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"The Northern Professionals"

September 2020 / CE Ref J3327

Australian Government Department of Agriculture, Water and the Environment
RE: Submission to Reef 2050 Long Term Sustainability Plan Review: Sep 2020

Dear Sir/ Madam

This is to add my concern to that of many others that the Reef 2050 Plan was developed based on poor and inaccurate information resulting in policies that are causing substantial unnecessary damage to the economy of the Australian Reef Regions.

Others will be able to present information to assist the review come to informed conclusions on the scientific questions of the degree to which a range of industry activity is or is not a threat to the reef. Others will be submitting information about the degree to which The Reef 2050 Plan is impacting on the economy.

The main purpose of this submission to the review is to provide the following paper, **The Economic Value of Great Barrier Reef Tourism to Australia's "Reef Regions" (Revision 2).**

Much of the past economic justification of actions to protect the reef has been based on the tourism value of the reef. Unfortunately, much of the past comment has been based portraying the whole value of tourism expenditure in the Reef Regions as the value of tourism related to the reef. (See Deloitte Access Economics Paper, "At What Price? The Economic, Social and Iconic Value of the Great Barrier Reef".)

The paper sets out how only part of this portrayed value is actually due to the reef. It also serves to put reef tourism in the context of the total economy of the Reef Regions and the value of industries affected by some of the policies coming out of The Reef 2050 Plan.

Also attached to this submission is further information about the **Role and Importance of Cairns Seaport in Development of Northern Australia**.

For further background on Cummings Economics, its experience and key role in the Reef Regions and northern Australia, see https://www.cummings.net.au/

Yours sincerely

W S Cummings

Principal

THE ECONOMIC VALUE OF GREAT BARRIER REEF TOURISM TO AUSTRALIA'S "REEF REGIONS"

1. Introduction

The coastal regions (see Box 1) facing the Great Barrier Reef play an important role in Australia's tourism. However, it is important to recognize that not all visitor income in these regions is related to the Great Barrier Reef as an attraction.

In making decisions about actions to protect the Great Barrier Reef, it is important to get the science right about real impacts on the reef. In economic terms, it is also important to get the economic value of the Great Barrier Reef into perspective of the total economy of the area and particularly, the value of industries that might be affected by constraints aimed at protecting the reef.

The following particularly addresses the two questions of:

- What is the "real" economic value of Great Barrier Reef tourism;
- How this value fits into the regional economies and compares with other major industries in the area, especially those earning export income.

2. Australia's "Reef Regions" Tourism

A major apparent shortcoming of the Deloitte Access Economics Paper, "At What Price? The Economic, Social and Iconic Value of the Great Barrier Reef" based on 2015-16 data is that the Deloitte's Paper uses the total value of tourism (visitor expenditure) in the Reef Regions as the basis for calculation of economic impact. This assumes that all visits to the Reef Regions are attributable to the existence of the Great Barrier Reef.

The following table sets out the visitor statistics for the Reef Regions (**see Definition Box 1**) in 2016 and 2019.

Table 1 – Visitor Statistics, Australia's Reef Regions

	2016	**2019**
Visitor Numbers	**No. '000**	**No. '000**
International Overnight	1,437	1,374
Domestic Overnight	6,378	7,697
Total Overnight	**7,815**	**9,071**
Domestic Day Trips	7,135	9,102
Visitor Nights	**38,315**	**44,341**
Expenditure	**$M**	**$M**
International Overnight	$1,482m	$1,390m
Domestic Overnight	$4,672m	$5,553m
Total Overnight	**$6,154m**	**$6,943m**
Day Trips	$912m	$1,384m
Overall Total	**$7,066m**	**$8,327m**
Overnight Visitors Average Spend Per Trip	**$**	**$**
International Overnight	$1,031	$1,011
Domestic Overnight	$773	$722
Average Spend Per Day Trip	$128	$152

Source: Cummings Economics from Tourism Research Australia.

3. Reef Related Tourism Expenditure

The foregoing gives total visitation to Australia's Reef Regions. However, much of this visitation is not related to the reef. Visitors can be for business, work, education, visiting friends and relatives, weddings, funerals and the like. For instance, the following table gives proportion of visitation to individual Reef Regions that is not holiday related and that which is for holiday purposes.

Table 2 – Proportion of Visitors Non-Holiday & Holiday Purpose

	% Non-Holiday	% Holiday Purpose
Tropical North	37%	63%
Townsville	63%	37%
Whitsundays	32%	68%
Mackay	77%	23%
South Barrier Reef	64%	36%
Total Area	**53%**	**47%**

Source: Cummings Economics from Tourism and Events Queensland.

Thus, of the total overnight visitors to the Reef Regions of about 9 million in 2019, less than a half (about 4.2 million) were Holiday Purpose visitors.

Even among Holiday Purpose visitors, there are repeat visitors who have already been to the reef, and those with a special interest – birdwatching, sports events, bush walking, 4WD adventure and so on who often do not visit the reef during their trip.

Great Barrier Reef Marine Park Authority records give reef visitation as follows.

Table 3 – Visitor Numbers to Great Barrier Reef Marine Park

	2015-16 '000	2018-19 '000
Coral Viewing	273	220
Flights	99	98
Levy Exempt	370	381
Part Day	274	219
Full Day	1,654	1,602
Total	**2,670**	**2,520**

Source: Cummings Economics from Great Barrier Reef Marine Park Authority.

We thus have actual visitation to the reef of about 2.5 million. While the bulk are probably visitors staying overnight, it is likely they will include significant numbers of local residents on day trips. Thus, of the total overnight visitors of about 9 million and 9 million day trips generating expenditure in the region, only about 2.5 million actually visit the reef.

Clearly, the Great Barrier Reef only accounts for a proportion of total tourism expenditure generated in Australia's Reef Regions of the order $8.3bn in 2019.

4. Estimated Expenditure Generated by Reef Tourism

Figures are not readily available for actual expenditure generated by actual visitors to the Great Barrier Reef.

This includes two major elements as follows.

1) Actual expenditure on reef trips;
2) Associated expenditure by the reef visitors in the region.

Actual expenditure on reef trips will vary substantially. Most will take trips on the various ferry services offering reef trips with the bulk up around $200 an adult person. For reef fishing charters, it can be higher.

If it is assumed the average is $200 per visitor, total annual expenditure on reef trips would be of the order of $500m.

Estimating the second element poses come conceptual difficulties.

