

DAMS AND WATER SECURITY

COUNCIL: CAIRNS, MAREEBA, ETHERIDGE, COOK, TABLELANDS

STATE ELECTORATE: CAIRNS, BARRON RIVER, HILL, TRAEGER

FEDERAL ELECTORATE: KENNEDY, LEICHHARDT

↓ THE ISSUE

Tropical North Queensland (TNQ) has seen sustained population growth during the past 30 years underpinned by expansion of industries including agriculture, tourism, fisheries, education, health and retail. At the forefront of agricultural growth has been the Atherton Tablelands, driven by the Mareeba Dimbulah Water Supply Scheme (MDWSS) with rapid expansion in high value crops such as avocados, bananas, berries and sugarcane. Water is now 100% allocated and 80% used, with purchase prices rising more than three-fold since 2011, peaking at \$4000ML.

To address high prices and supply issues on the Tablelands, Nullinga Dam is proposed as a long-term solution for the region. A detailed business case was recently released by Building Queensland and identifies 53,000ha of land suitable for irrigation. The proposed dam site is located on the Walsh River and likely demand is estimated at 83,875ML from users surveyed. The study examined two main dam sizes yielding 58,000ML and 74,000ML with costs between \$713 million and \$1.068 billion respectively.

In addition, agriculture in areas such as the District of Lakeland and Etheridge Shire have potential to expand rapidly with high value crops such as bananas, grains, cotton and watermelons proving feasible. Water security has been a concern for a number of years and is now limiting supply.

At a time when demand for fresh Australian produce is increasing in export markets, ongoing agricultural growth on the Atherton Tableland and regions such as Lakeland is at risk. Agricultural



Artist impression of Nullinga Dam

exports are vital to Tropical North Queensland (TNQ) with the industry sector output currently valued at \$2.8 billion, constrained mainly by factors such as irrigation and access to market. Recent trade deals secured with China, Japan, Korea and Indonesia present new market access opportunities, with Cairns International Airport providing direct air access to these markets from northern Australia where agricultural exports underpin sustainable tourism flights. Urban demand also continues to increase with Cairns' population growth averaging 1.4% per annum. Combined with an estimated three million tourists visiting TNQ annually, to ensure the growing needs of the region can be met an effective and multi-faceted water supply strategy is required.

Four significant water supply and infrastructure projects are considered essential enablers for the region:

- Nullinga Dam
- Lakeland Irrigation Area Project
- Gilbert River Irrigation Scheme
- Tablelands Irrigation Project

BRIEFING NOTE SUMMARY

- At a time when demand for fresh Australian produce is increasing, ongoing agricultural growth in Tropical North Queensland is at risk.
- To cater for growing demand for water, four significant water supply and infrastructure projects are considered essential enablers for the region: Nullinga Dam, Lakeland Irrigation Area Project, Gilbert River Irrigation Scheme and Tablelands Irrigation Project.
- All four projects require bilateral commitment and shared investment (split 50:50) to facilitate environmental approvals and progress to construction stage.
- Nullinga Dam is the most advanced project and requires bilateral investment of \$854 million to unlock additional agricultural production worth more than \$200 million per annum.

Building Queensland, Detailed Business Case: Nullinga Dam and Mareeba Dimbulah Water Supply Scheme Improvements Project, June 2019
 North Queensland Market and Agricultural Supply Chain Study, May 2019
 Department of Agriculture and Fisheries, Tablelands Agricultural Profile: Mareeba, 2016
 Water Exchange: Mareeba-Dimbulah irrigation water prices, permanent trade – medium priority, accessed July 2019
<https://economy.id.com.au/cairns/population>
<https://economy.id.com.au/fnqroc/value-add-by-industry>

↓ BACKGROUND

On the back of record drought periods in Australia, water security and food security have become national policy issues. In strengthening the role of northern Australia as a food bowl, substantial feasibility work has progressed in the past three years to explore new agricultural development opportunities. With these studies continuing to progress and most coming to a close, there are now clear priorities for progressing full environmental impact assessments and construction activities. A coordinated approach to development is now required.

Nullinga Dam: The Queensland Government, through Building Queensland, recently released a detailed business case showing costs for a 74,000ML stand-alone dam at \$1.068 billion. The project will require shared State and Federal investment of \$854 million on top of industry contributions of \$213 million (based on \$2900ML price). A Queensland Department of Agriculture and Fisheries study showed agricultural output on the Tablelands grew 30% in four years to \$552 million. Nullinga Dam would unlock additional agricultural production worth around \$200 million per annum. The Queensland ALP Government has announced it would 'protect' the proposed dam site but would investigate alternative water supply solutions in preference to Nullinga Dam, stating it is too costly.

Lakeland Irrigation Area Project: Regional Development Australia FNQ&TS, through the National Water Infrastructure Development Fund (NWIDF), funded a strategic business case that investigates new water storage options to expand the Lakeland irrigation area. When constructed, the proposed dam will store 200,000ML and irrigate 8,000ha of arable land. The Federal Government has committed an additional \$10 million to further develop the business case. The project will require bilateral Government support to facilitate and coordinate the development approval processes for the dam.

Gilbert River Irrigation Scheme: Etheridge Shire Council proposes to manage water from the Gilbert Catchment general reserve and facilitate construction of an irrigation scheme along the Gilbert River, distributing water to an estimated 30,000ha of irrigable land. A detailed business case funded by the State Government's Maturing the Infrastructure Pipeline Program is currently under way and due for completion in March 2020. Preliminary modelling suggests the scheme is economically feasible, and that the area is suited to a range of irrigated crops including grains, pulses and cotton.

Tablelands Irrigation Project: The prefeasibility of the Southern Atherton Tablelands Irrigation Project has been completed and indicates a detailed

business case would cost \$2.2 million, with an additional \$5 million required for an environmental impact study. The Tableland Regional Council is seeking an investment of \$7.2 million through the National Water Infrastructure Development Fund to progress this project. The proposed development includes a 35,000ML capacity and 98.5% water reliability, and the project would facilitate a land use transition from predominantly beef cattle to higher value crops and renewable energy.

↓ NEXT STEPS

Development of the four proposed water infrastructure projects would meet a range of State and National Policy objectives:

- Expand northern Australia's agricultural productive capacity – this is nationally significant given the impact of drought on food and water security in southern Australia;
- Increase northern Australia's contribution to GDP through an increase in agricultural production;
- Diversify northern Australia's economic capabilities to facilitate investment and reduce reliance on tourism; and
- Strengthen Australia's international competitiveness through proximity to Asia.

OUR RECOMMENDATION

- That the State and Federal Governments commit to investing \$854 million as a 50:50 contribution to the construction of Nullinga Dam with \$10 million of the Federal funds going towards an environmental impact statement.
- That, subject to completion of the business cases, the Queensland Government works with the Federal Government to facilitate and coordinate the development approval processes for the Lakeland Irrigation Area Project and the Gilbert River Irrigation Scheme.
- That the Federal Government invest \$7.2 million through the National Water Infrastructure Development Fund to progress the Tablelands Irrigation Project.

ESTIMATED PROJECT COST \$861.2M

	2019-2020	2021-2022	2021-2022	2027-2031
	Environmental Approvals (Nullinga)	Planning & Design (Nullinga)*	Business case (Tablelands)	Procurement & construction (Nullinga)*
Recommended State Investment	-	\$50m	-	\$377m*
Recommended Federal Investment	\$10m	\$50m	\$7.2m	\$367m*

*staged funds to flow for Nullinga Dam from 2020-2031