

WET TROPICS REGION

Herbert catchment water quality targets

Catchment profile

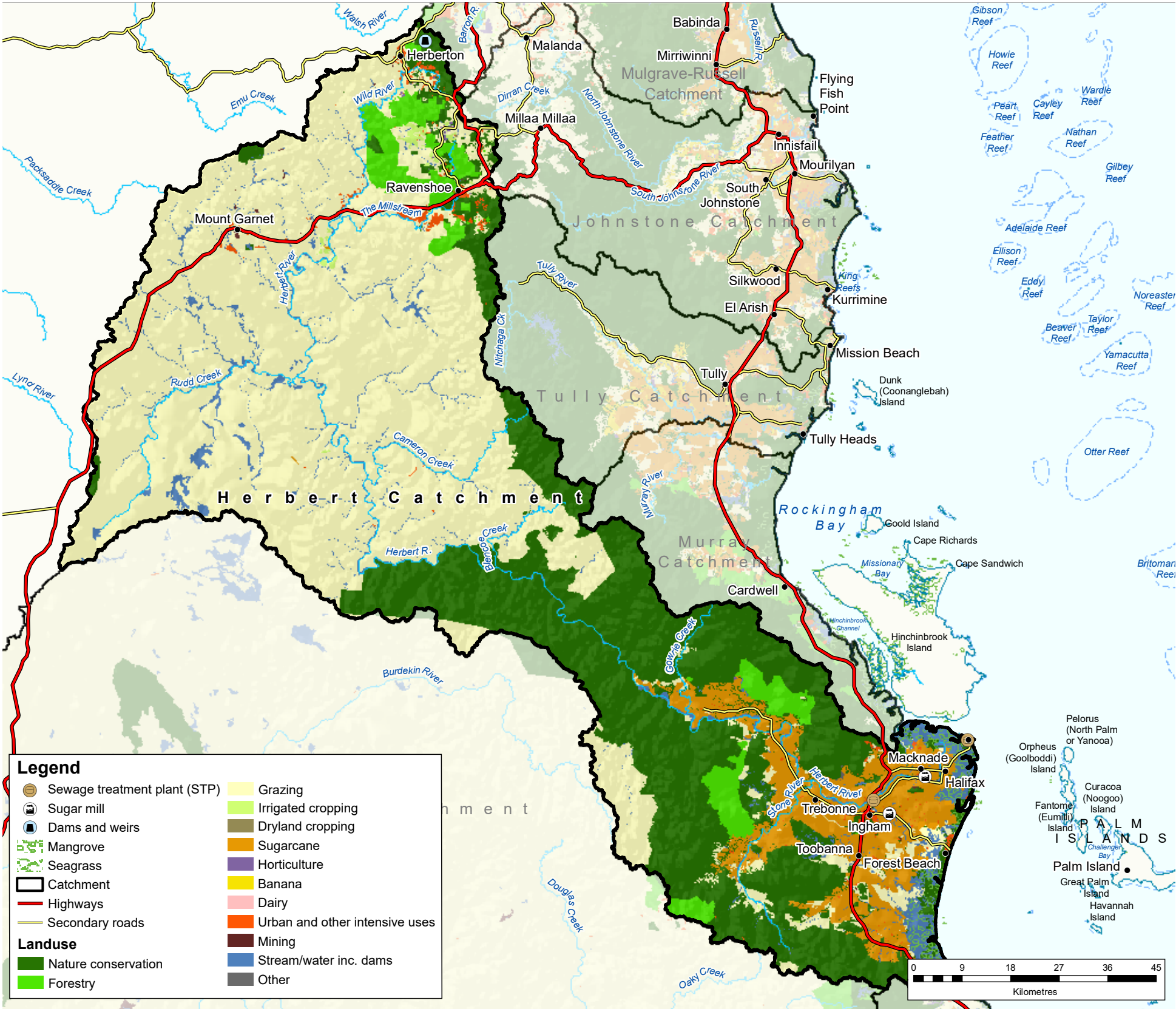
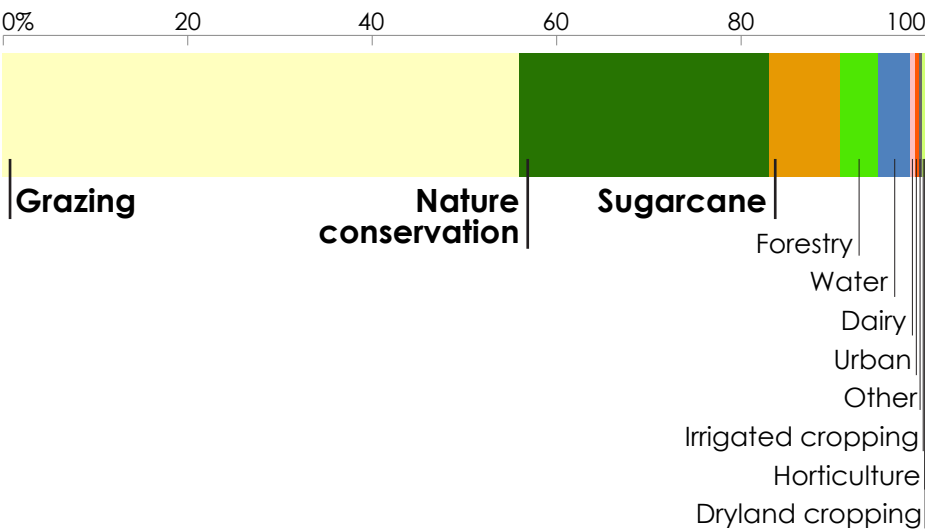
Under the Reef 2050 Water Quality Improvement Plan, water quality targets have been set for each catchment that drains to the Great Barrier Reef. These targets (given over the page) consider land use and pollutant loads from each catchment.

