BURNETT MARY REGION

Kolan catchment water quality targets

Catchment profile

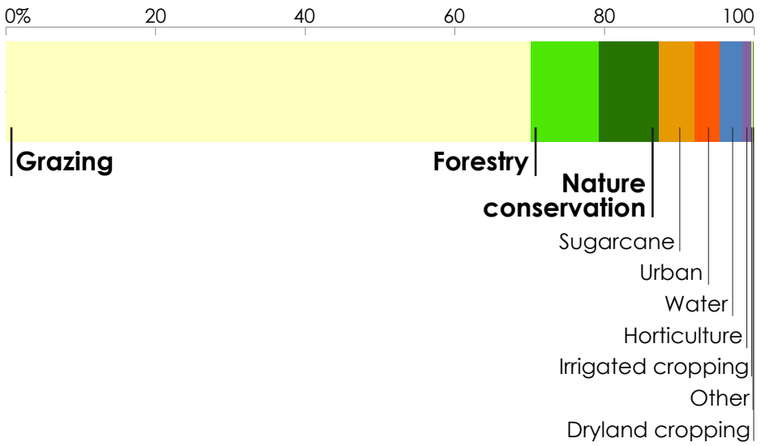
Under the Reef 2050 Water Quality Improvement Plan, water quality targets have been set for each catchment that drains to the Great Barrier Reef. These targets (given over the page) consider land use and pollutant loads from each catchment.

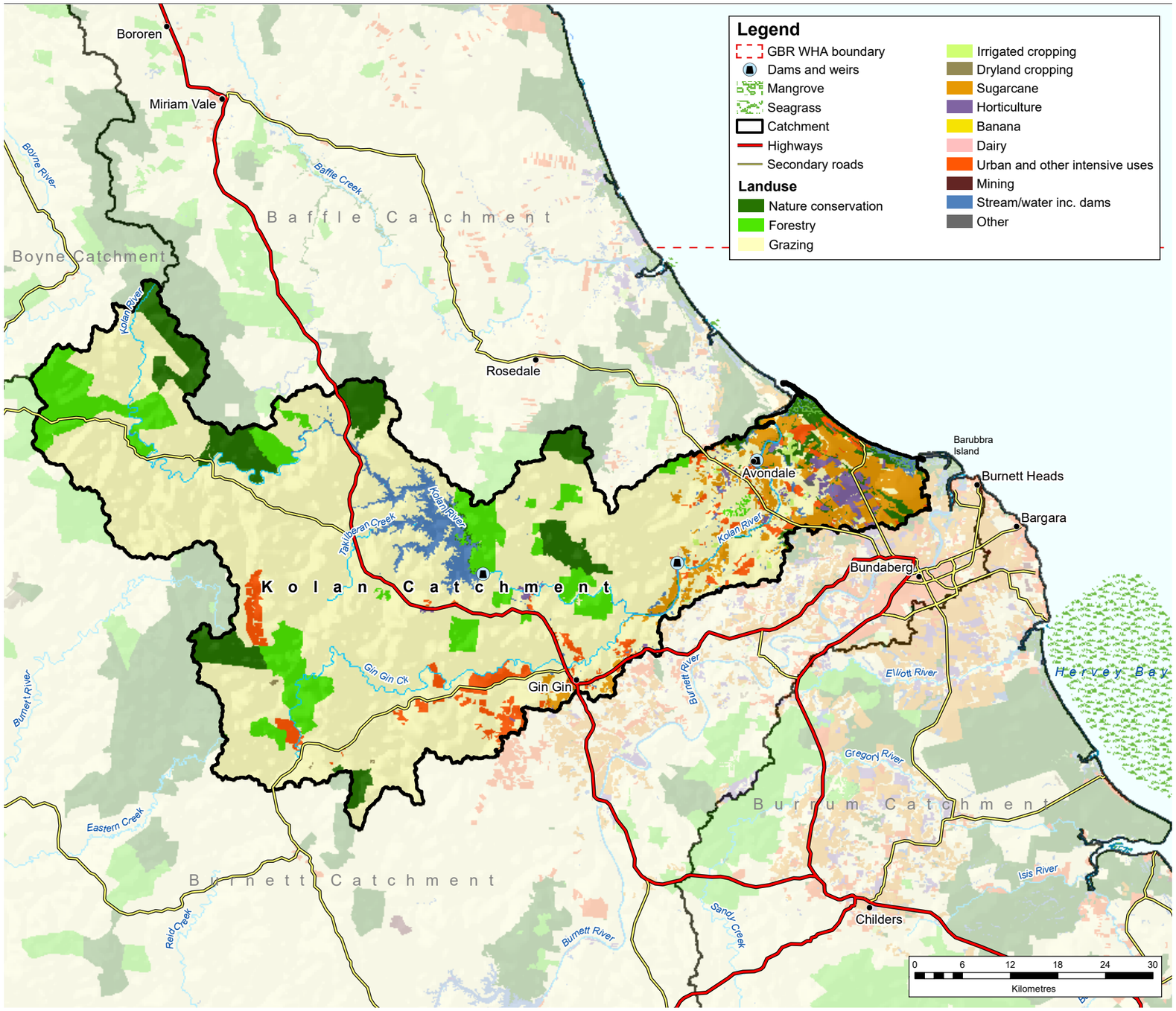
The Kolan catchment covers 2901 km^2 (5% of the Burnett Mary region). Rainfall averages 901 mm a year, which results in river discharges to the coast of about 312 GL each year.