Is the expenditure associated with the trip just the expenditure of the night before and the night after or the visitor's whole trip to the region? Clearly for some, the whole of that person's trip will be dependent on the opportunity to visit the reef. For others, it will only be part of the cause of the visit.

To derive an estimate of likely expenditure attributable to the reef, the following generously assumes that the whole of the trip expenditure by visitors to the reef is attributable to the reef's existence.

The indications from previous Table 1 is that average trip expenditure to Reef Regions in 2019 was:

International Overnight Visitors $1,011

Domestic Overnight Visitors $722

Day Visitors $152

It can be argued that the fact that a number of visitors will visit more than one of the Reef Regions on their trip that the average trip expenditure will be higher than the above. It can also be argued that the type of visitor who visits the reef will have a higher than average trip expenditure.

On the basis that those taking reef trips have an expenditure rate double the overall domestic average and about 50% more than the international average (ie. $1,500), total expenditure by reef visitors would be $3.75m, i.e. about 45% the overall level of visitor expenditure.

Latest Tourism Research Australia's estimates of the contribution of tourism to Gross Regional Product (GRP) gives the following.

Table 4 – Tourism Gross Value Added Australia's Reef Regions

	$M
Whitsundays	$586m
Tropical North	$2,581m
Townsville	$780m
Mackay	$423m
Capricorn	$572m
Gladstone	$240m
Bundaberg	$333m
Total	**$5,515m**

Source: Cummings Economics from Tourism Research Australia.

Based on the above, it is estimated that addition to Gross Regional Product (GRP) will be about $6 billion.

On this basis, estimated reef related tourism impact on GRP would be of the order of $2.7bn.

5. Reef Tourism Impacts in a Wider Context

The following gives estimated Gross Regional Product of Australia's Reef Regions.

Table 5 – Estimated Gross Regional Product, Australia's Reef Regions, 2017-18

	$BN
Cairns SA4 / Far North SA3	$14.2bn
Townsville SA4	$13.3bn
Mackay SA4	$16.4bn
Central Qld SA4	$15.0bn
Bundaberg LGA	$4.3bn
Total	**$63.2bn**

Source: Cummings Economics from Economy id Estimates.

Thus, in Australia's Reef Regions, contribution of reef tourism to the area's Gross Regional Product is estimated to be about 4% of total.

Latest Australian Bureau of Statistics (ABS) for agricultural production in the region for 2018-19 gives the following.

Table 6 – Gross Value of Agricultural Production, Reef Regions NRMs. 2018-19

	$M
Cape York & Wet Tropics	$1142m
Dry Tropics	$1382m
Mackay / Whitsundays	$446m
Fitzroy Basin	$1888m
Burnett / Maryborough	$1576m
Total	**$6434m**

Source: Cummings Economics from ABS data.

In addition to the above, value at farm gate prices, agriculture involves very substantial further processing and storage, especially by sugar mills and meatworks.

Total value of agricultural production including processing and storage is likely to be of the order of $8bn. Total value of reef tourism including all visitor spending in the regions by visitors to the reef at $3.8bn is about half that of the agricultural sector.

Statistics from the Queensland Department of Mines and Energy indicates value of mineral production in the Australian Reef Regions in 2016-17 was $35.3bn. Value of reef tourism including all expenditure in the Reef Regions by those who visited the reef at $3.8bn was one-ninth that of the value of production of mining in the Reef Regions.

6. Conclusions

It is not correct to represent that the value of all visitor expenditure of about $8bn per annum in the Australian Reef Regions is generated by the Great Barrier Reef. Of all the overnight visitors to the Reef Regions (about 9 million a year) and of local day trips (also about 9 million a year), reef visits account for only about 2.5 million.

Actual expenditure on reef trips is only likely to be $0.5bn a year. That represents about 1/16th of total tourism expenditure.

Even if one makes generous assumptions that all expenditure by those who visit the reef is attributable to the reef and that average trip expenditure by those who visit the reef is about double the average of all visitors, only about 45% of total tourism expenditure could be attributed to the reef.

On this basis, total expenditure generated would be about $3.8bn and estimated contribution to Gross Regional Product about $2.7bn.

On this basis, reef tourism contributes only about 4% to the Reef Region's Gross Regional Product of over $60bn per annum.

A reef tourism expenditure of $3.8bn per annum compares with the value of agricultural industries in the Reef Regions, including processing and storage, of about $8bn per annum, ie. about half the size.

Mining production in the region, at about $35bn, has a value of about nine (9) times that of reef tourism.

The combined value of mining and agriculture in the Reef Regions is about 11 times the above generous estimates of the value of reef tourism.

Box 1 - Defining the Australia's Reef Regions

The coastal regions facing the Great Barrier Reef are comprised of tourism regions as follows.

- Tropical North based on Cairns
- Townville Region
- Whitsundays Region
- Mackay Region
- Capricorn based on Rockhampton
- Gladstone Region
- Bundaberg Region

Tourism and Events Queensland group the last three as South Barrier Reef Region.

These regions are within the east flowing river catchments that flow into the Great Barrier Reef lagoon except for the Cairns Tropical North Region that has significant area of west flowing rivers into the Gulf of Carpentaria. However, population, tourism and general economic activity in this area is low and its exclusion would affect total figures marginally.

On Australian Bureau of Statistics boundaries, the Reef Regions are defined by:

- Outback Qld Far North SA3
- Cairns SA4
- Townsville SA4
- Mackay SA4
- Central Qld SA4
- Bundaberg SA3

These regions all cover river catchments that flow into the Great Barrier Reef waters with the exception of the Outback Queensland Far North that covers an area of some rivers that flow west into the Gulf of Carpentaria. However, again population, tourism and general economic activity is very low and inclusion in the Reef Regions affects figures only marginally.

ATTACHMENT

NOTE 1:
THE ROLE & IMPORTANCE OF CAIRNS SEAPORT IN DEVELOPMENT IN NORTHERN AUSTRALIA

Northern Australia covers an area about 40% of Australia. Realities of areas and distances leads to a series of state sized regions each with its own key hub/capital city.

Peninsula Australia (aka Tropical/ Far North Queensland) has been progressively emerging as the largest of these regions in population (see chart).

Although Cairns is well known for its role in Australia's domestic and international tourism, its primary economic role is that of a regional capital – a hub transport, distribution, manufacturing, administrative and services centre for the region. A feature of the region is that no part is more than about 400km from the sea and there are six significant ports around its coastline – Mourilyan, Cairns, Cape Flattery, Thursday Island, Weipa, Karumba.

