

# Boyne catchment water quality targets

## Catchment profile

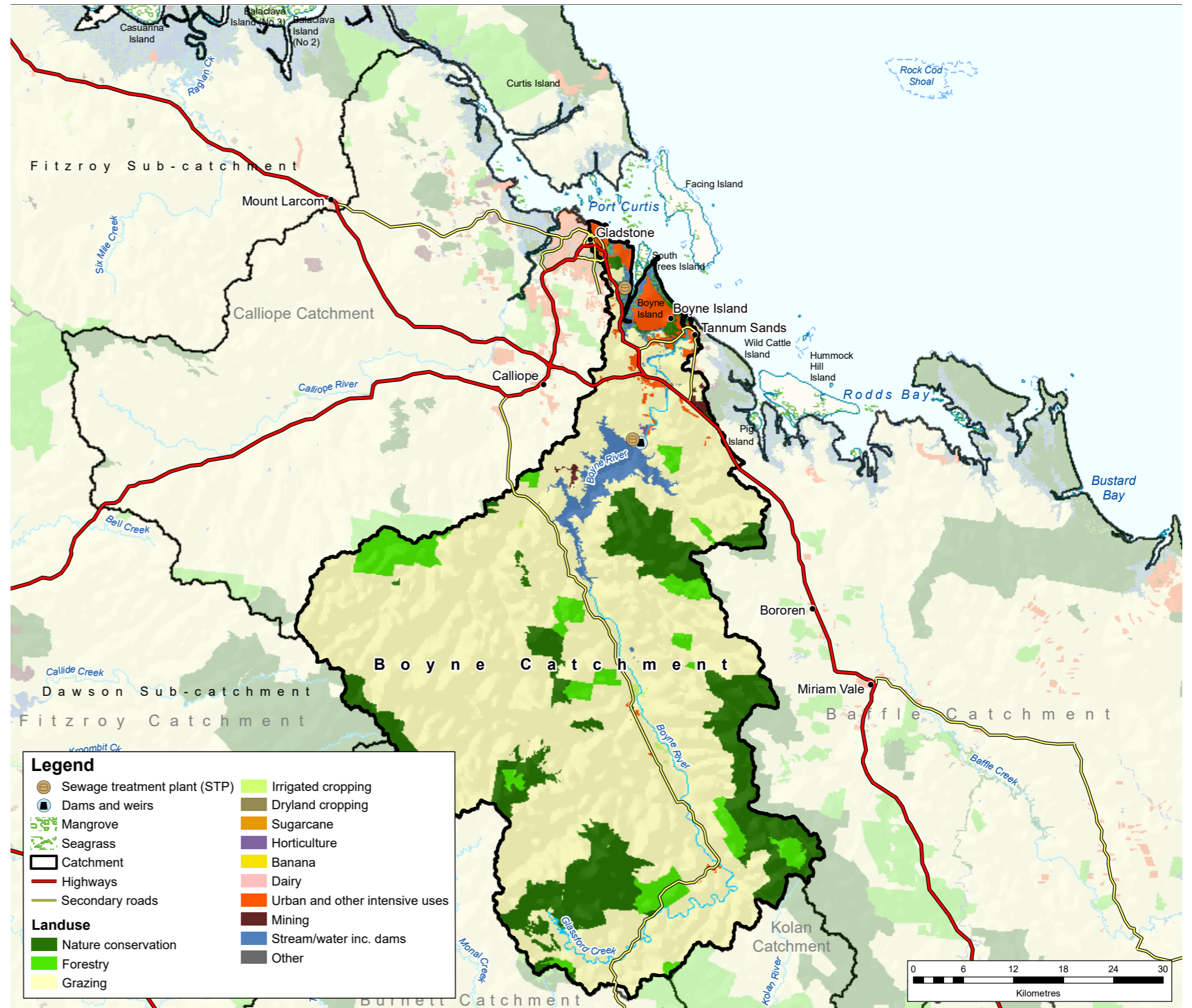
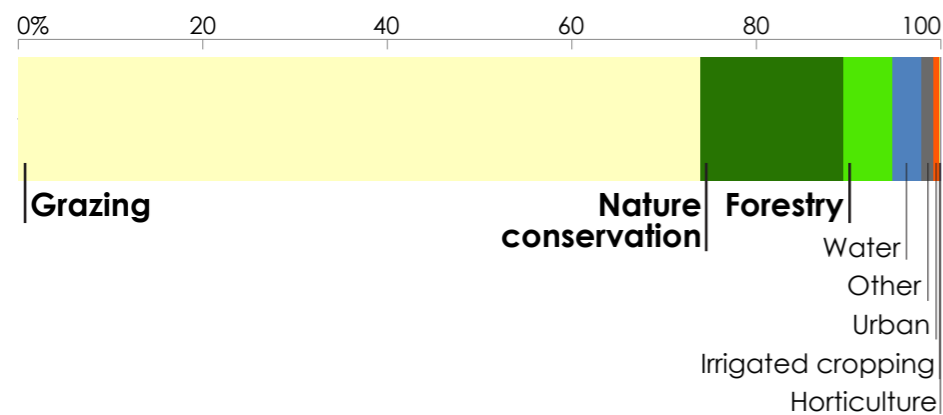
Under the Reef 2050 Water Quality Improvement Plan, water quality targets have been set for each catchment that drains to the Great Barrier Reef. These targets (given over the page) consider land use and pollutant loads from each catchment.

