635
Eyre Yorke Block	Talia	EYB4	This subregion is comprised predominantly of undulating to hilly plains on calcarenite with local rises and occasional steep-sided hills on quartzite on the west side of Eyre Peninsula. Dunes are restricted to the coastal fringe where they occur in association with lagoons and lakes. Shallow brownish sands with many calcarenite outcrops occur throughout the subregion and support a woodland of <i>Melaleuca lanceolata</i> and <i>Allocasuarina verticillata</i> in the south or <i>Eucalyptus socialis</i> , <i>E. gracilis</i> and <i>E. diversifolia</i> mallee in the north. Much of this region is used for grazing livestock and rotation cereal cropping.	1089152
Eyre Yorke Block	Eyre Mallee	EYB5	This subregion is distinguished climatically by being more arid than regions to the south. The mallee that once dominated this subregion has been cleared for wheat cultivation. The northern margin is formed by the dunefields of the Great Victoria Desert and the eastern margin of the Gawler Ranges. The region consists of an undulating plain with an extensive cover of dunes and sand sheets. A mallee association of <i>Eucalyptus socialis</i> and <i>E. gracilis</i> occurs on the shallow calcareous earths or deeper duplex soils of the plains with <i>E. incrassata</i> / <i>Melaleuca uncinata</i> mallee on the dune sands. To the east the subregion includes hilly uplands on metasediments small intramontane basins. Isolated quartzite ranges and granite outcrops form prominent inselbergs such as Darke Peake and Wudinna Hill which occur throughout the region. Livestock grazing and cereal cropping has resulted in the clearance and/or degradation of much of the native vegetation in this subregion.	2295667
Finke	Finke P1	FIN1	The Finke P1 subregion lies over the Amadeua Basin and small parts of the Pedirka and Eremonga Basins and contains sedimentary rocks of Devonian and Cambrian age. Soils are a mix of shallow and deep sands, massive earths, and red duplex saline affected soils. Elevation varies between 300 and 600 m and many small ranges and hills occur throughout. Drainage	2257081

			include the Palmer, Finke and Hugh Rivers draining from the southern MacDonnell Ranges. The climate is arid with annual rainfall varying between 200 and 300 mm. Vegetation includes Acacia sparse shrubland and Triodia grassland with tall Acacia shrubland.	
Finke	Finke P2	FIN2	The Finke P2 subregion is a narrow subregion roughly following the drainage lines of the Karinga Creek and Finke and Goyder Rivers. It lies over the Amadeus, Eremonga and Pedirka Basins with sedimentary rocks of Tertiary, Permian and Devonian age. Soils in this subregion are massive earths and red duplex saline affected soils. Elevation varies from 200 m along the Finke River to over 500 m along the Karinga Creek. The climate is arid with annual rainfall between 200 and 300 mm. Vegetation is a mix of Chenopod shrubland, Triodia grassland, and Acacia shrubland.	1520287
Finke	Tieyon	FIN3	The Tieyon subregion lies over the Amadeus and Eromanga Basins and Musgrave Block of Tertiary age. Soils are shallow sands and massive earths low in nutrients. Elevation ranges from 300 m in the east to 600 m in the west, near the Musgrave Ranges. Several peaks rise several hundred metres from the plains such as Mount Conner (850 m), and in the Ayers Range near Kulgera. Drainage is minimal in this subregion despite lying between the Musgrave Ranges and the Karinga Creek drainage system, with one main drainage channel Goyder Creek flowing into Finke River to the east. The climate is arid with annual rainfall between 200 and 300 mm. Vegetation is mainly Acacia sparse to tall shrubland and hummock grassland.	2758535
Finke	Pedirka	FIN4	A gently undulating plain with parallel dunes. The plains support a low open woodland of Hakea spp., Grevillea spp., Acacia aneura and A. cibaria on red earthy sands, while a tall shrubland of Hakea spp., Grevillea spp., Acacia ligulata, Aristida holathera var. holathera and A. contorta is found on the red siliceous sands of the dunes.	843694
Flinders	Wilsons Promontory	FLI1	WP 9 - Wilsons Promontory province is a spectacular area of rocky hills and mountains, tannin-stained creeks, dense heathy lowlands, sweeping white sandy beaches and prominent granite headlands surrounded by the cold waters of Bass Strait. The geology consists of Palaeozoic granites and deep Quaternary sand deposits. Texture contrast soils (Kurosols) and earths (Dermosols) are associated with the granitic terrain, dominated by Wet Forest, Granitic Hills Woodland, Lowland Forest, Shrubby Foothill Forest and Damp Forest ecosystems. The pale sands and sandy earths (Podosols, Tenosols and Rudosols) are associated with the sandy terrain, and mixture of wet soils (Hydrosols) associated with swamp deposits are dominated by Wet Heathland, Sand Heathland/Wet Heathland Mosaic, Heathy Woodland and Riparian Scrub ecosystems.	40564
Flinders	Flinders	FLI2	FLI 2 Flinders, comprises the Furneaux Group of islands and coastal northeastern Tasmania. Devonian granites dominate the elevated areas of the subregion forming rugged and mountainous ridges. These are overlain by shallow stony/gravelly gradational or duplex soils carrying Eucalyptus amygdalina open forest and woodland, with Eucalyptus nitida open forest on higher peaks. Quaternary/Tertiary materials overlain by deep sandy soils typify extensive lowland plains, coastal deposits and dunes, the vegetation of which has been substantially converted to improved pasture.	487865
Flinders Lofty Block	Mount Lofty Ranges	FLB1	This subregion extends from north of the Fleurieu Peninsula to the Barossa Valley, and is predominantly an undulating to low hilly upland with steeper marginal ranges and hills. The Barossa Valley is the lowest area in this subregion and represents a structural basin. The rest of the subregion consists of hilly uplands on sandstone and shale with northerly trending strike	300385



			ridges and dissected lateritic tableland remnants. Low open woodland commonly dominated by <i>Eucalyptus obliqua</i> and <i>E. baxteri</i> are found in higher rainfall areas on deep, lateritic soils. Shallower or sandy soils support <i>E. fasciculosa</i> , <i>E. cosmophylla</i> and in the northern part of the region <i>E. goniocalyx</i> . <i>E. leucoxylon</i> dominates the woodlands on podzolised soils in the lower rainfall areas, <i>E. viminalis</i> ssp. <i>cygnetensis</i> dominate the wetter and cooler woodlands and <i>E. odorata</i> characterises drier sites. Eucalypts give way to drooping sheoak ( <i>Allocasuarina verticillata</i> ) in the most arid woodlands and in coastal situations on shallow rocky soils.	
Flinders Lofty Block	Broughton	FLB2	This subregion is characterised by a series of wide undulating intramontane basins with red duplex soils, separated by low but distinct northerly trending strike ridges. In the north the region leads into the Southern Flinders Ranges with no sharply defined landform boundary but a land use boundary marking the northern extremity of wheat cultivation. Due to widespread clearing for farming the only significant remnant of native vegetation is found in the Mt Remarkable area, where an open forest dominated by <i>Eucalyptus cladocalyx</i> or by <i>E. goniocalyx</i> and <i>E. leucoxylon</i> on reddish dense loams remains. Degraded remnants of <i>E. leucoxylon</i> and <i>E. odorata</i> woodlands can still be found on stony crests and steep slopes.	1032917
Flinders Lofty Block	Olary Spur	FLB3	A low easterly trending upland branching off the northerly trending Flinders Ranges. It comprises hogback ridges on metasediments and rounded granite hills, with shallow loamy soils supporting open shrubland of mulga ( <i>Acacia aneura</i> ), hopbush ( <i>Dodonaea</i> spp.) and turpentine bush ( <i>Beyeria</i> spp.), or a lower cover of saltbush ( <i>Atriplex vesicaria</i> ) and bluebush ( <i>Maireana sedifolia</i> ), locally with open mallee. Gentle footslopes and pediments commonly form extensive elongated intramontaneplains with deeper duplex soils characteristically covered by saltbush and bluebush, commonly with scattered mulga or false sandalwood ( <i>Myoporum platycarpum</i> ).	2034858
Flinders Lofty Block	Southern Flinders	FLB4	This subregion is characterised by a series of high quartzite hogback ridges with shallow loamy soils and intervening plains and lowlands with red duplex soils. To the south, intermontane plains are extensive, commonly with flat alluviated floors. Native pine ( <i>Callitris glaucophylla</i> ), mallee ( <i>Eucalyptus socialis</i> , <i>E. oleosa</i> and <i>E. brachycalyx</i> ) and black oak ( <i>Casuarina pauper</i> ) dominate the slopes of the ridges although in the south these communities merge with eucalypt forests ( <i>E. cladocalyx</i> , <i>E. goniocalyx</i> and <i>E. leucoxylon</i> ). The understorey of the ridge is generally sparse, with scattered shrubs including <i>Dodonaea viscosa</i> ssp. <i>angustissima</i> , wattles (eg <i>Acacia rivalis</i> ) and porcupine grass ( <i>Triodia irritans</i> ), giving way near the summits to yacca ( <i>Xanthorrhoea quadrangulata</i> ).	2067039
Flinders Lofty Block	Northern Flinders	FLB5	Low ridges and hills on limestone and siltstone, with quartzite hogbacks and intermontane plains. The plains and low hills support open woodlands of black oak ( <i>Casuarina pauper</i> ), bullock bush ( <i>Alectryon oleifolius</i> ssp. <i>canescens</i> ), mulga ( <i>Acacia aneura</i> ) and native pine ( <i>Callitris glaucophylla</i> ) alternating with mallee scrub ( <i>E. socialis</i> ), tall shrublands (eg. <i>Acacia</i> spp. <i>Eremophila</i> spp. and <i>Senna</i> spp.) on reddish powdery calcareous loams, and tracts of sparse chenopod shrublands of <i>Maireana</i> spp. and <i>Atriplex</i> spp. with seasonal grasses and forbs on red duplex soils. Two introduced species have become characteristic seasonal forbs in this subregion. They are Salvation Jane ( <i>Echium plantagineum</i> ) and wild hops ( <i>Acetosa vesicaria</i> ), which carpet the plains and low hills. The quartzite hogback ridges are sparsely wooded with black oak, mulga and some native pine. These species extend down to the lower slopes and valleys where they occur with mallee species (eg. <i>E. socialis</i> ) and tall shrubs such as	1690914

			Acacia rivalis and elegant wattle ( <i>A. victoriae</i> ). River red gum ( <i>E. camaldulensis</i> ) dominates the valley floors along with coolibah box ( <i>E. intertexta</i> ) and teatree ( <i>Melaleuca glomerata</i> ) on reddish siliceous loams.	
Gascoyne	Ashburton	GAS1	Mountainous range country divided by broad flat valleys, associated with Ashburton River Catchment. of the Ashburton Basin (shales, sandstones and conglomerates), and the north-western part of Bangemall Basin (sandstone, shale, carbonates). Mulga/snakewood low woodlands occur on shallow earthy loams over hardpan on the plains, with mulga scrub and Eremophila shrublands on the shallow stony loams of the ranges. Low mixed shrublands on hills. Large areas of Triodia. Arid (desert) climate with bimodal (winter and summer) rainfall, with tropical monsoon influences.	3687006
Gascoyne	Carnegie	GAS2	Underlain by the Earraheedy Basin of the Capricorn Orogen (Proterozoic) and the south-eastern extension of the Bangemall Basin. Rugged low Proterozoic sedimentary and granite ranges divided by broad flat valleys. Shallow earthy loams over hardpan on the plains and shallow stony loams associated with the ranges. Extensive salt lake systems. Low Mulga communities occur on hills and plains. Samphire and saltbush steppes are associated with salt lakes while ranges are dominated by mulga scrub and Eremophila shrublands. Desert climate, with bimodal rainfall.	4718634
Gascoyne	Augustus	GAS3	Rugged low Proterozoic sedimentary and granite ranges divided by broad flat valleys. Also includes the Narryera Complex and Bryah Basin of the Proterozoic Capricorn Orogen (on northern margin of the Yilgarn Craton), as well as the Archaean Marymia and Sylvania Inliers. Although the Gascoyne River System provides the main drainage of this sub-region, it is also the headwaters of the Ashburton and Fortescue Rivers. There are extensive areas of alluvial valley-fill deposits. Mulga woodland with Triodia occur on shallow stony loams on rises, while the shallow earthy loams over hardpan on the plains are covered by Mulga parkland. A desert climate with biomodal rainfall.	9669508
Gawler	Myall Plains	GAW1	Gently undulating calcrete plains and occasional quartzite or granite hills. Includes a zone of salt lakes and gypsum dunes at Lake Gillies and steep strike ranges at the Middleback Ranges. To the east out cropping conglomerate occurs with mangrove flats along the coastal margin. Acacia papyrocarpa/Casuarina pauper low woodland is found on grey brown calcareous earths, red calcareous earths and dense brown loams on the plains. Rocky outcrops support Eucalyptus incrassata/Melaleuca uncinata open scrub and Allocasuarina verticillata low woodland on dense brown loams. The lowest areas support chenopod shrubland of Halosarcia halocnemoides on grey calcareous loams. Light grazing occurs in most areas.	977952
Gawler	Gawler Volcanics	GAW2	Low flat topped to broadly rounded hills, and gentle footslopes extending without a break into alluvial plains. Includes the Gawler Ranges, which represent an upland originating from an old land surface, the relics of which are visible as a bevelled summit plane sloping gently to the north. Further north are low lying tracts with dunes, salt lakes and isolated low hills on volcanics. Eucalyptus dumosa / E. socialis tall open shrubland is found on shallow loamy soils on the hillslopes. On the crests and upper slopes are hummock grasslands of Triodia irritans and open herblands of Stipa spp. On the red duplex soils of the plains, a low open woodland of Acacia papyrocarpa / Maireana sedifolia dominates, and a chenopod shrubland of Halosarcia indica ssp. leiostachya is found on the salt pans. Most of this area is used for livestock grazing.	1786908
Gawler	Gawler Lakes	GAW3	An undulating upland plain underlain by quartzite and sandstone, with shallow loamy soils.	3439491

			Encompasses the Woomera plateau, which is characterised by the absence of trees and tall shrubs, except on floodplains, where mulga ( <i>Acacia aneura</i> ), bullock bush ( <i>Alectryon oleifolius</i> ssp. <i>canescens</i> ), occasional red gums ( <i>Eucalyptus camaldulensis</i> ) and other species may be found. The gibber-covered areas are either bare or carry a scattered growth of samphire ( <i>Halosarcia</i> sp.) and bindyi ( <i>Sclerolaena</i> sp.). The depositional plains to the south and south-west of the plateau are covered with deep calcareous earths characteristically carrying an open myall ( <i>Acacia papyrocarpa</i> ) woodland with a bluebush ( <i>Maireana sedifolia</i> ) understorey, or red aeolian sand sheets and dunes with open mulga shrubland or a low woodland of <i>Casuarina pauper</i> or <i>Callitris glaucophylla</i> .	
Gawler	Arcoona Plateau	GAW4	A series of low plateaux on sandstone and quartzite with an undulating surface of aeolian sand or gibbers over red duplex soils, and rocky quartzite hills with colluvial footslopes. There is a cover of low chenopod shrubland, <i>Acacia victoriae</i> tall shrubland with a chenopod shrub understorey and fringing <i>Acacia papyrocarpa</i> woodland.	1190336
Gawler	Kingoonya	GAW5	This subregion consists of the plains lying between the quartzite plateaux of Arcoona and Woomera and the silcrete tablelands abutting the northern margin of the region. The plains west of Kingoonya are erosional, but the eastern and central parts of the region comprise depositional plains with occasional red sand dunes and in the north-east, local rocky rises. Shallow loams with rock outcrop occur on the rises, and deep red calcareous earths on the plains. A system of lakes and pans following old drainage lines is present toward the centre of the subregion. Low open woodland or tall open shrubland dominates throughout. Mulga ( <i>Acacia aneura</i> ) and other wattles, eg dead finish ( <i>Acacia carnei</i> ) and myall ( <i>A. papyrocarpa</i> ), are the major components. Native pine woodlands occur on many dunes. Saltbush vegetation is found in areas which do not support tree growth.	4966088
Geraldton Sandplains	Edel	GS1	Parts of the southern Carnarvon Basin (Dirk Hartog, Bernier and Dorre Islands as well as Edel Land and the northern end of the Geraldton Sandplains (North of Kalbarri)). In terms of its flora and fauna, this is an interzone between the South-western Bioregions of WA and the Carnarvon Bioregion. It is underlain by Phanerozoic sediments and characterised by proteaceous tree-heaths and <i>Acacia-Casuarina</i> thickets on pale red Quaternary sand (white sand on the coast), and has a semi-arid, warm, Mediterranean climate.	1582213
Geraldton Sandplains	Geraldton Hills	GS2	Southern end of Carnarvon Basin and northern end of the Perth Basin, with exposed areas of Permian/Silurian siltstone and Jurassic sandstones, mostly overlain by sandplains, alluvial plains, coastal limestones. Sand heaths with emergent <i>Banksia</i> and <i>Actinostrobus</i> , York Gum woodlands on alluvial plains, proteaceous heath and <i>Acacia</i> scrubs on limestones depending on depth of coastal-sand mantle, low closed forest of <i>Acacia rostellifera</i> (now cleared) on alluvial plains of Greenough and Irwin River (behind beach dune system south of Geraldton). Also includes the Pinjarra Orogen which is an area of Hill country with a Proterozoic basement, and comprises extensive, undulating, lateritic uplands mantled in sandplain supporting proteaceous shrublands and mallees while valleys support York Gum and 'Jam'. Warm semi-arid to Mediterranean climate with 400 – 500 mm of rainfall.	1968449
Geraldton Sandplains	Leseur Sandplain	GS3	coastal Aeolian and limestones, Jurassic silstones and sandstones (often heavily lateritized) of central Perth Basin. Alluvials associated with drainage systems. There are extensive yellow sandplains in south-eastern parts, especially where the sub-region overlaps the western edge of the Pilbara Craton. Shrub-heaths rich in endemics occur on a mosaic of lateritic mesas,	1173511

			sandplains, coastal sands and limestones. Heath on lateritized sandplains along the sub-region's north-eastern margins. Mediterranean climate.	
Gibson Desert	Lateritic Plain	GD1	Monotonous, gently undulating plain with few sandstone mesas. Solitic gravelly sandplains and laterised upland on flat-lying Jurassic and Cretaceous sandstones of Canning (Gunbarrel) Basin. Vegetation described as 'Carnegie Botanical District', Mulga parkland over <i>Triodia basedowii</i> on lateritic "buckshot" plains. Mixed shrub steppe of <i>Acacia</i> , <i>Hakea</i> and <i>Grevillea</i> over <i>Triodia pungens</i> on red sand plains and dune fields. Lateritic uplands support shrub steppe in the north and mulga scrub in the south. Quaternary alluvia associated with palaeo-drainage features support Coolabah woodlands over bunch grasses. Climate is Arid, mean annual rainfall 200mm, mainly summer rainfall.	12714791
Gibson Desert	Dune Field	GD2	Red dune fields mantling Permian strata of Gunbarrel Basin. Lateritised upland on flat-lying Jurassic and Cretaceous sandstones of Canning Basin. Mulga parkland over <i>Triodia basedowii</i> on lateritic "buckshot" plains. Mixed shrub steppe of <i>Acacia</i> , <i>Hakea</i> and <i>Grevillea</i> over <i>Triodia pungens</i> on red sand plains and dune fields. Lateritic uplands support shrub steppe in the north and mulga scrub in the south. Quaternary alluvia associated with palaeo-drainage features support Coolabah woodlands over bunch grasses. The climate is arid, with mainly summer rainfall, 200mm annually.	2914116
Great Sandy Desert	McLarty	GSD1	This is mainly tree steppe grading to shrub steppe in south; comprising open hummock grassland of <i>Triodia pungens</i> and <i>Plectrachne schinzii</i> with scattered trees of <i>Owenia reticulata</i> and Bloodwoods, and shrubs of <i>Acacia</i> spp, <i>Grevillea wickhamii</i> and <i>G. refracta</i> , on Quaternary red longitudinal sand dune fields overlying Jurassic and Cretaceous sandstones of the Canning and Armadeus Basins. <i>Casuarina decaisneana</i> (Desert Oak) occurs in the far east of the region. Gently undulating lateralized uplands support shrub steppe such as <i>Acacia ancistrocarpa</i> ? shrublands over <i>Triodia pungens</i> hummock grass. Calcrete and evaporite surfaces are associated with occluded palaeo-drainage systems that traverse the desert; these include extensive salt lake chains with samphire low shrublands, and <i>Melaleuca glomerata</i> - <i>M. lasiandra</i> shrublands. It includes the Mandora Paleoriver System. Red-brown dunefields with finer texture than further south. Includes gravelly surfaces of Anketell Ridge along its northern margin.	13173266
Great Sandy Desert	Mackay	GSD2	GSD2 (Mackay sub-region): Tropical inland 'red-centre' desert. Includes 'Percival' and 'Auld' palaeoriver systems. There is little drainage in the subregion, although a large playa lake, Lake Mackay, occurs on the Western Australia border. Mainly tree steppe grading to shrub steppe in south; comprising open hummock grassland of <i>Triodia pungens</i> and <i>Plectrachne schinzii</i> with scattered trees of <i>Owenia reticulata</i> and bloodwood ( <i>Corymbia</i> ), and shrubs of <i>Acacia</i> spp, <i>Grevillea wickhamii</i> and <i>G. refracta</i> , on Quaternary red longitudinal sand dune fields overlying Jurassic and Cretaceous complexes of metamorphic rocks and sandstones of the Arunta Inlier and Canning, Ngalia and Armadeus Basins. Soils are predominantly shallow sands. <i>Casuarina decaisneana</i> (Desert Oak) occurs in the south and east of the region. Gently undulating lateritised uplands support shrub steppe such as <i>Acacia pachycarpa</i> shrublands over <i>Triodia pungens</i> hummock grass. Calcrete and evaporite surfaces are associated with occluded palaeo-drainage systems that traverse the desert; these include extensive salt lake chains with samphire low shrublands, and <i>Melaleuca glomerata</i> - <i>M. lasiandra</i> shrublands. Monsoonal influences are apparent in the north-western sector of this region. Arid tropical	26728522

			with summer rain and there are temperature extremes between summer and winter.	
Great Sandy Desert	Great Sandy Desert P3	GSD3	The Great Sandy Desert P3 subregion lies over the Arunta Province containing metamorphic and plutonic rocks of Precambrian age. Soils are both shallow and deep sands, and some massive earths. Elevation varies between 500 and 900 m. The climate is arid with annual rainfall between 300 and 400 mm. Drainage in this small subregion is minimal. Mulga ( <i>Acacia anuera</i> ) tall sparse-shrubland dominates the subregion, with some areas of <i>Triodia</i> grassland with <i>Acacia</i> tall shrubland overstorey.	375672
Great Sandy Desert	Great Sandy Desert P4	GSD4	The Great Sandy Desert P4 subregion incorporates the large saline lakes of Lake Neale and Lake Amadeus. It lies over the Amadeus Basin and has Tertiary sedimentary rocks. Soils are influenced by the presence of saline lakes, having mostly saline loams and areas of shallow sands. The topography is flat with elevation throughout the entire subregion around 450 m. Drainage is dominated by the large saline lakes. Vegetation is <i>Eucalyptus gongylocarpa</i> open-woodland, <i>Acacia anuera</i> (Mulga) tall open-shrubland, and <i>Samphire</i> low open-shrubland fringing salt pans.	722851
Great Sandy Desert	Great Sandy Desert P5	GSD5	The Great Sandy Desert P5 subregion lies over the Arunta Province and Ngalia Basin, containing sedimentary rock of Precambrian age. Soils are mainly shallow sands and saline loams. The elevation lies mostly between 500 m and 600 m, with a few peaks rising to 700 m in the Stuart Bluff Range. There is little drainage in this small subregion. The climate is arid with annual rainfall between 300 and 400 mm. The vegetation is mostly <i>Acacia</i> sparse shrubland and <i>Triodia</i> grassland.	289546
Great Sandy Desert	Great Sandy Desert P6	GSD6	The Great Sandy Desert P6 subregion lies over the Arunta Province containing metamorphic and plutonic rocks of Precambrian age. The subregion covers Lake Lewis, with mostly saline loam soils. The subregion is relatively flat, with elevation mostly between 550 m and 600 m. The climate is arid with annual rainfall between 300 and 400 mm. The vegetation is influenced by Lake Lewis, with <i>Inland Teatree</i> ( <i>Melaleuca glomerata</i> ) dominant in the subregion.	82932
Great Victoria Desert	Shield	GVD1	<p>The western end is underlain by Yilgarn Craton. There is a higher proportion of sandplains in comparison to the entire bioregion. To the east is an arid active sand-ridge desert of deep Quaternary aeolian sands overlying Permian and Mesozoic strata of the Officer Basin. Landforms consists of salt lakes and major valley floors with lake derived dunes. Sand plains with patches of seif dunes running east west. Areas of moderate relief with out-cropping and silcrete-capped mesas and plateaus (breakaways).</p> <p><i>Spinifex</i> (<i>Triodia</i> spp) and mallee (<i>Eucalyptus kingsmilli</i>, <i>E. youngiana</i>) over hummock grassland dominated by <i>Triodia basedowii</i> occur on the aeolian sand plain. Scattered marble gum (<i>E gongylocarpa</i>) and native pine (<i>Callistris</i> spp) occur on the deeper sands of the sand plains. Mulga and acacia woodlands occur mainly on the colluvial and residual soils. Halophytes such as salt bush (<i>Atriplex</i>), Bluebush (<i>Kochia</i>), and samphire (<i>Arthrocnemum</i>) occur marginal to the salt lakes and in saline drainage areas.</p> <p>The climate is arid, with summer and winter rain approximately 190mm per annum.</p>	4741825
Great Victoria Desert	Central	GVD2	Great Victoria Desert 2 is arid active sand-ridge desert with extensive dune fields of deep Quaternary aeolian sands overlying Permian strata of the Gunbarrel Basin.	12590817