Cargo volumes through these ports exceed those of the states of South Australia and Tasmania and of the Northern Territory. In this configuration, Cairns is not a bulk cargo export port except for sugar – other ports play this role. However, it is by far and away the busiest port in the region and one of Australia's busiest ports for shipping movements. In bulk cargo vessels, Cairns seaport is the region's main port of import and redistribution of fuel around the region and of fertilisers. It is vital that the seaport is deep enough to handle these types of ships.

Cairns seaport is one of Australia's leading tourism ports. The Reef Fleet carries over a million passengers a year. This is added to by Cairns being the major port-of-call in northern Australia for cruising yachts, super yachts and cruise ships. Recent upgrading of the channel still leaves it incapable of taking Voyager Class cruise ships.

Cairns is the location of the Australian Navy's north eastern naval base. It is vital that in times of emergency, larger Australian and Allied vessels are able to operate from the port.

Cairns seaport is the base for one of Australia's largest fishing fleets with a need for larger "motherships" to operate from the port to service the large fishing fleet especially in the Gulf of Carpentaria with fuel and supplies and to take off catch.

Cairns is the base for the largest number of registered vessels in Queensland. But it is also the base for container cargo vessels servicing northward into the Torres Strait and Gulf. Cairns based SeaSwift operates coastal shipping across northern Australia.

Of great importance in the future will be the expansion of the port to take international container vessels. The Cairns region has developed in recent decades as the third largest fruit producing region in Australia. This is mainly based on supplying domestic markets. Importantly in the future, it will be important to extend this beyond current restricted air cargo supply to Asia, through the development of container cargo export/import links.

NOTE 2:
LARGEST MARINE INDUSTRIES HUB IN NORTHERN AUSTRALIA & REGIONAL QUEENSLAND

Largest Locally Based Fleet

- Australia's largest tourism fleet 187 passenger vessels registered carrying over one million visitors to the reef each year.
- One of Australia's largest fishing industry ports with 700 vessels registered.
- The largest fleet of cargo and work vessels home ported in northern Australia.
- Australia's north-eastern naval base and other government vessels.

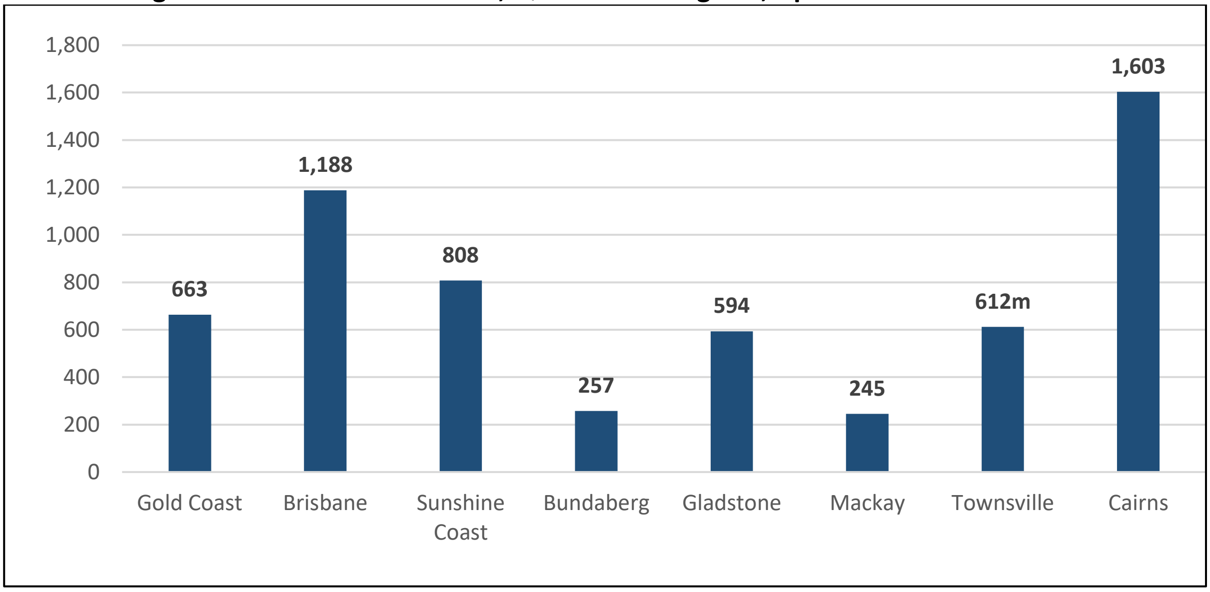
Cairns records the largest number of commercial ships registered in Queensland.

Table #1: Count of Commercial Ships with National Law Certificate of Operation (CoO) Queensland Regions, April 2017

CoO issued at	Class 1 – Passenger	Class 2 – Non-pax	Class 3 – Fishing	Class 4 – Hire & Drive	Total
Airlie Beach	90	196	48	160	**494**
Brisbane	93	608	453	34	**1188**
Bundaberg	16	61	171	9	**257**
Cairns	187	628	700	88	**1603**
Gladstone	43	263	265	23	**594**
Gold Coast	56	358	96	153	**663**
Mackay	5	107	132	1	**245**
Sunshine Coast	30	255	340	183	**808**
Townsville	14	292	275	31	**612**
Urangan	18	130	327	29	**504**
Total	**552**	**2898**	**2807**	**711**	**6968**

Source: MSQ from AMSA Data.

Chart #1: Registered Commercial Vessels, Queensland Regions, April 2017



Source: See Table #1.

Large Numbers of Visiting Vessels

In addition, Cairns Seaport attracts:

- The largest number of cruise ship visits in North Australia.
- The largest number of superyachts and cruising yachts.
- Bulk cargo ships delivering the region's needs for fuel, fertilisers and shipment of sugar from the immediate district.
- Substantial number of visits of naval vessels.

Marine Industries Backup

Backing up the shipping operations are:

- Three shipyards with supporting industrial services.
- Administrative and other professional services.
- The Great Barrier Reef Marine College.

Largest Employment

Cairns Seaport is the largest in the North in terms of maritime employment and activity.