The Boyne catchment covers 2496 km<sup>2</sup> (2% of the Fitzroy region). Rainfall averages 894 mm a year, which results in river discharges to the coast of about 314 GL each year.

The Boyne catchment is the southernmost coastal catchment in the Fitzroy region. The headwaters of the Boyne River rise in the Bobby Range, within the Great Dividing Range. The river descends from the western slopes of the range and flows generally north-east. The river enters Lake Awoonga, the major water source for the Gladstone region. The mouth of the Boyne River is south of the main urban centre, Gladstone, and discharges to the Port Curtis area and the Great Barrier Reef Marine Park. Land use is dominated by grazing with very small amounts of horticulture. The coastal zone surrounding the city of Gladstone is an important industrial area including an international port facility within Port Curtis and a prominent heavy industrial strip.

## Land uses in the Boyne catchment

The main land uses are grazing (74%), nature conservation (16%), and forestry (5%).



## 2025 water quality targets and priorities

### End-of-catchment anthropogenic load reductions required from 2013 baseline

Dissolved inorganic nitrogen (DIN)	Fine sediment	Particulate phosphorus (PP)	Particulate nitrogen (PN)
maintain current load	<b>40%</b> 6 kilotonnes	<b>40%</b> 5 tonnes	<b>40%</b> 9 tonnes

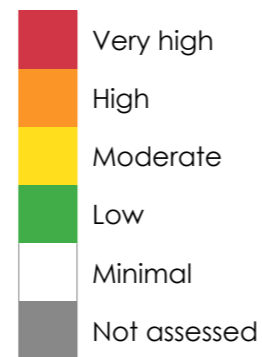
The 2025 targets aim to reduce the amounts of fine sediments, nutrients (nitrogen and phosphorus) and pesticides flowing to the reef. Where there are minimal anthropogenic pollutant loads, the aim is to maintain current water quality so there are no increases in loads. Each target for sediment and nutrients 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.

### Pesticides

To protect at least **99%** of aquatic species at the end of catchment

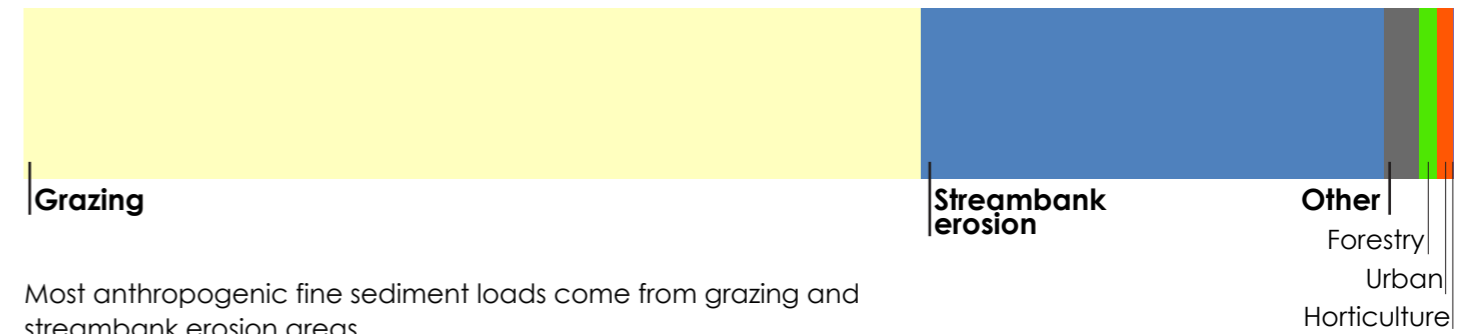
### Water quality relative priority



## Modelled water quality pollutant loads

The Boyne catchment has minimal loads of anthropogenic dissolved inorganic nitrogen and small loads of fine sediment.

### Fine sediment



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

### Types of sediment erosion



Most sediment erosion comes from hillslopes and streambanks in the Boyne catchment.



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