

Regional Ecosystems

Vegetation communities within Queensland are categorised and mapped by a system known as ‘Regional Ecosystems’. A Regional Ecosystem (RE) is a distinct vegetation community that occurs in association with a particular combination of geology, soil and landform in a specific bioregion in Queensland.

Most landholders have a colloquial name for vegetation on their property (e.g. ironbark woodland or vine thicket) and know the land type (e.g. rocky slopes or fertile floodplains). A Regional Ecosystem simply defines the combination of land and vegetation together. This Note will help Land for Wildlife landholders understand the

Regional Ecosystem classification system and interpret vegetation maps.

Defining Regional Ecosystems has helped classify biodiversity, ecological processes and vegetation communities on a landscape scale. Regional Ecosystem classifications are used to provide a consistent approach to planning, vegetation management and legislation across Queensland.

What RE is on my property?

There are several ways to find out about Regional Ecosystems on your property.

1. Have a look at your Land for Wildlife Property Assessment form. Regional Ecosystems for your property are listed under Habitat Description, or ask your Land for Wildlife Officer.
2. Visit the website www.derm.qld.gov.au/REMAP and type in your property’s lot and plan number or latitude and longitude coordinates. A RE map will be emailed back to you. This is a free service.
3. Workshops are run by various organisations, such as the Queensland Herbarium, for those wanting to learn how to key out a Regional Ecosystem using geological maps and field investigations.

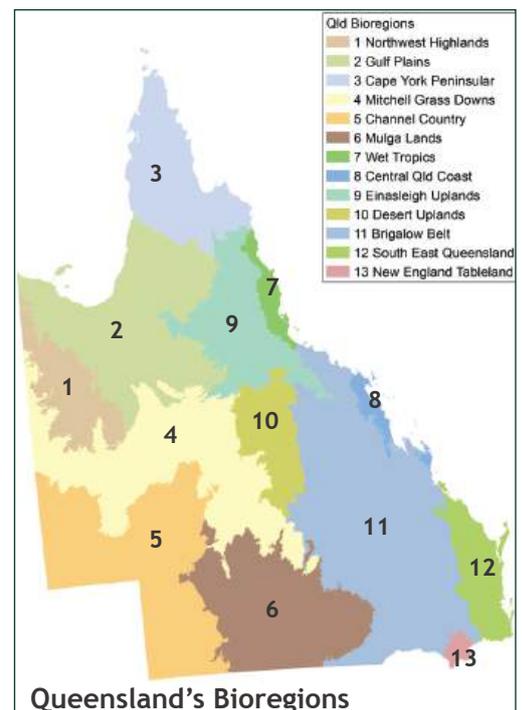
Learning about the REs on your property can help you identify plant species and plan revegetation projects using appropriate plants.

The RE code

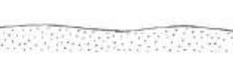
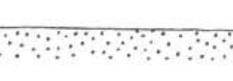
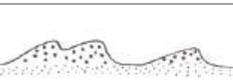
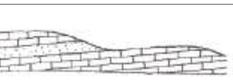
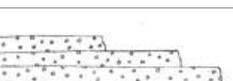
Each RE is classified by a three-part code (e.g. 12.3.1). The first part of the RE classification is the bioregion, the second part reflects the geology, soil and landform while the third part refers to the vegetation. The combination of these three factors produce a Regional Ecosystem.

part 1: Bioregions (e.g. 12.3.1)

The first part of the Regional Ecosystem classification is the bioregion. The state of Queensland has been divided into 13 different bioregions. Bioregions are based on broad landscape patterns and reflect the major differences in geology, climate, plants and animals across Queensland.



Regional Ecosystem 12.9-10.2 describes *Corymbia citriodora*, *Eucalyptus crebra* open forest on sedimentary rocks.