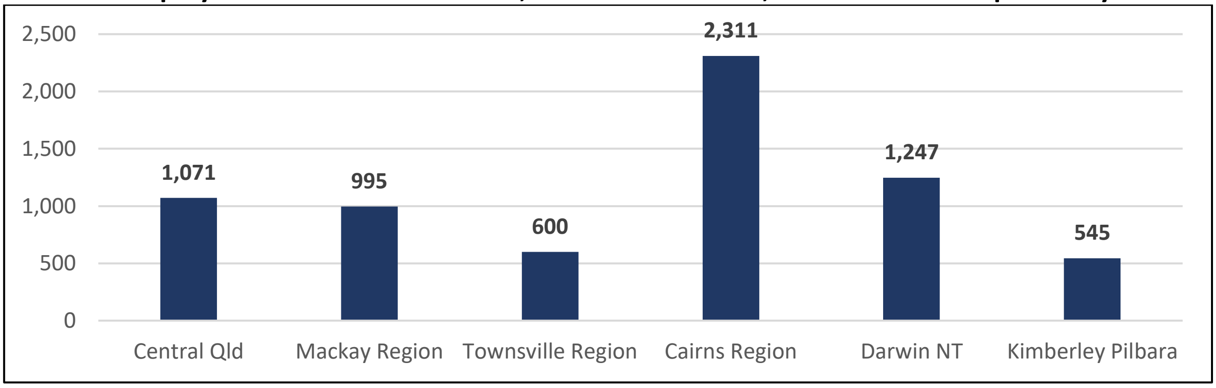
**Table #2: Employment in Marine Activities, Northern Australia Regions (1)
(Usual Place of Residence), Census 2016**

	Cairns Region	Townsville Region	Mackay Region	Central Qld Region	NT	Kimberley /Pilbara
Fishing	276	83	90	80	213	35
Fish & Seafood Wholesaling	122	6	11	10	16	0
Ship Building & Repair	228	8	23	10	37	6
Boat Building & Repair	124	55	73	29	43	20
Marine Equipment Retail	65	43	54	20	43	11
Water Transport nfd	156	40	65	56	47	65
Water Freight Transport	37	14	7	24	45	61
Water Passenger Transport	26	49	135	120	18	4
Water Transport Support Services	9	9	5	7	7	12
Stevedoring Services	7	107	17	82	34	68
Port & Water Transport Terminal Operations	63	142	416	524	74	177
Other Water Transport Services	298	44	99	109	70	86
Total	**1411**	**600**	**995**	**1071**	**647**	**545**

Note(1) SA4 regions, Queensland.
Source: Cummings Economics from ABS Census 2016.

On top of these figures, the Navy employs 900 in Cairns and 600 in Darwin.

Chart #2: Employment in Marine Activities, Northern Australia, Census Identified plus Navy



Source: Cummings Economics from Census Data plus Dept of Defence Navy Employment.

NOTE 3:
MARINE SECTOR IS VITAL TO THE REGIONAL ECONOMY

The marine industries based on Cains Seaport are estimated to have a turnover of the order of $1 billion a year, provide direct jobs of the order of 4,600 and, with "flow-on" effects, support of the order of one in ten of Cairns population.

Table: Order of Magnitude Estimates of Marine Sector Direct Turnover & Employment Cairns/Peninsula Australia Region

	Turnover	Employment
Ship Operations (Local)	**(approx.)**	**(approx.)**
Reef fleet	$180 m	800
Fishing Commercial & Recreational	$200 m	900
Trading & Other Work Vessels	$110 m	400
Navy & Other government Vessels	$180 m	960
Total	**$670 m**	**3060**
Visiting Ships		
Total Cruise Ships Super yachts Cruising yachts	**$50 m**	**250**
Support Operations		
Shipyards	$75 m	360
Support repair & maintenance	$60 m	300
Other marine industry services	$160 m	600
Total	**$295 m**	**1,260**
Estimated Overall Total	**$1,015 m**	**4,600**

Note[(1)]: In turnover, there is some overlap with part of the turnover of the ship operations becoming the turnover of the support operations. Allowing for this turnover of the sector is estimated at about $1.0bn and direct employment of the order of 4,600.
Source: Cummings Economics from industry information; 2011 detailed report update estimates.

Dependent on the Seaport is:

- A major part of tourism activity.
- Through export of sugar and import of fertilisers, most of the region's large agricultural sector.
- Through the import of fuel, almost all economic activity including Cairns International Airport.

Coastal cargo services out of Cairns play a vital role in northern development in the Peninsula/Torres area.

Estimated value of cargo shipped .... $650 m pa

Population supported 21,000

Estimated Gross Regional Product .... $980 m pa

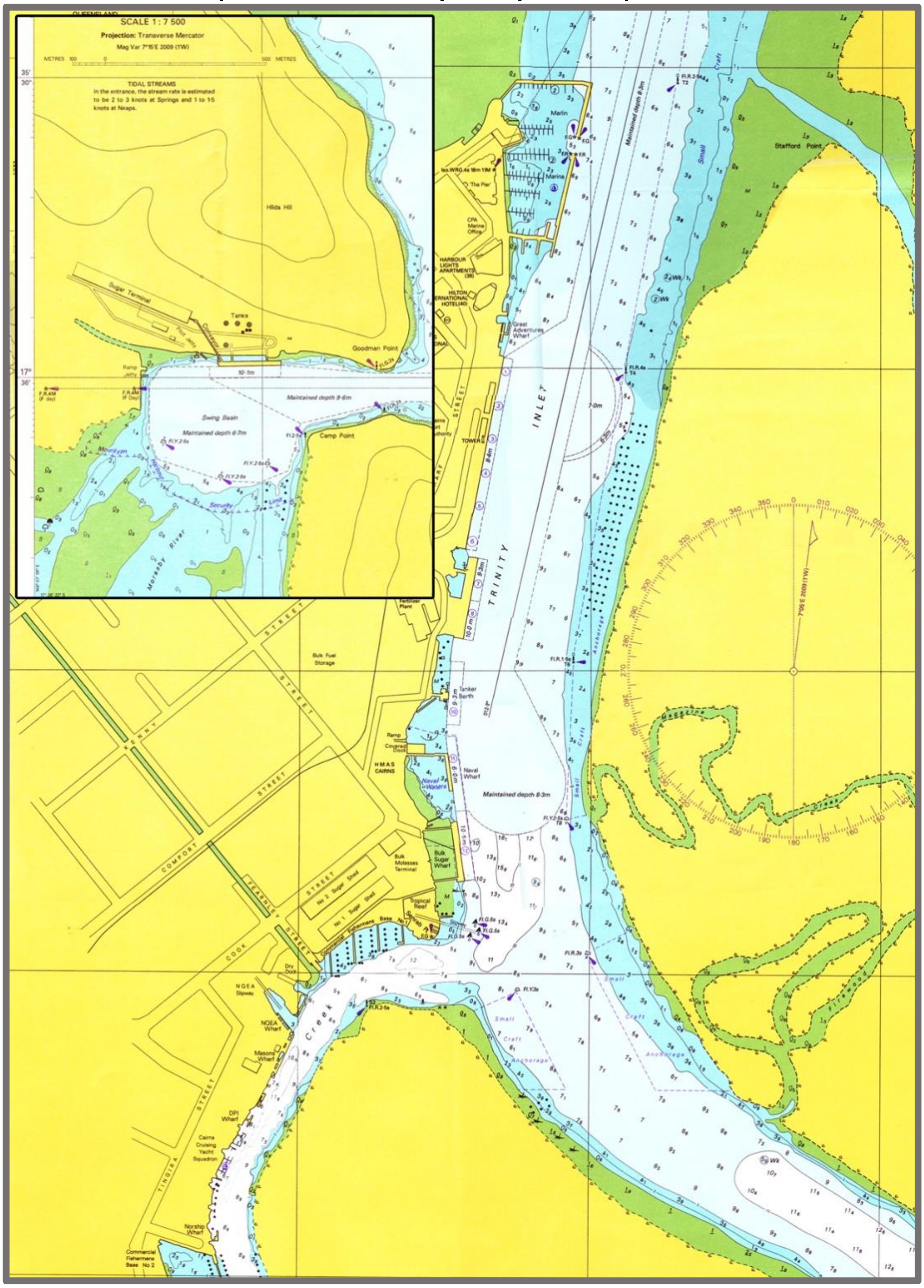
Estimated contribution to Australia's exports .... $800 m pa

