

WET TROPICS REGION

Barron catchment water quality targets

Catchment profile

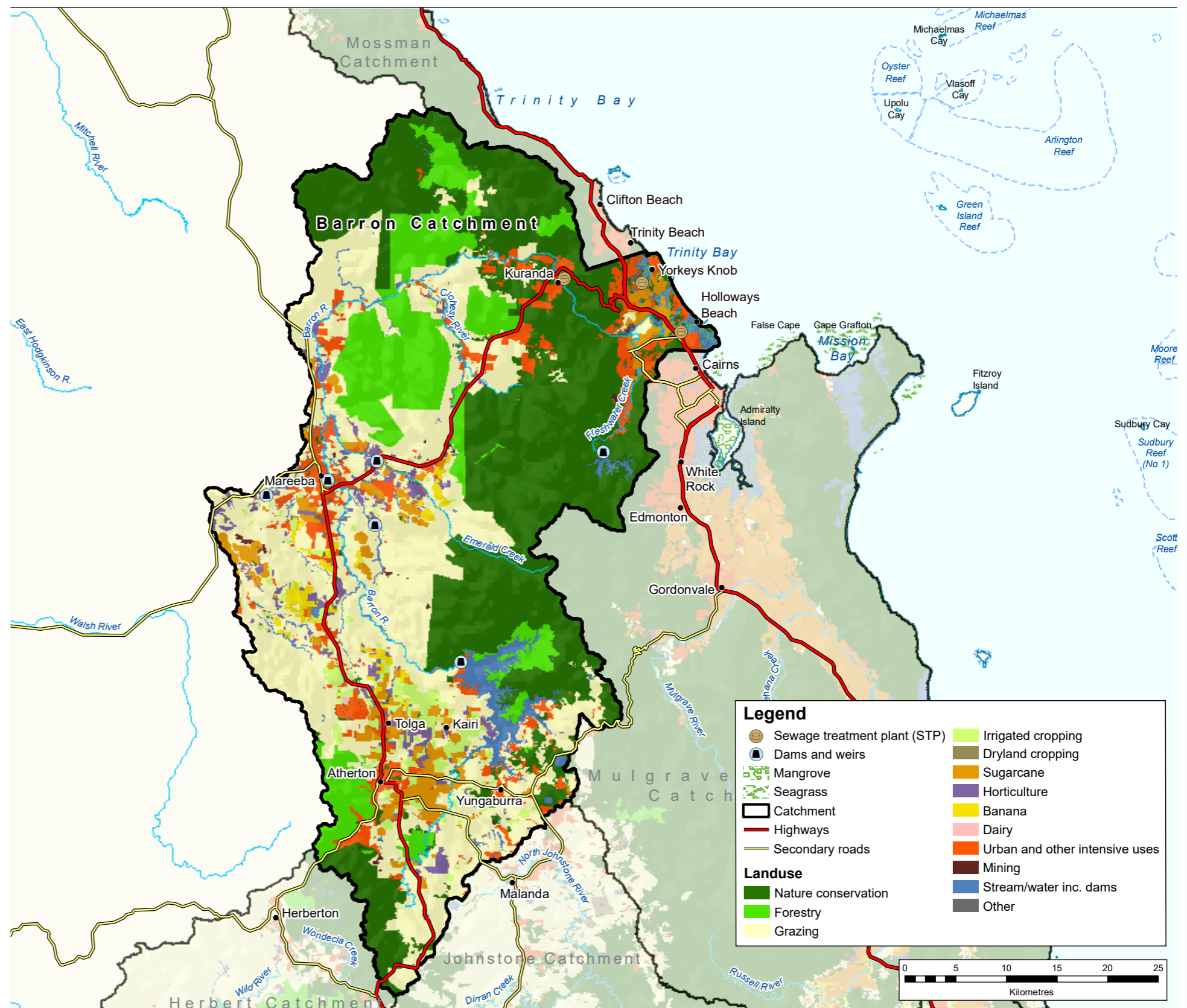
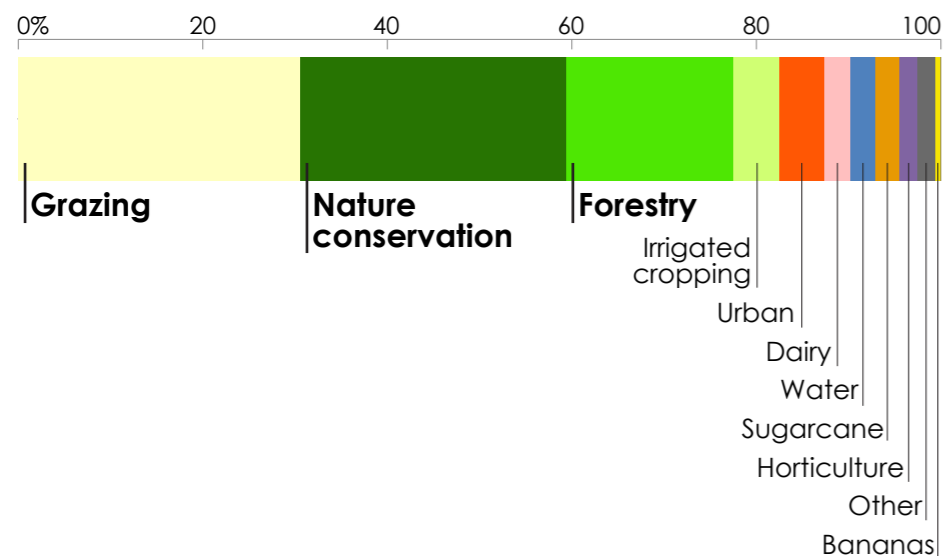
Under the Reef 2050 Water Quality Improvement Plan, water quality targets have been set for each catchment that drains to the Great Barrier Reef. These targets (given over the page) consider land use and pollutant loads from each catchment.