			<p>Landforms consists of salt lakes and major valley floors with lake derived dunes. Sand plains with extensive seif dunes running east west, occasional outcropping (breakaways) and quartzite hills provide minor relief.</p> <p>Vegetation is primarily a Tree steppe of <i>Eucalyptus gongylocarpa</i>, Mulga and <i>E. youngiana</i> over hummock grassland dominated by <i>Triodia basedowii</i> on the aeolian sands, <i>Acacia</i>, dominates the colluvial soils with <i>Eremophila</i> and <i>Santalum</i> spp, halophytes are confined to edges of salt lakes and saline drainage systems.</p> <p>The climate is arid, with summer and winter rain averaging 150 –180mm.</p>	
Great Victoria Desert	Maralinga	GVD3	An extensive dunefield with occasional silcrete rises and shallow depressions. A chain of dry lakes occurs in the south . Vegetation ranges from tall open shrubland of <i>Eucalyptus kingsmillii</i> ssp. <i>alatissima</i> / <i>E. youngiana</i> on red earthy sands, to low open woodland of <i>E. gongylocarpa</i> / <i>Acacia aneura</i> / <i>A papyrocarpa</i> on red calcareous earths and hummock grassland of <i>Triodia basedowii</i> on red siliceous sands.	11428768
Great Victoria Desert	Kintore	GVD4	An extensive sandplain with south-easterly trending dunes, occasional inselbergs and low calcrete or limestone rises. A tall shrubland of <i>Eucalyptus</i> spp., <i>Triodia basedowii</i> , <i>Acacia aneura</i> and <i>Aristida contorta</i> is found on the red earthy sands of the interdunal areas, while a hummock grassland of <i>Triodia basedowii</i> , <i>Aristida contorta</i> , and <i>A. holathera</i> var. <i>holathera</i> dominates the red siliceous sands of the dune crests. Inselbergs support a low shrubland of <i>Senna</i> spp. and <i>Eremophila</i> spp. on mainly bare rock.	4946716
Great Victoria Desert	Tallaringa	GVD5	An undulating plain with dunes, low gibber-covered rises and shallow sandy depressions associated with a relict drainage system. The plains support a tall shrubland of <i>Acacia aneura</i> , <i>A. cibaria</i> , <i>Enneapogon</i> spp. and <i>Aristida contorta</i> on red massive earths; and a chenopod shrubland of <i>Atriplex vesicaria</i> and <i>Sclerolaena</i> spp. on red earthy sands. The dunes support a low shrubland of <i>Acacia aneura</i> , <i>Aristida contorta</i> , <i>Senna</i> spp. and <i>Eremophila</i> spp. on red siliceous sands. Depressions support a chenopod shrubland of <i>Maireana</i> spp. <i>Halosarcia</i> spp. and <i>Frankenia</i> spp. on crusty red duplex soils.	3650213
Great Victoria Desert	Yellabinna	GVD6	This subregion comprises essentially the field of regular parallel dunes of the Great Victoria Desert and tracts of salt lakes. The dunefield mantles an erosional plain, and low outcrops of granite or volcanics form inselbergs or tors within the dunefield. The dunes consist mainly of sand derived from the Western Australian Shield, with a gradual colour change southward to where white sands derived from the coast predominate. Interdunal areas support <i>Eucalyptus socialis</i> / <i>E. gracilis</i> open scrub on red calcareous earths, while dunes support <i>E. socialis</i> / <i>Triodia irritans</i> open scrub on reddish siliceous sands. A chenopod shrubland of <i>Halosarcia</i> spp. and <i>Sclerostegia tenuis</i> occurs on the black calcareous loams of the depressions.	4516997
Gulf Coastal	Gulf Coastal P1	GUC1	The Gulf Coastal P1 subregion includes coastal areas along the southern Gulf of Carpentaria from near the Roper River to near the Queensland border. It lies over the McArthur Basin and contains sedimentary rocks mostly of Precambrian age. Soils are predominatly shallow sands with coastal water logged duplex soils and saline flats. The elevation is mostly below 50 m, although rises to 250 m in small ranges. The climate is tropical with annual rainfall between 800 and 1200 mm, falling mostly between December and March; cyclones are a frequent phenomenon. Drainage includes the lower reaches of many major rivers such as the Roper, McArthur, Limmen Bight, Calvert and Robinson Rivers. <i>Eucalyptus</i> woodland with tussock grass	2620805

			understorey dominates the subregion, with significant areas of tidal flats, mangroves and littoral grassland.	
Gulf Coastal	Gulf Coastal P2 Pellews	GUC2	The Pellews subregion includes the Sir Edward Pellew Group of islands at the mouth of the McArthur River. The islands are a mix of sandstone formations, mostly Cainozoic limestones, and residual sand dunes occur throughout. The elevation on the islands reaches 90 m, but is mostly below 30 m. The climate is tropical with annual rainfall around 1000 to 1200 mm. There are a few small tidal creeks on the larger islands. Eucalyptus woodland and low open-woodland predominate on the islands, although much of the largest island (Vanderlin) is covered by Melaleuca woodland.	66784
Gulf Fall and Uplands	McArthur - South Nicholson Basins	GFU1	The McArthur-South Nicholson Basin is a large subregion, stretching from the southern Arnhem Plateau to the Queensland border. As the name suggests, it lies over the McArthur and Nicholson Basins, with a small area over the Dunmurra Basin. It is comprised of sedimentary rocks of Precambrian age. The soils are a mix of massive earths, shallow sands, craking clays, and duplex soils with subsurface waterlogging. The elevation varies from near sea level along the coastal flats to 360 m. There are many major drainage lines transversing the subregion, flowing from the various plateaux and tablelands to the coast. Significant rivers include the Roper, McArthur and Nicholson Rivers. The vegetation is complex but is dominated by Eucalyptus low open-woodland with hummock grass understorey and Eucalyptus woodland with tussock grass understorey.	9331035
Gulf Fall and Uplands	Gulf Fall and Uplands P2	GFU2	The Gulf Fall and Uplands P2 subregion lies over the Dunmurra and Nicholson Basins, and is comprised of sedimentary and plutonic rocks of Cretaceous and Precambrian ages. Soils are a mix of massive earths, shallow sands, cracking clays, and duplex soils with subsurface waterlogging. Elevation varies between 200 m and 350 m. Drainage in the subregion includes headwaters of many coast-ward rivers, including the Calvert and Nicholson Rivers. The climate is semi-arid to tropical, with annual rainfall ranging from 400 to 800 mm, and falling mostly between December and March. Vegetation is predominantly Eucalyptus low open-woodland.	2517001
Gulf Plains	Karumba Plains	GUP1	contains all areas subject to coastal influences including dunes, saline mud flats and mangrove lined estuaries. This subregion extends around the entire seaward margin of the bioregion. The (Northern) Karumba Plain of the Cape York Peninsula bioregion is essentially an extension of this subregion. The major watercourses of the Gulf Plains bioregion have their headwaters in four other bioregions. The estuaries of these large and diverse river systems are contained within the Karumba Plains subregion. Between these estuaries are the most extensive marine plains in Australia. Sand dunes are prominent throughout, but particularly in the west, and north of Karumba. The marine plains receive runoff from adjacent subregions. Vegetation is dominated by mangroves ( <i>Avicennia</i> sp), herbfields, woodlands and scrubs.	1072137
Gulf Plains	Wellesley Islands	GUP10	including the Forsayth Islands and the South Wellesley Islands. Lying in the southern part of the Gulf, they have a rainfall higher than the mainland nearby, and temperatures moderated by the Gulfs waters. The subregion is geologically similar to Donors Plateau subregion, being dominated by laterised Tertiary plateaus, and underlain by shales and labile sandstones. The islands are fringed by marine plains and sand dunes. Although the islands are poorly known biologically, it appears that there are significant vegetation differences with Donors Plateau subregion. Dominant vegetation includes eucalyptus woodlands.	124364
Gulf Plains	Armraynald Plains	GUP2	contain the extensive grasslands and low open grassy woodlands on the clay plains associated	1589464

			with the major rivers entering the southern Gulf. The subregion is dominated by clay plains, with extensive, older and higher plains channelled by younger braided watercourses. Seasonal and permanent wetlands are associated with the watercourses and backplains, and near the coast where the alluvium meet the marine plains. There are also areas of sandier alluvium, where major watercourse enter the Gulf Plains from the North–West Highlands. Small areas of sand sheet overlie the clays, usually as outliers of adjacent subregions. In the far west there are low hills that are outliers of the Mount Isa Inlier subregion of the North–West Highlands.	
Gulf Plains	Woondoola Plains	GUP3	contain the extensive grasslands and low open grassy woodlands on the clay plains associated with the major rivers entering the southern Gulf. The subregions is dominated by clay plains, with extensive, older and higher plains channelled by younger braided watercourses. Seasonal and permanent wetlands are associated with the watercourses and backplains, and near the coast where the alluvium meet the marine plains. There are also areas of sandier alluvium, where major watercourse enter the Gulf Plains from the North–West Highlands. Small areas of sand sheet overlie the clays, usually as outliers of adjacent subregions.	2358319
Gulf Plains	Mitchell - Gilbert Fans	GUP4	is in the north–east of the bioregion, and contains the alluvial fans of the Mitchell and Gilbert Rivers. These overlapping fans have a landscape characterised by numerous sandy linear traces of prior and current levees of flood channels, occasional major river channels and areas of finer textured flood plains. Small areas of sand sheet outliers of the adjacent subregions, occur around its eastern boundary.	5201796
Gulf Plains	Claraville Plains	GUP5	is in the drier south–east of the bioregion. It is formed by extensive fans of coarse sands and loams derived largely from the adjacent sandstone plateaus of the Gilberton Plateau subregion. These fans form a relatively uniform landscape that slopes westwards to the Woondoola Plains subregion where it is truncated by the northward flowing rivers of that subregion. The subregion is traversed by a number of watercourses, all of which drain into the Norman, Saxby or Flinders Rivers, in the Woondoola Plains subregion, and then into the Gulf near Karumba.	3789787
Gulf Plains	Holroyd Plain - Red Plateau	GUP6	lies between the Mitchell–Gilbert Fans subregion and the Einasleigh Uplands bioregion. It includes consolidated terrestrial deposits that have been laterised and subsequently partly dissected, and dissected plateau surfaces on Cretaceous and Tertiary clayey sandstones and claystones. Small areas of Cretaceous shales occur in the far east, near the junction of the Mitchell and Walsh Rivers. The higher rainfall of this subregion has led to marked differences in vegetation to that of the Claraville Plains subregion. The Holroyd Plain–Red Plateau subregion is traversed by a number of major watercourses, which receive significant runoff from this subregion in their lower reaches. Within the subregion, along its eastern boundary, there are also small areas of Mesozoic sandstones.	2207827
Gulf Plains	Doomadgee Plains	GUP7	lies in the far north western corner of the region, and extends into the Northern Territory. These lowlands extend between the North–West Highlands and the Karumba Plains subregion north of the Nicholson River, but remnants of the surface continue around the north–eastern margin of the Highlands as far as the Leichhardt River. The subregion is characterised by laterised Tertiary surfaces that have been partly overlain by sandy outwash from the adjacent ranges.	1830633
Gulf Plains	Donors Plateau	GUP8	separates the clay floodplains of the Armraynald and Woondoola Plains subregions. It is an undulating complex of shales, laterised Tertiary plateaus and sandy outwash.	2450009



			Cretaceous labile sandstones outcrop in the north, and Cretaceous shales in the south. In the north the fine sandstones are overlain by a dissected laterised Tertiary plateau and there are areas of Tertiary sand sheet. In the more arid south, the shales are partly covered by sandy outwash from the North–West Highlands bioregion.	
Gulf Plains	Gilberton Plateau	GUP9	includes the highest parts of the bioregion (altitude 1080m ASL), where the climate and vegetation has affinities with parts of the adjacent Einasleigh Uplands bioregion. The sandstones and other Mesozoic sediments that underlie most of the Gulf Plains outcrop to their greatest extent in this subregion. They cover the western margins of the Einasleigh Uplands and form high gently sloping plateaus that extend as scattered outliers into the Einasleigh Uplands. These plateaus, and the overlying laterised Tertiary surfaces and residual sands form this subregion. The high plateau surfaces that dominate it have been dissected in many areas, and differential erosion of the strata has resulted in a characteristically stepped landscape of ledges and scarps. Its lower western areas are dominated by sandy Tertiary surfaces. The boundary between this subregion and the Claraville Plains to the west marks the change from laterised Tertiary deposits (erosional landscapes) to the sandy alluvial fans (depositional landscapes) of the Claraville Plains. Most of this subregion is remote and poorly known biologically. Springs and spring fed watercourses reach their maximum expression within the bioregion in this subregion, although they are poorly known scientifically.	1315699
Hampton	Hampton	HAM	Hampton Bioregion: Quaternary marine dune systems on a coastal plain of the Eucla Basin, backed by stranded limestone scarp. Areas of marine sand are also perched along the top edge of the scarp. Various mallee communities dominate the limestone scree slopes and pavements, as well as the sandy surfaces. Alluvial and calcareous plains below the scarp support eucalypt woodlands and Myall open low woodlands.	1087873
Jarrah Forest	Northern Jarrah Forest	JF1	Duricrusted plateau of Yilgarn Craton characterised by Jarrah-Marri forest on laterite gravels and, in the eastern part, by Marri-Wandoo woodlands on clayey soils. Eluvial and alluvial deposits support Agonis shrublands. In areas of Mesozoic sediments, Jarrah forests occur in a mosaic with a variety of species-rich shrublands. Warm Mediterranean.  Northern Jarrah Forest: The area east of the Darling Scarp, overlying Archaean granite and metamorphic rocks of an average elevation of 300 m, capped by an extensive laterite duricrust, dissected by later drainage and broken by occasional granite hills. In the east the laterite becomes deeply dissected until it compresses isolated remnants. Rainfall is from 1100 mm on the scarp to ca. 700 mm in the east and north. Vegetation comprises Jarrah - Marri forest in the west with Bullich and Blackbutt in the valleys grading to Marri and Wandoo woodlands in the east with Powder bark on breakaways. There are extensive but localised sand sheets with Banksia low woodlands. Heath is found on granite rocks and as a common understorey of forests and woodlands in the north and east.	1898773
Jarrah Forest	Southern Jarrah Forest	JF2	Duricrusted plateau of Yilgarn Craton characterised by Jarrah-Marri forest on laterite gravels and, in the eastern part, by Marri-Wandoo woodlands on clayey soils. Eluvial and alluvial deposits support Agonis shrublands. In areas of Mesozoic sediments, Jarrah forests occur in a mosaic with a variety of species-rich shrublands. Warm Mediterranean. Southern Jarrah Forest: South of Collie the plateau broadens and slopes gently to the south coast, Drainage is	2609118

			still dissected in the west but broadening and leveling of the surface in the east causes poor drainage and large (Lake Muir) and numerable small wetlands. The ironstone becomes less evident being buried beneath sands. Rainfall is from 1200 mm in the south west to 500 mm in the east. Vegetation comprises Jarrah - Marri forest in the west grading to Marri and Wandoo woodlands in the east. The are extensive areas of swamp vegetation in the south - east dominated by Paperbarks and Swamp Yate. The understory component of the forest and woodland reflects the more mesic nature of this area.	
Kanmantoo	Kangaroo Island	KAN1	The island is characterised by an undulating upland plain with an extensive laterite cover which gives rise to mottled-yellow duplex soils. The plain rises to an average height of 100 - 150m and is bounded by a densely dissected scarp falling steeply to the cliffed coastline. Along the southern coastline some dunes are developed but otherwise these are rare. A characteristic feature of the eastern, somewhat lower-lying part of the island is the occurrence of numerous rounded salt lakes and depressions, which may be due to the solution processes in the calcrete cover. Shallow red sands occur on the intervening plains. In the eastern part of the island are scattered remnants of mallee communities dominated by coastal mallee ( <i>E. diversifolia</i> ) and Kangaroo Island narrowleaf mallee ( <i>Eucalyptus cneorifolia</i> ). On deeper soils in the wetter, western part of the island, the mallee is replaced by woodlands of Kangaroo Island mallee ash ( <i>E. remota</i> ), brown stringybark ( <i>E. baxteri</i> ), sugar gum ( <i>E. cladocalyx</i> ) and cup gum ( <i>E. cosmophylla</i> ). Scattered stands of these forests occur as uncleared blocks in the central section of the island, but in the west large tracts remain in conservation reserves.	439986
Kanmantoo	Fleurieu	KAN2	This subregion is predominantly an undulating to low hilly upland with steeper marginal ranges and hills. A lateritized surface occurs on the Fleurieu Peninsula and becomes increasingly dissected northward to where only a few remnants survive as rounded crests and summits with mottled -yellow duplex soils. The lowest lying areas are within the Inman Valley where soft glacial and fluvio-glacial deposits have been lowered more quickly than the surrounding sedimentary rocks. Much of the native vegetation has been cleared, however some remains in reserves and small isolated inaccessible areas. Low open woodland commonly dominated by <i>Eucalyptus obliqua</i> and <i>E. baxteri</i> are found in higher rainfall areas on deep, lateritic soils. Shallower or sandy soils support <i>E. fasciculosa</i> , <i>E. cosmophylla</i> and in the northern part of the region <i>E. goniocalyx</i> . <i>E. leucoxylon</i> dominates the woodlands on podzolised soils in the lower rainfall areas, <i>E. viminalis</i> ssp. <i>cygnetensis</i> dominates the wetter and cooler woodlands and <i>E. odorata</i> characterises drier sites. <i>Eucalypts</i> give way to drooping sheoak ( <i>Allocasuarina verticillata</i> ) in the most arid woodlands and in coastal situations on shallow rocky soils.	370588
King	King	KIN	KIN 193 King, incorporates King Island and the northwestern tip of Tasmania. It is a region of subdued topography and low relief. Precambrian metamorphic rocks overlain by diverse soils, and recent marine deposits covered by deep sandy profiles support extensive <i>Eucalyptus obliqua</i> open forest and <i>Nothofagus cunninghamii</i> closed forest. <i>Acacia melanoxylon</i> closed forest and <i>Melaleuca ericifolia</i> closed forest occur on poorly drained low-lying sites. The vegetation of King Island has been substantially degraded by clearing and burning following European settlement.	426025
Little Sandy Desert	Rudall	LSD1	Sparse shrub-steppe over <i>Triodia basedowii</i> on stony hills, with River Gum communities and bunch grasslands on alluvial deposits in and associated with ranges. Arid with summer rainfall.	10098549

			The Rudall Complex, Throssell Group and Lamil Group of the Patterson Orogen. Proterozoic hill country of Throssel, Mount Sears, Broadhurst and Harbutt Ranges. Includes headwaters and course of Rudall River. Extensive areas of tussock grass are associated with footslopes. River Gums communities along drainage. Extensive Triodia hummock grasslands on hills and surrounding plains.	
Little Sandy Desert	Trainor	LSD2	Red Quaternary dune fields with abrupt Proterozoic sandstone ranges of Bangemall Basin. Shrub steppe of acacias, Thryptomene and grevilleas over Plectrachne schinzii on sandy surfaces. Sparse shrub-steppe over Triodia basedowii on stony hills, with eucalypt and coolibah communities and bunch grasslands on alluvial deposits and drainage lines associated with ranges. Arid with episodic summer rainfall.  Red centre' desert on Neoproterozoic sedimentary basement (Officer Basin).	991275
MacDonnell Ranges	MacDonnell Ranges P1	MAC1	The MacDonnell Ranges P1 subregion lies over the Amadeus Basin and Arunta Province containing sedimentary, metamorphic and plutonic rocks of Devonian and Ordovician age. Soils include shallow sands and massive earths. Elevation in the subregion varies from 530 m to the Northern Territory's highest peak, Mt Zeil, at 1530 m. Most of the subregion lies between 600 and 800 m. Drainage includes the Finke and Hugh Rivers and Pioneer and Ormiston Creeks. The climate is arid with annual rainfall varying between 200 and 300 mm. Vegetation is dominated by Triodia grassland with tall Acacia shrubland and Acacia aneura (Mulga) tall sparse-shrubland.	1483972
MacDonnell Ranges	MacDonnell Ranges P2	MAC2	The MacDonnell Ranges P2 subregion includes the south-western ranges and lies over the Amadeus Basin, containing sedimentary rocks of Devonian and Ordovician age, and shallow sandy soils. The elevation varies from 480 m to over 900 m, and has deeply dissected gorges. The major drainage includes Walker Creek and Finke River. The climate is arid with annual rainfall between 200 and 300 mm. Vegetation includes Triodia grassland with low open woodland and sparse Acacia shrubland.	1092779
MacDonnell Ranges	MacDonnell Ranges P3	MAC3	The MacDonnell Ranges P3 subregion lies over the Amadeus Basin and Arunta Province containing metamorphic and sedimentary rocks of Precambrian age. The elevation varies between 300 m and 1200 m, with most of the subregion above 600 m, forming a plateau with many peaks. The plateau forms a complex drainage system, with many rivers flowing to the east and south east into the Simpson Desert. These include the Hale and Giles Rivers, and headwaters of the Huckitta and Illogwa Creeks and Plenty and Sandover Rivers. The climate is arid with annual rainfall between 300 and 400 mm. Vegetation includes Triodia grassland with low open-woodland and Acacia tall open-shrubland.	1352689
Mallee	Eastern Mallee	MAL1	Mallee Bioregion: Re-define to include an area from the Coolgardie Bioregion – the area between Lake Hope, Forrestiana and Mount Holland, which comprises Salmon Gum and Morrell woodlands on greenstone, with smaller areas of mallee and Acacia / Casuarina thicket on sandplains.  The south-eastern part of Yilgarn Craton is gently undulating, with partially occluded drainage. Mainly mallee over myrtaceous-proteaceous heaths on duplex (sand over clay) soils. Melaleuca shrublands characterise alluvia, and Halosarcia low shrublands occur on saline alluvium. A mosaic of mixed eucalypt woodlands and mallee occur on calcareous earth plains	3413210