The Herbert catchment covers 9844 km² (45% of the Wet Tropics region). Rainfall averages 1222 mm a year, which results in river discharges to the coast of about 5081 GL each year.

The Herbert catchment is the largest catchment in the Wet Tropics region and primarily sits inland behind the Johnstone, Tully and Murray catchments. The catchment is divided into three main sections, the upper north-western section in the Atherton and Evelyn Tablelands, the mid-section that is mostly reserved for conservation, and the lower section of coastal floodplains. The Herbert River drains the majority of the catchment, with several smaller coastal creeks capturing the southern section of the floodplain. The upper section is mostly grazing, and the lower floodplains are dominated by sugarcane. There are three main urban centres, Herberton, Ravenshoe and Ingham.

Land uses in the Herbert catchment

The main land uses are grazing (56%), nature conservation (27%), and sugarcane (8%).



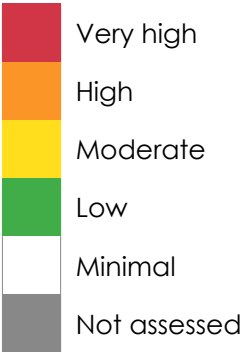
2025 water quality targets and priorities

End-of-catchment anthropogenic load reductions required from 2013 baseline				Pesticides
Dissolved inorganic nitrogen (DIN)	Fine sediment	Particulate phosphorus (PP)	Particulate nitrogen (PN)	
70% 620 tonnes	30% 99 kilotonnes	30% 57 tonnes	30% 200 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.