Source: Cummings Economics/Sea Swift.

NOTE 4:
WHY MAJOR TRANSPORT HUB

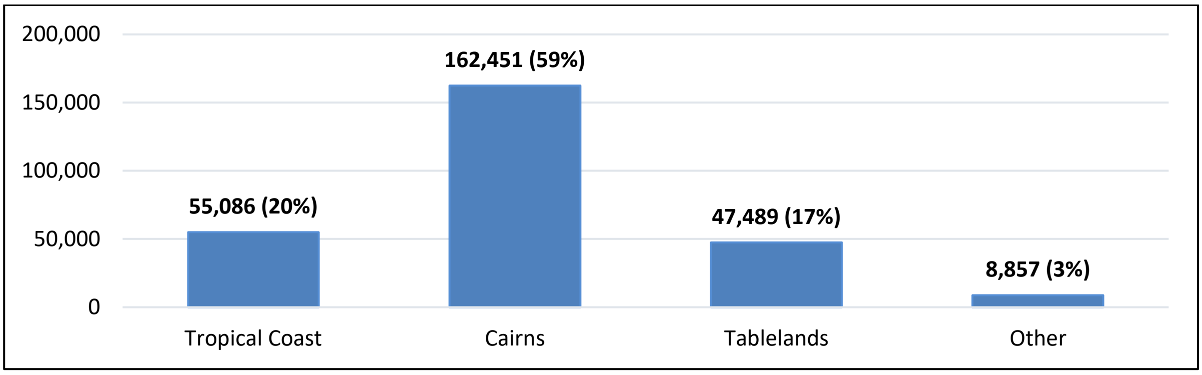
Best Port Site in the Area

Map #1: Cairns & Mourilyan Seaports Compared Area



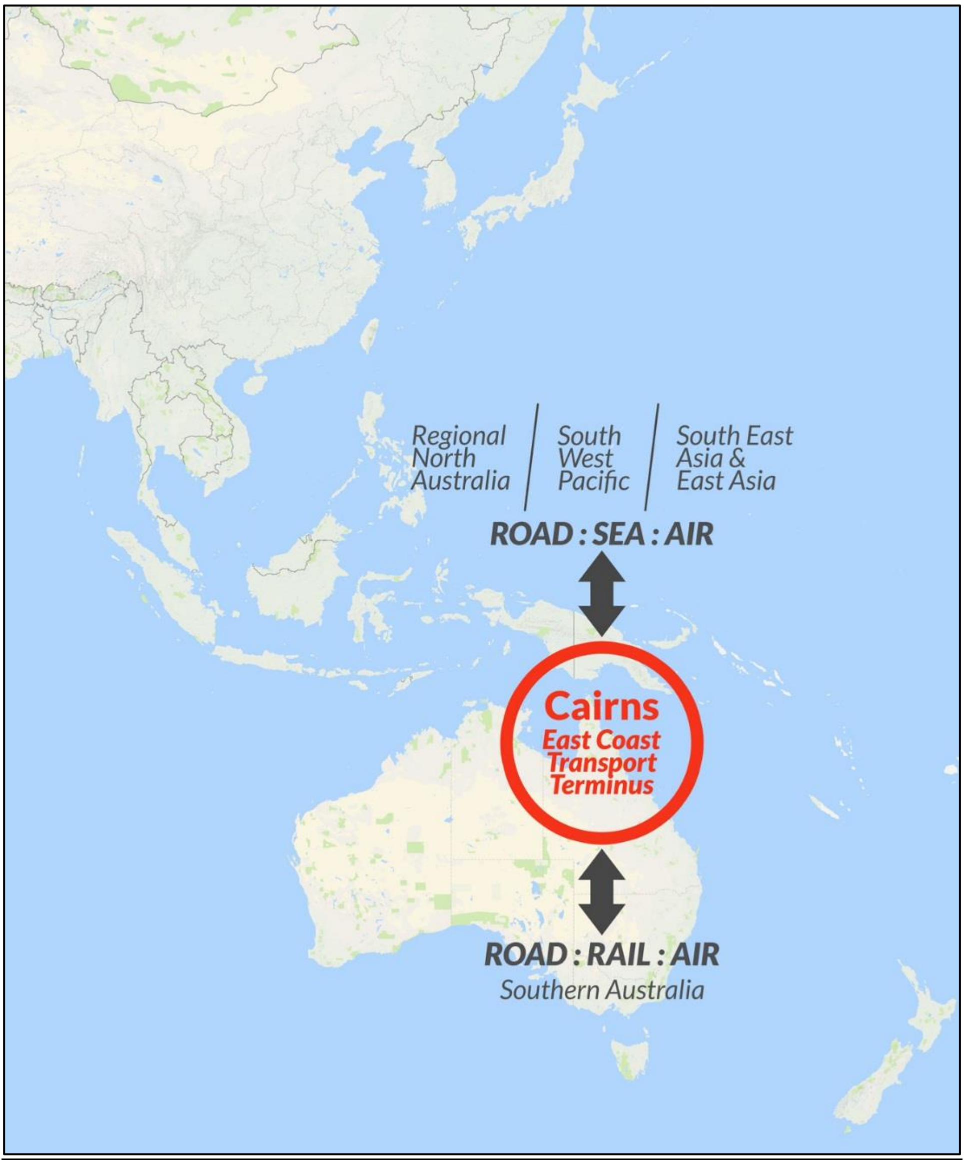
Major Population & Market in the Region

Chart: FNQROC Region, Distribution of Residential Population (1), 2016



Note(1): Estimated residential population.
Source: Cummings Economics – FNQROC Economic Profile.