			<p>and sandplains overlying Eocene limestone strata in the east. Climate is semi-arid (Dry) Warm Mediterranean.</p> <p>Eastern Mallee Subregion: calcareous clays and loams as duplex soils that often contain sheet and modular kankar, outcrops of metamorphosed sandstone, and white and yellow sandplains and loamy plains with numerous salt pans (pan fields). Mallee on sandplains, samphire around small salt lakes, mallee and patches of woodland on clay, and scrub-heath on sandstone. Mallee with Boree (<i>Melaleuca pauperiflora</i>) on calcareous clay and loam. Mediterranean to semi-arid, winter rainfall 500 – 300mm.</p>	
Mallee	Western Mallee	MAL2	<p>MAL Mallee</p> <p>The Mallee bioregion is the south-eastern part of Yilgarn Craton. Its landscape is gently undulating, with partially occluded drainage. Mallee over myrtaceous-proteaceous heaths on duplex (sand over clay) soils are common. <i>Melaleuca</i> shrublands characterise alluvia, and <i>Halosarcia</i> low shrublands occur on saline alluvium. A mosaic of mixed eucalypt woodlands and mallee occur on calcareous earth plains and sandplains overlying Eocene limestone strata in the east. Landscape is fragmented with particular surface-types almost completely cleared as wheat-fields.</p> <p>Western Mallee subregion has more relief than its eastern counterpart: main surface-types comprise clays and silts underlain by Kankar, exposed granite, sandplains and laterite pavements. Salt lake systems on a granite basement. Occuded drainage system. Mallee communities occur on a variety of surfaces; <i>Eucalyptus</i> woodlands occur mainly on fine-textured soils, with scrub-heath on sands and laterite. Warm Mediterranean; 250-500mm rainfall.</p>	3981671
Mitchell Grass Downs	Mitchell Grass Downs P1	MGD1	<p>The Mitchell Grass Downs P1 subregion forms a large, flat, low depression within the Barkly Tableland subregion, with several large intermittent freshwater lakes. It lies over the Georgina basin containing sedimentary rocks of Tertiary and Cambrian age. The soils are finely structured clays, and the elevation varies marginally between 200 m and 220 m. Several creeks flow into the subregion's lakes from the surrounding tableland. The climate is semi-arid with annual rainfall between 400 and 500 mm. The vegetation is predominantly <i>Eucalyptus microtheca</i> low open-woodland with <i>Chenopodium auricomum</i> (Bluebush) sparse-shrubland understorey.</p>	1153285
Mitchell Grass Downs	Barkly Tableland	MGD2	<p>The Barkly Tableland subregion lies over the Georgina and Dunmurra Basins containing sedimentary rocks of Cretaceous and Cambrian ages. The soil is predominantly cracking clays with some small areas of calcareous earths and shallow sands. The tableland forms an elongated plateau, stretching from the centre of the Northern Territory to the Queensland border. The elevation of the plateau is around 230 m, rising towards the Carrara Ranges in the north east to 260 m. The drainage in the tableland is a complex of short creeks and rivers, flowing towards several large freshwater lakes. The vegetation is dominated by <i>Astrebula</i> (Mitchell Grass) grassland.</p>	8908546
Mitchell Grass Downs	Georgina Limestone	MGD3	<p>is made up of various limestone and deeply weathered Cretaceous sediments, sometimes covered by superficial Quaternary deposits, which form low hills, scarps and ridges. Vegetation</p>	2950809

			includes areas of Georgina gidgee ( <i>Acacia georginae</i> ) (( <i>A. cambagei</i> ) to the east) woodland, mulga ( <i>A. aneura</i> ) or ( <i>Acacia</i> spp.) open shrublands, spinifex grasslands and ( <i>Astrebla</i> ) grasslands. ( <i>Astrebla</i> ) tussock grasslands dominate the clay soils on the undulating plains between the hills while eucalypt open woodland and open herb grasslands occur along the alluvial plains of the Georgina River. Pre-Cambrian or Ordovician igneous and metamorphic rock outcrops supporting mainly spinifex hummock grasslands and which are essentially outliers from the North West Highlands bioregion, are common in the eastern part of this subregion.	
Mitchell Grass Downs	Southwestern Downs	MGD4	is the most arid part of the Mitchell Grass Downs bioregion and is dominated by undulating plains supporting ( <i>Astrebla pectinata</i> ) grasslands on brown cracking sometimes stony clay soils. Gravel covered plains supporting open herb and grasslands are extensive along the southern and north eastern edges of the subregion.	3765089
Mitchell Grass Downs	Kynuna Plateau	MGD5	is dominated by dissected low hills, mesas, buttes and tablelands with local elevation around 100 metres above the surrounding plains. The tops of the hills and plateaus are formed by remnant Tertiary capping over deeply weathered Cretaceous sediments. Soils on these areas are shallow and stony and support a range of lancewood ( <i>Acacia shirleyi</i> ) and spinifex communities while the exposed Cretaceous sediments on the scarps, side slopes and mantled pediments have shallow to deep stony clay soils and are covered by spinifex hummock grasslands, gidgee ( <i>A. cambagei</i> ) woodlands and open herb/grasslands. The plains between the ranges support ( <i>Astrebla</i> ) grasslands on deep cracking clay soils.	2336319
Mitchell Grass Downs	Northern Downs	MGD6	is separated from the remainder of the bioregion by the watershed which separates the drainage lines flowing into the Gulf of Carpentaria from those flowing southward. This subregion is dominated by ( <i>Astrebla</i> ) tussock grasslands on cracking clay soils. Blue grass ( <i>Dichanthium</i> spp.) grasslands become more frequent towards the more northerly, tropically influenced parts of the area. Trees are confined mainly to watercourses or scattered across the undulating downs.	3527184
Mitchell Grass Downs	Central Downs	MGD7	is dominated by ( <i>Astrebla</i> ) tussock grasslands on undulating plains with deep cracking clay soils. Gidgee ( <i>Acacia cambagei</i> ) trees are scattered across the downs but also occur on mantled pediments or scarp retreat zones associated with the eroding Tertiary surface along the edges of the adjacent Mulga Lands and Desert Uplands bioregions. Quaternary sand sheets are associated with the Thomson river and support mixed species shrubland.	6793577
Mitchell Grass Downs	Southern Wooded Downs	MGD8	has a high proportion of gidgee ( <i>Acacia cambagei</i> ), boree ( <i>A. tephрина</i> ), brigalow ( <i>A. harpophylla</i> ) and mixed species "wooded downs". Landforms supporting these vegetation types are predominantly flat to gently undulating plains and stony mantled pediments or scarp retreat zones associated with eroding Tertiary surfaces. Interspersed with these woodlands are extensive areas of ( <i>Astrebla</i> ) tussock grasslands.	4079309
Mount Isa Inlier	Southwestern Plateaus & Floodouts	MII1	is dominated by near horizontal sand sheets that overlie Cretaceous sandstones and shales. These plateau surfaces and plateau remnants are outliers of the Carpentaria Basin (Smart et al., 1980), the formation that largely defines the adjacent Gulf Plains bioregion. The Cretaceous sediments overlie Cambrian limestones which outcrop in the north. These limestones in turn overlie sediments of the pre-Cambrian Lawn Hill Platform (Blake, 1987), part of the Mount Isa Inlier subregion. These folded sediments outcrop as low hills in the south-east of the subregion. In the west and south-west, the subregion merges into the	1409538

			limestone downs and clay plains of the adjacent Mitchell Grass Downs bioregion. There are extensive areas of alluvial sands and clays in the south-west of the subregion overlying the limestones of the Mitchell Grass Downs bioregion. The Cainozoic elements of this subregion have affinities with adjacent provinces of the Mitchell Grass Downs bioregion. Most of the subregion drains into the Georgina River, and then into Eyre Creek. The far northern part drains into the Gregory River.	
Mount Isa Inlier	Thorntonia	MII2	is composed almost entirely of hills on limestones, overlain in places by small areas of Mesozoic shales of the Carpentaria Basin. The subregion has been formed by the dissection of the Barkly Plateau (in the Mitchell Grass Downs bioregion) by the headwaters of Gulf tributaries. Its geological affinity, as part of the Georgina Basin, is with the Mitchell Grass Downs bioregion, although its landform, soil and vegetation affinities are with the Northwest Highlands. Outliers of Mitchell Grass Downs' grasslands occur in the north-west where remnants of the original plains remain as small plateaus. The entire subregion is drained by the Gregory River and Lawn Hill Creek. Springs draining from the limestones make the middle and upper reaches of these rivers perennially flowing.	762368
Mount Isa Inlier	Mount Isa Inlier	MII3	contains almost all the heavily folded sediments of the bioregion. Small areas of alluvium occur throughout. There are small areas of Mesozoic sediments of both the Carpentaria and Eromanga Basins (Blake, 1987) capping some hills. There are also small outliers of the Thorntonia subregion along its western margins. The subregion drains northward into the Gulf of Carpentaria, via the Leichhardt and Cloncurry Rivers, and southwards into Lake Eyre, via tributaries of Georgina Creek and the Hamilton River.	4492284
Mulga Lands	West Balonne Plains	MUL1	is formed by areas of poplar box ( <i>Eucalyptus populnea</i> ), mulga ( <i>Acacia aneura</i> ), forest gum (yellow jacket) ( <i>E. intertexta</i> ) woodlands intermixed with brigalow ( <i>A. harpophylla</i> ), belah ( <i>Casuarina cristata</i> ) and gidgee ( <i>A. cambagei</i> ) and woodlands on Tertiary clay plains. Coolibah ( <i>Eucalyptus coolabah</i> ) open woodlands occur on floodplains associated with Wallum Creek and other smaller drainage lines. The subregion falls within the ( <i>Aristida-Bothriochloa</i> ) pasture type area defined by Western et al. (1981) which is largely within the Brigalow Belt bioregion.	2066000
Mulga Lands	West Bulloo	MUL10	supports a mixture of mulga ( <i>Acacia aneura</i> ) woodlands and shrublands with extensive areas of dissected tablelands and hills formed by weathered Cretaceous sediments. These latter areas support a complex of mulga ( <i>Acacia aneura</i> ), bendee ( <i>A. catenulata</i> ) and lancewood ( <i>A. shirleyi/A. petraea</i> ) shrublands. Ecosystems more typical of the Channel Country bioregion such as alluvial clay plains supporting open herblands and gidgee ( <i>Acacia cambagei</i> ) shrublands on scarps retreat areas are common in the Western Bulloo subregion.	2884099
Mulga Lands	Urisino Sandplains	MUL11	Urisino Sandplain subregion occurs on Quaternary aeolian sands and alluvial sediments surrounding small areas of Cretaceous sandstone and Tertiary silcretes on tablelands. The area is typified by an undulating sandplain with small areas of low, parallel dunes. Local streams with small clay pans and depressions drain low tablelands and stony rises. Loamy, calcareous red earths occur on sandplains, brown stony loams on tablelands and sandy red earths with minor grey clays on fine alluvial sediments. Dense groves of mulga with ironwood, and some poplar box occur in the subregion. Woody shrubs are widespread. Canegrass and some black box are present on pans. Thinner mulga and western bloodwood occur on rises.	1940050
Mulga Lands	Warrego Sands	MUL12	Warrego Sands subregion consists of Quaternary aeolian and alluvial sediments with some groundwater influence. Sandplains, channels, floodplains and minor basins on the lower	456823

			Warrego fan are the characteristic landforms of the subregion while soils consist of red earths, reddish texture contrast soils and grey clays. Poplar box with belah, ironwood, gidgee, white cypress pine, beefwood, and red box characterise the subregion, with mulga on stony areas. Dense woody shrubs also occur, while coolabah, black box, river cooba with lignum, canegrass, saltbush and copperburr are present on clays, and some gidgee, leopardwood and wilga on higher margins.	
Mulga Lands	Kerribree Basin	MUL13	Kerribree Basin subregion is based on Quaternary alluvial and aeolian sands derived from Warrego overflow. Characteristic landforms of the subregion are low linear dunes, undulating plains with drainage sinks, and saline clay pans and swamps associated with channel systems. Red siliceous sands, sandy red earths, brown loamy soils and grey and brown cracking clays typify the subregion. Ironwood, belah and white cypress pine occur on the dunes, while poplar box, mulga, belah gidgee and leopardwood are present on plains. Sparse coolabah, gidgee and black box with canegrass and some lignum occur on alluvial systems.	403428
Mulga Lands	White Cliffs Plateau	MUL14	White Cliffs Plateau subregion is composed of Cretaceous sandstones and claystones with marginal Quaternary colluvium and limited alluvium. Landforms consist of a stony plateau and dissected tablelands with escarpments and stony slopes. Contour banding is evident on flatter slopes. Gravelly alluvial plains and floodouts of local creeks also occur. Typical soils are red brown loams and clays, and some texture contrast soils. Gravelly loams and limited brown clays in alluvium also occur. Mitchell grass is present on plateaus. Bladder saltbush and bluebush with small patches of belah and gidgee are also present. Sparse mulga with saltbush and bluebush occur on stony plains and slopes. River redgum and yapunyah occur on larger creek lines. Mulga, poplar box occur on alluvial plains with coolabah while river cooba occurs on channels.	1072315
Mulga Lands	Paroo Overflow	MUL15	Paroo Overflow subregion consists of Quaternary alluvium and Aeolian sands on the lower alluvial fan of the Paroo River with small areas of Palaeozoic bedrock. Landforms are characterised by isolated rocky hills emerging from extensive source bordering dunefields. Clay plains and channels of the overflow system also occur. Typical soils are pale red clayey sands and grey clays on fine alluvium. Open mulga, rosewood and belah are present on hills and dunes while canegrass, lignum, old man saltbush occur on clay pans with yapunyah and black box on margins.	320477
Mulga Lands	Paroo-Darling Sands	MUL16	Paroo - Darling Sands subregion consists of Devonian quartz sandstone emergent hills surrounded by Quaternary Aeolian sands and alluvial clays of the lower Paroo. Landforms are generally rounded ridges with rocky hillslopes, flanked by dunes and sandplain. Channels, floodplain and saline claypans occur also, with lunettes in the alluvial system. Limited areas of stony loams occur on bedrock. Deep red earths and brown texture contrast soils are present on dunes and plains, with grey and brown saline cracking clays on fine alluvium. Mulga, belah, rosewood with sandhill wattle, beefwood, leopardwood and bluebush occur. Poplar box occurs in depressions in red country. Canegrass, lignum and old man saltbush occur on clays with yapunyah and black box on channels and lake margins. Sparse mulga is present on lunettes.	532115
Mulga Lands	Eastern Mulga Plains	MUL2	is dominated by mulga (Acacia aneura), poplar box (Eucalyptus populnea) woodlands with outcropping of weathered Cretaceous sediments forming hills and low scarps with shallow stony soils. These latter landforms support a range of mulga (Acacia aneura), bendee (A.	1558974

			catenulata) woodlands on the upper slopes, with bowyakka ( <i>A. microsperma</i> ), mountain yapunyah ( <i>Eucalyptus thozetiana</i> ), brigalow ( <i>A. harpophylla</i> ) woodlands on the exposed Cretaceous sediments on the lower slopes.	
Mulga Lands	Nebine Plains	MUL3	is differentiated from the Eastern Mulga Plains by the occurrence of claypans and old alluvial sand plains areas which are remnants of an old drainage system and which support herbland, shrubland, silver-leaved ironbark ( <i>Eucalyptus melanophloia</i> ) woodland and spinifex ( <i>Triodia</i> ) grasslands communities. These areas are scattered across extensive mulga ( <i>Acacia aneura</i> ) woodland covered plains dissected by drainage areas supporting eucalypt woodlands.	1986525
Mulga Lands	North Eastern Plains	MUL4	is dominated by undulating plains with mulga ( <i>Acacia aneura</i> ) dominated communities, interspersed with outcropping of weathered Cretaceous sediments forming dissected low hills and scarps. The Cretaceous sediments are covered by bendee ( <i>Acacia catenulata</i> ), mulga ( <i>A. aneura</i> ), mountain yapunyah ( <i>Eucalyptus thozetiana</i> ) and bowyakka ( <i>Acacia microsperma</i> ) woodlands.  The mulga communities in the North Eastern Plains subregion are codominated by poplar box ( <i>Eucalyptus populnea</i> ) and silver-leaved ironbark ( <i>E. melanophloia</i> ). This subregion is fringed by brigalow woodlands and/or <i>Astrebla</i> grasslands where the eroding edge of the Tertiary surface that forms the subregion, exposes the underlying Cretaceous geologies.	669981
Mulga Lands	Warrego River Plains	MUL5	is the largest area in the Mulga Lands bioregion not dominated by <i>Acacia</i> woodland or shrublands. The main channels of the Warrego River are lined with river red gum ( <i>Eucalyptus camaldulensis</i> ) and coolibah ( <i>E. coolabah</i> ) woodlands. Where the floodplain spreads out, particularly to the south, extensive alluvial clay plains support coolibah ( <i>Eucalyptus coolabah</i> ) open woodland, gidgee ( <i>Acacia cambagei</i> ) with some brigalow ( <i>A. harpophylla</i> ) open woodland and Mitchell grass ( <i>Astrebla</i> ) grasslands. Scattered across these areas are floodouts and drainage lines fringed by coolibah ( <i>Eucalyptus coolabah</i> ), or yapunyah ( <i>E. ochrophloia</i> ) open woodlands which may have a lignum ( <i>Muehlenbeckia florulenta</i> ) understorey and areas of alluvially derived low sand hills supporting a range of mulga ( <i>Acacia aneura</i> ), poplar box ( <i>E. populnea</i> ) and cypress pine ( <i>Callitris</i> ) woodlands.	2493684
Mulga Lands	Langlo Plains	MUL6	is dominated by undulating plains with mulga ( <i>Acacia aneura</i> ) dominated communities, interspersed with outcropping of weathered Cretaceous sediments forming dissected low hills and scarps. The Cretaceous sediments are covered by bendee ( <i>Acacia catenulata</i> ), mulga ( <i>A. aneura</i> ), mountain yapunyah ( <i>Eucalyptus thozetiana</i> ) and bowyakka ( <i>Acacia microsperma</i> ) woodlands.  The mulga communities in the Langlo Plains subregion are dissected by alluvial clay plains associated with the Langlo River and other drainage lines feeding into the Warrego River and support gidgee ( <i>Acacia cambagei</i> ) and yapunyah ( <i>Eucalyptus ochrophloia</i> ) woodlands and herblands.	1276628
Mulga Lands	Cuttaburra-Paroo	MUL7	Paroo Sand Sheets subregion consists of Quaternary aeolian sands and alluvial sediments surrounding small areas of Tertiary silcretes stony plain. Undulating stony plain and sandplains with low linear dunes. Channels, floodplains and claypans of Cuttaburra Creek. Stony red loams and earths occur on the rises while sandy red earths and grey clays occur on sandplains and fine alluvial sediments. Open mulga, leopardwood and shrubs occur on rises, while ironwood, mulga, white cypress pine, rosewood, poplar box, and belah with shrubs are	1695073



			present on sandplains. Ironwood, mulga, poplar box with gidgee, belah, yapunyah, coolabah and black box occur on alluvial sediments.	
Mulga Lands	West Warrego	MUL8	supports a mixture of mulga ( <i>Acacia aneura</i> ) woodlands and shrublands with extensive areas of dissected tablelands and hills formed by weathered Cretaceous sediments. These latter areas support a complex of mulga ( <i>Acacia aneura</i> ), bendee ( <i>A. catenulata</i> ) and lancewood ( <i>A. shirleyi/A. petraea</i> ) shrublands. Ecosystems more typical of the Channel Country bioregion such as alluvial clay plains supporting open herblands and gidgee ( <i>Acacia cambagei</i> ) shrublands on scarps retreat areas occur, but become more common in the Western Bulloo subregion.	4695821
Mulga Lands	Northern Uplands	MUL9	is dominated by scarps, dissected tablelands, mesas and buttes formed by Tertiary sandstone. These areas support extensive areas of mulga ( <i>Acacia aneura</i> ) and bendee ( <i>A. catenulata</i> ) shrublands on plateaus with bastard mulga ( <i>A. stowardii</i> ) open shrublands or lancewood ( <i>A. shirleyi</i> ) on shallower soils. Valley floors, where the underlying Cretaceous sediments are exposed, support gidgee ( <i>Acacia cambagei</i> ) and some brigalow ( <i>A. harpophylla</i> ) woodlands with river red gum ( <i>Eucalyptus camaldulensis</i> ) open woodlands along drainage lines.	1247797
Murchison	Eastern Murchison	MUR1	The northern parts of the 'Southern Cross' and 'Eastern Goldfields' Terranes of the Yilgarn Craton. Characterised by its internal drainage, and extensive areas of elevated red desert sandplains with minimal dune development. Salt lake systems associated with the occluded Paleodrainage system. Broad plains of red-brown soils and breakaway complexes as well as red sandplains. Vegetation is dominated by Mulga Woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and Halosarcia shrublands. Arid climate, with mainly winter rainfall (200mm).	21134880
Murchison	Western Murchison	MUR2	Northern part of the 'Murchison' Terranes of the Yilgarn Craton. Mulga low woodlands, often rich in ephemerals(usually with bunch grasses), on outcrop and fine-textured Quaternary alluvial and eluvial surfaces (extensive hardpan washplains that dominate and characterise the sub-region) mantling granitic and greenstone strata of the northern part of the Yilgarn Craton. Surfaces associated with the occluded drainage occur throughout with hummock grasslands on Quaternary sandplains, saltbush shrublands on calcareous soils and Halosarcia low shrublands on saline alluvia. Contains the headwaters of the Murchison and Wooramel Rivers, which drain the sub-region westwards to the coast. Arid climate with bimodal rainfall that usually falls in winter.	6985453
Murray Darling Depression	South Olary Plain	MDD1	South Olary Plain subregion consists of Quaternary aeolian sands and lake sediments characterised by Dunefields, sandplains, dry lakes and groundwater basins. Soils are typically deep siliceous and calcareous red to yellow sands, sandy earths, brown texture contrast soils on dunes and sandplains. Saline, gypseous and calcareous clays occur on lake beds, with mixed sands and pelleted clays occurring in lunettes. Diverse mallee is present on sands consisting of pointed mallee, congoo mallee, red mallee, lerp mallee, slender-leaf mallee, as well as yorrell, white cypress pine, mallee cypress pine, belah, rosewood, with porcupine grass and diverse shrubs. Belah, rosewood, black bluebush, pearl bluebush and old man saltbush, occurs on sandplains and heavier soils. Black box fringes depressions, halophytes are present on salinas, and chenopod shrublands occur on lunettes, sometimes with white cypress pine.	6143536
Murray Darling Depression	Murray Mallee	MDD2	MM 1.2 - Murray Mallee province is typified by calcareous material in the form of a broad undulating sandy plains that is often associated with linear, west-east aligned, low sand dunes	5522375

