

FITZROY REGION

Fitzroy catchment water quality targets

Catchment profile

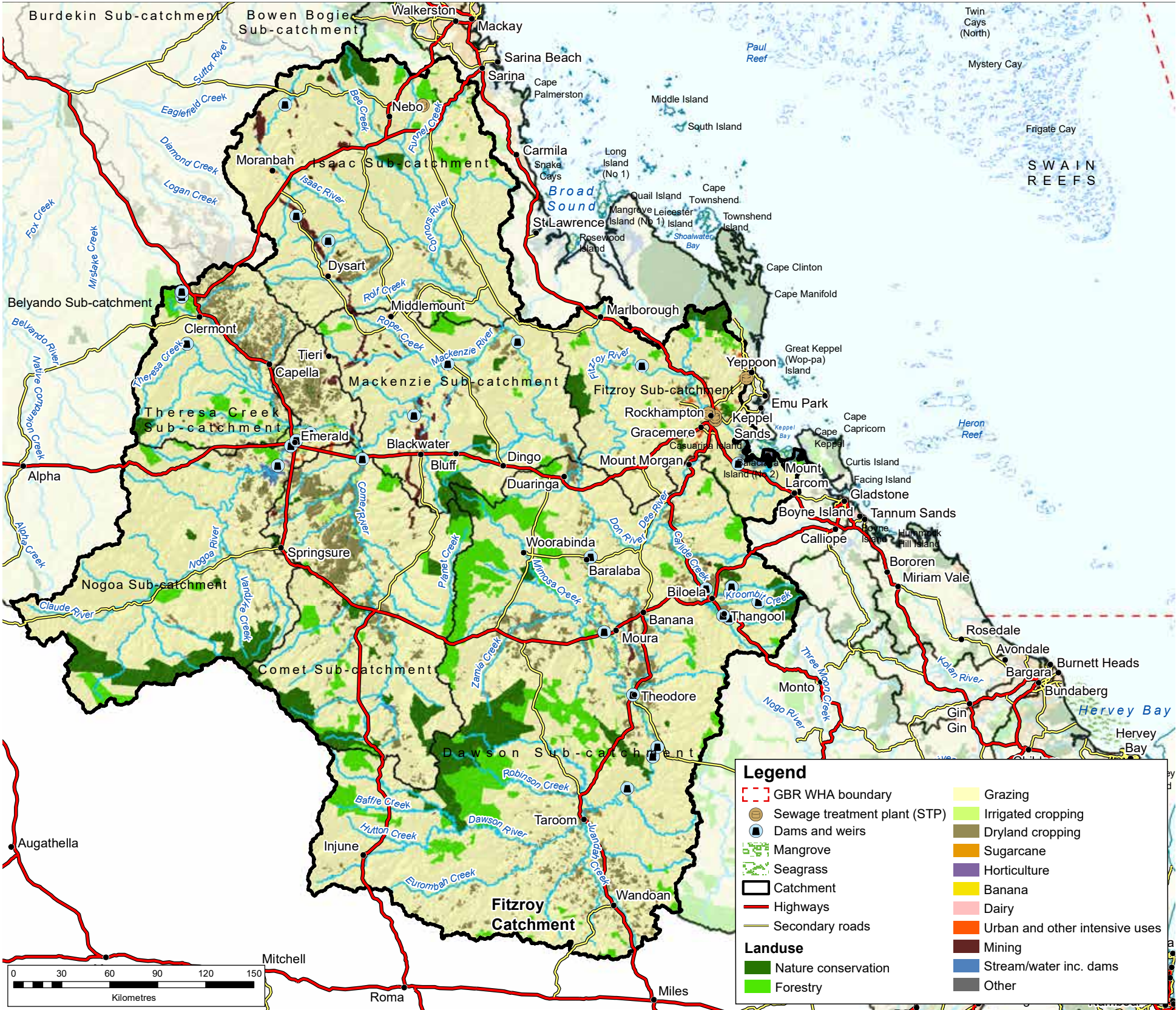
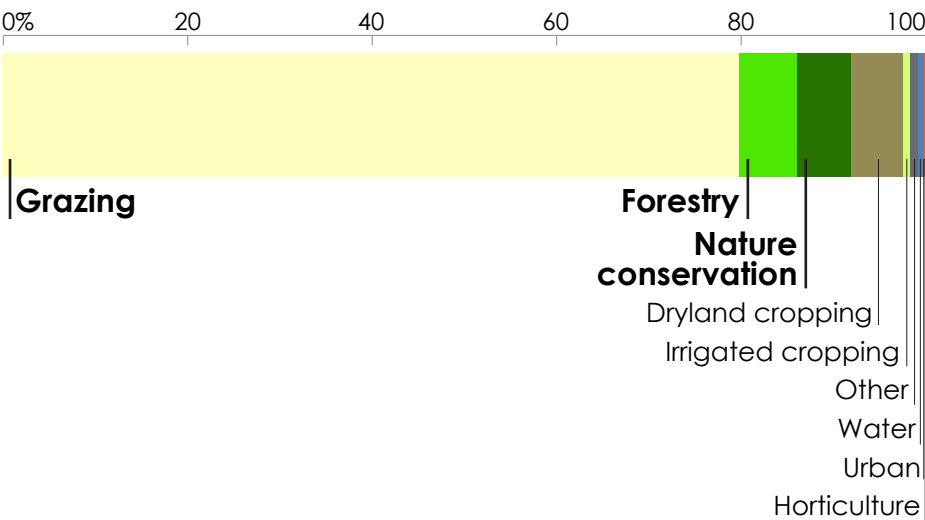
Under the Reef 2050 Water Quality Improvement Plan, water quality targets have been set for each catchment that drains to the Great Barrier Reef. These targets (given over the page) consider land use and pollutant loads from each catchment.

