



Waterway Protection Benefits Dairy Farms



There are many good environmental reasons for fencing off waterways in the Corner Inlet catchment and local dairy farmers are keen to investigate the associated on-farm benefits.



Surrounded by a catchment of 2300km², Corner Inlet is a wetland of international significance with its unique environmental features recognised as assets worth protecting.

Its picturesque and well-served catchment is a drawcard for

tourists, tree and sea changers, and recreational fishing enthusiasts. It supports natural landscapes and vibrant, productive primary industries.

According to the *Corner Inlet Water Quality Improvement Plan**, agriculture constitutes just over 50% of total land use within the catchment, with dryland grazing approximately 40% and dairy 10%.

Corner Inlet is Victoria's most southerly marine embayment and is fed by a system of waterways that stretch from the Strzelecki and Hoddle Ranges, through fertile farm land and down to the coast.

The quality of water flowing from the catchment into the estuarine and marine ecosystems has a direct impact on the overall health, productivity and amenity of the inlet.

As part of the Corner Inlet Connections program, Dairy Australia, GippsDairy and the West Gippsland Catchment Management Authority share a common goal in encouraging landholders to enhance and protect their waterways and to benefit from the resulting on-farm gains.

Key Facts

Project Name

Corner Inlet Connections

Project Partners

- Dairy Australia
- GippsDairy
- West Gippsland Catchment Management Authority.

Key Outcomes

- River bank fencing and stabilisation
- Exclusion of cattle from waterways and improved stock management
- Weed reduction
- Revegetation of banks using indigenous plant species
- Improved water quality and flow.

How To Be Involved?

To obtain further information or to express interest in a waterway management project for your property, please contact the West Gippsland Catchment Management Authority
P. 1300 094 262
E. reception@wgcm.vic.gov.au



Your Levy at Work



** The development of a Water Quality Improvement Plan for Corner Inlet was led by the WGCMA in collaboration with community groups, local organisations and government agencies. The WQIP was funded by the Australian Government and released in December 2013.*

Protecting Corner Inlet's Assets and Enhancing Farm Productivity

Corner Inlet was designated a Ramsar wetland in 1982. This is a treaty that recognises the importance of the inlet's ecological values at an international level.

Corner Inlet's characteristic barrier islands, tidal mudflats and sheltered waters provide habitat for a diverse range of plants and animals, including significant populations of resident and migratory wader birds.

The 67,000 hectare Ramsar wetland is home to seagrass meadows, mangroves and saltmarsh that are a critical component of fish feeding and breeding cycles.

A major threat to seagrass, and therefore to the inlet's ecological balance, is the movement of nutrient and sediment from the surrounding catchment into local waterways.

Nutrient and sediment flow into Corner Inlet can be caused by:

- erosion on steep slopes, particularly during high rainfall events
- bank erosion and faecal contamination from cattle with access to unfenced waterways
- effluent management issues
- inappropriate use and timing of the application of fertiliser.

Gillian Hayman NRM Technical Specialist with Dairy Australia acknowledges that nutrient and sediment loss is something dairy farmers are concerned about.

"Farmers are keen to maximise production, just like any other business owner," explained Gillian.

"Reducing nutrient and sediment loss means they're keeping valuable top soil and nutrients on-farm, maintaining pasture cover and protecting the land, an investment that's proven well worth the effort."

Good land management practice and waterway stewardship are vital to a productive farm business and to improved water quality for Corner Inlet.



Aerial photo showing the extent of sediment flow (right) into Corner Inlet after a heavy rain event in 2013. Photo - Parks Victoria.

According to Matt Bowler, West Gippsland Catchment Management Authority's Delivery Team Leader, there is a strong history of waterway management work in the Corner Inlet catchment.

"Eighty-four percent of dairy farmers in the WGCMA's management region have had some river frontage fenced off. Seventy-six percent of those surveyed indicated that there had been no loss in farm productivity as a result of the works."

Proven Gains Backed by Science

To highlight both the environmental and, importantly, the on-farm benefits of good waterway management, Dairy Australia, GippsDairy and the WGCMA hosted a Riparian Field Day in Foster.

The aim of the field day was to outline both the environmental and on-farm benefits of good waterway management, and to highlight project funding and support available to get this work done.

Associate Professor Ian Rutherford, expert in waterway management with Melbourne University, discussed with local landholders the sustainability of on-farm waterway management from both a business and environmental perspective.

Dr Rutherford described how the major reason that farmers fence off their streams is to improve management of their stock, and to reduce the number of stock getting stuck in the creek. But the science demonstrates other benefits.

“Excluding cattle from a waterway, even with a five to six metre buffer, will reduce nutrient runoff by 78%, reduce turbidity and stop most of the pathogens, from faecal contamination, entering the waterway.”

“Reducing nutrient runoff, particularly nitrogen and phosphorus, is good news for water quality given that increased nutrients can result in algal blooms,” explained Dr Rutherford. “Reduced turbidity results in cleaner drinking water for cattle, which results in productivity gains.”

