BURNETT MARY REGION Mary 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 Mary catchment covers 9466 km² (18% of the Burnett Mary region). Rainfall averages 1084 mm a year, which results in river discharges to the coast of about 2892 GL each year.

The Mary catchment is the second largest catchment and has the highest population in the Burnett Mary region. The Mary River begins in the Conondale Range and flows north to the Ramsar-listed Great Sandy Strait on the coast between the mainland and Fraser Island. The Mary River and its network of tributaries capture the majority of the catchment, with two smaller waterways, Susan River and Bunya Creek, capturing the waters from the northern head of the catchment. Grazing, forestry and conservation are prevalent throughout the catchment, with smaller areas used for sugarcane and cropping in the lower reaches. The Mary catchment has the greatest area of urban land use in the Burnett Mary region, as it contains the major centres of Maryborough, Maleny, Kenilworth, Cooroy, Gympie, Kilkivan and Hervey Bay.

Land uses in the Mary catchment

The main land uses are grazing (51%), forestry (20%), and nature conservation (18%).









End-of-catchment anthropogenic load reductions required from 2013 baseline				Pesticides
Dissolved inorganic nitrogen (DIN)	Fine sediment	Particulate phosphorus (PP)	Particulate nitrogen (PN)	
50% 180 tonnes	20% 130 kilotonnes	20% 160 tonnes	20% 470 tonnes	To protect at least 99% of aquatic species at the end of catchment

Modelled water quality pollutant loads

The Mary catchment contributes the largest anthropogenic loads of dissolved inorganic nitrogen and fine sediment in the region. Most of the dissolved inorganic nitrogen comes from sugarcane, and most of the sediment from streambank erosion. The Mary is one of the five highest contributors of fine sediment of the 35 catchments that drain to the Great Barrier Reef.

Dissolved inorganic nitrogen

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

Fine sediment

l Streambank erosion

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

Types of sediment erosion

0%

Most sediment erosion comes from streambanks and hillslopes in the Mary 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 <u>2017 Scientific Consensus Statement</u>. The priorities reflect scientific assessment of the likely risks of pollutants damaging coastal and marine ecosystems.





Queensland Government

Water quality

High

Low

Minimal

Not assessed

relative priority

Very high

Moderate