The Fitzroy catchment covers 142,552 km² (92% of the Fitzroy region). Rainfall averages 646 mm a year, which results in river discharges to the coast of about 6018 GL each year.

The Fitzroy catchment covers the majority of the Fitzroy region. Lying inland of the region's smaller coastal catchments, it is the largest catchment draining to the Great Barrier Reef lagoon. The Fitzroy River forms the main channel transporting run-off from the whole catchment, which comprises an extensive network of tributaries. Some of these are an extensive area in their own right. There are five main tributaries: the Connors and Isaac rivers in the north of the catchment; the Nogoa River in the western reaches of the catchment, which joins the Mackenzie; and the Dawson River in the south of the catchment, which also joins the Mackenzie to form the Fitzroy River. Agriculture is the major land use in the catchment; this is mostly grazing but also includes large areas of cropping, forestry and horticulture. The Fitzroy catchment also contains a diverse array of wetlands, waterways, floodplains and lagoon systems. It includes a number of urban centres, including Rockhampton and Emerald, and the area is known for mining.

Land uses in the Fitzroy catchment

The main land uses are grazing (80%), forestry (6%), and nature conservation (6%).



2025 water quality targets and priorities

End-of-catchment anthropogenic load reductions required from 2013 baseline				Pesticides
Dissolved inorganic nitrogen (DIN)	Fine sediment	Particulate phosphorus (PP)	Particulate nitrogen (PN)	
maintain current load	30% 390 kilotonnes	30% 380 tonnes	30% 640 tonnes	To protect at least 99% of aquatic species at the end of catchment

The 2025 targets aim to reduce the amounts of fine sediments, nutrients (nitrogen and phosphorus) and pesticides flowing to the reef. Where there are minimal anthropogenic pollutant loads, the aim is to maintain current water quality so there are no increases in loads. Each target for sediment and nutrients is expressed as: (a) the percentage load reduction required compared with the 2013 estimated load of each pollutant from the catchment; and (b) the load reductions required in tonnes. Progress made since 2013 will count towards these targets. [Previously reported](#) progress between 2009 and 2013 has already been accounted for when setting the targets. The pesticide target aims to ensure that concentrations of pesticides at the end of each catchment are low enough that 99% of aquatic species are protected. The targets are ecologically relevant for the Great Barrier Reef, and are necessary to ensure that broadscale land uses have no detrimental effect on the reef's health and resilience.

A high percentage reduction target may not necessarily mean it is the highest priority. The priorities (ranked by colour) reflect the relative risk assessment priorities for water quality improvement, based on an independent report, the [2017 Scientific Consensus Statement](#). The priorities reflect scientific assessment of the likely risks of pollutants damaging coastal and marine ecosystems.

Water quality relative priority

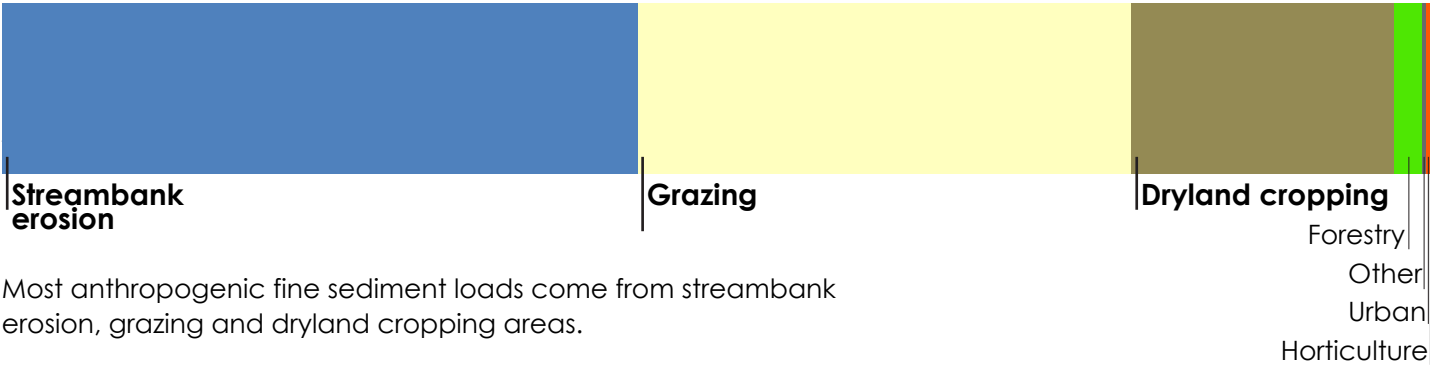


Modelled water quality pollutant loads

The Fitzroy has minimal anthropogenic loads of dissolved inorganic nitrogen.

The Fitzroy catchment contributes the largest loads of anthropogenic fine sediment in the region, and is the second biggest contributor of the 35 catchments that drain to the Great Barrier Reef. Most of the sediment comes from grazing lands, and includes gully and streambank erosion.

Fine sediment



Most anthropogenic fine sediment loads come from streambank erosion, grazing and dryland cropping areas.

Types of sediment erosion



Most sediment erosion comes from streambanks and gullies in the Fitzroy catchment.