Land Zone	Basic Description
1	 <p>Land that is subject to tidal inundations (e.g. mangroves, beaches and tidal flats).</p>
2	 <p>Coastal dunes, coastal lakes and swamps that do not get inundated by seawater.</p>
3	 <p>Fertile, tillable soils (e.g. floodplains, alluvial plains, terraces, levees, channels, river and creek flats, swamps and inland lakes).</p>
4	 <p>Clay deposits usually forming undulating or flat plains.</p>
5	 <p>Old loamy and sandy plains including deeply weathered landscapes (e.g. deep red earth soils).</p>
6	 <p>Inland sand dunes (e.g. Simpson Desert dunefields).</p>
7	 <p>Exposed duricrusts, or jump-ups, where mottled rocks come to the surface (e.g. ironstone mesas and low stony rises on downs).</p>
8	 <p>Young igneous rock such as basalts and rhyolites that form extensive plains, hills, cones and plugs.</p>
9	 <p>Undulating landscapes with fine sedimentary soils and moderate fertility (e.g. mudstones, limestones and sandstones).</p>
10	 <p>Sandstone ranges with medium to coarse-grained sedimentary rocks and low fertility usually forming ledges and plateaus.</p>
11	 <p>Metamorphosed rocks forming ranges, hills and lowlands with shallow, low-fertility soils (e.g. slates, schist, serpentinite and phyllites).</p>
12	 <p>Old igneous rocks forming hills and lowlands on granite rocks with low to moderate fertility (e.g. rhyolites, granites, gabbros and dolerites).</p>

part 2: Land Zones (e.g. 12.3.1)

The second component to a Regional Ecosystem is the land zone. Twelve land zones have been defined in Queensland. Land zones represent significant differences in geology, landforms and soil. Land zones generally correspond to broad geological categories and can be identified using geological maps.

Determining the correct land zone for a property can sometimes be difficult. A geological map is required and specific attention should be paid to whether the soils have been overlaid with deep weathering processes that occurred during the humid Tertiary period.

In general, land zone numbers increase to reflect an increasing age of soils, sediments and rocks. For example, recently formed or deposited soils and sediments are defined in land zones 1-3; whereas old rocks and soils are defined in land zones 11-12.

Land zone 9 (fine sedimentary soils) and land zone 10 (course-grained sedimentary rocks) have been combined together into one zone in the South East Queensland bioregion. For example, RE 12.9-10.4 describes *Eucalyptus racemosa* woodland on sedimentary rocks.

More detailed descriptions of land zones can be found within the vegetation section of the Department of Environment and Resource Management (DERM) website www.derm.qld.gov.au/vegetation

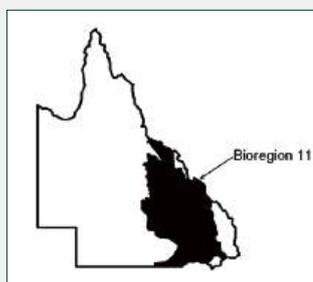


part 3: Vegetation (e.g. 12.3.1)

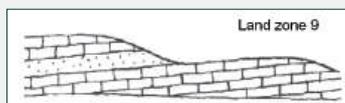
The third component to a Regional Ecosystem describes the vegetation. Regional Ecosystems describe vegetation by the structure of vegetation (e.g. open forest, grassy woodland or wet heathland), dominant plants in the canopy and associated plants in the understorey. Scientific names are used in RE descriptions as common plant names vary from one area to another and are sometimes unreliable.

For example

Regional Ecosystem 11.9.5



Bioregion 11
Southern Brigalow Belt



Land zone 9
Fine sedimentary soils



RE 11.9.5

RE description: Brigalow (*Acacia harpophylla*) and/or Belah (*Casuarina cristata*) open forest on fine-grained sedimentary rocks.

RE status: Endangered

RE descriptions

Each individual RE has a specific description. Over 1350 REs have been described in Queensland. Up-to-date RE descriptions are available on DERM's website www.derm.qld.gov.au. The Regional Ecosystem Description Database (REDD) lists all REs. This database can be downloaded from the same website. Alternatively, RE descriptions can be obtained from your Land for Wildlife Officer along with lists of plant species that occur in your RE.