			<p>with intervening heavier textured swales developed from Cainozoic deposits of alluvial, aeolian and swampy deposits. The vegetation is dominated by East/West-Dune Mallee with some Chenopod Mallee and Shallow-Sand Mallee.</p> <p>The plains, drainage lines and groundwater discharge landscapes are dispersed with salt lakes and gypsum flats with lunettes developed on the eastern margins of the lakes. The Cainozoic deposits give rise to calcareous earths (Calcarosols), cracking clays (Vertosols), red sands (Rudosols). The vegetation is dominated by Gypseous Plains Shrubland, Saline Shrubland (Raak), Plains Grassland and Drainage-line Grassy Woodland.</p>	
Murray Darling Depression	Murray Lakes and Coorong	MDD3	<p>This area is dominated by Lakes Alexandrina and Albert which form large depressions in the Murray plain, and the Coorong, an elongated salt water lagoon separated from the ocean by a narrow peninsula of sand dunes. Small lacustrine plains and swamps with saline cracking clays fringe the lakes and are bordered by undulating calcrete plains covered by extensive sand sheets. Samphire and saltbush shrublands dominate the low lying plains and swamps whilst the native vegetation on the sandy soils of the higher ground is mainly Allocasuarina verticillata/Melaleuca lanceolata low woodland. Most native vegetation in this area has been subject to clearance and grazing.</p>	249132
Murray Darling Depression	Lowan Mallee	MDD4	<p>LM 1.1 - Lowan Mallee province is typified by white siliceous sand formed into a complex array of jumbled irregular and parabolic dunes with intervening sand sheets and plains which are composed of the white sand and clayey deposits. The Cainozoic deposits of siliceous sands, clay, silt and mobile dunes give rise to leached sands (Podosols and Rudosols) and mottled yellow and grey texture contrast soils in the swales (Sodosols).</p> <p>The vegetation is dominated by Lowan Sands Mallee with some Chenopod Mallee in the Sunset Country and Sandplain Heath, Mallee Heath, Loamy Sand Mallee, Scrub-pine Woodland, Broombush, Red-Swale Mallee, Yellow Gum Woodland and Heathy Woodland in the Big and Little Deserts.</p>	2336449
Murray Darling Depression	Wimmera	MDD5	<p>WM 1.3 - Wimmera province is typified by flat to gently undulating plains in the east, with black and grey cracking clay soils (Vertosols). Supporting Plains Woodland, Plains Grassy Woodland, Plains Grassland, Red Gum Wetland and Grassy Woodland ecosystems. The western part is typified by stranded beach ridges with interspersed with clay plains (where there are a mixture of swamp, lakes, lagoons and lunettes in the south) with cracking clay soils and red texture contrast soils (Vertosols and Sodosols). The vegetation on these less fertile plains are Heathy Woodland and Shallow Sands Woodland.</p>	1699340
Murray Darling Depression	Darling Depression	MDD6	<p>Darling Depression subregion consists of Quaternary aeolian sands and lake sediments along with isolated Devonian quartz sandstone outcrops. Extensive sandplains are present along with dunefields piled against Cobar Peneplain ranges. Rare floods in the Darling River feed freshwater overflow lakes. Stony ridges and ranges also occur. Soils are generally deep siliceous and calcareous red to yellow sands, sandy earths, brown texture contrast soils on dunes and sandplains. Brown and grey and calcareous clays occur on lakes. Pale yellow sands are present on lunettes. Stony loams occur on hills. Belah, rosewood, nelia, mulga wilga and woody shrubs are present on western sandplains. Pointed mallee, congoo mallee, yorrell with diverse shrubs and porcupine grass, occasional kurrajong and mallee cypress pine occur on eastern sandplains. Mulga, white cypress pine, red box, mallee, belah and poplar box on central dunes. Lignum, canegrass, black bluebush and black box or poplar box on margins and</p>	3798454

			beds of swamps and lakes. Mulga with red box and shrubs is present on rocky hills.	
Nandewar	Northern Complex	NAN1	Dominated by Carboniferous sediments and leucoalumellite which form flat to undulating areas, low hills and ranges at high altitudes and hilly areas adjacent to granites. Lower undulating areas carry an open forest dominated by <i>E.sideroxylon</i> , with <i>E.melanophloia</i> dominant in hilly areas on leucoalumellite. Open forest to woodland dominated by <i>E.melanophloia</i> and <i>Callitris hugelii</i> is widespread on the sediments with <i>E.albens</i> occurring on lower slopes and <i>Brachychiton populneum</i> on more undulating areas.	959239
Nandewar	Inverell Basalts	NAN2	Dominated by Tertiary basalts and containing occasional inliers of fine Palaeozoic sediments. The basalts form undulating landforms and carry woodlands and open woodlands of white box with occasional <i>E.melanophloia</i> in the south and west and <i>E.sideroxylon</i> in the east. Lower slopes carry <i>E.melliodora</i> and <i>E.blakelyi</i> with <i>A.floribunda</i> in the valleys. The sediments form undulating to low hilly landforms which carry open forests and woodlands. These are dominated by <i>E.melanophloia</i> , <i>Callitris hugelii</i> and <i>E.albens</i> on coarser soils and <i>E.blakelyi</i> , <i>E.melliodora</i> and <i>A.floribunda</i> on finer soils.	230958
Nandewar	Kaputar	NAN3	Dominated by tertiary basalts with small areas of trachyte plugs and Mesozoic sediments. Landforms are predominantly rugged, with some ledges with shallow, usually fine textured, lithosols. Higher areas are woodland or wet open forest of <i>E.pauciflora</i> and <i>E.viminalis</i> , with areas of <i>E.laeopinea</i> , <i>E.caliginosa</i> , and <i>E.macrorhyncha</i> . The steep slopes have woodlands and open forests dominated by <i>Callitris hugelii</i> with <i>E.albens</i> on finer soils and <i>E.crebra</i> on coarser soils. <i>E. melanophloia</i> is prominent in some exposed areas, with <i>Callitris endlicheri</i> .	84443
Nandewar	Peel	NAN4	Dominated by fine grained Silurian and Devonian sediments. Low peaked hills are the predominant landform with podzolic soils and some level basalt caps in the north. The vegetation is dominated by <i>E. albens</i> woodlands with <i>E. melliodora</i> and <i>E. blakelyi</i> on the lower slopes and <i>A. floribunda</i> as an occasional low tree. Steeper areas in the east are dominated by <i>E. youmanii</i> and <i>A. floribunda</i> , with areas of <i>E.dealbata</i> on the steepest northern and western aspects. <i>E. melanophloia</i> occurs on basalt caps, whilst <i>Callitris hugelii</i> and <i>Brachychiton populneum</i> occur on stonier areas in the west and north.	1424181
Naracoorte Coastal Plain	Bridgewater	NCP1	Coastal dunes and limestone outcrops give way to a series of coastal plains and lagoons, divided by consolidated calcarenite dunes rising 20 - 50 metres above the plains and running from south east to north west. Prior to European settlement the interdunal areas supported vast wetlands. Most of these have since been drained and are now used for cattle and sheep grazing and small areas of agriculture. On the dunes, three distinct sandy soils are found:- deep, yellow-grey, calcareous sands occur on the active coastal dunes; shallow, alkaline, reddish sands are found on the consolidated calcarenite dunes; and deep, neutral, yellow-grey, siliceous sands with a bleached upper horizon have formed on the unconsolidated dunes overlying the calcarenite dunes and interdunal plains. Three main soils occur on the interdunal plains: Shallow, well-drained, alkaline, black uniform loams, over shell beds, are found on the lee side of the dunes; deep imperfectly drained, alkaline, duplex or texture-contrast soils occur on the more elevated plains and deep, poorly drained, alkaline, cracking clays, often associated with swamps, are found in the lower lying parts of the plains. (Laut et al. 1977).  The coastal dunes are dominated by shrubland communities of <i>Acacia longifolia</i> var. <i>sophorae</i> and <i>Leucopogon parviflorus</i> , whilst low lying swampy areas support sedgeland communities of	457862

			Gahnia filum, Baumea juncea and Juncus sp, and Melaleuca brevifolia and M. halmaturorum shrublands. Further inland, consolidated dune ridges are dominated by Eucalyptus diversifolia mallee communities and E. obliqua, E. fasciculosa and E. arenacea woodlands.	
Naracoorte Coastal Plain	Glenelg Plain	NCP2	GP 2 – Glenelg Plain province is a series of long low narrow ridges running parallel to the present coastline. These Cainozoic deposits give rise to pale acidic sandy dunes and humic acid sands on the flats (Podosols), dominated by Plains Grassy Woodland. On the red earths (Dermosols and Calcaresols), and mottled texture contrast soils (Kurosols) in the swales; the vegetation consists of Damp Sands Herb-rich Woodland, Heathy Woodland, Herb-rich Heathy Woodland, Damp Sands Herb-rich Woodland/Damp Heathland/Damp Heathy Woodland complexes.	634938
Naracoorte Coastal Plain	Lucindale	NCP3	A broad plain on clay and marl, divided by low parallel calcarenite dune ridges trending northwest. Swamps occur in low lying areas throughout. Most native vegetation has been cleared for grazing (sheep and beef cattle). Remaining native vegetation includes Eucalyptus fasciculosa, E. obliqua and E. leucoxydon low woodland on red, weakly structured sandy soils on rises, Gahnia trifida/G. filum tussock sedgeland on black organic soils in low lying areas, and Acacia longifolia var. sophorae / Leucopogon parviflorus open heath on coastal dunes.	741215
Naracoorte Coastal Plain	Tintinara	NCP4	This area mainly consists of calcarenite dune ridges with shallow sands and intervening swampy plains with yellow grey duplex soils. The dune free plains near Keith in the east have shallow loams derived from the underlying limestone. Large areas of remnant vegetation are found in the sandy soils of the dunes and swales or in swamp areas. Eucalyptus fasciculosa low woodland and E. diversifolia open mallee and Banksia ornata shrubland are found on sandy, pedal mottled-yellow duplex soils and bleached sands, whilst Melaleuca halmaturorum ssp. halmaturorum tall shrubland and B. marginata shrubland are found in the lower lying areas on clay soils. Most native vegetation has been cleared for grazing although large areas remain in National Parks and Wildlife reserves and privately owned heritage agreements.	708059
New England Tableland	Bundarra Downs	NET1	Dominated by metasediments which have weathered to form solodic soils of moderate fertility. These carry Eucalyptus albens on undulating topography.	151864
New England Tableland	Severn River Volcanics	NET10	Predominantly hilly to rugged landforms which have derived from acid volcanics to form lithosols and podzolic soils. At higher altitudes E. banksii, E. caliginosa and E. melliodora are common, while E.dealbata, E. bancroftii and E. albens occur at lower altitudes.	150105
New England Tableland	Northeast Forest Lands	NET11	Dominated by acid igneous rocks which have weathered to form kraznosems, lithosols, podzolics and siliceous sands. These occur as landscapes where coarse slopes are dominant and rock outcrops are widespread. Vegetation is dominated by E.campanulata, with E. cameronii on coarser soils and E. obliqua on finer soils. E.acaciiformis, E. nova-anglica, E. pauciflora and E. stellulata form woodlands on the lower slopes and bottoms of broad valleys.	205456
New England Tableland	Tenterfield Plateau	NET12	Dominated by acid igneous rocks which have weathered to form fine to medium grained solodic soils. They support woodlands of E. nova-anglica, E.caliginosa, E.melliodora, E.bridgesiana, and A. floribunda.	139795
New England Tableland	Yarrowyck-Kentucky Downs	NET13	Dominated by granodiorites with medium to coarse-grained solodic soils. E. blakelyi and A. floribunda dominate undulating to low hilly areas, with E. nova-anglica on poorly drained flats. Stringybarks are common on the hills and white gums are common in higher altitude areas to the south-east.	65133
New England	Binghi Plateau	NET14	Dominated by acid igneous rocks which have weathered to form podzolic soils and siliceous	63888

Tableland			sands. Encompasses a variety of landforms including hilly to rugged margins and more undulating plateau tops across a wide altitudinal range. <i>Eucalyptus andrewsii</i> is the most common species forming forests and woodlands on coarse well-drained soils, while <i>E. caleyi</i> , <i>E. bancroftii</i> and <i>E. dealbata</i> form woodlands and low woodlands on exposed aspects with shallow rocky soils. <i>E. youmanii</i> and <i>Callitris endlicheri</i> are also usually present on steeper areas. <i>E. deanei</i> is common in central and eastern parts whilst <i>E. melliodora</i> and <i>E. blakelyi</i> occur throughout.	
New England Tableland	Stanthorpe Plateau	NET15	Dominated by acid igneous rocks which have weathered to form podzolic soils and siliceous sands. Encompasses a variety of landforms including hilly to rugged margins and more undulating plateau tops across a wide altitudinal range. <i>Eucalyptus andrewsii</i> is the most common species forming forests and woodlands on coarse well-drained soils, while <i>E. caleyi</i> , <i>E. bancroftii</i> and <i>E. dealbata</i> form woodlands and low woodlands on exposed aspects with shallow rocky soils. <i>E. youmanii</i> and <i>Callitris endlicheri</i> are also usually present on steeper areas with <i>E. nova-anglica</i> , <i>E. conica</i> and <i>E. pauciflora</i> also common in parts. <i>E. deanei</i> is common in central and eastern parts whilst <i>E. melliodora</i> and <i>E. blakelyi</i> are prominent in warmer parts.	268187
New England Tableland	Eastern Nandewars	NET16	Dominated by acid igneous rocks which have weathered to form podzolic soils and siliceous sands. Encompasses a variety of landforms including hilly to rugged margins and more undulating plateau tops across a wide altitudinal range. <i>Eucalyptus andrewsii</i> is the most common species forming forests and woodlands on coarse well-drained soils, while <i>E. caleyi</i> , <i>E. bancroftii</i> and <i>E. dealbata</i> form woodlands and low woodlands on exposed aspects with shallow rocky soils. <i>E. melliodora</i> and <i>E. blakelyi</i> are prominent with <i>E. youmanii</i> and <i>Callitris endlicheri</i> also usually present on steeper areas.	320573
New England Tableland	Tingha Plateau	NET17	Dominated by acid igneous rocks which have weathered to form podzolic soils and siliceous sands. Encompasses a variety of landforms including hilly to rugged margins and more undulating plateau tops across a wide altitudinal range. <i>Eucalyptus andrewsii</i> is the most common species forming forests and woodlands on coarse well-drained soils, while <i>E. caleyi</i> , <i>E. bancroftii</i> and <i>E. dealbata</i> form woodlands and low woodlands on exposed aspects with shallow rocky soils. <i>E. melliodora</i> and <i>E. blakelyi</i> occur throughout with <i>E. youmanii</i> and <i>Callitris endlicheri</i> also usually present on steeper areas. Open forest dominated by <i>E. caliginosa</i> is common on tertiary sediments.	78438
New England Tableland	Nightcap	NET18	Dominated by acid igneous rocks which have weathered to form podzolic soils and siliceous sands. Encompasses low hilly to hilly areas with open forests of <i>E. radiata</i> , <i>E. caliginosa</i> and <i>E. dalrympleana</i> ssp. <i>heptantha</i> on the hills and <i>E. nova-anglica</i> , <i>E. pauciflora</i> and <i>E. stellulata</i> on lower areas.	113612
New England Tableland	Round Mountain	NET19	Dominated by acid igneous rocks which have weathered to form podzolic soils and siliceous sands. Round mountain contains the highest peak of the region and is predominantly hilly to rugged. Dominated by open forests of <i>E. campanulata</i> and <i>E. caliginosa</i> .	20606
New England Tableland	Beardy River Hills	NET2	Dominated by metasediments which have weathered to form lithosol soils distributed across a hilly to rugged landscape. The vegetation is predominantly a woodland of <i>Eucalyptus dealbata</i> , <i>E. sideroxylon</i> , and <i>E. youmanii</i> .	24624
New England Tableland	Walcha Plateau	NET3	Dominated by metasediments of the south-eastern section of the New England Tableland. It has a wide range of vegetation communities, from tall open forests of <i>Eucalyptus obliqua</i> and	476492

			E. fastigata in the far south and east, to open woodlands and woodlands of E. pauciflora and E. stellulata in central and northern areas.	
New England Tableland	Armidale Plateau	NET4	Dominated by metasediments which have weathered to form yellow podzolics and solidic soils. Encompasses the lower altitudes of the eastern New England Tableland which are dominated by woodlands of E. blakelyi and E. melliodora with E. caliginosa on hillier areas and E. nova-anglica on poorly drained flats.	291246
New England Tableland	Wongwibinda Plateau	NET5	Dominated by metasediments which have weathered to form yellow podzolics and solidic soils. Encompasses the higher altitudes of the eastern New England Tableland which are dominated by woodlands of E. pauciflora, E. acaciiformis and E. nova-anglica, with E. radiata common on the hills.	106250
New England Tableland	Deepwater Downs	NET6	Dominated by diorites which have weathered to form an undulating to low hilly landscape with solodic and podzolic soils of moderate fertility. They carry a woodland dominated by Eucalyptus blakelyi, E. bridgesiana, and A. floribunda.	97770
New England Tableland	Glenn Innes-Guyra Basalts	NET7	Dominated by basalts soils which have been eroded to form an undulating to hilly landscape. These carry woodlands of Eucalyptus pauciflora and E. stellulata at higher altitudes, but have E. albens woodlands on lower western parts which have formed in drier conditions.	277293
New England Tableland	Ebor Basalts	NET8	Dominated by basaltic soils which have been eroded to form an undulating and hilly landscape. These carry Eucalyptus pauciflora -E. stellulata open woodlands, with areas of E. obliqua and E. fastigata open forest.	35420
New England Tableland	Moredun Volcanics	NET9	Derived from acid volcanics which form a gentle landform that is dominated by solodic and podzolic soils. At higher altitudes Eucalyptus banksii, E. caliginosa, and E. melliodora are common, while E. dealbata, E. bancroftii and E. albens occur at lower altitudes.	117458
Northern Kimberley	Mitchell	NK1	<p>This is the dissected plateau of Kimberley Basin. Savannah woodland over high Sorghum grasses and hummock grasses on shallow sandy soils on outcropping Proterozoic siliceous sandstone strata. Savannah woodlands over high Sorghum grasses on red and yellow earths mantling basic Proterozoic volcanics. Riparian closed forests of Melaleuca and Pandanus occur along drainage lines. A prominent feature is the rugged sunken coastline with extensive Mangal occurring in estuaries and sheltered embayments. Numerous small patches of monsoon rainforest are scattered through the district. The climate is dry hot tropical, sub-humid with high summer rainfall (1100 – 1500 mm annually). Areas of laterite upland with open forests and alluvial floors along major river valleys. Broad scale vegetation mapping of the area describes the following components;</p> <ul style="list-style-type: none"> <li>· Mangroves.</li> <li>· Eucalyptus spp., Eucalyptus miniata (Northern woollybutt) +/- Eucalyptus tetradonta (Darwin stringybark) open-woodland with Triodia bitextura (curly spinifex) and Sorghum grasses (Sorghum spp.).</li> <li>· Eucalyptus tectifica (Darwin box) +/- Eucalyptus grandifolia (large-leaved cabbage gum) +/- Eucalyptus byrnesii (fan-leaved bloodwood) woodland with Sorghum spp. (sorghum) and Sehima nervosum (white grass) tall grasses.</li> <li>· Eucalyptus miniata (Northern woollybutt) grassy woodland.</li> <li>· Eucalyptus tetradonta (Darwin stringybark) and Eucalyptus miniata (Northern woollybutt) +/- Eucalyptus bleeseri (rusty-barked bloodwood) woodland with Sorghum spp.</li> </ul>	6079984

			<p>tall-grasses.</p> <ul style="list-style-type: none"> <li>· Semi-deciduous vine thickets on sandstone.</li> </ul>	
Northern Kimberley	Berkeley	NK2	<p>The subregion has medium rainfall and is less dissected than the Mitchell subregion. Also the upland of mainly Pentecost sandstones is more continuously mantled by (sandy) soils, and dominated by open savannah woodland. Savannah woodland of Northern woollybutt (<i>Eucalyptus miniata</i>) and Darwin stringybark (<i>Eucalyptus tetradonta</i>) over high <i>Sorghum</i> grasses and <i>Plectrachne schinzii</i> hummock grasses on shallow sandy soils on outcropping Proterozoic siliceous sandstone strata. There are also savannah woodlands on <i>Eucalyptus tectifica</i> - <i>E. grandifolia</i> alliance over high <i>Sorghum</i> grasses on red and yellow earths mantling basic Proterozoic volcanic substrates. Riparian closed forests of <i>Melaleuca</i> and <i>Pandanus</i> occur along drainage lines. Extensive Mangal occurs in estuaries and sheltered embayments. There appear to be less small patches of monsoon rainforest in this subregion where they tend to be confined to near coastal areas. The climate is dry hot tropical, sub-humid with summer rainfall. Broad scale vegetation mapping of the area describes the following components;</p> <ul style="list-style-type: none"> <li>· Mangroves.</li> <li>· <i>Eucalyptus</i> spp., <i>Eucalyptus miniata</i> (Northern woollybutt) +/- <i>Eucalyptus tetradonta</i> (Darwin stringybark) open-woodland with <i>Triodia bitextura</i> (curly spinifex) and <i>Sorghum</i> spp. (sorghum) grasses.</li> <li>· Small areas of <i>Eucalyptus tectifica</i> (Darwin box) +/- <i>Eucalyptus grandifolia</i> (large-leaved cabbage gum) +/- <i>Eucalyptus byrnesii</i> (fan-leaved bloodwood) woodland with <i>Sorghum</i> spp. (sorghum) and <i>Sehima nervosum</i> (white grass) tall grasses. This association is primarily found in the Mitchell subregion.</li> <li>· Very small areas of <i>Eucalyptus miniata</i> (Northern woollybutt) grassy woodland.</li> <li>· <i>Eucalyptus tetradonta</i> (Darwin stringybark) and <i>Eucalyptus miniata</i> (Darwin Northern woollybutt) +/- <i>Eucalyptus bleeseri</i> (rusty-barked bloodwood) woodland with <i>Sorghum</i> spp. tall-grasses.</li> <li>· <i>Melaleuca</i> spp. (paperbark and <i>Eucalyptus</i> spp. Low woodland with <i>Triodia bitextura</i> (curly spinifex) hummock grasses.</li> <li>· Saline tidal mudflats +/- samphire.</li> </ul>	2540149
NSW North Coast	Nymboida	NNC1	<p>Nymboida subregion is composed of complex faulted bedrock of Devonian slates and quartzites, as well as Permian mudstones and lithic sandstones both intruded by granodiorites. It contains areas of Tertiary basalt on the margins of the Great Escarpment. Serpentine is present at Baryulgil. The subregion is situated on the foothills of the Great Escarpment with steep slopes and high rainfall. Relief extends to 750m. Some isolated plateaus exist, often with a basalt cap. Red earths and red loams on basalts and granodiorites typify the subregion. Red and brown texture contrast soils occur on volcanics and sedimentary rocks. Dry sclerophyll forest is present, including northern grey ironbark, broad-leaved white mahogany, white mahogany, tallowwood and turpentine. Rainforest elements are present in sheltered locations along escarpment including coachwood, crab-apple, prickly ash, and rough tree fern.</p>	825766
NSW North Coast	Woodenbong	NNC10	<p>Woodenbong subregion is composed of Jurassic lithic and quartz sandstones, and shales with areas of Tertiary basalts. Hilly, basalt ridges and plateau remnants occur. The subregion includes outer and dissected parts of Mt Warning caldera slopes, with relief to 600m. Fertile</p>	189899

			red earths and red loams occur on basalt. Poor red, brown and yellow texture contrast soils occur on sedimentary rocks. Sands and loams are found along streams. Rainforests occur on basalt as for Richmond-Tweed subregion. Wet and dry sclerophyll, including New England blackbutt, red bloodwood and tallowwood occur on sedimentary rocks.	
NSW North Coast	Clarence Basin	NNC11	Clarence Basin subregion occurs on Sub-horizontal Jurassic and Cretaceous lithic and quartz sandstones and claystones. Extensive areas of alluvials and coastal barrier sands also occur. Low stepped hills and plains occur, with hillier areas in west and south. Beach, dune and lagoon barrier systems and estuarine fills occur along the main streams. Mellow texture contrast soils and areas of deep sand are present on Mesozoic rocks. Deep siliceous sands and podsols occur in dunes, organic sands and mud are found in estuaries. Dry sclerophyll forests and woodlands of spotted gum, grey gum, blackbutt, red bloodwood and white mahogany occur in the hills. The sequence of vegetation on dunes includes paperbark, snappy gum, blackbutt, dwarf red bloodwood, bastard mahogany with banksia, bangalow palm and areas of heath and paperbark swamp. Mangroves occur in estuaries.	988683
NSW North Coast	Richmond - Tweed	NNC12	Richmond - Tweed subregion consists of Jurassic lithic and quartz sandstones and shales exposed in valleys. Tertiary volcanics of the Mt Warning complex are present, as are mainly sheet basalts, with minor rhyolite and tuffs. A major syenite and gabbro plug also exists, a remnant of the caldera explosion. Landforms include a dissected volcanic caldera with central plug of Mt Warning. Basement rocks exposed around the plug and an outer rim of volcanic flows with a well-developed radial drainage pattern. Steep slopes are present with relief to 1100m. Red friable loams occur on basalts, with texture contrast and fabric contrast soils on volcanic rocks on slopes, all with high fertility. Low fertility texture contrast soils are present on sandstones and shales. Cracking clays occur in valleys. Subtropical and warm temperate rainforests and wet sclerophyll forests occur, including black booyong, white booyong, hoop pine, bangalow palm, climbing palm, rough tree fern, Australian cedar, teak, white mahogany, small-fruited grey gum, tallowwood and Sydney blue gum.	395712
NSW North Coast	Murwillumbah	NNC13	Murwillumbah subregion is composed of Folded Devonian lithic sandstones, slate and phyllite. Small areas of loamy alluvium also occur. With relief to 250m, the landforms of the subregion consist of finely dissected steep ranges, with narrow alluvial plains. Shallow yellow earths occur on hill crests, with yellow and brown texture contrast profiles on slopes and organic loams on alluvial plains. Wet and dry sclerophyll forests, including blackbutt, Sydney blue gum and forest red gum, occur on lower slopes and plains.	627236
NSW North Coast	Southern Coastal Lowlands	NNC14	Dominated by alluvial deposits of the Tweed River lowlands and quaternary sands in the coastal zone. Subtropical rainforest was historically distributed on the coastal lowlands, with Lowland Red Gum, Scribbly Gum, Paperbark and Swamp ecosystems in frequently inundated areas and mangroves along coastal estuaries.	3162
NSW North Coast	Scenic Rim	NNC15	contains the wet-moist elevated basalts and rhyolites of the McPherson and Main Ranges and minor areas of moist elevated sedimentary and metamorphic rocks. The major vegetation types of this province include complex notophyll rainforest and tall open forests. The province is closely linked in terms of landscape and biota to other parts of northern New South Wales (e.g. Mount Warning Shield) and is recognised as part of a distinctive bioregion (New South Wales North Coast) in the IBRA.	230770
NSW North Coast	Manning -	NNC2	Manning - Macleay subregion consists of extremely complex faulted terrain where the New	3151848