The Barron catchment covers 2188 km² (10% of the Wet Tropics region). Rainfall averages 1442 mm a year, which results in river discharges to the coast of about 879 GL each year.

The Barron catchment is located in the central section of the Wet Tropics region and lies largely inland, with only a small coastal fringe. The catchment is divided into two main sections, the upper reaches in the Atherton Tablelands, above the Barron Falls, and the lower reaches in the narrow coastal plain. The Tablelands has a large catchment area comprising numerous sub-catchments that flow into the Barron River and is a major agricultural region. Other major waterways in the Barron catchment include Lake Tinaroo, Lake Morris and Freshwater Creek, which feeds into the Barron River below the Barron Falls. The lower reaches of the Barron River cross to the coast north of Cairns, and consists principally of urban and agricultural (grazing and sugarcane) land use.

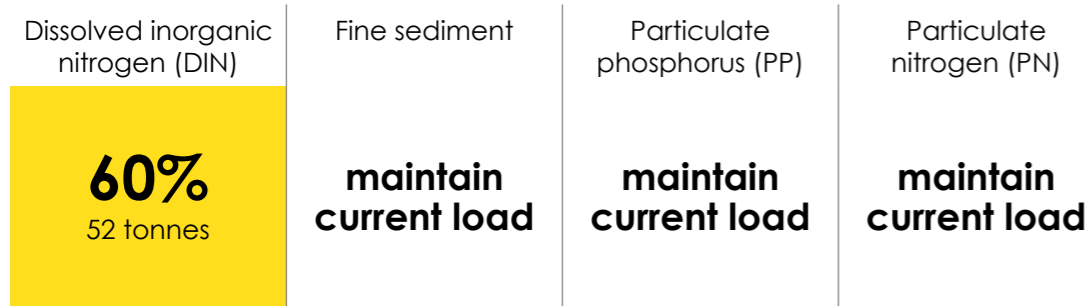
Land uses in the Barron catchment

The main land uses are grazing (31%), nature conservation (29%), and forestry (18%).



2025 water quality targets and priorities

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



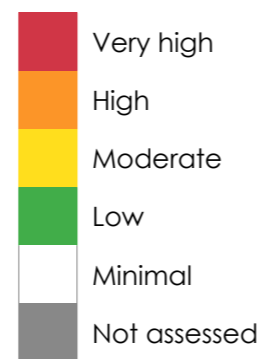
The 2025 targets aim to reduce the amounts of fine sediments, nutrients (nitrogen and phosphorus) and pesticides flowing to the reef. Where there are minimal anthropogenic pollutant loads, the aim is to maintain current water quality so there are no increases in loads. Each target for sediment and nutrients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

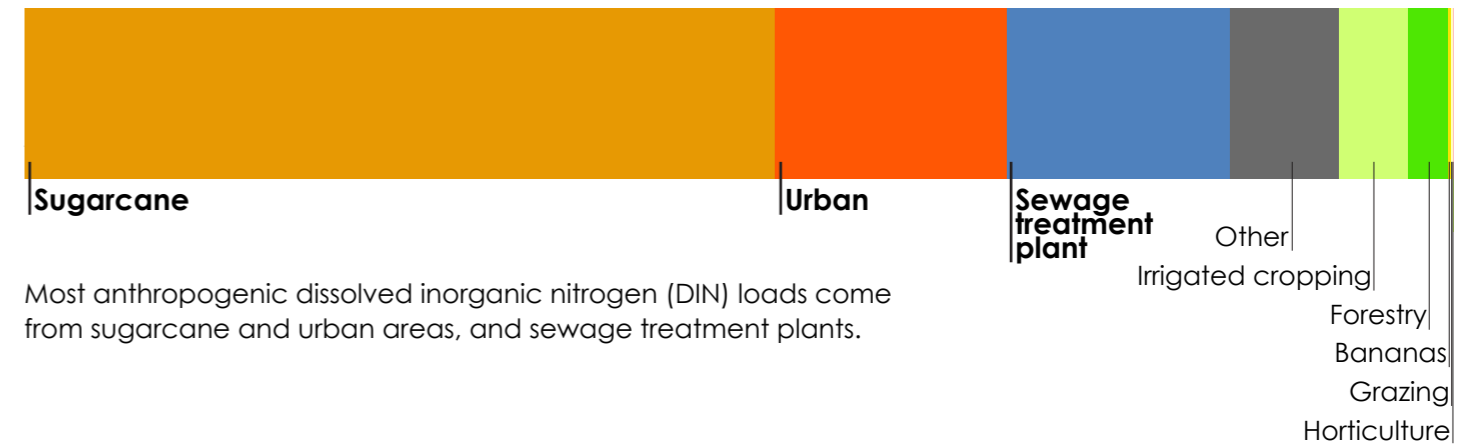
Water quality relative priority



Modelled water quality pollutant loads

The Barron catchment has minimal anthropogenic fine sediment loads flowing to the coast. Independent sediment-tracing studies have indicated the long-term sediment yields are similar to pre-development rates. The aim is to reduce dissolved inorganic nitrogen loads, most of which come from sugarcane.

Dissolved inorganic nitrogen



Most anthropogenic dissolved inorganic nitrogen (DIN) loads come from sugarcane and urban areas, and sewage treatment plants.

