

# BURDEKIN REGION

## Burdekin catchment water quality targets

### Catchment profile

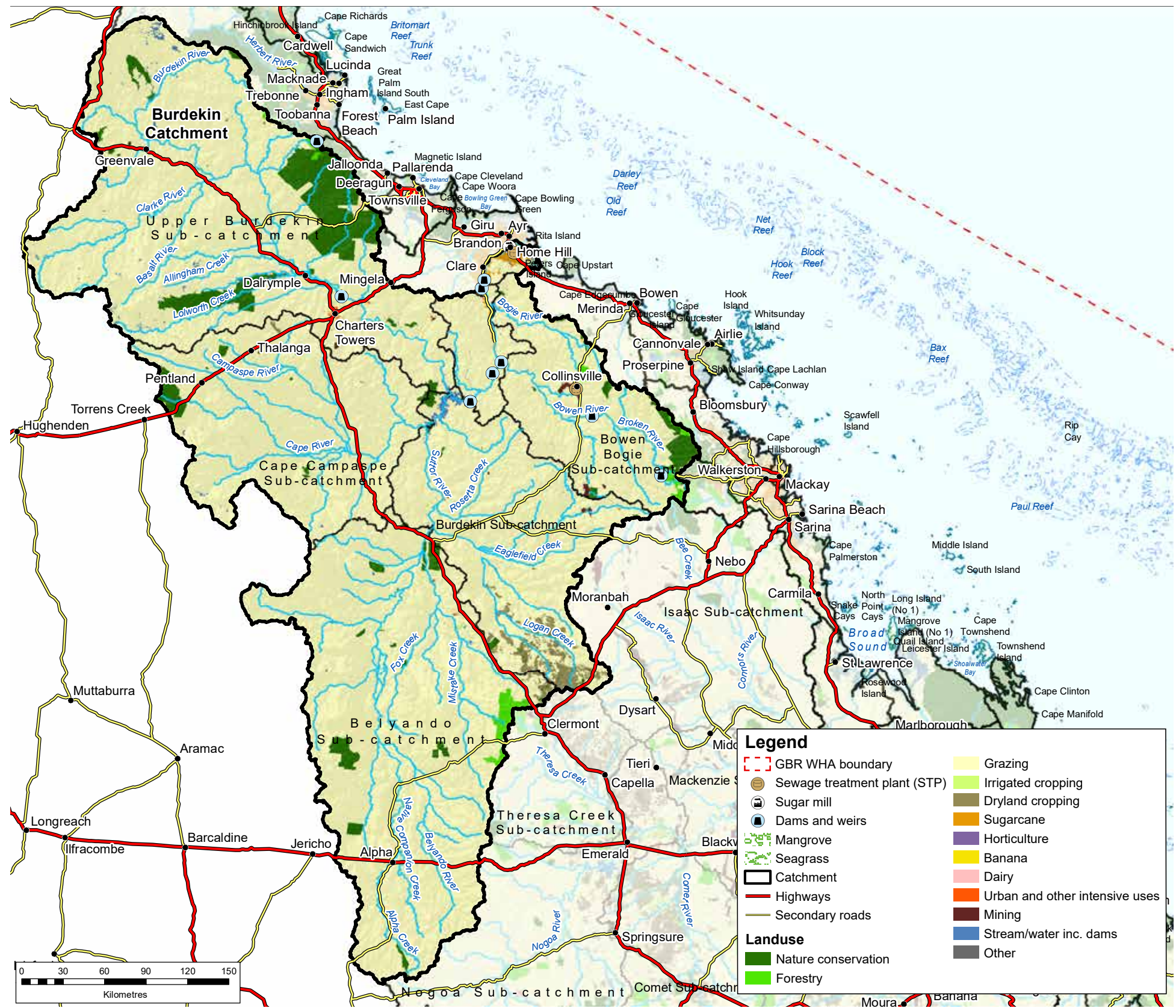
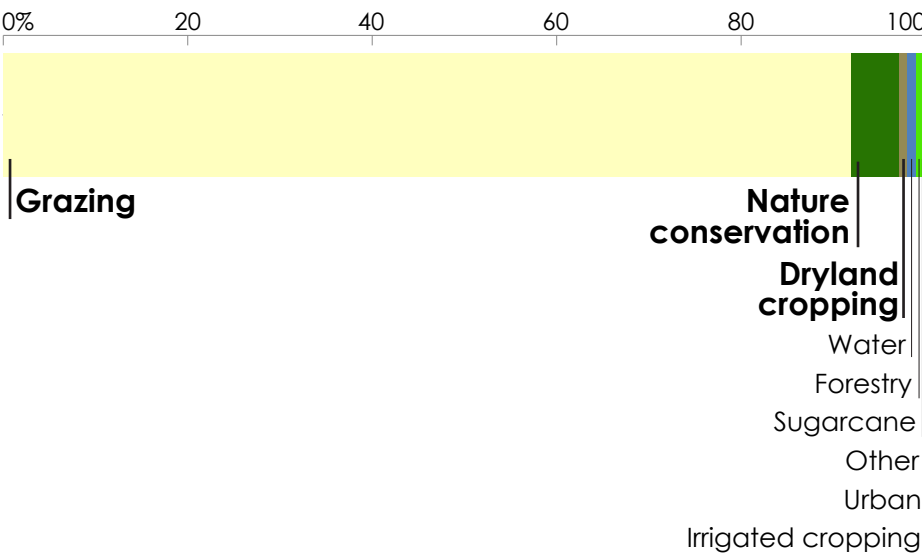
Under the Reef 2050 Water Quality Improvement Plan, water quality targets have been set for each catchment that drains to the Great Barrier Reef. These targets (given over the page) consider land use and pollutant loads from each catchment.