	Macleay		England Fold belt over-thrusts the Sydney Basin. The main rocks that are present are Silurian and Devonian slates, quartzites and acid volcanics, Carboniferous mudstones and lithic sandstones, as well as less deformed Permian shales and sandstones. Small areas of granite and plateaus of Tertiary basalt on Barrington and Comboyne Plateaus also occur, as do Quaternary coastal sands. Complex pattern of ridges and valleys running to the Great Escarpment occur in the subregion with strong structural control along fault lines. Coastal beach, dune and lagoon barrier systems reach their maximum development at Myall Lakes. Red brown structured loams occur on basalt. A range of other soil types relating to geology occur but are poorly known. Deep siliceous sands and very well developed podsoils are present in dunes, particularly the older high dunes. Organic sands occur in estuaries. Wet sclerophyll forest with white mahogany, small-fruited grey gum, Sydney blue gum, blackbutt, tallowwood and brush box is present. White gum, blackbutt, forest red gum and grey box occurs on dry open flats. Dense Antarctic beech is present on Barrington tops and patches of mixed cool temperate and warm temperate rainforest occur on Comboyne Plateau on basalt. A coastal complex of banksia, paperbark, smooth-barked apple, and blackbutt with numerous shrubs and areas of heath and swamp occurs on dunes. Mangroves are present in estuaries.	
NSW South Western Slopes	Upper Slopes	NSS1	Northern Inland Slopes subregion consists of Ordovician to Devonian folded and faulted sedimentary sequences with inter-bedded volcanic rocks and large areas of intrusive granites. Landforms are composed of steep, hilly and undulating ranges and granite basins. Occasional basalt caps and confined river valleys with terrace remnants also occur. Shallow stony soils occur on steep slopes, texture contrast soils grading from red subsoils are present on upper slopes to yellow subsoils on lower slopes. Alluvial sands, loams and clays also occur. Open forests and woodlands occur. Red stringybark is present on upper slopes with black cypress pine, kurrajong, red ironbark, white gum, white box, yellow box and Blakely's red gum on lower slopes, merging west to yellow box, grey box and white cypress pine. Rough-barked apple on flats with river oak occurs on upper tributaries and river red gum occurs on lower and larger streams.	4795121
NSW South Western Slopes	Lower Slopes	NSS2	Lower Slopes subregion is similar to the Upper Slopes subregion, consisting of Ordovician to Devonian folded and faulted sedimentary sequences with inter-bedded volcanic rocks and large areas of intrusive granites. It also contains larger areas of Tertiary and Quaternary alluvium. Characteristic landforms of the subregion are undulating and hilly ranges and isolated peaks set in wide valleys at the apices of the Riverina alluvial fans. Soils are similar to those of the Upper Slopes with shallow stony soils on steep slopes, and red and yellow subsoils with alluvial sands, loams and clays also occurring. This subregion has more extensive red-brown earths on undulating plains and more extensive grey clays on alluvium. Dwyer's gum occur on granite, with red ironbark on sedimentary rocks and Hill red gum, white cypress pine and red stringybark in the ranges. Grey box woodlands occur with yellow box, white cypress pine and belah on lower areas. Poplar box, kurrajong, wilga and red box are present in the north, with limited areas of bull mallee, blue mallee, green mallee and congoo mallee in the central west. Myall, rosewood and yarran occur on grey clays, with yellow box, polar box, and belah on alluvial loams. River red gum occurs on all streams with black box in the west with some lignum and river cooba.	4032204
Nullarbor	Carlisle	NUL1	The Nullarbor bioregion extends over most of the onshore part of the Eucla Basin – an	5788518

			<p>epeirogenic basin of cretaceous and tertiary sediments on an irregular basement predominantly of Precambrian granite and metamorphic rocks.</p> <p>NUL1 is along the northern edge of the Bunda Plateau comprised primarily of the Carlisle Plain which has deeper soil profiles with a high proportion of red quartz rich sand mixed with loams and calcareous clays which is partly calcreted over calcareous sandstone. It is part of an old, now inactive palaeodrainage system, which flows into the Nullarbor Karst.</p> <p>Landforms consists of salt lakes and major valley floors with lake derived dunes. Sand plains with extensive seif dunes in the northern areas of the sub-region, occasional outcropping (breakaways) and quartzite hills provide minor relief. Some Karst formations are found in the southern areas of NUL1.</p> <p>Vegetation in the Northern sections of the subregion are primarily a Tree steppe of Eucalyptus gongylocarpa, Mulga and E. youngiana over hummock grassland dominated by Triodia basedowii on the aeolian sands, Acacia, dominates the colluvial soils with Eremophila and Santalum spp halophytes are confined to edges of salt lakes and saline drainage systems. Low woodlands of Acacia papyrocarpa (Western Myall) over Maireana sedifolia (bluebush) are present in the central and southern areas of NUL1. Includes Myoporum platycarpum and E. oleosa in the east and west and woodlands dominated by Acacia aneura (Mulga).</p> <p>Climate is arid non-seasonal with average rainfall of 150 - 200mm.</p>	
Nullarbor	Nullarbor Plain	NUL2	<p>The Nullarbor bioregion extends over most of the onshore part of the Eucla Basin – an epeirogenic basin of cretaceous and tertiary sediments on an irregular basement predominantly of Precambrian granite and metamorphic rocks.</p> <p>Primarily NUL2 is a tertiary limestone plain; subdued arid karst features. Dominated by the Nullarbor Plain, which is wholly contained within the much larger Bunda Plateau. It has shallow calcareous soils, thinly mantling massive lifetare scrublands.</p> <p>Small scale relief in the patterns of clay-filled depressions that alternate with rises of thin stony soils or bare limestone. Southern end of several palaeodrainage lines extend onto the Nullarbor Plain.</p> <p>The Nullarbor Karst is one of the worlds largest karst systems. Extensive features are the shallow surface depressions (the dongas and ridge and corridor terrain). Other karst features include drip pits, rillenkarrren, rundkarren, pavements, solution pans and rockholes. Larger surface karst features such as collapse dolines and blowholes are also present.</p> <p>The Nullarbor Plain is a vast and remarkably flat treeless plain determined by the combination of aridity and the calcareous soils. Bluebush - Saltbush steppe in central areas; low woodlands of Acacia papyrocarpa (Western Myall) over Maireana sedifolia (bluebush) are present in peripheral areas, including Myoporum platycarpum and E. oleosa in the east and west.</p>	12784443

			Climate is arid non-seasonal with average rainfall of 150 - 200mm.	
Nullarbor	Yalata	NUL3	A plain formed mainly on calcarenite and calcrete with occasional granitic inselbergs. Brown calcareous earths are the dominant soils and carry mallee ( <i>Eucalyptus socialis</i> , <i>E. gracilis</i> ) with a saltbush understorey. Aeolian sand sheets and dunes cover parts of the plain which, in the north, merges with the Great Victoria Desert. Long sandy beaches and occasional cliffed headlands occur along the coastal margin of this plain.	1148737
Ord Victoria Plain	Ord	OVP1	<p>The region shows level to gently undulating plains with scattered hills on Cambrian volcanics and Proterozoic sedimentary rocks from the Wiso and Ord Basins respectively; Soils in the subregion are predominantly shallow loams, clays, and sands, with some deep loams covering the Ord Basin. The overall vegetation is grassland with scattered bloodwoods (<i>Eucalyptus</i> spp.) and snappy gum (<i>Eucalyptus brevifolia</i>) with spinifex and annual grasses. The climate is dry hot tropical, semi-arid with summer rainfall.</p> <p>The lithological mosaic has three main components:</p> <p>(1) Abrupt Proterozoic and Phanerozoic ranges and scattered hills mantled by shallow sand and loam soils supporting Triodia hummock grasslands with sparse low trees.</p> <p>(2) Cambrian volcanics and limestone form extensive plains with short grass (<i>Enneapogon</i> spp.) on dry calcareous soils and medium-height grassland communities (<i>Astrebla</i> spp. and <i>Dichanthium</i> spp.) on cracking clays. Riparian forests of red river gum (<i>Eucalyptus camaldulensis</i>) fringe drainage lines.</p> <p>(3) In the southwest, Phanerozoic strata expressed as often lateralized upland sand plains with sparse trees. This component recurs as the Sturt Plateau Region in central Northern Territory.</p> <p>The Ord subregion is comprised of a major river system draining low-lying plains and hilly tracts northwards via the Ord River. The average annual rainfall is between 500 and 800 mm. Phanerozoic strata of the Ord Basin strata have been well exposed, including sandstones, limestone and volcanics.</p> <p>Broad scale vegetation mapping of the area describes the following components;</p> <ul style="list-style-type: none"> <li>- <i>Eucalyptus microtheca</i> (coolibah) and/or <i>Eucalyptus</i> spp. +/- <i>Excoecaria parvifolia</i> (gutta percha) grassy low woodland.</li> <li>- <i>Astrebla pectinata</i> (barley Mitchell grass) closed-tussock grassland +/- low trees.</li> <li>- <i>Dichanthium fecundum</i> (curly bluegrass) and <i>Chrysopogon fallax</i> (golden beard grass) tussock grassland sparsely wooded with low trees.</li> <li>- <i>Eucalyptus brevifolia</i> (snappy gum) low open-woodland with <i>Triodia</i> spp. (spinifex) hummock grasses or sometimes a hummock grassland without trees.</li> <li>- <i>Triodia pungens</i> (soft spinifex) and/or <i>Triodia intermedia</i> (winged spinifex) and/or <i>Triodia bitextura</i> (curly spinifex) hummock grassland wooded with <i>Eucalyptus</i> spp or <i>Bauhinia cunninghamii</i> (bauhinia) low trees.</li> <li>- <i>Eucalyptus pruinosa</i> (silver box) +/- <i>Bauhinia cunninghamii</i> (bauhinia) low open-woodland +/- a shrub layer and tussock grasses or <i>Triodia</i> spp. (spinifex)</li> <li>- <i>Eucalyptus</i> spp. grassy woodland</li> </ul>	3233893

			<ul style="list-style-type: none"> <li>- <i>Eucalyptus terminalis</i> (desert bloodwood) low open-woodland with <i>Sehima nervosum</i> (white grass) and <i>Chrysopogon fallax</i> (golden beard grass) tussock grasses +/- <i>Triodia</i> spp. (spinifex).</li> <li>- <i>Eucalyptus opaca</i> (plains bloodwood) and <i>Eucalyptus chlorophylla</i> (shiny-leaved box) sparse low-open woodland with tussock grasses or a <i>Triodia pungens</i> (soft spinifex), <i>Triodia intermedia</i> (winged spinifex) hummock grassland wooded with <i>Eucalyptus brevifolia</i>.</li> <li>- <i>Triodia wiseana</i> (limestone spinifex) open-hummock grassland wooded with low trees of <i>Terminalia</i> spp. or <i>Adansonia gregorii</i> (boab).</li> <li>- <i>Astrebla lappacea</i> (curly Mitchell grass) and/or <i>Astrebla pectinata</i> (barley Mitchell grass) tussock grassland sparsely wooded with <i>Acacia</i> spp. low trees.</li> <li>- <i>Enneapogon purpurascens</i> (nine-awn grass) tussock grassland.</li> <li>- <i>Eucalyptus</i> spp., <i>Eucalyptus miniata</i> (Northern woollybutt) +/- <i>Eucalyptus tetradonta</i> (Darwin stringybark) open-woodland with <i>Triodia bitextura</i> (curly spinifex) and <i>Sorghum</i> spp. (sorghum) grasses.</li> <li>- <i>Eucalyptus dampieri</i> (pindan bloodwood) low open-woodland with <i>Triodia pungens</i> (soft spinifex) and/or <i>Triodia intermedia</i> (winged spinifex) hummock grasses.</li> <li>- <i>Triodia pungens</i> (soft spinifex) and/or <i>Triodia intermedia</i> (winged spinifex) hummock grassland sparsely wooded with low trees.</li> <li>- <i>Eucalyptus brevifolia</i> (snappy gum) low open-woodland with <i>Triodia pungens</i> (soft spinifex) and/or <i>Triodia bitextura</i> (curly spinifex) hummock grasses and/or tussock grasses.</li> <li>- <i>Triodia wiseana</i> (limestone spinifex) and <i>Triodia intermedia</i> (winged spinifex) hummock grassland sparsely wooded with <i>Eucalyptus brevifolia</i> (snappy gum) low trees.</li> <li>- <i>Eucalyptus brevifolia</i> (snappy gum) low open-woodland with <i>Triodia bitextura</i> (curly spinifex) hummock grasses +/- <i>Enneapogon</i> spp. (nine-awn grass) short-tussock grasses or sometimes a grassland without trees.</li> </ul>	
Ord Victoria Plain	South Kimberley Interzone	OVP2	The South Kimberley Interzone is a long elongated subregion, stretching from near Katherine in the Northern Territory to near Fitzroy Crossing in Western Australia, and forms an interzone between arid and humid zones. Its geology is characterised by Cambrian sedimentary and volcanic rock on the Victoria and Wiso Basins, and Proterozoic sedimentary rocks; vertosols on plains and predominantly skeletal soils on hills. Soils are predominantly finely structured clays, with some areas of massive earths and shallow sandy and loamy soils. Elevation varies from 50 m along the Victoria River, rising to 480 m in the south of the subregion. Drainage includes much of the upper catchment of the Victoria River, parts of the Ord River catchment, and the internally draining Sturt and Hooker Creeks. Average rainfall varies from 400 to 800 mm annually. Vegetation is dominated by low open-woodland <i>Eucalyptus brevifolia</i> with <i>Triodia pungens</i> understorey, <i>Astrebla</i> grassland, and pindan ( <i>Acacia</i> spp.) and bloodwood woodlands.	7728330
Ord Victoria Plain	Ord-Victoria Plains P3	OVP3	This subregion has shallow sandy and loam soils dominated by <i>Eucalyptus tectifica</i> and <i>E. terminalis</i> woodland with <i>Sorghum</i> understorey and <i>E. brevifolia</i> with <i>Plectrachne pungens</i> understorey. The climate is monsoonal with a dry season between April and October, and a hot rainy season from November to March. Rainfall varies in the subregion from 600 mm to 1000 mm from south to north. Elevation varies from 50 m to 350 m.	749831
Ord Victoria Plain	Ord-Victoria Plains P4	OVP4	This subregion forms the catchment for the Camfield River and Cattle Creek, and is bounded by the Tanami Desert to the south and the Sturt Plateau to the east. Elevation varies between 130 to 330 m. The area is in the semi-arid zone, with annual rainfall varying from 500 to 800	828726

			mm, with most falling from November to March. The subregion is dominated by Spinifex and Mitchell grasslands, with small areas of low Eucalyptus terminalis woodland. Dominant soils of the subregion are massive earths and finely structured clays. The subregion lies within the Wiso Basin and is dominated by Cambrian Limestone and Volcanics.	
Pilbara	Chichester	PIL1	The Chichester sub-Region (PIL 1) comprises the northern section of the Pilbara Craton. Undulating Archaean granite and basalt plains include significant areas of basaltic ranges. Plains support a shrub steppe characterised by Acacia pyrifolia over Triodia pungens hummock grasslands, while Eucalyptus leucophloeia tree steppes occur on ranges. Semi-desert-tropical (300mm); drainage to north via numerous rivers (e.g. De Grey, Oakover, nullagine, Shaw, Yule, Sherlock).	8375159
Pilbara	Fortescue	PIL2	The Fortescue Plains. Alluvial plains and river frontage. Extensive salt marsh, mulga-bunch grass, and short grass communities on alluvial plains in the east. Deeply incised gorge systems in the western (lower) part of the drainage. River Gum woodlands fringe the drainage lines. Northern limit of Mulga (Acacia aneura). An extensive calcrete aquifer (originating within a palaeo-drainage valley) feeds numerous permanent springs in the central Fortescue, supporting large permanent wetlands with extensive stands of river gum and cajuput Melaleuca woodlands.  Semi desert tropical, with average rainfall of 300 mm, falling mainly in summer cyclonic events. Drainage to north-west.	1875487
Pilbara	Hamersley	PIL3	Hamersley – Southern section of the Pilbara Craton. Mountainous area of Proterozoic sedimentary ranges and plateaux, dissected by gorges (basalt, shale and dolerite). Mulga low woodland over bunch grasses on fine textured soils in valley floors, and Eucalyptus leucophloeia over Triodia brizoides on skeletal soils of the ranges. Semi-desert tropical, average 300mm rainfall, usually in summer cyclonic or thunderstorm events. Winter rain is not uncommon. Drainage into either the Fortescue (to the north), the Ashburton to the south, or the Robe to the west.	5710638
Pilbara	Roebourne	PIL4	Quaternary alluvial and older colluvial coastal and sub-coastal plains with a grass savanna of mixed bunch and hummock grasses, and dwarf shrub steppe of Acacia translucens or A. pyrifolia and A. inequilatera. Uplands are dominated by Triodia hummock grasslands. Ephemeral drainage lines support Eucalyptus victrix or BLOODWOOD = deserticola? woodlands. Samphire, Sporobulus and mangal occur on marine alluvial flats and river deltas. Resistant linear ranges of basalts occur across the coastal plains, with minor exposures of granite. Islands are either Quaternary sand accumulations, or composed of basalt or limestone, or combinations of any of these three. Climate is arid (semi-desert) tropical with highly variable rainfall, falling mainly in summer. Cyclonic activity is significant, with several systems affecting the coast and hinterland annually.	1891840
Pine Creek	Pine Creek	PCK	The Pine Creek subregion includes the fall areas west of the Arnhem Plateau and incorporates the headwaters and middle reaches of the South Alligator, Mary, McKinlay, Margret, Adelaide, Finniss, Fergusson and Katherine Rivers. It also includes parts of the Darwin rural area. The terrain is hilly to rugged and elevation is generally below 200 m. The subregion lies on the Pine Creek Orogen and has a range soils, including shallow sands, duplex soils occasionally waterlogged, shallow loams, and yellow duplex soils with ironstone gravel. Vegetation is	2851823

			dominated by Eucalyptus woodlands. The climate is monsoonal with rainfall occurring between the months of November and April, varying greatly from inland areas (1000 mm) to coastal areas (1600 mm).	
Riverina	Lachlan	RIV1	Lachlan subregion is composed of Quaternary alluvial sediments and it primarily clay dominant. Groundwater lakes are present and river discharge is lower than for other streams. Landforms are characterised by a complex alluvial fan with numerous distributary channels and floodplains, depression plains, and abandoned lake beds with lunettes. There are limited source bordering dunes. Red and brown clays are present, with red-brown texture contrast soils on levees and terraces, and minor deep sands also occur. Black box and river red gums occur on channels. Black box, lignum and cane grass occurs in swamps while saltbush and bluebush with old man saltbush, cottonbush, myall and grasses is present on the plains. White cypress pine occurs on sandhills.	2150581
Riverina	Murrumbidgee	RIV2	Murrumbidgee subregion consists of Quaternary alluvial sediments along with clay and sand with source bordering dunes and lakes. An alluvial fan with distributary channels and floodplains, and undulating plains with depressions are the typical landforms of the subregion. Source bordering dunes are also common. Red brown earths, grey and brown clays are present and deep siliceous sands occur on dunes. River red gum and river cooba occur on channels. Black box, lignum and old man saltbush is present on floodplains. Myall and old man saltbush with other saltbush and grasses were formerly widespread on backplains. White cypress pine occurs on dunes.	3051105
Riverina	Murray Fans	RIV3	Murray Fans subregion consists of Quaternary alluvial sediments. Clay and sand with source bordering dunes, lakes and swamps also occur. Landforms consist of a relatively confined alluvial fan constrained by sediments from northern Victorian rivers, the Murrumbidgee fan and the Cadell fault. Meandering channels, floodplains, source bordering dunes, overflow lakes and swamps are also present. Red brown earths, grey clays and deep sands are typical. Extensive river red gum forests with river cooba occur on channels and low floodplains. Yellow box and black box with saltbush are present on high floodplains and terraces. White cypress pines occurs on dunes, sandy levees and lunettes. Common reed, cumbungi and grasses are present in swamps.	2067882
Riverina	Victorian Riverina	RIV4	VR 4 - Victorian Riverina province is characterised by flat to gently undulating landscape on recent unconsolidated sediments with evidence of former stream channels and wide floodplain areas associated with major river systems and prior steams. Alluvium deposits from the Cainozoic period gave rise to the red brown earths and texture contrast soils (Dermosols, Kurosols, Chromosols and Sodosols) which dominate the Riverine Plain. The vegetation is dominated by Plains Grassy Woodland, Plains Grassland, Pine Box Woodland/Riverina Plains Grassy Woodland Mosaic, Riverine Grassy Woodland/Riverine Sedgy Forest/Wetland Mosaic, Plains Grassy Woodland/Gilgai Plains Woodland/Wetland Mosaic, Grassy Woodland and Wetland Formation ecosystems.	1781980
Riverina	Robinvale Plains	RIV5	Robinvale Plains subregion is composed of Quaternary alluvial sediments where clay is dominant and small overflow lakes are present. The subregion is a narrow floodplain with meandering channels, billabongs, levees and low dunes. Overflow lakes with lunettes also occur. Red brown earths, grey clays, deep sands and yellow texture contrast soils are typical. River red gum occur on channels. Black box, river cooba, old man saltbush, belah and lignum	159627

			are all present on floodplains. White cypress pine, mallee acacias and bluebush occur on lunettes and sand dunes.	
Riverina	Murray Scroll Belt	RIV6	The incised ancestral floodplain of the Murray River and adjacent irrigated plains. This area includes a variety of fluvial landforms including discontinuous levees, oxbows, black swamps, lakes and low terraces. Near-vertical cliffs border the old floodplain and vegetative cover varies from disturbed woodlands of <i>Eucalyptus camaldulensis</i> and <i>E. largiflorens</i> , and shrublands of <i>Muehlenbeckia florulenta</i> or <i>Atriplex vesicaria</i> to orchards and vineyards.	378324
Simpson Strzelecki Dunefields	Simpson-Strzelecki Dunefields P1	SSD1	The subregion lies on the Amadeus basin containing sedimentary rocks of Devonian, Cambrian and Precambrian age. The soils in this subregion are shallow and deep sands. Elevation ranges from 230 m to 650 m around the southern MacDonnell Ranges. The drainage is relatively sparse, with the Todd River as the only major watercourse. The climate is arid with annual rainfall between 200 and 300 mm. The vegetation is dominated by <i>Triodia basedowii</i> grassland with <i>Acacia</i> tall sparse-shrubland and <i>Acacia georginae</i> (Gidyea) low open woodland.	1355222
Simpson Strzelecki Dunefields	Simpson Desert	SSD2	The Simpson Desert subregion covers a large area in the south-east corner of the Northern Territory. It covers a large area of the Eromanga Basin and Arunta Province, with Cretaceous sedimentary rocks overlain by deep sands. The elevation ranges from 400 m in the north to almost sea level in the south east of the subregion. This influences drainage which is generally flows south east, and several large perennial rivers flow through the subregion: Todd, Hale, Plenty, Hay and Field Rivers and Illogwa Creek. The climate is arid with annual rainfall averaging 100 to 300 mm. Vegetation is dominated by <i>Triodia basedowii</i> grassland with <i>Acacia</i> tall sparse shrubland.	13606489
Simpson Strzelecki Dunefields	Dieri	SSD3	An extensive dunefield interrupted by large claypans grading into a large playa complex of salt lakes with gypsum dunes, and surrounding plain with channels and dunes. The dunes are sparsely vegetated with a hummock grassland of <i>Zygochloa paradoxa</i> and occasional <i>Cynanchum floribundum</i> , <i>Acacia murrayana</i> and <i>A. ligulata</i> . The swales and sand plains have a mix of shrublands variously dominated by <i>Nitraria billardiarei</i> , <i>Maireana astrotricha</i> , <i>M. aphylla</i> , <i>Acacia ligulata</i> or <i>Senna artemisioides</i> ssp. <i>filifolia</i> , with an understorey of ephemeral herbs and annual grasses. The claypans within the sand deserts are partly connected and allow the formation of a vast sheet of water during floods. They carry a range of vegetation types including shrublands dominated by <i>Atriplex nummularia</i> , <i>Halosarcia</i> spp. or <i>Muehlenbeckia florulenta</i> . The large playas of Lake Eyre North and South are fringed by open shrublands of <i>Halosarcia</i> spp. and <i>Frankenia</i> spp., and occasionally <i>Nitraria billardiarei</i> . Woodlands of <i>Eucalyptus coolabah</i> ssp. <i>arida</i> and/or <i>Acacia salicina</i> and shrublands of <i>Atriplex nummularia</i> fringe the floodplains and channels of the main watercourses.	4734165
Simpson Strzelecki Dunefields	Warriner	SSD4	A gently sloping plain with extensive dunefields, isolated gypcrete remnants, broad floodplains and large pans. There is a cover of low open woodland with a chenopod understorey ( <i>Acacia aneura</i> , <i>A. cibaria</i> , <i>Enneapogon</i> spp. <i>Aristida contorta</i> ), tall shrubland with a grass understorey ( <i>Acacia ligulata</i> , <i>Senna</i> spp. <i>Eremophila</i> spp. <i>Dodonaea viscosa</i> ssp. <i>angustissima</i> ) chenopod shrubland ( <i>Eragrostis australasica</i> , <i>Nitraria billardiarei</i> , <i>Halosarcia</i> spp. <i>Atriplex nummularia</i> ) and low fringing woodland ( <i>Eucalyptus coolabah</i> ssp. <i>arida</i> , <i>Acacia cambagei</i> ).	951543
Simpson Strzelecki Dunefields	Strzelecki Desert	SSD5	An extensive dunefield with numerous small claypans, and a chain of inter-connected salt lakes with gypsum dunes along the eastern margins. A chenopod shrubland of <i>Maireana astrotricha</i> and <i>Chenopodium auricomum</i> dominates the red massive earths of the interdunal	7484945