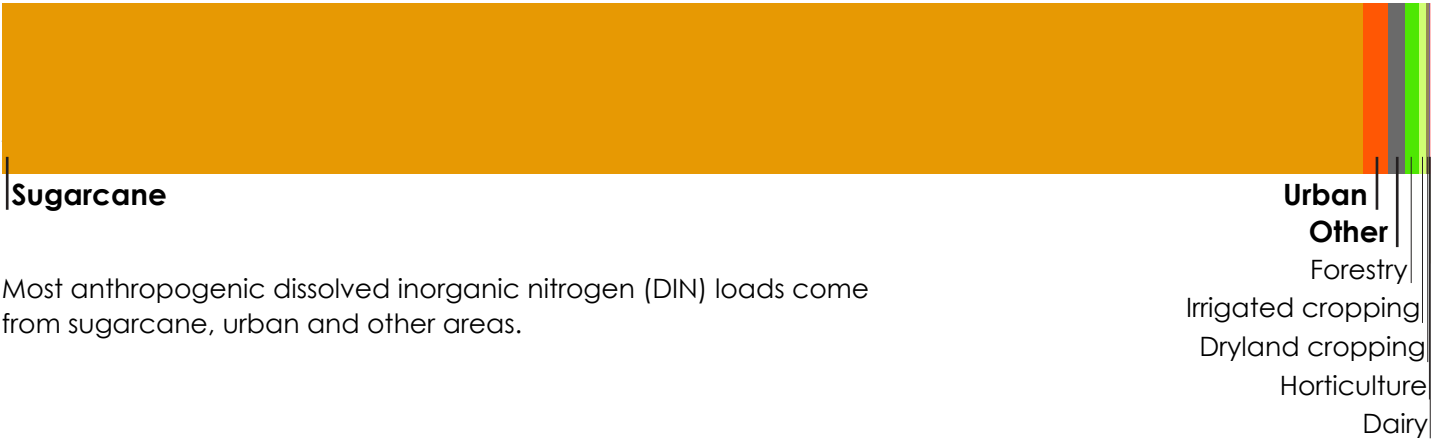
Water quality relative priority



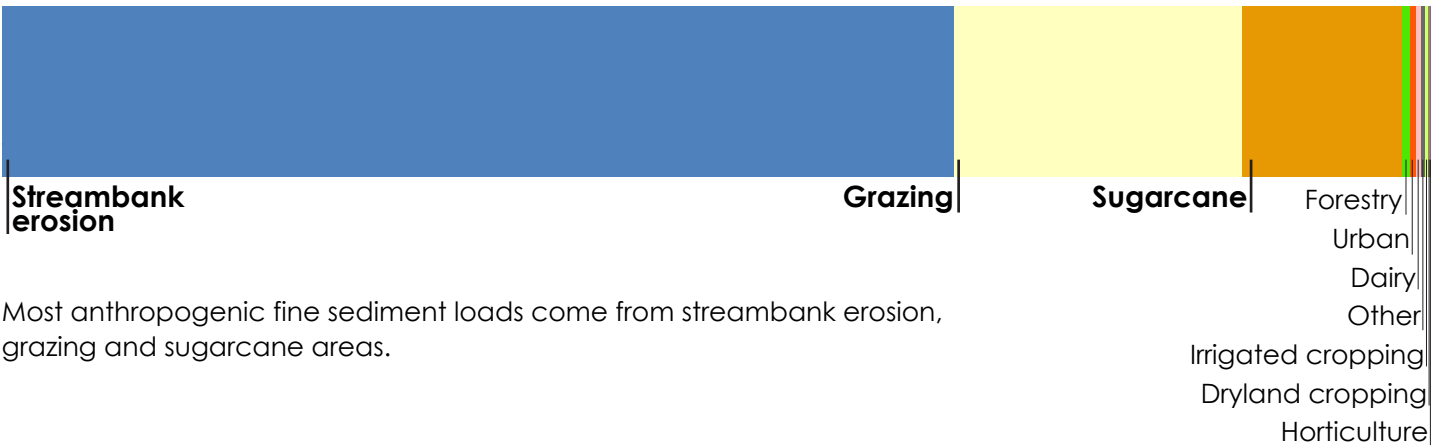
Modelled water quality pollutant loads

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

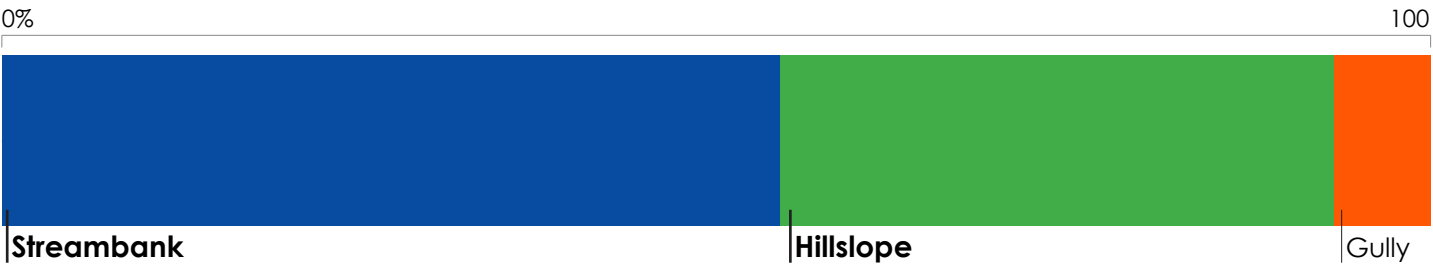
Dissolved inorganic nitrogen



Fine sediment



Types of sediment erosion



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