The Kolan is the smallest of the five major catchments in the Burnett Mary region. The bulk of the catchment lies inland, and there is just one main waterway, the Kolan River, which discharges to receiving waters of the Great Sandy Marine Park. The waters of the upper Kolan and of a few other sub-catchments are contained in Lake Monduran by the Fred Haigh Dam. The majority of this inland region is used for grazing, with smaller areas set aside for conservation and forestry. Below the dam, the main channel of the Kolan River continues to the coast and is met by a number of smaller sub-catchments draining the eastern section of the catchment area, where agricultural land use for sugarcane and horticulture is more prominent.

Land uses in the Kolan catchment

The main land uses are grazing (70%), forestry (9%), and nature conservation (8%).





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)	Pesticides
50% 34 tonnes	**20%** 6 kilotonnes	**20%** 5 tonnes	**20%** 14 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.

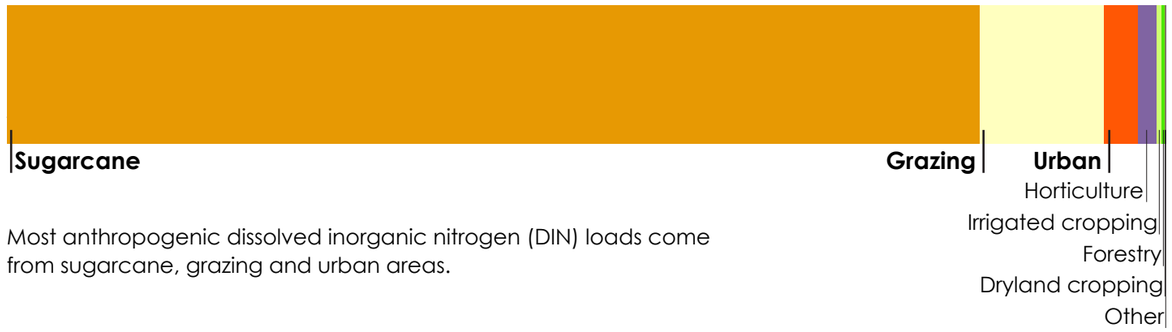
Water quality relative priority

- Very high
- High
- Moderate
- Low
- Minimal
- Not assessed

Modelled water quality pollutant loads

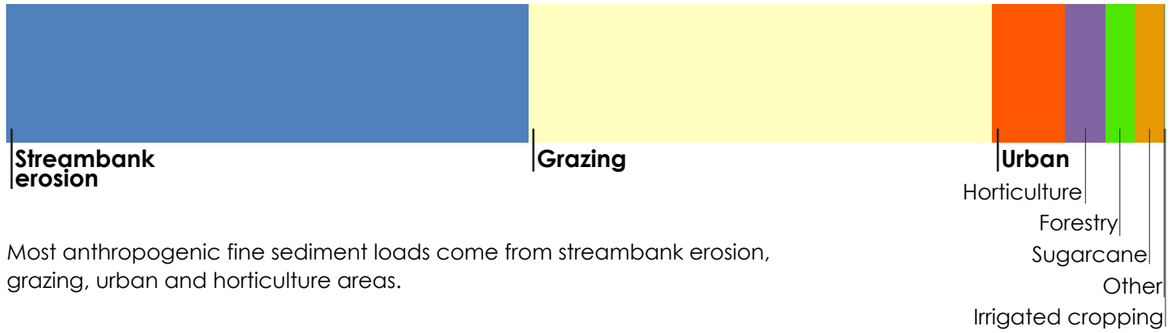
The aim is to reduce dissolved inorganic nitrogen, most of which comes from sugarcane. The Kolan catchment has small loads of anthropogenic fine sediment from grazing and streambank erosion.

Dissolved inorganic nitrogen



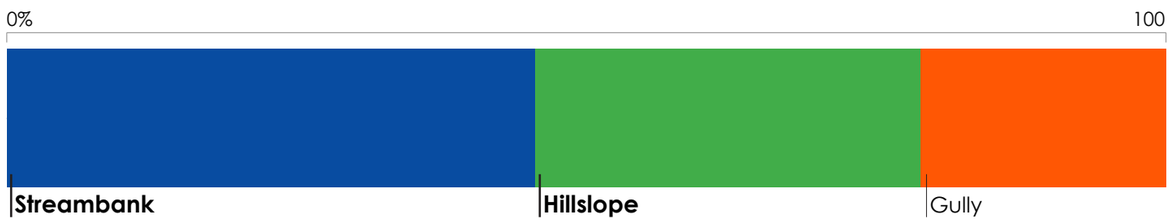
Most anthropogenic dissolved inorganic nitrogen (DIN) loads come from sugarcane, grazing and urban areas.

Fine sediment



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

Types of sediment erosion



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