			areas. On the red siliceous sands of the interdunal areas a tall shrubland of <i>Acacia ligulata</i> , <i>Atalaya hemiglauc</i> a and <i>Hakea</i> spp. occurs, while on yellowish sands a hummock grassland of <i>Zygochloa paradoxa</i> and <i>Triodia basedowii</i> is found. On the grey self-mulching cracking clays of the pans and salt lakes a chenopod shrubland of <i>Chenopodium auricomum</i> , <i>Atriplex nummularia</i> and <i>Halosarcia</i> spp. occurs along with a low shrubland and grassland of <i>Eragrostis australasica</i> and <i>Muehlenbeckia florulenta</i> .	
Simpson Strzelecki Dunefields	Central Depression	SSD6	Central Depression subregion is a complex of Quaternary aeolian sands, alluvial and lake sediments. The subregion has low sand dunes of variable orientation and shape, and extensive sand sheets and soils of deep quartz sands, which support open vegetation with scattered mulga and areas of dense scrubs or sparse mulga ( <i>Acacia aneura</i> ) with occasional whitewood ( <i>Atalaya hemiglauc</i> a). Large lake basins with fringing lunettes characterised by sand and clay soils support lignum ( <i>Muehlenbeckia cunninghamii</i> ), canegrass ( <i>Eragrostis australasica</i> ) and fringing black box ( <i>Eucalyptus largiflorens</i> ). Some saline lakes possibly linked to groundwater also occur. Sparse mulga communities are found on alluvials with occasional poplar box in drainage lines where soils are heavy clays.	309649
Simpson Strzelecki Dunefields	Bulloo Dunefields	SSD7	Bulloo Dunefields subregion is composed of Quaternary aeolian sands from local sources, alluvial and lake sediments, with outcrops of Cretaceous or Tertiary bedrock. Landforms are sandplains and low dunes, and marginal to extensive areas of floodout country. Tablelands and stony downs occur on bedrock. The subregion has deep red to yellow quartz sand, with heavy clays in alluvial areas. Stony loams occur on downs. Mulga, whitewood, ironwood, bumble box, and canegrass are present on sandplains. Mulga, bumble box, grasses and forbs occur on floodouts. Mulga, dead finish, desert poplar, silver cassia, punty bush, turkey bush, bluebush and grasses occur on tablelands and downs.	976054
South East Coastal Plain	Gippsland Plain	SCP1	GP 5.1 – Gippsland Plain province is flat low lying coastal and alluvial plains with a gently undulating terrain dominated by barrier dunes and floodplains and swampy flats. The soils associated with the upper terrain are texture contrast soils (Dermosols and Chromosols), supports Lowland Forest ecosystem. The dunes are predominantly sandy soils (Podosols and Tenosols) supporting Heathy Woodland and Damp Sands Herb-rich Woodland ecosystems. The fertile floodplains and swamps are earths and pale yellow and grey texture contrast soils (Hydrosols) supports Swamp Scrub, Plains Grassy Woodland, Plains Grassy Forest, Plains Grassland and Gippsland Plains Grassy Woodland/Gilgai Wetland Mosaic ecosystems.	1201056
South East Coastal Plain	Otway Plain	SCP2	OP 5.2 - Otway Plain province includes coastal plains and dunes, foothills with river valleys and swamps in the lowlands. With the retreat of the sea ridges mark the positions of successive shoreline. The soils associated with the upper terrain are texture contrast soils (Dermosols and Chromosols), supporting Lowland Forest and Heathy Woodland ecosystems. The dunes are predominantly sandy soils (Podosols and Tenosols) and the floodplains and swamps are earths and pale yellow and grey texture contrast soils (Hydrosols) supporting predominately Grassy Woodland and Plains Grassy Woodland ecosystems.	261788
South East Coastal Plain	Warrnambool Plain	SCP3	WP 5.3 - Warrnambool Plain providence consists of a distinctive cliffed coastline and low calcareous dune formations, dissected by rives and inlets and swamplands. The Cainozoic sediments and volcanic deposits dominate the area giving rise to sandy soils (Calcarosols and Tenosols and Podosols) on the dunes and cliffline, supporting Brown earths and texture contrast soils (Dermosols, Sodosols) on the flat plain supporting	234268



			Lowland Forest and Herb-rich Foothill Forest ecosystems. Texture contrast soils and fertile peats (Hydrosols) in the swamplands supports Damp Sands Herb-rich Woodland/Damp Heathland/Damp Heathy Woodland, Damp Heathland/Damp Heathy Woodland, Damp Heath Scrub, Damp Sands Herb-rich Woodland and Swamp Scrub ecosystems.	
South East Corner	East Gippsland Lowlands	SEC1	EGL 8.1 East Gippsland Lowlands province has gently undulating terraces flanked by coastal plains, dunefields and inlets. A complex of Palaeozoic and Cainozoic deposits predominantly of granite, sands, marine sediments and beach deposits giving rise to yellow texture contrast soils (Kurosols and Chromosols) on the terraces, leached sands (Podosols and Tenosols) of the coastal plains and dunes, friable earths and texture contrast soils (Dermosols, Kurosols and Hydrosols) along the floodplains and valleys. The vegetation is dominated by Lowland Forest with Damp Forest and Shrubby Dry Forest ecosystems interspersed throughout the foothills; while Banksia Woodland and Riparian Scrub Complex occur around the coastal areas.	647364
South East Corner	South East Coastal Ranges	SEC2	East Gippsland Uplands subregion consists of extensive areas of granite amongst Ordovician and Silurian metamorphosed sedimentary and volcanic rocks including slates, chert and quartzites. Gently folded red and purple Devonian sandstones and shales, and limited areas of Tertiary basalt and sand deposits occur. Quaternary coastal sediments and small areas of alluvium are also present. The subregion occurs on a very abrupt margin on the Great Escarpment. Deep gorges with rapids and waterfalls occur in the main streams including the lower Snowy River. An extensive subdued basin with rolling hills occurs on the Bega granite with steep hillslopes at the contact aureole. Streams carry large volumes of sand to valley floors and estuaries. Small beach, dune and lagoon barrier systems also occur. Coarse texture contrast soils occur on granite, with thinner profiles on metamorphics with red and yellow clay subsoils. Deep coarse sands in granite derived alluvium are often deposited in swampy valley flats. Deep fine sands occur in dunes. Peaty sands are present in lagoons and swamps. Red bloodwood and spotted gum forests are present to 300m. Spotted gum is less common in the south. Yellow stringybark, grey ironbark, black ash, yertchuk and woollybutt occur to 550m. Brown barrel, black ash, large-fruited red mahogany, and monkey gum to 900m, when snow gum occurs.	2055349
South East Corner	Bateman	SEC3	Bateman subregion consists of tightly folded fine grained Ordovician metamorphic rocks with several intrusions of granite. The western margin is a tight synclinal fold in Devonian sandstone and siltstone. Small areas of Tertiary basalt and quartz sands occur behind the coastal headlands and Quaternary alluvium is present on main valley floors and in the estuaries. Steep hills occur below the Great escarpment in a north-south orientation and controlled by rock structure. Lines of hills become lower toward the coast with a slight up turn along the coastal margin. Coastal barrier systems are small and estuarine fills limited. Mostly texture contrast soils occur in the subregion. Red clay subsoils with thin topsoil occur on metamorphic rocks, with deeper coarser grained profiles on granite. Red brown structured loams occur on basalt, and deep siliceous sands with some podsol development are present on Tertiary sands and coastal dunes. Hakea, melaleuca, coast rosemary and dwarfed red bloodwood heath occur on headlands. Red bloodwood and spotted gum forests occur to 300m, while yellow stringybark, grey ironbark and woollybutt are present to 550m. Brown	173137

			barrel, black ash, Sydney peppermint, large-fruited red mahogany, Sydney blue gum and monkey gum to 900m, then snow gum occurs.	
South Eastern Highlands	Highlands-Southern Fall	SEH1	<p>HS 10.1 Highlands - Southern Fall province is the southerly aspect of the Great Dividing Range. These dissected uplands have moderate to steep slopes, high plateaus and alluvial flats along the main valleys. The geology is of Palaeozoic deposits giving rise to predominantly sedimentary and granitic rocks. The brown and red porous earths (Dermosols) occur in the upper reaches and yellow and red texture contrast soils (Chromosols and Kurosols) graduate down the valleys.</p> <p>The dominated vegetation is Shrubby Dry Forest and Damp Forest on the upper slopes; Wet Forest ecosystems in the valleys and Montane Dry Woodland, Montane Damp Forest and Montane Wet Forest ecosystems are in the higher altitudes.</p>	1475663
South Eastern Highlands	Oberon	SEH10	Oberon subregion consists of fine grained Silurian and Devonian slates, shales and sandstones with Ordovician acid volcanics. Basalt caps and flows occur on the highest crests. Rounded and stepped hills of the plateau occur, while a dendritic drainage pattern parallels basalts on crests and ridges. Red and yellow texture contrast soils occur on slopes, with well-structured deep red loams on basalt. Moderately fertile soils occur despite the cold environment. Narrow-leaved peppermint, mountain gum and some snow gum occur on high areas. Apple box, yellow box, ribbon gum and Blakely's red gum occur in the west.	292419
South Eastern Highlands	Bathurst	SEH11	Bathurst subregion is composed of Carboniferous granite with limited areas of Tertiary basalt caps and Quaternary sands along the Macquarie River. Rounded hills occur in a granite basin surrounded by steep slopes on the contact margin. Outcrops with tors occur near margins. Chain of ponds streams are present in wide flat valley floors. Terrace alluvium occurs along the Macquarie River. Shallow red earths occur on ridges, with yellow texture contrast soils on all slopes and deep coarse sands in alluvium. Apple box, yellow box, some white box and red stringybark occur. Ribbon gums are found on lower slopes and brown barrel occurs in the east. Patches of black cypress pine are present in rocky outcrop areas. River oak occurs along streams.	161058
South Eastern Highlands	Orange	SEH12	Orange subregion is composed of Ordovician acid volcanics and slates, phyllites and Silurian volcanics. Extensive Tertiary basalts from Canobolas and small stocks of granite occur. Limited limestone and serpentinite are present. Characteristic landforms include a low hilly plateau with Canobolas peaks rising above. Numerous volcanic features such as plugs, dykes and domes occur in the Canobolas complex. Karst landscapes are present at Borenore and Molong. Deep structured red and brown loams occur on basalt and fine metasediments. Mellow texture contrast soils are found on any slopes with a sand component in the bedrock. Alluvial loams and black clays occur in swampy valley floors. Limited areas of shallow organic loams occur at high altitude on Canobolas. Yellow box and Blakely's red gum occur with red stringybark, white gum and broad-leaved peppermint across most of the plateau. Ribbon gum is present on lower slopes, with snow gum in cold patches and high levels of Canobolas. River oak occurs along main streams.	284770
South Eastern Highlands	Hill End	SEH13	Hill End subregion is composed of Silurian and Devonian slates, sandstones and volcanics with numerous quartz veins in a steeply dipping, tightly folded sequence. Tertiary basalt caps with river gravels are parallel to the main streams. Characteristic landforms are a plateau with hilly to mountainous edges and deep entrenched channels of Turon and Macquarie Rivers cutting	307453

			across the structural trends. Mottled red and yellow texture contrast soils occur, with red earths. Yellow box, red box and Blakely's red gum on lower areas, with red stringybark, broad-leaved peppermint and white gum on hills. Brown barrel occurs in the east. Areas of white box occur and river oak is present along main streams.	
South Eastern Highlands	Western Fall	SEH14	SEH 14 Western Fall subregion consists of Silurian and Devonian acid intrusives, fine grained Palaeozoic sedimentary and meta-sedimentary rocks and areas of granite. Rugged hills, with small plateau areas characterise the subregion as well as steep stony slopes and strong structural control on ridge lines. Red earths and red texture contrast soils occur. Soils are typically thin and stony on slopes, thickening on footslopes, and becoming yellow and harsh on valley floors. Narrow-leaved peppermint, red stringybark, ribbon gum, and mountain gum open forests occur.	529417
South Eastern Highlands	South Eastern Highlands	SEH15		
South Eastern Highlands	Highlands-Northern Fall	SEH2	HN 10.2 Highlands - Northern Fall province is the northerly aspect of the Great Dividing Range. These dissected uplands have moderate to steep slopes, high plateaus and alluvial flats along the main valleys. The geology is of Palaeozoic deposits giving rise to predominantly sedimentary and granitic rocks. The brown and red porous earths (Dermosols) occur in the upper reaches and yellow and red texture contrast soils (Chromosols and Kurosols) graduate down the valleys.  The vegetation is a mosaic of Herb-rich Foothill Forest and Shrubby Dry ecosystems dominating large areas of lower slopes; Montane Dry Woodland and Heathy Dry Forest ecosystems on the upper slopes and plateau; and Grassy Dry Forest and Valley Grassy Forest ecosystems associated with major river valleys.	1675945
South Eastern Highlands	Otway Ranges	SEH3	OR 10.3 Otway Ranges province consists of moderate to steep slopes deeply dissected blocks of alternating beds of sandstone and siltstone and shales. and swampy alluvial fans in the lowlands. The geology is of Mesozoic non-marine deposits covered with a veneer of younger Cainozoic deposits at lower elevations. Brown earths and brown texture contrast soils (Chromosols, Kurosols and Sodosols) occur throughout the bioregion with leached sands (Podosols) in the lowlands.  The dominate vegetation is Wet Forest, Shrubby Wet Forest and Cool Temperate Rainforest ecosystems on the higher slopes; and Shrubby Foothill Forest on the lower slopes.	150030
South Eastern Highlands	Strzelecki Ranges	SEH4	ST 10.4 - Strzelecki Ranges province consists of moderate to steep slopes deeply dissected blocks of alternating beds of sandstone and siltstone and shales and swampy alluvial fans in the lowlands. The geology is of Mesozoic non-marine deposits covered with a veneer of younger Cainozoic deposits including newer basalts. The mottled yellow and red texture contrast soils (Chromosols, Kurosols and Sodosols) and occasional red earths (Ferrosols) are found throughout the bioregion with leached sands (Podosols) in the lowlands.  The dominate vegetation is Wet Forest and Damp Forest on the higher slopes; and Shrubby Foothill Forest and Lowland Forest on the lower slopes.	344326
South Eastern Highlands	Monaro	SEH5	Monaro subregion is composed of block faulted ranges and closed lake basins in Silurian and Devonian acid fine grained sedimentary and metamorphic rocks, with some granites. It contains extensive areas of thin Tertiary basalt flows over lake and river sediments and consists of a sloping plateau rising from 600 to 1300 m north to south, with structural ridges of	1764194

			more resistant rock. Stepped plains occur on basalt with intervening low areas of granite or sedimentary rocks. Numerous shallow lakes and swamps occur, a few are permanent although many are closed basins and periodically dry. The subregion is in rainshadow with rainfall between 450-700 mm. Harsh yellow texture contrast soils occur in general. Shallow red brown to black stony loams are present on basalt. Snow gum, ribbon gum, candle-bark gum, broad-leaved peppermint and mountain gum occur in open woodlands with kangaroo grass understorey. White gum and mottled gum occur on hills. Brown barrel and black ash forests are present in the east with west-facing patches of dwarf casuarina heathland. Extensive grasslands of snow grass, spear grass and wallaby grass occur on the driest plains with clumps of snow gum amongst rocky outcrops.	
South Eastern Highlands	South Eastern Highlands	SEH5	MP 10.5 Monaro Tableland province consists of undulating rises with occurrences of low hills and depositional flats with a high organic content. The geology consists of granitic and sedimentary deposits which give rise to predominately yellow and brown texture contrast soils (Sodosols and Chromosols ). The dominate vegetation is Montane Dry Woodland, Montane Grassy Woodland, Montane Riparian Woodland and Tableland Damp Forest ecosystems.	5097875
South Eastern Highlands	Murrumbateman	SEH6	Murrumbateman subregion is composed of fine grained Palaeozoic sedimentary and meta-sedimentary rocks, with minor areas of coarse acid volcanics. Tertiary alluvial terraces occur along main streams. The subregion consists of an undulating plateau with rounded hills and peaks, and entrenched meandering streams with chain of ponds tributaries. Mottled yellow and brown texture contrast soils occur with strongly bleached topsoils. Dark organic loams and clay loams are present on valley floors. Saline patches are also present. Blakely's red gum and yellow box occur on lower slopes, with red stringybark, bundy and white gum on ridges. Areas of apple box, and mottled gum also occur. Limited swampy flats and valley floor grasslands are present.	571133
South Eastern Highlands	Bungonia	SEH7	Bungonia subregion consists of primarily fine grained Palaeozoic sedimentary and meta-sedimentary rocks, with minor areas of acid volcanics and limestone. Areas of Tertiary river and terrestrial sediments and low sandsheets occur in the south with very limited basalt. Distinct plateau occur with very steep, deep margins on the Great Escarpment dropping into the Shoalhaven River. Strong linear ridges are present on resistant sandstones and volcanics, and wide valleys occur with some cold air drainage and inverted tree lines. Mostly yellow texture contrast soils occur, some with harsh clay subsoils. Shallow structured organic loams occur on limestone and basalt, with deep siliceous sands and clayey sands on Tertiary sediments. Mottled gum, broad-leaved peppermint, white gum, red stringybark and black ash forests and woodlands are present. Snow gum and snow grass occur in cold pockets. Black she-oak is common as understorey and in regeneration areas. There is limited distribution of argyle apple.	430478
South Eastern Highlands	Kanangra	SEH8	Kanangra subregion consists of Devonian sandstones with small areas of granite and fine grained Silurian and Ordovician sediments at the edge of the Sydney Basin and includes ridges and small plateaus to 1200 m, deep valleys, swampy upper tributary floors, outcrops and tors on granite hills. Red and yellow earths and structured loams occur with well drained slopes and moderate fertility. Grey gum and Blaxland's stringybark occur on lower areas, with brown barrel, mountain gum, narrow-leaved peppermint and ribbon gum on higher areas. Patches of	130993

			snow gum also occur. High diversity swamps are present on Boyd Plateau with carex and tea-tree, while sphagnum bogs occur in streams.	
South Eastern Highlands	Crookwell	SEH9	Crookwell subregion consists of fine grained Ordovician and Silurian sedimentary rocks, with some granites. Tertiary basalts with buried river gravels occur along ridges well above present streams. The subregion is hilly, with some rugged areas and deep valleys. Hill tops may be small plateaus or capped by basalt and showing inverted relief. Red and yellow texture contrast soils occur, with thin and stony soils on steep slopes. Stony brown structured loams are present on basalts. Apple box, mountain gum with Blakely's red gum and yellow box occur. Red stringybark, white box, broad-leaved peppermint and mottled gum are present on stony ridges in the north. Small areas of Argyle apple also occur.	465887
South Eastern Queensland	Burnett - Curtis Hills and Ranges	SEQ1	is less well defined geologically as the other subregions. This is partly due to the influence of climate as this subregion abuts the dry coastal corridor between Gladstone and Sarina that is part of the Brigalow Belt bioregion. It is geologically diverse and includes granite hills and ranges in the east and low rolling hills on old sedimentary rocks in the west. The subregion has been extended north-west to include the elevated sandstone and volcanic Kroombit Tops plateau that is a moist topographic isolate linked floristically and climatically to Blackdown Tableland and the ranges of southern Queensland. Main vegetation types of the subregion include (Eucalyptus crebra) and (E. citriodora) woodlands, eucalypt mixed open forests and araucarian microphyll rainforests.	990674
South Eastern Queensland	Moreton Basin	SEQ2	is predominantly Jurassic and Triassic/Jurassic sandstones. It is an area of low, hilly relief and broad alluvial valleys. Some parts of the Moreton Basin subregion are dry with rainfall less than 750mm per annum. Major vegetation types include eucalypt woodlands and open forests, (Acacia harpophylla) open forest and semi-evergreen vine thicket.	784980
South Eastern Queensland	Southeast Hills and Ranges	SEQ3	Is based largely upon the Beenleigh and North and South D'Aguilar Blocks. This subregion is moist and hilly to mountainous. The geology is predominantly metamorphics with some acid volcanic intrusions. The main vegetation types of the subregion include eucalypt open forests, eucalypt tall open forests, complex notophyll rainforest and araucarian notophyll rainforest.	533685
South Eastern Queensland	Southern Coastal Lowlands	SEQ4	whilst centred upon sedimentary rocks of the Nambour Basin also includes marine and estuarine sediments and the high dunes of the southern off-shore islands. Major vegetation types are heathlands and banksia woodlands, (Melaleuca quinquenervia) forests and woodlands, mangrove forests, sedgeland and (Eucalyptus racemosa) and (E. pilularis) open forests and tall open forests.	348213
South Eastern Queensland	Brisbane - Barambah Volcanics	SEQ5	contains widespread rhyolitic and andesitic rocks and associated sedimentary rocks of the upper Brisbane Valley and parts of the Barambah Creek catchment. This is an area of rolling hills and broad stream valleys. There are also granitic intrusions associated with elevated topography in the east of the subregion. The subregion is relatively dry (800–1000mm per annum) and contains extensive ironbark eucalypt woodlands, araucarian microphyll rainforests and prior to clearing, (Eucalyptus tereticornis) woodlands.	806790
South Eastern Queensland	South Burnett	SEQ6	contains basalt flows and old land surfaces interspersed with sedimentary rocks, acid volcanics and metamorphics. The subregion is relatively elevated and contains the Bunya Mountains. The highest parts of the subregion are closely linked to the Scenic Rim province in terms of fauna and flora. In places the boundary between the South Burnett subregion and the Eastern Downs subregion of the Brigalow Belt bioregion is difficult to define. The major vegetation	563873

			types of the South Burnett subregion include araucarian microphyll rainforest and eucalypt woodlands and open forests.	
South Eastern Queensland	Gympie Block	SEQ7	extends from the Sunshine Coast hinterland to north of Bundaberg. It contains low, hilly landscapes on old sedimentary rocks, metamorphics and intermediate and basic volcanics with scattered acid volcanic intrusions. It is moist in the south (rainfall in excess of 1500mm per annum) but drier in the north (rainfall of 900mm per annum). The relatively fertile soils associated with the intermediate to basic volcanics support extensive patches of araucarian notophyll and microphyll rainforest and mixed eucalypt forests. Ironbark woodlands replace the mixed eucalypt forests where rainfall is less than about 1000mm per annum.	859033
South Eastern Queensland	Burnett - Curtis Coastal Lowlands	SEQ8	is based upon the sedimentary rocks of the Maryborough Basin and marine and alluvial sediments. It is drier than the Great Sandy and Southern Coastal Lowlands subregions to the south and has a marked tropical component to the biota. Major vegetation types of the province include heathlands, ( <i>Melaleuca quinquenervia</i> ) open forests and eucalypt woodlands and open forests.	698878
South Eastern Queensland	Great Sandy	SEQ9	includes Fraser Island and the area traditionally known as Cooloolo. It contains sand masses and the sandstone hills and riverine plains of the upper Noosa River catchment. Vegetation includes notophyll rainforest, ( <i>Lophostemon confertus</i> — <i>Syncarpia hillii</i> ) tall open forest, mixed eucalypt open forests, banksia woodlands and ( <i>Melaleuca quinquenervia</i> ) woodlands.	357775
Stony Plains	Breakaways	STP1	A dissected silcrete tableland and mesas, and extensive gibber-covered footslopes on deeply weathered shales. There is a cover of chenopod shrubs and forbs ( <i>Atriplex vesicaria</i> , <i>Sclerolaena</i> spp. <i>Halosarcia</i> spp.) on crusty red duplex soils and reddish firm siliceous loams with small areas of low woodland ( <i>Acacia cambagei</i> , <i>Eucalyptus camaldulensis</i> , <i>E. coolabah</i> ssp. <i>arida</i> ) on brown self-mulching cracking clays.	4496864
Stony Plains	Oodnadatta	STP2	Undulating plains with some gypsum crusting, low hills with silcrete gibbers and low gypcrete escarpments. On escarpments and the reddish powdery calcareous loams of the tableland, <i>Maireana astrotricha</i> chenopod shrubland occurs along with a tall open shrubland of <i>Acacia aneura</i> , <i>A. cibaria</i> and <i>Hakea leucoptera</i> . The plains support the same vegetation communities, while on the floodplains a low woodland of <i>Eucalyptus coolabah</i> ssp. <i>arida</i> , <i>Acacia salicina</i> , <i>A. cambagei</i> and <i>A. aneura</i> , and <i>Eucalyptus camaldulensis</i> woodland occur.	4633162
Stony Plains	Murnpeowie	STP3	A gently undulating gypcrete plain with entrenched drainage, low escarpments and silcrete tablelands. Dunes, occasional lakes and floodplains are found in the centre of the subregion with a gently sloping gibber plain to the west. The tablelands support a low shrubland of <i>Maireana aphylla</i> , <i>Rhagodia parabolica</i> and <i>M. astrotricha</i> on crusty red duplex soils, and a tall open shrubland of <i>Acacia</i> , <i>Eremophila</i> , <i>Dodonaea</i> , <i>Senna</i> and <i>Alectryon oleifolius</i> ssp. <i>canescens</i> on reddish powdery calcareous loams. The plains are dominated by <i>Maireana aphylla</i> , <i>Rhagodia parabolica</i> chenopod shrubland and a tall open shrubland of <i>Acacia tetragonophylla</i> , <i>Alectryon oleifolius</i> ssp. <i>canescens</i> and <i>Eremophila</i> spp. on crusty red duplex soils, while the floodplains are dominated by low woodland of <i>Eucalyptus coolabah</i> ssp. <i>arida</i> , <i>Acacia salicina</i> , <i>A. cambagei</i> and <i>E. camaldulensis</i> on brown self mulching cracking clays. On the escarpments an open chenopod shrubland of <i>Atriplex vesicaria</i> - <i>Sclerolaena</i> spp and <i>Zygophyllum apiculatum</i> occupies the mainly bare rock, while on dunes <i>Acacia ligulata</i> , <i>A. ramulosa</i> and <i>A. aneura</i> low shrubland is found on red siliceous sand.	2987200
Stony Plains	Peake-Dennison	STP4	Hills and low ridges on metasediments, and small areas of undulating plain. Hills and ridges	256525