RE status

Regional Ecosystems are granted different protection status under the Queensland *Vegetation Management Act 1999*. The Act has three levels of status:

- 1. Least concern.** The total area of the remaining remnant vegetation is greater than 10,000 hectares, and the vegetation is over 30% of its pre-clearing extent (the amount of that vegetation that existed prior to European arrival) across a bioregion.
- 2. Of concern.** Represents remnant vegetation that is 10-30% of its pre-clearing extent across a bioregion, or more than 30% of pre-clearing extent remains and the remaining remnant area is less than 10,000 ha.
- 3. Endangered.** Contains remnant vegetation less than 10% of its pre-clearing extent across the bioregion, or 10-30% of pre-clearing extent remains and the remnant area is less than 10,000 hectares.

Mapping Regional Ecosystems

Many different methods are used to determine Queensland's Regional Ecosystems. These include satellite imagery, aerial photographs, vegetation maps, geological maps, soil maps, extensive field sampling, on-ground surveys and historical knowledge. The Queensland Herbarium is the lead agency for RE surveying and mapping.

To appear on a certified RE map, a patch of bushland must be identified as remnant and must be above a minimum size. Remnant vegetation is defined as vegetation with at least 50% of the original canopy, 70% of the original height and is composed of the same species that would exist if the vegetation community were undisturbed.

RE maps are generally produced at a scale of 1:100,000. Part of South East Queensland is mapped at a finer scale of 1:50,000. For vegetation to show up on a 1:100,000 RE map, it must be at least five hectares in size and 75 metres wide. 1:50,000 RE maps will show vegetation that is at least one hectare in size with a minimum width of 35 metres. Some vegetation communities, such as fringing and mosaic communities, do not appear on RE maps as they are too small or scattered.

RE information is reviewed regularly based on new maps, surveys and ground-truthing. RE maps are updated every second year.

Applying to change a RE map

Landholders can apply to have a RE map changed by submitting an application for a Property Map of Assessable Vegetation (PMAV). PMAVs are property-scale maps certified by DERM. They show the boundaries of mapped remnant vegetation and areas of non-remnant vegetation. Depending on the status of vegetation mapped, approvals from DERM may be required before undertaking works.

More information can be obtained from DERM's website or by contacting their regional Vegetation Management Officer at one of the following DERM offices:

South East region, Ipswich - phone 3884 5328 or Gympie - phone 5480 5333,

South West region, Toowoomba - phone 4688 1098.

If landholders have in-depth knowledge about the RE mapping process, access to aerial photographs and ecological identification skills, they can prepare and submit their own application for a RE map change directly to DERM. Applications submitted in this way must follow the guidelines laid out in the Application Kit for a Property Map of Assessable Vegetation which is available from DERM's website.

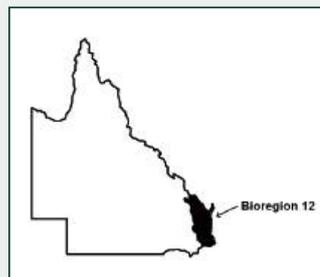
What you can do

- ✓ Obtain a RE map for your property.
- ✓ Check that the RE map matches the vegetation present on your property.
- ✓ Find out the status of the RE on your property (e.g. least concern, of concern or endangered).
- ✓ Use REs to guide your revegetation activities.

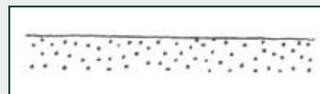
Further information

A number of fact sheets and publications are available from DERM offices or their website www.derm.qld.gov.au. These publications are updated regularly due to ongoing changes in vegetation management legislation, codes and policies.

For example Regional Ecosystem 12.5.6



Bioregion 12
South East
Queensland



Land zone 5
Old loamy/
sandy plains



RE 12.5.6

RE description: *Eucalyptus siderophloia*, *E. propinqua*, *E. microcorys* and/or *E. pilularis* open forest on remnant Tertiary surfaces, usually deep red soils.

RE status: Endangered

Land for Wildlife is a voluntary program that encourages and assists landholders to provide habitat for wildlife on their properties. For more information about Land for Wildlife South East Queensland, or to download *Land for Wildlife Notes* free of charge, visit www.lfwseq.com.au

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Information in *Land for Wildlife Notes* is not necessarily endorsed by any of the supporting agencies, nor should it be taken to constitute professional advice or a recommendation of land management.

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