Northern Terminus of East Coast Transport Network



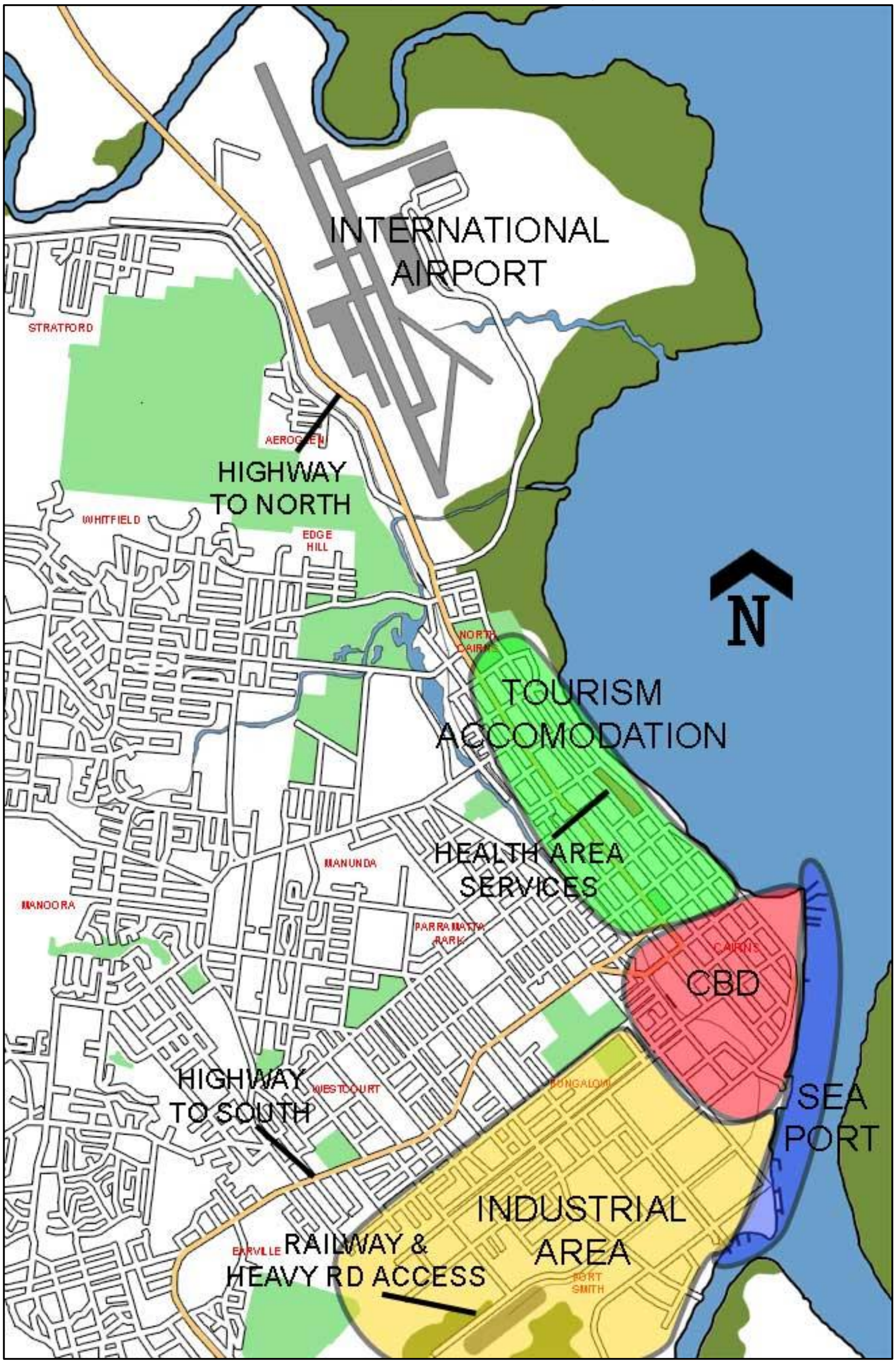
Leading Cargo Transhipment Port

Freeport/Sea Swift over $800 million of freight a year to regional and near northern ports.

Future links to Darwin, PNG, Pacific, Asia.