	Inlier		support a tall open shrubland of <i>Acacia aneura</i> , <i>A. cibaria</i> and <i>Eremophila freelingii</i> on reddish firm siliceous loams, while plains support a chenopod shrubland of <i>Atriplex rhagodioides</i> , <i>A. vesicaria</i> , <i>Sclerolaena</i> spp. and <i>Maireana astrotricha</i> on crusty red duplex soils, and small areas of <i>Eucalyptus coolabah</i> ssp. <i>arida</i> , <i>E. camaldulensis</i> and <i>Acacia cambagei</i> low woodland on brown self-mulching cracking clays. A tall shrubland of <i>Acacia ligulata</i> , <i>Senna</i> spp. <i>Eremophila</i> spp. and <i>Dodonaea viscosa</i> ssp. <i>angustissima</i> is found on the red siliceous sands of the dunes.	
Stony Plains	Macumba	STP5	This subregion consists of a broad floodplain in the north east, with anastomosing channels, partly overlain by dunes, and an undulating gibber plain in the south west with dunes, numerous claypans, wide floodplains and some low hills. On the floodplains of the north east a woodland of <i>Eucalyptus camaldulensis</i> , <i>E. coolabah</i> ssp. <i>arida</i> and <i>Acacia cambagei</i> dominates on grey siliceous loams, while chenopod shrubland of <i>Chenopodium auricomum</i> , <i>Maireana aphylla</i> and <i>Atriplex nummularia</i> occupies grey self mulching cracking clays. In interdunal areas an open grassland of <i>Triodia basedowii</i> and <i>Aristida contorta</i> is found on red siliceous sands, while on the dunes the same soils and vegetation occur, with the addition of <i>Zygochloa paradoxa</i> and <i>Acacia holathera</i> var. <i>holathera</i> . In the south west of the subregion the plain is dominated by chenopod shrubland of <i>Atriplex vesicaria</i> , <i>Sclerolaena</i> spp., <i>Maireana astrotricha</i> and <i>Enneapogon</i> spp. on crusty red duplex soils. The dunes support a tall shrubland of <i>Hakea</i> spp., <i>Grevillea</i> spp., <i>Senna</i> spp., and <i>Eremophila</i> spp. on red siliceous sands while the pans are occupied by open chenopod shrubland of <i>Halosarcia</i> spp., <i>Sclerostegia tenuis</i> and <i>Frankenia</i> spp. on crusty red duplex soils. The hills support a tall shrubland of <i>Atriplex vesicaria</i> and <i>Sclerolaena</i> spp. on reddish firm siliceous loams, and the floodplains support tussock grassland ( <i>Astrebla pectinata</i> , <i>Tripogon loliiformis</i> and <i>Sporobolus actinocladus</i> ) on brown self-mulching cracking clays and <i>Eucalyptus coolabah</i> ssp. <i>arida</i> , <i>E. camaldulensis</i> and <i>Acacia cambagei</i> low woodland on crusty red duplex soils.	1045895
Sturt Plateau	Sturt Plateau P1	STU1	The Sturt Plateau P1 subregion is located at the southern end of the Sturt Plateau, bordered by the Tanami Desert to the south and Barkly Tableland to the east. The climate is semi arid with a monsoonal influence, with rain occurring mostly in summer months. Rainfall varies between 500 and 800 mm annually. It is a low plateau with no major drainage lines. Elevation varies minimally, ranging between 200 and 300 m asl. Lake Woods is found 20 km east of the subregion. Soils in the subregion are dominated by Tertiary aeolian deposits. The subregion covers the northern part of the extensive Wiso Basin. Vegetation is predominantly spinifex ( <i>Triodia</i> sp. and <i>Plectrachne</i> sp.) grassland, with stands of Bullwaddy in the north of the subregion.	1938936
Sturt Plateau	Sturt Plateau P2	STU2	The Sturt Plateau P2 subregion is a gently undulating plateau with little surface drainage. The only significant drainage in the subregion is Newcastle Creek, which flows in a southwesterly direction into Lake Woods. Elevation ranges from 150 to 350 m. The subregion lies within the Dunmurra and Wiso Basins and has a large area of massive earth soils, much of which is Tertiary formed laterites, and in the south west of the subregion Cainozoic sandy soils predominate. The subregion supports extensive stands of Lancewood ( <i>Acacia shirleyi</i> ) on rocky skeletal soils, <i>Eucalyptus dicromophloia</i> low woodland with <i>Chrysopogon</i> sp. and <i>Plectrachne</i> sp. understorey grasses, and <i>E. pruinosa</i> and <i>Lysiphyllum cunninghamii</i> low open woodland. Annual rainfall in the subregion is low, ranging from 500 to 800 mm.	4333920
Sturt Plateau	Sturt Plateau P3	STU3	The Sturt Plateau P3 subregion forms a large plateau providing drainage to two large river	3584772

			systems, the Dry and King Rivers flow to the Daly River to the northwest, and the Western and Elsey Creeks to the Roper River in the east. This subregion covers most of the northern slopes of the Sturt Plateau, with the elevation ranging from 300 m asl in the southern area to 100 m asl in the north east and west parts. Most of the subregion covers the Dunmurra Basin and fringes the Daly, Wiso, and McArthur Basins in the north, southwest and northeast respectively. Eucalyptus dichromophloia woodland and low open woodland is the dominant vegetation. Tertiary formed laterites of the Birdum Creek Beds and Cainozoic deposited sands cover much of the subregion.	
Swan Coastal Plain	Dandarragan Plateau	SWA1	Dandaragan Plateau: plateau bordered by Derby and Dandaragan Faults. Cretaceous marine sediments mantled by sands and laterites. Characterised by Banksia low woodland, Jarrah - Marri woodland, Marri woodland, and by scrub-heaths on laterite pavement and on gravelly sandplains. Warm Mediterranean (700 mm).	383460
Swan Coastal Plain	Perth	SWA2	<p>Low lying coastal plain, mainly covered with woodlands. It is dominated by Banksia or Tuart on sandy soils, Allocasuarina obesa on outwash plains, and paperbark in swampy areas. In the east, the plain rises to duricrusted Mesozoic sediments dominated by Jarrah woodland. Warm Mediterranean. Three phases of marine sand dune development provide relief. The outwash plains, once dominated by A. obesa-marri woodlands and Melaleuca shrublands, are extensive only in the south.</p> <p>Perth: Colluvial and aeolian sands, alluvial river flats, coastal limestone. Heath and/or Tuart woodlands on limestone, Banksia and Jarrah-Banksia woodlands on Quaternary marine dunes of various ages, Marri on colluvial and alluvials. Includes a complex series of seasonal wetlands. Also includes Rottnest, Carnac &amp; Garden Is etc. Mediterranean (1000 – 600 mm).</p>	1128948
Sydney Basin	Cerrabee	SB1	Kerrabee subregion consists of Triassic Narrabeen Group quartz and lithic sandstones and shales. Singleton coal measures are exposed in valley floors. Numerous volcanic necks of Jurassic age and small areas of ridge top Tertiary basalt flows occur. Quaternary sandy alluvium is present in main valleys. The subregion is a sandstone plateau with cliffed edges with wide valleys that have sandy alluvial fill. Volcanic necks form circular depressions or low domes depending on relative erodibility of adjacent rock types. Typical soils have shallow sandy profiles, with bare rock outcrops on the plateau. Sandy texture contrast soils occur on slopes, with harsh texture contrast soils on coal measures, and deep sands and loams in alluvium. Basalts have red brown structured loams and clay loams, often buried by slope debris where the volcanic necks form depressions. Characteristic vegetation is yellow bloodwood, broad-leaved ironbark, rough-barked apple, grey gum with scribbly gum and shrubs and patches of dry heath on the plateau. Rough-barked apple, forest red gum, grey box, white box, yellow box, fuzzy box, with Queensland blue grass and three awned spear grass are found in valleys. River oak occurs on the main streams. Volcanic necks and domes always support distinctive local vegetation usually a box with grassy understorey.	426468
Sydney Basin	Cataract	SB10	Cataract subregion consists of Triassic Hawkesbury Sandstone on the coastal edge of the Basin above the Illawarra escarpment. Quaternary sands and muds occur in Georges River and Botany Bay. The characteristic landform is a sandstone plateau with shallow creeks flowing through hanging swamps in the highest parts ramping down to low hills in the Georges River and Botany Bay. Coastal cliffs occur to the north of the Illawarra. Large barrier system with	152101



			beach, dunes, swamps, and estuary occur at Kurnell. Deep sands and clayey sands occur with peat in hanging swamps, with yellow earths on better drained sandstone ridges. Siliceous sands occur in younger dunes and well developed podzols in older dunes. Organic sands occur in swamps and estuary. Red bloodwood and black ash woodland with abundant shrubs occurs on sandstone with extensive gahnia, banksia in hanging swamps. A coastal dune sequence of tea-tree, coast wattle, smooth-barked apple, blackbutt and swamp mahogany occurs on the barrier system. Mangroves and salt marshes occur on Towra Point and up the Georges River estuary.	
Sydney Basin	Moss Vale	SB11	Moss Vale subregion consists of Triassic Wianamatta Group shales, Tertiary basalts and trachyte intrusions, with a large Quaternary peat swamp. Landforms are a shale and basalt plateau with rolling hills and shallow valleys. A very large peat swamp occurs at Wingecarribee. Soils consist of structured red and red-brown clay loams and loams, and loamy alluvium with high fertility. Areas of sandstone at the margins occur with thin, waterlogged sandy soils. Organic peat is present in swamps. Stony slope debris occurs on larger intrusions. Tall forest of narrow-leaved peppermint, Sydney peppermint, monkey gum, black ash, messmate, coastal white box, and brown barrel occur on shale and basalts. Extensive sedgelands and hanging swamps occur on sandstone. Wingecarribee supports a raised sphagnum bog. Sydney peppermint, narrow-leaved peppermint, and gully ash occurs on trachyte domes.	96710
Sydney Basin	Illawarra	SB12	Illawarra subregion consists of Permian siltstones, shale, sandstones and interbedded volcanics on and below the coastal escarpment. Quaternary alluvium and coastal sands are also present. Vegetated cliff faces occur on the coastal escarpment with waterfalls and steep streams. Boulderly debris slopes occur with sandy clay matrix, low hills and alluvial valleys on the coastal ramp. Barrier systems occur at Lake Illawarra and Nowra. Structured red and red brown loams and clay loams occur with some areas of mellow texture contrast soils. These soils have high fertility and good water holding capacity. Siliceous sands occur on beaches and dunes, with podsol profiles in older dunes, peaty sands and organic silts in swamps and estuaries. Mixed warm temperate and subtropical rainforest complexes occur on rich shale soils and alluvium under the escarpment. Coachwood, native tamarind, cabbage tree palm, Port Jackson fig and cheese tree occur with soft tree fern and rough tree fern understorey. Adjacent tall forests support Sydney peppermint, brown barrel, yellow stringybark and coastal white box. Coastal dunes contain coast wattle, tea-tree, banksia and blackbutt. Common reed occurs in fresh swamps and lakes, with mangroves and limited saltmarsh in estuaries.	121768
Sydney Basin	Ettrema	SB13	Ettrema subregion is composed of Permian horizontal quartz sandstone alternating with shales. Deep gorges expose Silurian volcanics and Carboniferous granite in underlying Lachlan Fold Belt. Limited Tertiary basalt occurs with river gravels. Low stepped hills occur on the plateau, with deeply incised streams off the plateau edge below waterfalls on the escarpment. Alternating sandstone and shale create bare rock benches and soil benches with shallow, often saturated sand. Structured red brown clay loams occur on basalt. A very prominent 'contour' vegetation pattern occurs in this subregion. Lichens, mosses and low heath patches occur on rock, with woodlands with dwarfed red bloodwood, black ash, tall heath and sedgeland on soil benches. Better soils have messmate and brown barrel. Gullies support rainforest elements with turpentine plumwood, coachwood, lilly pilly and mountain	178849

			pepper.	
Sydney Basin	Jervis	SB14	Jervis subregion is composed of Permian quartz sandstone and mixed shale and lithic sandstones. Tertiary trachyte intrusives occur at Milton. Limited Tertiary sands and more extensive Quaternary coastal sands also occur. The escarpment faces west and south and sandstone plateau rises to small peaks such as Pigeon House. Waterfalls and gorges occur off the escarpment but low hills and coastal ramps occur on siltstones to Jervis Bay. Well-developed coastal barrier is present, with Jervis Bay enclosed by tied islands. Pleistocene cliff top dunes occur on the peninsula with fresh lakes created by water table windows. Poor shallow sands occur on a quartz sandstone plateau similar to Ettrema subregion. Deep texture contrast soils with loam topsoils are found on coastal shales, and the subregion has moderate fertility but waterlogged valley floors. Coastal barriers extend from clean dune sands to deep podzols in Pleistocene dunes. Organic sands and muds occur in swamps and estuary. Spotted gum, blackbutt, black ash and bangalay dominate coastal forests on shale. Rainforest elements occur on trachyte, watergum along streams. Open understorey with macrozamia. Sand dunes have a barrier sequence of tea-tree, banksia and wattles, merging to protected forests and scrubs with smooth-barked apple, red bloodwood, forest oak, bangalay and blackbutt. Gahnia sedgelands occur with black wattle in steep wet gullies. Common reed swamps and sedgeland in wide valleys on shale and behind dunes. Swamp oak, salt marsh and mangrove sequence in estuaries.	135586
Sydney Basin	Hunter	SB2	Hunter subregion is composed of a complex of Permian shales, sandstones, conglomerates, volcanics and coal measures. It is bounded on the north by the Hunter Thrust fault, and on the south by cliffs of Narrabeen Sandstone. Pleistocene coastal barrier system occurs in the Newcastle bight. Landforms are typically rolling hills and wide valleys, with a meandering river system on a wide flood plain. River terraces are evident, the highest with silicified gravels. Streams can be brackish or saline at low flow. Numerous small swamps occur in the upper catchment with extensive estuarine swamps behind the coastal barrier of beach and dunes. A variety of harsh texture contrast soils occur on the slopes, with deep sandy loam alluvium on the valley floors. A small number of source bordering dunes occur on southern tributaries of the Hunter. Deep sands with podsol profiles are found in dunes on the barrier, with saline, organic muds in the estuary. Soil salinity is common on some bedrocks in the upper catchment. Patches of rainforest brush occur in the lower valley. Forest and open woodlands of white box, forest red gum, narrow-leaved ironbark, grey box, grey gum spotted gum and rough-barked apple occur with extensive stands of swamp oak in upper reaches and foothills. River oak and river red gum occurs along the streams. Coastal dune vegetation consists of blackbutt, smooth-barked apple, coastal banksias and swamp mahogany. Mangroves, salt marsh and freshwater reed swamps occur in the estuary.	459920
Sydney Basin	Capertree	SB3	Capertree subregion is composed of Permian Shoalhaven Group conglomerates, sandstones, and shales with coal at the base of the Sydney Basin with exposure of underlying Devonian shale, siltstone or quartzite. Includes the eastern margin of Narrabeen sandstone in cliffs. Small areas of hill top Tertiary basalt also occur. Characteristic landforms are wide valleys and low rolling hills below sandstone cliffs, The isolated flat top mountains in the valleys formed as pinnacles or remnant pieces of plateau. Steep, bouldery debris slope below cliffs. Shoulder slopes with stone pillars or 'pagodas' occur above steep canyons on tributary streams falling	200486

			into gorges. Low gradient swampy streamlines also occur. Soils are shallow, stony texture contrast profiles, usually with gritty well drained A horizons, over tough yellow or grey poorly drained clays. Bouldery debris with clay matrix occurs below cliffs (talus). Organic sands are found in swamps. Red brown structured loams occur on basalts. Woodlands support rough barked apple, red stringybark, red box, yellow box, Blakely's red gum with shrubby understory and wallaby grass in open valleys. Scribbly gum, red stringybark, red box and broad-leaved ironbark occur on talus slopes. Black ash and Sydney peppermint are found on sandstone peaks. Dwarf casuarina, tea tree, and sedge are apparent on pagoda margins.	
Sydney Basin	Wollemi	SB4	Wollemi subregion consists of Hawkesbury Sandstone and equivalent quartz sandstones of the Narrabeen Group, with sub-horizontal bedding, strong vertical joint patterns. A few volcanic necks also occur. This is the highest part of the Blue Mountains. A sandstone plateau with benched rock outcrops occurs here and jointing in the deep gorge of the Capertee and Wolgan Rivers controls the creek directions. Thin sands or deep yellow earths occur on the plateau, with thin texture contrast soils on shale benches. Organic sands occur in swamps and joint crevices, with bouldery slope debris below cliffs and sandy alluvium in pockets along the streams. Red brown structured loams occur on basalts. Red bloodwood, yellow bloodwood, rough-barked apple, smooth-barked apple, hard-leaved scribbly gum, and grey gum occur with diverse shrubs and heaths on plateau. Smooth-barked apple, Sydney peppermint, blue-leaved stringybark, and turpentine and gully rainforests occur in gullies and canyon heads. Ribbon gum and Blaxland's stringybark are found on basalt. River oak occurs along the main streams.	665228
Sydney Basin	Yengo	SB5	Yengo subregion consists of Triassic Hawkesbury Sandstone with valleys incised to Narrabeen sandstone, a few volcanic necks and basalt caps, Quaternary sandy alluvium and high level sands on Mellong Range and Maroota. Quaternary muddy sands occur in the Hawkesbury upper estuary. Landforms range from a benched sandstone plateau with steep slopes to narrow valleys with low cliff lines on Narrabeen sandstone. The sub-rectangular drainage pattern is structurally controlled. The northern end of Lapstone monocline controls the Mellong Range. The Hawkesbury River gorge cuts across the subregion and tributary streams dammed by levees form freshwater swamps adjacent to the river. Shallow quartz sands occur on the plateau, with some areas of deep yellow earth and patches of podsol development on sandstone benches and in all Tertiary and Quaternary high level sands. Texture contrast soils occur on shales, with deep clean sands in alluvium. Red brown structured loams and clay loams occur on basalt. Red bloodwood, yellow bloodwood, rough-barked apple, smooth-barked apple, hard-leaved scribbly gum, and grey gum occur with diverse shrubs and heaths on plateau. Smooth-barked apple, Sydney peppermint, blue-leaved stringybark, and turpentine with rainforest species are found in gullies. Hard-leaved scribbly gum, rough barked apple and Parramatta red gum with sedge swamps occur on Mellong Range sand. River mangrove and grey mangrove occur along margins of upper Hawkesbury estuary, and freshwater reed swamps occur with sedges and paperbarks.	460077
Sydney Basin	Wyang	SB6	Wyang subregion is composed of Triassic Narrabeen sandstones, Quaternary estuarine fills, and coastal barrier complexes. This subregion occurs on the coastal fall of the Sydney Basin, with rolling hills and sandstone plateau outliers. Beach, dune and lagoons of coastal barriers are interspersed with coastal cliffs and rock platforms. Texture contrast soils occur on lithic sandstones and shales. Loamy sands and alluvium are found along creeks, with clean quartz	210857

			sands on beaches and frontal dunes and podsols in older hind dunes. Organic sands and muds occur in lagoons and swamps. Smooth-barked apple, red bloodwood, brown stringybark, Sydney peppermint, spotted gum, bastard mahogany, northern grey ironbark and grey gum occur on hills and slopes. Prickly-leaved tea-tree and other shrubs occur with swamp mahogany, swamp oak, sedges and common reed on swampy creek flats. Open heath with banksia, tea-tree, coastal wattle, black she-oak and smooth-barked apple occur on barrier dunes. Limited areas of grey mangrove in entrances to coastal lakes.	
Sydney Basin	Pittwater	SB7	Pittwater subregion is composed of Triassic Hawkesbury Sandstone with thin ridge cappings of Ashfield Shale. Narrabeen sandstones are exposed in valleys and along the coast. Quaternary coastal sands also occur. The subregion is situated on the Hornsby plateau of quartz sandstone with occasional shale caps. Small beach, dune and lagoon barrier systems occur as do steep coastal cliffs and rock platforms. Deep yellow earths or rocky outcrop occur on plateau tops. Uniform and texture contrast soils occur on sandstones and shale slopes. Loamy sands are found in alluvium along creeks, clean quartz sands with moderate shell content occur on beaches and frontal dunes. Organic sands and muds occur in estuaries. Shale caps support tall forests of Sydney blue gum and blackbutt or turpentine and grey ironbark. Sydney peppermint, smooth-barked apple, scribbly gum, red bloodwood, yellow bloodwood, with diverse shrubs and patches of heath occur on the sandstone plateau. Blackbutt, turpentine, coachwood and water gum are found in deep sheltered gullies, while spotted gum, Deane's gum, bangalow palm, and forest oak occur on Narrabeen sandstone lower slopes. Banksia and tea-tree heath are found on dunes. Bangalay, swamp mahogany, cabbage tree palm, swamp oak, common reed and cumbungi occur in fresh swamps. Mangrove and saltmarsh communities occur in quiet estuaries.	147361
Sydney Basin	Cumberland	SB8	Cumberland subregion is composed of Triassic Wianamatta groups shales and sandstones and a downwarped block on the coastal side of the Lapstone monocline. The subregion is intruded by a small number of volcanic vents, and partly covered by Tertiary river gravels and sands. Quaternary alluvium occurs along the main streams. Low rolling hills and wide valleys occur in a rain shadow area below the Blue Mountains. At least three terrace levels are evident in the gravel splays. Volcanics from low hills occur in the shale landscapes. Swamps and lagoons are present on the floodplain of the Nepean River. Red and yellow texture contrast soils occur on slopes, becoming harsher and sometimes affected by salt in tributary valley floors. Pedal uniform red to brown clays occur on volcanics. Poor uniform stony soils, often with texture contrast profiles occur on older gravels, with high quality loams on modern floodplain alluvium. Grey box, forest red gum, narrow-leaved ironbark woodland with some spotted gum on the shale hills. Hard-leaved scribbly gum, rough-barked apple and old man banksia occurs on alluvial sands and gravels. Broad-leaved apple, cabbage gum and forest red gum with abundant swamp oak is found on river flats. Tall spike rush, and juncus with Parramatta red gum occurs in lagoons and swamps.	274987
Sydney Basin	Burraborang	SB9	Burraborang subregion is composed of Permian and Triassic sandstones and shales on the western edge of the Basin. Limited basalt caps also occur. Characteristic landforms are rolling hills on a sandstone plateau with deep gorges and sandstone cliffs in the Burraborang valley. Rocky outcrops, texture contrast soils and uniform sands occur on sandstone. Bouldery debris with sandy clay matrix occurs below cliffs. Rich loams are present in alluvium. Heath,	256988