The Burdekin catchment covers 130,120 km<sup>2</sup> (93% of the Burdekin region). Rainfall averages 633 mm a year, which results in river discharges to the coast of about 9234 GL each year.

The extensive area of the Burdekin catchment is divided up into five major sub-catchments. The extent of the Burdekin catchment ranges from the upper tributaries of the Burdekin River in the north (behind the coastal ranges north-west of Townsville), to the west and south-westerly reaches of the Cape and Belyando river sub-catchments and the southernmost reaches of the Suttor and Bowen rivers sub-catchments. With the exception of the Bowen River, the Burdekin River sub-catchments converge above the Burdekin Dam to form Dalrymple Lake. Below the dam, the Burdekin River is met by the Bowen River, and then flows through the Lower Burdekin floodplains and Burdekin delta to the coast. The catchment area is mostly used for agricultural purposes, principally grazing but with some intensive sugarcane in the floodplains. There are two urban centres, Ayr and Home Hill, in the lower reaches and wetlands along the coast.

### Land uses in the Burdekin catchment

The main land uses are grazing (92%), nature conservation (5%), and dryland cropping (1%).





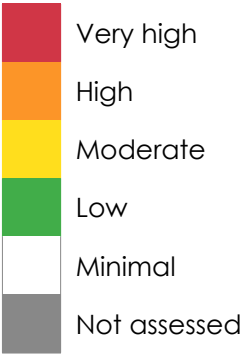
2025 water quality targets and priorities

End-of-catchment anthropogenic load reductions required from 2013 baseline				Pesticides
Dissolved inorganic nitrogen (DIN)	Fine sediment	Particulate phosphorus (PP)	Particulate nitrogen (PN)	
60% 100 tonnes	30% 840 kilotonnes	30% 440 tonnes	30% 720 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. 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 Burdekin catchment is the second largest contributor of anthropogenic dissolved inorganic nitrogen loads in the region, and is one of the five highest contributors of the 35 catchments that drain to the Great Barrier Reef. Most dissolved inorganic nitrogen comes from sugarcane.

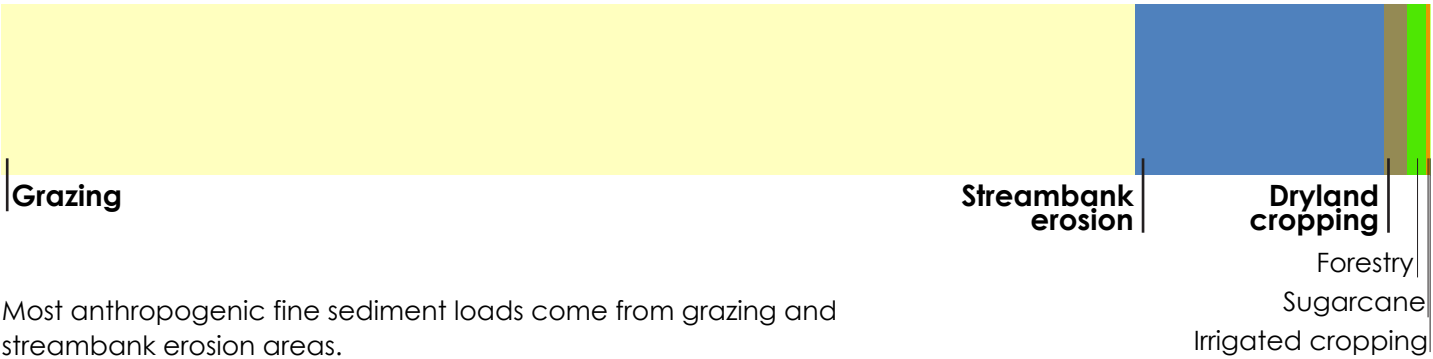
The Burdekin catchment is the largest contributor of anthropogenic fine sediment loads of the 35 catchments that drain to the Great Barrier Reef. It delivers more than double the loads of any other region. Most comes from gully erosion in grazing areas. Independent sediment-tracing studies indicate that the Bowen and Upper Burdekin sub-catchments have sediment erosion rates that are much greater than the long-term natural geological rates: 7.5 times greater in the Bowen, and 3.6 times greater in the Upper Burdekin.

Dissolved inorganic nitrogen



Most anthropogenic dissolved inorganic nitrogen (DIN) loads come from sugarcane, dryland cropping and irrigated cropping areas.

Fine sediment



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

Types of sediment erosion



Most sediment erosion comes from gullies and hillslopes in the Burdekin catchment.