Highly Efficient Internodal Transport Hub

Map #2: Cairns Today – Location of Major Functions



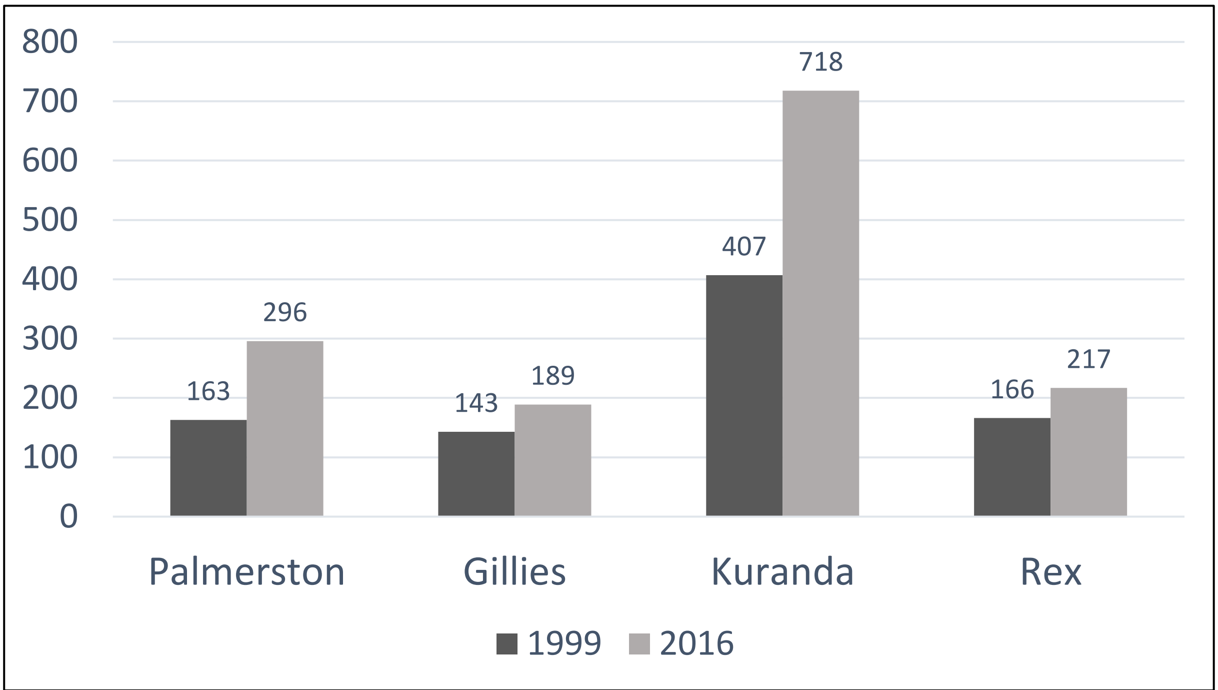
Kuranda Range Rail & Road Most Efficient Interior Access

Table: Maximum Heights Above Sea Level of Transport Routes

	Feet	Meters
Kuranda Range Rd		
Rail	1140	347
Road	1520	463
Rex Range Rd	1524	465
Gillies Hwy	2740	829
Palmerston Hwy	2814	853

Source: Cummings Economics from Google Earth Maps.

Chart: Range Road AADTS Heavy Vehicles



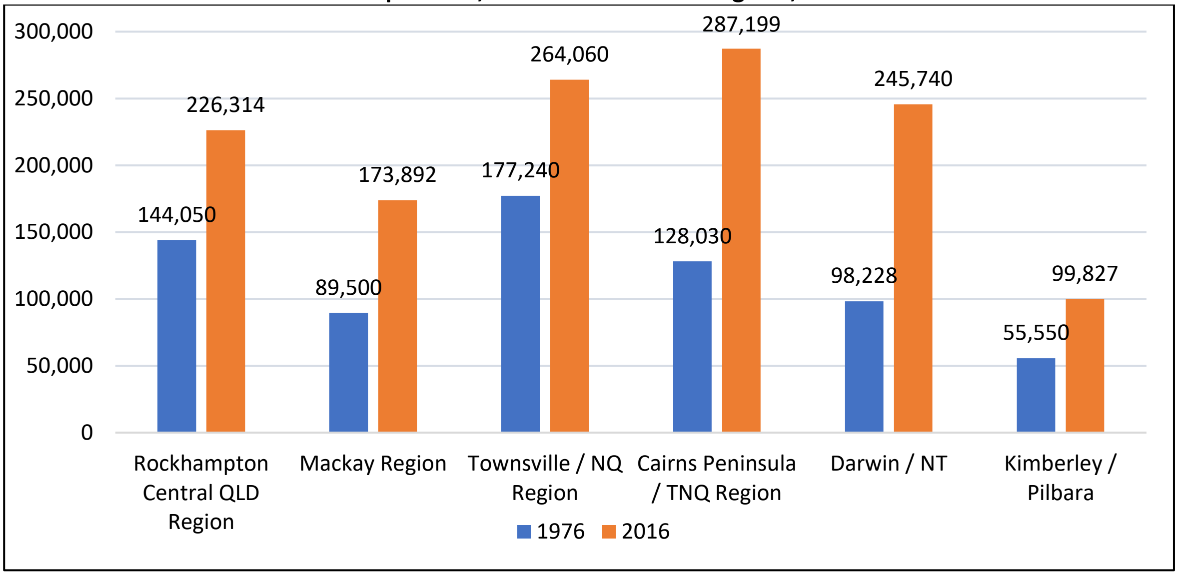
	Palmerston	Gillies	Kuranda	Rex
1999	163	143	**407**	166
2016	296	189	**718**	217

Source: Cummings Economics from Qld Main Roads Data.

NOTE 5:
NEED TO PLAN AHEAD

THE REGION HAS EMERGED AS THE LARGEST & FASTEST GROWING IN NORTHERN AUSTRALIA

Chart #1: Estimated Residential Population, Northern Australia Regions, 1976 & 2016



Note Boundaries:

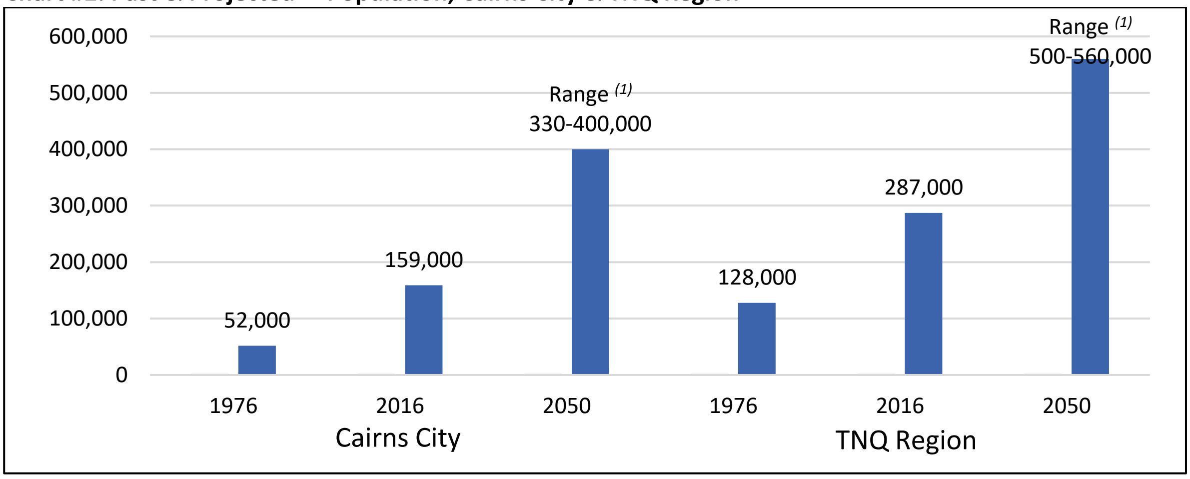
- *Rockhampton/Gladstone Region – Fitzroy plus Central West.*
- *Townille Region – Townsville SA4 plus Queensland Outback North less Carpentaria SA2.*
- *Cairns Region – Cairns SA4 plus Queensland Outback Far North plus Carpentaria SA2.*

Note: Hinchinbrook Shire included with Townsville/NQ.

