

A symbol of stewardship in sustainability

COUNCIL NAME

Nambucca Valley Council

WEB ADDRESS

nambucca.nsw.gov.au

SIZE

1,491 square kilometres

POPULATION

19,000

FUNDING PROGRAM

Increasing Resilience to Climate Change

Overview

A powerhouse of simplicity and steel, the windmill is an icon of the Australian landscape. Today, this ancient technology is helping Nambucca Valley Council to address the contemporary challenge of climate change.

Dawkins Park, and the lake which sits at its heart, is a central feature of the small town of Macksville on the Nambucca River. The lake was in bad shape following long periods of dry weather, extreme heat and the over-abundance of White Ibis.

With the help of funding from the NSW Government's Increasing Resilience to Climate Change program and NSW Clubs, Council has improved the lake's water quality and created learning opportunities that engage young people in the story of adaptation.

Background

Nambucca Valley Council's [map of future climate risks](#) has found rainfall and heat will become more intense and unpredictable and water availability more variable, placing ecosystems and infrastructure under stress.

The 18-metre windmill that stands sentinel over Dawkins Park is not just a renewable energy source that improves water quality. It also serves as a symbol and focal point for Nambucca Valley Council's vision to transform the park into an environmental and educational precinct that builds skills and knowledge to help the local community to adapt.

Implementation

In 2017, Council commenced a management program to reduce the attraction of Dawkins Park as habitat for the Australian White Ibis. But the excessive numbers of birds had left many problems in their wake, including poor water quality, degraded vegetation and an unpleasant odour.

One part of the solution is Dawkins Park's windmill, which now pumps water up to 10 litres per second through a 'raingarden' for biofiltration. This reduces the problem of stagnant water, while plants around the pond form a defensive barrier against unwanted nutrients and pollutants that get washed off roads and lawn areas.

The windmill is also a unique learning tool that is increasing community and student stewardship. Council partnered with Southern Cross University to develop an 'outdoor' classroom and a series of resources, including engaging and easy-to-read signage at learning stations around the park. Students follow a walking trail to learn about the reserve's water quality and ecology, and the impact of climate change on the local environment. This is complemented with an [interactive website](#) which provides interesting insights into local bird and wildlife.



Council also forged strong connections with local Aboriginal Elders of the Gumbaynggirr people, and other cultural knowledge holders and educators. Special resources were developed to share Gumbaynggirr knowledge, stories and songlines.

Inquiry-based learning, problem-solving and co-design allows students to identify and predict relationships between changing weather conditions and sustainability scenarios throughout the reserve. Students are then connected to further Council resources at the Macksville library, which adjoins the site, the dedicated website or other centres of learning.

Outcomes

Despite periods of excessive heat, rainfall and algal growth, the windmill continues to turn – although the process of monitoring and managing is ongoing.

More than 115 species of birds have been spotted at the lake, and waterbirds like the Cattle egret now flock to the park to breed and roost.



Council staff enthusiastically promote the project's resources to local and regional schools. And Council continues to investigate and address water quality management in the lake to create a balanced environment which supports biodiversity and is a beautiful place for the community to enjoy.

Key Learnings

“Climate change is impacting our community in many ways – we’ve had bushfires, fish kills and five floods in the last 18 months,” says Nambucca Valley Council’s Grants and Contributions Officer, Teresa Boorer.

“We knew we needed to take a holistic view to help our community adapt to a changing climate and more unpredictable, extreme weather events. This project addresses the challenges we face holistically, and we’ve delivered a solution that cuts across many aspects of climate change.

“We also know climate adaptation will require ongoing learning and stewardship. The learning spaces we have created have been central to the project’s ongoing success.”

More information

Watch a short video, [Smart water use for a changing climate](#), or check out Council’s educational resources on the [Dawkins Park website](#).

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