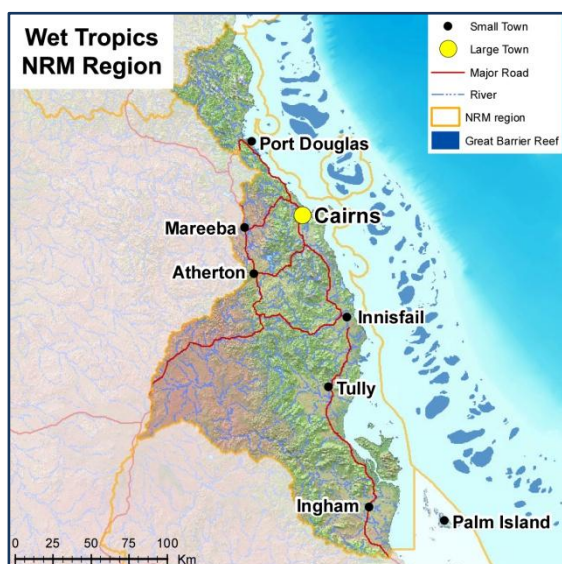


Wet Tropics region



Regional Profile

The Wet Tropics region covers 22,000 square kilometres and includes most of the Wet Tropics of Queensland World Heritage Area and parts of the Great Barrier Reef World Heritage Area. With these two significant areas, the region is one of the most biodiverse places on the planet. The tropical climate features high rainfall with 50-70 per cent falling in summer, and occasional cyclones.

Region Priorities

Due to its location, environmental assets, and land use pressures, improving the quality of water entering the Great Barrier Reef is a major focus for NRM planning and management activities across the region.

In the coastal areas of the Wet Tropics, the main crop is sugar cane (a priority industry for investment) followed by intensively grown bananas, with small areas of tree crops.

There is also some wet grazing on coastal areas; however the land used for this industry is normally unsuitable for cropping. Grazing is a major land use in the western catchment, with multi-cropping (such as potatoes, maize and peanuts) the main agricultural land use on the Tablelands.

Due to their use in the cane and banana industries, nitrogen and pesticides in runoff are an area of concern for the region, with phosphorus representing an additional risk from paw paw crops. Sediment runoff is an issue for grazing, in locations where ground cover is poor and for multicrops, prior to the break of the wet season.

Progress against Water Quality targets

By the end of year five, 1,178 farmers had been funded through the programme, equating to 182 per cent achievement of the target of funding 648 farmers through the program.

Proportion and area of industry engaged

Through the programme, 1,213 farmers were engaged, with 1,178 farmers funded to improve their land management practices. This means that across the region, over 589,000 ha (77 per cent) of the total productive area is under improved land management, over 282,000 ha has been impacted by priority practices across all industries and 741 cane farmers received training, impacting over 84,000 ha (61 per cent of total land under cane).

Key pollutants

Paddock to Reef modelling indicates that 39 per cent of dissolved inorganic nitrogen (DIN), 68 per cent of PSII herbicides and 12 per cent of sediment entering the Great Barrier Reef comes from the Wet Tropics region. Over 90 per cent of nutrients, sediments and pesticides emanate from diffuse sources in the region.

Risk to the Great Barrier Reef from these pollutants is amplified in the Wet Tropics due to the proximity to the coast of vulnerable coral reef ecosystems, the frequency and intensity of rainfall events, and the significant use of fertilisers and pesticides by intensive agriculture on the coastal floodplain.

With more than 136,000 ha of land under cane, this was seen as a priority industry during the Reef Rescue programme, because of nutrient and pesticide use and the risk of potential runoff of these pollutants.

Accordingly, approximately 68 per cent of funds were allocated to sugarcane projects, with the remaining investment going to bananas, grazing, multicrops and dairy.

Regional Funding

\$33.7 million was provided to the region from 2008 to 2013 to assist with improving land management practices, the delivery of training and extension and undertaking system repair projects.

Load reductions

Modelled load reduction estimates from the Paddock to Reef programme indicate the following load reductions for the Wet Tropics between 2009 and 2013:

- 12 per cent reduction in annual average dissolved inorganic nutrient (DIN) load.
- 12 per cent reduction in annual average sediment load.
- 11 per cent reduction in annual average particulate nitrogen load.
- 19 per cent reduction in annual average particulate phosphorus load.
- 24 per cent reduction in annual average PSII pesticide load.

Key Achievements

- Over the five years of the Reef Rescue programme, applications from 65 per cent of the region's farmers and graziers were received, resulting in 911 projects funded. More than \$18 million in Water Quality Improvement grants was distributed, with successful land holders contributing an average of 57 per cent of the total funding to projects.
- An independent assessment of the use of incentives, as provided through the Reef Rescue programme in the Wet Tropics, found that it brought forward targeted practice change by an average of 5.4 years – and also stimulated others to make changes they had not previously considered.



Case study: Horticulture – Wet Tropics (Terrain NRM)

Winner of the Horticulture Reef Rescue award, Ian Barnes and his family have been growing bananas on their Mission Beach property in the Wet Tropics region of Far North Queensland for more than 50 years.

Ian had already made significant farming improvements on his 50 hectare family farm prior to becoming involved in the Reef Rescue programme, including changing from overhead to under-tree micro sprinklers across the majority of the property.

With the help of a Reef Rescue grant in 2011 (Cyclone Yasi wiped out their entire crop and destroyed their shed in February of that year), Ian has been able to make further changes which improved both his soil and nutrient management, thereby reducing the risk of run-off from the property.

Ian has also installed a fertigation tank to enable small amounts of nutrient to be applied regularly to the crop and scheduling equipment to optimise irrigation so that water and fertiliser are not lost to deep drainage.

Ian has also reduced his herbicide application through Reef Rescue through the purchase of a side throw slasher. The slasher slashes between rows and throws grass mulch up onto the beds, meaning he is no longer spraying the inter-row with herbicide.

Ian's improved soil management and reduction in nutrient and chemical applications have not only improved the quality of water leaving his farm but they have also resulted in improved production.



Ian Barnes' banana plantation
Photo: Queensland Farmers Federation