			shrubland and woodland with black ash, hard-leaved scribbly gum, Sydney peppermint and red bloodwood occur on sandstone similar to other parts of the Basin. Deane's gum, turpentine and blue-leaved stringybark occur immediately below the escarpment passing to grey gum, narrow-leaved ironbark and thin-leaved stringybark on bouldery slopes. River oak occurs along the main streams below the plateaus.	
Tanami	Tanami P1	TAN1	The Tanami P1 subregion is the largest in the Northern Territory and has a small part in Western Australia. The subregion covers the Tanami Desert and has an arid climate, with annual average rainfall of 400 mm. It covers several geological regions, including the Wiso, and Birrindudu Basins, Tennant and Arunta Inliers, and the Tanami Block. Soils are made up of shallow and deep sandy soils, and massive earths. The topography is undulating with large areas of sand dunes, and elevation ranging from 250 m in the north to 600 m in the south of the subregion. Drainage is minor in the subregion, and includes the Lander River, and Wilson and Winnecke Creeks. Vegetation is dominated by hummock grassland comprised of <i>Triodia pungens</i> and <i>Plectrachne schinzii</i> , with <i>Acacia</i> sparse-shrubland overstorey.	20769231
Tanami	Tanami P2	TAN2	The Tanami P2 subregion covers the eastern part of the Wiso Basin, the Georgina Basin, and the Tennant Inlier, with rocks of Cambrian origin. Soils are predominantly shallow sands. The climate is arid with annual average rainfall around 300 mm. Elevation ranges from 200 m in the north to 400 m in the south of the subregion. Several small creeks arising from the adjacent Davenport Ranges flow into the subregion, however there are no major drainage lines. Vegetation is predominantly tall shrubland with <i>Triodia pungens</i> and <i>Plectrachne schinzii</i> hummock grassland, and some scattered woodland.	1600955
Tanami	Tanami P3	TAN3	The Tanami P3 subregion covers part of the Georgina Basin and small parts of the Tennant Inlier, and are from the Devonian and Cambrian eras. Shallow sands and massive earths occur in the subregion. The climate is semi-arid, with the annual average rainfall of 300 mm occurring mostly in summer months. Elevation has a gradual slope from west to east, ranging from 600 m to 200 m, forming the eastern part of the Georgina drainage. The Sandover, Elkedra and Bunday Rivers form the major drainage lines, dissipating into a large sand plains. Extensive areas of <i>Triodia pungens</i> and <i>Plectrachne schinzii</i> grassland occur throughout, interspersed with <i>Acacia aneura</i> (Mulga) shrubland and <i>Eucalypt</i> low open-woodland.	3627223
Tasmanian Central Highlands	Tasmanian Central Highlands	TCH	TCH 327 Tasmanian Central Highlands, are predominantly underlain by Jurassic dolerite, forming an elevated undulating plateau and rugged mountain ranges further west with rocky gradational soils. Some Cambrian/Precambrian rocks and Tertiary basalt with diverse soil development occur in the far north-west of the region and carry <i>Nothofagus cunninghamii</i> closed forest in fertile, fire-protected situations. The lower surfaces of the region support <i>Eucalyptus delegatensis</i> open forest. Alpine heath is abundant on much of the Central Plateau and alpine surfaces of the Central Highlands.	767853
Tasmanian Northern Midlands	Tasmanian Northern Midlands	TMI	TMI 330 Tasmanian Northern Midlands lies in the Tamar graben, an extensive plain bordered in the east and west by hilly topography developed on Jurassic and Tertiary igneous rocks and Permian mudstone. Quaternary sands and alluvium carry <i>Eucalyptus viminalis</i> , <i>E. pauciflora</i> and <i>E. ovata</i> open forest and woodland, while Tertiary deposits are vegetated by <i>E. amygdalina</i> open forest and woodland. Permian mudstone and Tertiary basalt line the major fault-controlled river valleys. Soils of the Northern Midlands are diverse and predominantly sandy, supporting extensive agriculture: much of the region's vegetation has been converted	415437

			to improved pasture.	
Tasmanian Northern Slopes	Tasmanian Northern Slopes	TNS	TNS 331 Tasmanian Northern Slopes, rise from Tasmania's central north coast to the foot of the Central Highlands in a rolling hilly plateau. Tertiary basalts with gradational soils, and Cambrian sedimentary and metamorphic rocks are prominent features of this geologically diverse region. <i>Eucalyptus obliqua</i> open forest occurs across soil types on the coastal lowlands, but has been replaced by improved pasture and cropland in much of the area. <i>Eucalyptus viminalis</i> - <i>E. ovata</i> - <i>E. amygdalina</i> - <i>E. obliqua</i> open forest from the inland east of the region is progressively replaced in the west by <i>Nothofagus cunninghamii</i> closed forest.	623507
Tasmanian South East	Tasmanian South East	TSE	TSE 332 Tasmanian South East, encompasses much of coastal eastern Tasmania, the Midlands and the lower Derwent Valley. The area is dominated by Jurassic dolerite carrying <i>Eucalyptus pulchella</i> - <i>E. globulus</i> - <i>E. viminalis</i> open forest, and <i>E. delegatensis</i> open forest at higher altitudes. Permian/Triassic sedimentary rocks overlain by diverse soils support <i>E. tenuiramis</i> open forest. Prominent physiographic features include a highly indented coastline, broad expanses of hilly country and elevated dolerite-capped mountain ranges. Extensive areas of vegetation have been converted to improved pasture and cropland.	1098222
Tasmanian Southern Ranges	Tasmanian Southern Ranges	TSR	TSR 333 Tasmanian Southern Ranges, covers the mountainous tract of central southern Tasmania. Jurassic dolerite ridge mountains, and plateau ranges formed from Permian/Triassic sedimentary rocks underlie diverse soils in this region. <i>Eucalyptus obliqua</i> open forest is the dominant vegetation type and grows across a range of soil types. <i>E. regnans</i> open forest also occurs extensively on deep fertile soils in the Derwent and Huon catchments.	778002
Tasmanian West	Tasmanian West	TWE	TWE 334 Tasmanian West, comprises most of coastal and inland western Tasmania. Folding and subsequent erosion has resulted in rugged dissected inland mountain ranges dominated by Precambrian and Cambrian rocks supporting organic soils or shallow organic horizons over deep mineral profiles. From 300 metres elevation a discontinuous coastal plain slopes westward to the ocean. The prevalent forest vegetation type is <i>Nothofagus cunninghamii</i> - <i>Phyllocladus aspleniifolius</i> - <i>Eucryphia lucida</i> closed forest. Areas with poor drainage, low fertility and a history of frequent fire are dominated by <i>Gymnoschoenus sphaerocephalus</i> moorland with <i>Eucalyptus nitida</i> scrub on higher ground.	1551559
Tiwi Cobourg	Tiwi-Cobourg P1	TIW1	The Tiwi-Coburg P1 subregion covers the Tiwi Islands (Bathurst and Melville Is). They are of low relief with undulating lateritic rises and dissected plateaux up to 100 m. The areas of higher relief on the islands are remnants of a Tertiary land surface. The islands form part of the Money Shoal Basin and contain predominantly massive earth soils and extensive areas of saline clays. Vegetation is dominated by mixed <i>Eucalyptus</i> open-forest with <i>Sorghum</i> understorey. Average rainfall on the islands varies from 1400 to 2000 mm annually, most falling from December to April in northwest monsoonal winds. Several small creeks on the island form important riparian and mangal habitats.	734885
Tiwi Cobourg	Tiwi-Cobourg P2	TIW2	The Tiwi-Coburg P2 subregion is largely covered by the Gurig National Park on Coburg Peninsula. The area is relatively flat with extensive mixed Eucalypt and mangal forests. Elevation is low across the subregion (<60 m), with few important drainage lines. Soils are predominantly massive earths with low nutrients lying in the Money Shoal Basin and saline clays in coastal areas. Average annual rainfall is 1200 to 1400 mm.	261506
Victoria Bonaparte	Victoria Bonaparte P1	VB1	The Victoria Bonaparte P1 subregion (NT) lies predominantly on the Victoria Basin with small areas on the Daly and Bonaparte Basins. Sedimentary rocks give rise to predominantly shallow	6410068

			sandy soils. The climate is monsoonal with annual rainfall averaging 600 to 1400 mm. There are a number of low plateaux up to 350 m, and low lying coastal areas. Drainage in the subregion includes parts of the Daly River catchment, Fitzmaurice, Keep, and Bullo Rivers, as well as significant areas of the Ord and Victoria Rivers and their tributaries. Vegetation is dominated by <i>Euclayptus</i> woodland with grass understorey.	
Victoria Bonaparte	Victoria Bonaparte P2	VB2	This subregion falls between the Daly River and Moyle River, with most of the area below 50 m and rainfall varying between 1200 to 1600 mm. The northern part of the subregion includes the lower-reaches of the Daly River and a large area of closed forest. The subregion lies within the Pine Creek Orogen and Daly Basin and is dominated by early Proterozoic Graminoids. The duplex soils and clays of the area support stands of woodland with <i>Eucalyptus tectifica</i> and <i>E. latifolia</i> . In other areas such as the lowlands <i>E. papuana</i> and <i>E. polycarpa</i> , and along Hermit Creek <i>Melaleuca viridiflora</i> .	170645
Victoria Bonaparte	Victoria Bonaparte P3	VB3	This subregion follows closely the topography of the Whirlwind Plains and floodplains of the Baines, Angalarri, and Victoria Rivers. <i>Melaleuca minutifolia</i> , <i>Eucalyptus microtheca</i> low woodland with either <i>Sorghum</i> or <i>Chrysopogon</i> understorey, and <i>Chrysopogon fallax</i> grassland are the dominant vegetation types. Most of the subregion falls below 50 m, with some escarpment areas rising to 330 m. Rainfall is seasonal and restricted to the months December to March, and varies from 700 to 1200 mm.	688587
Victorian Midlands	Goldfields	VM1	GO 6.1 - Goldfields province is dominated by dissected uplands (predominantly a northerly aspect) of Lower Palaeozoic deposits. Low lying corridors of alluvial valleys and basaltic plains is dominated by Plains Grassy Woodland and Low Rises Grassy Woodland/Alluvial Terraces Herb-rich Woodland Mosaic ecosystems. The granitic and sedimentary (with Tertiary colluvial aprons) terrain is dominated by Grassy Woodlands much of which has been cleared. Box Ironbark Forest, Heathy Dry Forest and Grassy Dry Forest ecosystems, dominate the lower slopes or poorer soils. Metamorphic and old volcanic rocks have formed steeply sloped peaks and ridges. A variety of relatively poor soils are dominate the province with yellow, grey and brown texture contrast soils (Chromosols and Sodosols) and minor occurrences of friable earths (Dermosols and Ferosols).	1681675
Victorian Midlands	Central Victorian Uplands	VM2	CVU 6.2 - Central Victorian Uplands province is dominated by Lower Paleozoic deposits giving rise to dissected uplands at higher elevations. Low lying corridors of valleys and plains are dominated by Plains Grassy Woodland and Valley Grassy Forest ecosystems on the fertile plains and Grassy Woodland and Floodplain Riparian Woodland ecosystems on the rivercourses and Herb-rich Foothill Forest and Shrubby Foothill Forest ecosystems on the more fertile slopes with outwash. Amongst granitic and sedimentary (with Tertiary colluvial aprons) terrain with metamorphic and old volcanic rocks which have formed steeply sloped peaks and ridges. These less fertile hills support Grassy Dry Forest and Heathy Dry Forest ecosystems on the less fertile hills. Cainozoic deposits from the newer volcanic flows have infilled some of the old long valley floors. Relatively poor soils occur on the non-volcanic material are dominated by yellow texture contrast soils (Chromosols and Kurosols) and a mixture texture contrast soils (Chromosols) and red friable earths (Ferrosols) on the volcanic terrain.	1335967
Victorian Midlands	Greater Grampians	VM3	GG 6.3 - Greater Grampians province is dominated by prominent ridges of resistant sandstone giving rise to the striking parallel ranges; forming valleys which have been cut either in soft	274241

			shales or deeply weathered granites. The steep escarpments and gentle back slopes give the National Park is majestic beauty. The Palaeozoic deposits give rise to deep mottled yellow texture contrast soils (Kurosols) and shallow sandy soils (Rudosols). The rocky outcrops support Rocky Outcrop Shrubland and Rocky Outcrop Herbland ecosystems; on the fertile hills is Hills Herb-rich Woodland and on the less fertile hills is Heathy Dry Forest in the fertile plains and valleys supports Plains Grassy Woodland and on sandy flats (many with impeded drainage) supports Heathy Woodland, Sand Heathland and Damp Sands Herb-rich Woodland ecosystems.	
Victorian Midlands	Dundas Tablelands	VM4	DT 6.4 - Dundas Tablelands province is a dissected tableland of Tertiary deposits overlaying a Palaeozoic palaeopliian. A hard ironstone layer caps the Palaeozoic deposits, resisting erosion. Streams have cut deep narrow valleys across the tablelands. Black earths (Dermosols) dominate the valleys and the dissected Merino Tablelands, yellow texture contrast soils (Chromosols and Sodosols) and cracking clays (Vertosols) dominate the rest of the table tops. The vegetation is a complex mosaic of Plains Grassy Woodland, Damp Sands Herb-rich Woodland/Plains Grassy Woodland, Grassy Woodland/Damp Sands Herb-rich Woodland, Plains Grassy Woodland/Damp Sands Herb-rich Complex, Damp Sands Herb-rich Woodland and Creekline Grassy Woodland ecosystems.	490205
Victorian Volcanic Plain	Victorian Volcanic Plain	VVP1	VVP 3 - Victorian Volcanic Plain province dominated by Cainozoic volcanic deposits. These formed an extensive flat to undulating basaltic plain with stony rises, old lava flows, numerous volcanic cones and old eruption points and is dotted with shallow lakes both salt and freshwater. The soils are variable ranging from red texture contrast soils (Kurosols and Ferosols) on the higher fertile plain and scoraceous material supports Plains Grassy Woodland, Plains Grassland/Plains Grassy Woodland Mosaic and Plains Grassland. Calcareous sodic texture contrast soils grading to yellow acidic earths (Calcarosols, Sodosols and Dermosols), on the intermediate plain, and grey cracking clays (Vertosols) on the low plains, supports Stony Knoll Shrubland/Plains Grassy Woodland/Plains Grassy Wetland Mosaic and Plains Grassy Wetland ecosystems. On the stony rises (volcanic outcropping) the stony earths (Dermosols) support Stoney Rises Herb-rich Woodland, Basalt Shrubby Woodland and Herb-rich Foothill Forest ecosystems.	2077943
Victorian Volcanic Plain	Mount Gambier	VVP2	A gently sloping ash plain with steep ash cones rising abruptly. The craters of some of these cones contain lakes. Most native vegetation has been replaced with pine plantation, pastures and crops. Dairy and beef cattle are grazed and vegetables cultivated on small holdings. Rural land merges with the urban fringe of Mount Gambier (Laut et al. 1977). Very little native vegetation remains in this area, most having been cleared for agriculture. Native species recorded in this area include Eucalyptus ovata, Acacia melanoxylon and A. mearnsii (D'arcy et al. 1984). Major vegetation types were probably Gahnia trifida and G. filum sedgeland, Banksia marginata low woodland and Leptospermum lanigerum tall closed shrubland on lower lying areas; Melaleuca lanceolata plus Allocasuarina verticillata low woodland on terra rossa soils and minor occurrences of Themeda triandra tussock grassland, Eucalyptus obliqua open forest and E. ovata woodland.	84193
Warren	Warren	WAR	Dissected undulating country of the Leeuwin Complex, Southern Perth Basin (Blackwood Plateau), SW intrusions of the Yilgarn Craton and western parts of the Albany Orogen with	844141



			loamy soils supporting Karri forest, laterites supporting Jarrah-Marri forest, leached sandy soils in depressions and plains supporting low Jarrah woodlands and paperbark/sedge swamps, and Holocene marine dunes with <i>Agonis flexuosa</i> and <i>Banksia</i> woodlands and heaths. Moderate Mediterranean.	
Wet Tropics	Herbert	WET1	contains the delta of the Herbert River, and the piedmont fans associated with the coastal escarpment between the Cardwell Range and Bluewater Creek. In the south it grades into the Townsville Plains subregion of the Brigalow Belt bioregion. This subregion receives the lowest rainfall of any of the coastal lowlands of the Wet Tropics, and its floodplains are dominated by woodlands of paperbark ( <i>Melaleuca viridiflora</i> ), poplar gum ( <i>Eucalyptus platyphylla</i> ) and forest red gum ( <i>E. tereticornis</i> ). Small areas of dunes occur along its seaward margin and there are a large number of short estuaries with extensive mangrove communities backed by salt plains.	221085
Wet Tropics	Tully	WET2	is also dominated by alluvial plains and piedmont fans, but rainfall is generally higher and the vegetation is dominated by forests of paperbark ( <i>Melaleuca quinquenervia</i> ), woodlands of paperbark ( <i>Melaleuca viridiflora</i> ) and forest red gum ( <i>Eucalyptus tereticornis</i> ), rainforests and extensive wetland areas including swamps of fan palms ( <i>Licuala ramsayi</i> ) and feather palms ( <i>Archontophoenix alexandrae</i> ). The subregion contains the largest extent of coastal dune systems in the bioregion and mangrove systems are also widespread. The higher rainfalls however mean that brackish swamps occur in place of the salt pans characteristic of the Herbert subregion.	146628
Wet Tropics	Innisfail	WET3	receives similar rainfall to that of Tully. Unlike the Herbert and Tully subregions however, which are predominantly flat and have catchments dominated by granites and acid volcanics, Innisfail is gently undulating with low hills on Paleozoic sediments, and has considerable areas of basalt and metasediments in its catchment. Vegetation includes mesophyll rainforest, estuarine mangroves, coastal dune vegetation, paperbark ( <i>Melaleuca quinquenervia</i> ) forest, swamps of fan palm ( <i>Licuala ramsayi</i> ) and feather palm ( <i>Archontophoenix alexandrae</i> ) and woodlands dominated by paperbark ( <i>Melaleuca viridiflora</i> ), forest red gum ( <i>Eucalyptus tereticornis</i> ), carbeen ( <i>E. tessellaris</i> ) and pink bloodwood ( <i>Corymbia intermedia</i> ).	201845
Wet Tropics	Atherton	WET4	is a tableland area dominated by basalt plains The older lavas originated from composite or shield volcanoes and are deeply weathered. The younger lavas, which occur in the northern part of the subregion , are weakly weathered, stony and associated with cinder cones. A number of explosion craters such as those at Lakes Eacham and Barrine and Bromfield Swamp occur in the central and northern parts of the subregion. Relief is flat to undulating in the north where rainfall is least, while steep land occurs in the south and east where rainfall is highest. Because of the cooling effects of elevation, the climate is subtropical rather than tropical. Vegetation is mainly rainforests with sclerophyll woodland in the drier parts where mean annual rainfall is less than 1400mm (Isbell et al., 1976).	168028
Wet Tropics	Paluma - Seaview	WET5	encompasses the southern ranges of the bioregion and is separated from the subregions to its north by the Herbert River Gorge. Rainforested areas are separated into three distinct sections, the Mt Lee, Mt Spec and Mt Halifax sections, by open forest and woodlands. Estimated mean annual rainfall for much of this subregion is barely above the rainforest threshold of 1300mm and only exceeds 1600mm at higher elevations. Much of the Seaview Range section is below 800m but the Paluma Range section is generally above 800m with significant areas above 900m. The combined effects of greater distance from the coast and	275102

			lower elevation have resulted in significantly lower rainfall for the Seaview Range section. The geology of this province is complex, but the principal rocks are granites and acid volcanics.	
Wet Tropics	Kirrama - Hinchinbrook	WET6	includes the Cardwell and Kirrama Ranges, Macalister Mountains and the ranges of Hinchinbrook Island. These ranges are bounded by faults trending generally north–west and consist of Carboniferous to Permian granites and upper Carboniferous rhyolites. The Hinchinbrook Channel is relatively shallow, and it is only at times of high sea–level, such as during the past 6000 years, that this mountain range becomes an island. At its northern end acid volcanic rocks form steep ridges rising to Mt Pitt and abut the massive granitic complex of the centre and south of the island, culminating in Mt Bowen (1119m). This massif has steep slopes and is deeply dissected. This subregion is characterised by steep environmental gradients associated with steep slopes, gorges, water falls, shallow rocky soils and a complex pattern of vegetation with rainforest interspersed with tall open forests and woodlands.	239696
Wet Tropics	Bellenden Ker - Lamb	WET7	includes the very wet and cloudy upland and highland granite massifs of the Lamb, Bellenden Ker and Walter Hill Ranges and the coastal outlier of the Malbon Thompson Range. This subregion includes the highest mountains in Queensland (Mt Bartle Frere, 1622m) and some of the most rugged terrain. Rainfall on the centre peak of Mt Bellenden Ker averages over 8 metres per annum, with recorded rainfall intensities reaching 1140mm in a 24hr period (Tracey, 1982). Granites dominate this subregion, and the vegetation is predominantly rainforest. The subregion is recognised as a major centre of endemism in the bioregion for both flora and fauna.	255408
Wet Tropics	Macalister	WET8	is an undulating tableland bounded by a steep dissected escarpment falling to a very narrow coastal plain. Metasediments characterise this subregion, however there are several prominent granite peaks which occur along its length. This subregion is the area in which the Great Dividing Range comes closest to the coast. It is a lower section between the more elevated Carbine Tableland in the north and the Lamb Range to the south. It retains a narrow tenuous strip of rainforest which was absent in drier climatic times earlier in the Holocene. Although most of the area is between 400m and 500m, some ridges and isolated summits reach elevations of up to 1056m (e.g. Harris Peak). Due to its generally low altitude and its alignment parallel to the prevailing winds this coastal subregion is substantially drier than areas to its north and south resulting in an eastern escarpment and western fall dominated by woodlands with a band of rainforest in between. This band of rainforest has been termed the Black Mountain Corridor by ecologists or the Black Mountain Barrier by geneticists.	116331
Wet Tropics	Daintree - Bloomfield	WET9	is a complex subregion which is likely to be subdivided in the future. It presently includes the Carbine, Windsor and Big Tablelands, Mt Finnigan, and the Thornton, McDowall and Black Trevethan Ranges which are all sharply defined granite batholiths that have resisted erosion more than the surrounding Palaeozoic sediments which comprise the basins of the Daintree and Bloomfield Rivers. The Carbine subunit has a summit area 35km long and up to 15km wide with an elevation exceeding 1000m. Rainfall exceeds 3000mm in the higher parts. The Thornton subunit is named after Thornton Peak (1375m), the highest point in a granitic coastal range between the valleys of the Daintree and Bloomfield Rivers. Rising steeply from the coast, this high range induces a sub region of very high rainfall (exceeding 3000mm). The northernmost subunit includes Mt Finnigan (1148m), the highest point in a chain of mountains extending from Mt Boolbun South (1008m) in the south–west to Mt Amos (874m). The Big	360379

			Tableland is a small shelf on the south western slope of Mt Amos. The Mt Finnigan uplands and associated lowlands represent the most northerly extent of characteristically wet tropics forest types. The Mt Windsor Tableland is a granitic massif which has a broadly domed summit area where elevations exceed 1000m. Rainfall of the summit area exceeds 1600mm. Rainfall varies substantially within this subregion ranging from very wet tropical coastal areas in the southern section becoming progressively more strongly seasonal (monsoonal) to the north and drier to the west.	
Yalgoo	Yalgoo	YAL	This Bioregion has been extended westwards to the boundary of the South-west Botanical Province so that it now includes the Toolonga Plateau of the southern Carnarvon Basin. This region is an interzone between South-western Bioregions and Murchison. It is characterised by low woodlands to open woodlands of Eucalyptus, Acacia and Callitris on red sandy plains of the Western Yilgarn Craton and southern Carnarvon Basin. The latter has a basement of Phanerozoic sediments. Semi-arid to arid, warm, Mediterranean climate. Mulga, Callitris-E. salubris, and Bowgada open woodlands and scrubs on earth to sandy-earth plains in the western Yilgarn Craton. Rich in ephemerals. Arid to semi-arid warm Mediterranean.	3496844