Source: Cummings Economics from Australian Bureau of Statistics Cat No. 3218.0 et al.

ON A CONTINUATION OF PAST TRENDS, THERE IS A NEED TO PLAN FOR A MUCH LARGER CITY & REGION BY 2050

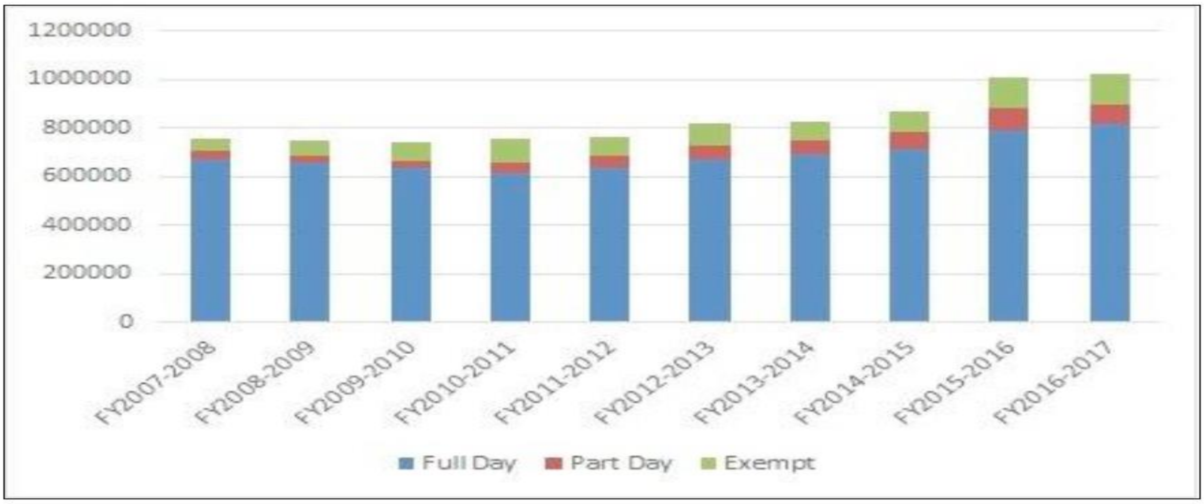
Chart #2: Past & Projected [(1)] Population, Cairns City & TNQ Region



Note[(1)]: Projected at average past growth rate 40 years & 15 years.
Source: Cummings Economics from 1976 & 2016 ABS Cat No. 3218.0.

REEF VISITATION HAS RISEN BY 250,000 OVER THE PAST 10 YEARS

Chart #3: Reef Visitation – Cairns Planning Area

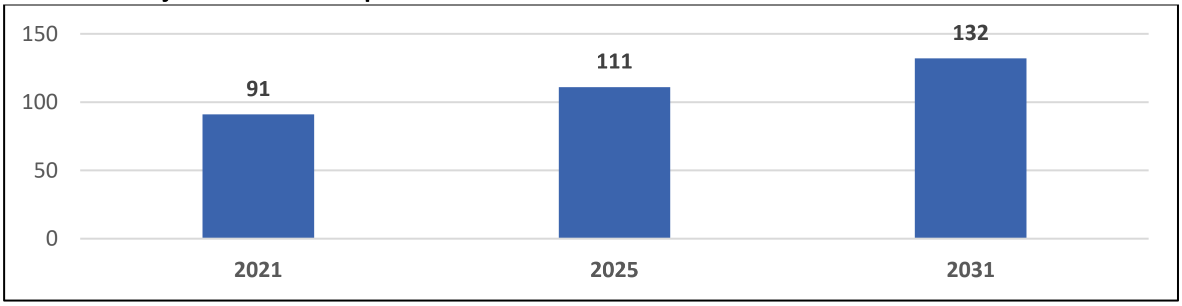


Source: Great Barrier Reef Marine Park Authority.

Recent trends indicate it seems likely to add of the order of 500,000 over the next 10 years

CRUISE SHIP VISITATIONS ARE PROJECTED TO GROW

Chart #4: Projected Cruise Ship Visits to Cairns - A 45% increase.



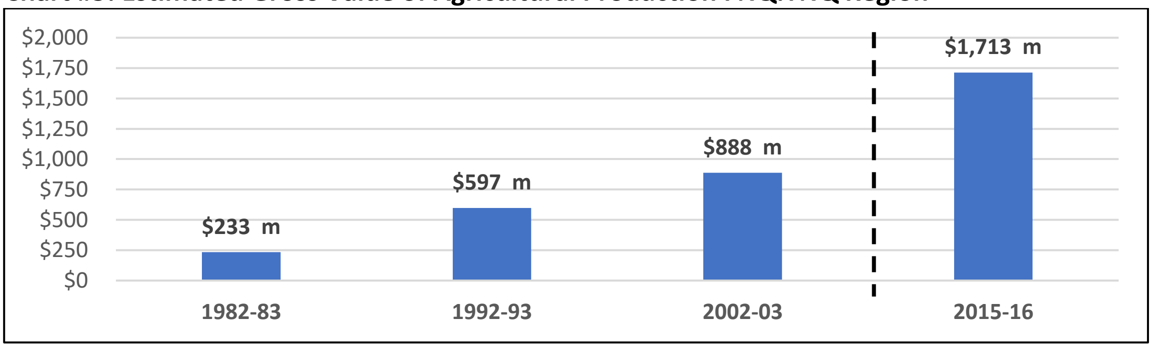
Source: Ports North Cairns Shipping Development Project EIS – Economic Analysis.

SUPERYACHT VISITS GROWING

HMAS CAIRNS IS TO BE EXPANDED WITH AN INVESTMENT OF OVER $300 MILLION.

AGRICULTURE EXPANDING IN THE REIGON ESPECIALLY MAREEBA AND COOK SHIRES.

Chart #5: Estimated Gross Value of Agricultural Production FNQ.TNQ Region



Note: 1982-983 to 2002-03 FNQ Statistical Division; 2015-16 Peninsula Australia/TNQ.
Source: Cummings Economics from ABS Cat No. 7503.0.