Dr Rutherford cited a Canadian study that found yearling cattle gained 23% more weight drinking clean water (trough) than contaminated water (pond). The water in the trough was more palatable and as a result the cattle drank and, subsequently, ate more - resulting in weight gain.

Dr Rutherford also explained to participants that, aside from excluding or restricting stock from waterways, the fencing of waterways also provides the option to protect existing vegetation and/or undertake revegetation as a way of reducing waterlogging and improve on-farm biodiversity.



Seeing is Believing

Mark Bland is one of many farmers in the Corner Inlet catchment who has incorporated this practice into his land management approach on his dairy farm east of Foster.

The property is bordered by Bennisson Creek, one of the Western Tributaries that flow to the Corner Inlet Ramsar Site. Mark has partnered with the WGCMA in a project to fence off and revegetate the length of the creek that runs through the farm.

A visit to the property as part of the field day provided local landholders with the opportunity to compare a project site currently being fenced and revegetated to a more established site. Participants in the field day gained clear insight into the practicalities and benefits of waterway rehabilitation.

“Prior to this project there was no fencing on this side of the property, it was a constant hassle trying to get cattle out of the creek,” Mark said.

As part of the project, approximately 2,500 plants per hectare will be planted in early spring 2014.

“The WGCMA has done a great job, we really appreciate it and we’re looking forward to watching it establish over time.”

Adding to the case for good waterway management, Matt Bowler explained that the majority of fish species in the region migrate through estuarine and river environments as part of feeding and breeding cycles.

“The Ramsar site supports an array of specialised ecosystems and many are influenced by the health of the inlet’s iconic seagrass meadows,” explained Matt.

“Improved water quality in rivers and creeks has been proven to reduce the algae that degrade the inlet’s seagrass habitat.”

Top left - The newly fenced-off section of Bennisson Creek on Mark Bland’s property. Some remnant trees have been maintained and each bank of the creek will be revegetated with a mix of indigenous species including upper storey trees and understory shrubs and sedges.

Left - A well-established site on the Bennisson Creek, upstream of the current project site on the Bland’s dairy farm.



Partnerships and Project Support

The field day, made possible through the Australian Government funded Corner Inlet Connections partnership program, generated expressions of interest in project work from a number of participants.

Ray and Fiona Argento, dairy farmers from Toora, attended the field day even though they were uncertain about their eligibility for the project.

“Our farm doesn’t have an official waterway running through it, although we do have a small block on Muddy Creek,” said Ray. “The dairy farm is on flat country at the base of Toora’s steep hills.”

“We have a network of drains that move water through the property, they eventually connect with Muddy Creek which then flows to the inlet. When it rains, a fair bit of water passes through our property from the hills to our north and the flow can erode the banks of our drains.”

“I wasn’t sure we’d fit the criteria for work on our place, but I was interested to hear about the project and find out what might be possible, particularly given we want to stop the erosion and keep our soil on farm.”

The field day gave Ray the opportunity to talk with Gillian Hayman and Matt Bowler about his property and he was encouraged to submit an expression of interest.

It is widely acknowledged that local farmers have been working for years to make improvements that help to protect the Corner Inlet Ramsar Site. Project funding and collaboration provides a boost to the investment made by landholders.

Landcare projects, CORE4 and GipRip have successfully facilitated on ground works in the past. Many public and private landholders have annual fencing and revegetation programs and for some it forms part of a more formal whole-farm plan.

Dairy Australia’s Gillian Hayman urges farmers across the Corner Inlet catchment to speak with the WGCMA about partnership projects and to explore funding eligibility.

“Directing funds to projects that provide production and environmental gains makes economic and practical sense,” Gillian adds. “Programs like these are a great opportunity to gain on-farm advice and address those more difficult or large scale projects.”

For further information regarding on-farm waterway management and funding available through the WGCMA, please call 1300 094 262 or email reception@wgcm.vic.gov.au.

Corner Inlet Ramsar Site

Corner Inlet was designated a Ramsar wetland in 1982 with the importance of its ecological values recognised at an international level.

The 67,000ha Ramsar wetland is internationally significant for its tidal mudflat system and as a wetland enclosed by barrier island formations.

From Woodside to Wilsons Promontory, the marine and coastal parks of Corner Inlet and Nooramunga provide vital habitat for over 30,000 resident and tens of thousands of migratory wader birds.

The inlet has the most southerly occurrence of White Mangrove in the world and supports Victoria’s largest area of the rare Broad-leaved seagrass (*P. australis*).

Corner Inlet Catchment

With a catchment area of 2300km², Corner Inlet is fed by a system of waterways stretching from the Strzelecki and Hoddle Ranges, through fertile countryside and down to the coast.

The catchment supports natural landscapes and vibrant primary industries and is a major drawcard for tourists and recreational fishing.

Photo - The lower Agnes River, a well-established example of waterway protection.