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Technical Report

The Social and Economic Long Term Monitoring Program (SELTMP) 2014

Coastal Communities in the Great Barrier Reef



Erin Bohensky, Matt Curnock, Sarah Gillet, Jeremy Goldberg,
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Reef &
Rainforest
RESEARCH CENTRE

The Social and Economic Long Term Monitoring Program (SELTMP) 2014 Coastal Communities in the Great Barrier Reef

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2014

LIST OF ACRONYMS

ABS	Australian Bureau of Statistics
DLGP	Department of Local Government and Planning
ERP	Estimated Resident Population
ESB	English-Speaking Background
GPC	Gladstone Ports Corporation
GBR	Great Barrier Reef
GBRMP	Great Barrier Reef Marine Park
GBRMPA	Great Barrier Reef Marine Park Authority
GBRWHA	Great Barrier Reef World Heritage Area
LGA	Local Government Area
NERP	National Environmental Research Program
SEIFA	Socio-Economic Indexes for Areas
SELTMP	Social and Economic Long-Term Monitoring Program

SELTMP 2014: OVERVIEW

The Social and Economic Long Term Monitoring Program in summary

The Social and Economic Long Term Monitoring Program (SELTMP) for the Great Barrier Reef is a dataset of national significance. It has been designed to describe conditions and trends of the human dimension of the Great Barrier Reef (GBR) for better decision-making. Through monitoring existing regional datasets and survey work, it presents annual snapshots of coastal communities, national residents, recreational users, the marine tourism industry, the commercial fishing industry, Traditional Owners, ports and shipping, catchment industries and mining. SELTMP monitors human use of and dependency on the GBR, human and community well-being (as they relate to the GBR), as well as a range of socio-cultural drivers such as perceptions, values, attitudes and behaviours. To date, SELTMP has surveyed over 8,000 primary users of the GBR.

One of the main uses of the SELTMP will be to assist reef managers in their quest to manage the Great Barrier Reef. Through web-based facilities researchers will also be able to access data for research purposes, industry and community leaders can support decision-making, and Reef managers can understand the complex social and economic environment within which they operate. For example, as trends in the human dimension are uncovered and understood, Reef managers will be able to recognise 'normal' behaviour (as opposed to 'abnormal'), understand impacts associated with planned or unplanned interventions (using 'before' and 'after' data), gauge public support for proposed environmental management initiatives and seriously consider the social and economic tradeoffs associated with regional decision-making.

Outcomes will be baseline knowledge of social conditions prior to any change event or intervention, and updates on status and temporal trends for the main user groups of the Great Barrier Reef region.

Over 100 people representing government, community and industry act as technical and strategic advisors for the program.

SELTMP 2014: COASTAL COMMUNITIES IN THE GREAT BARRIER REEF

Report summary

“SELTMP 2014: Coastal Communities in the Great Barrier Reef” is part of a series of technical reports from the *Social and Economic Long Term Monitoring Program* (SELTMP; NERP Project 10.1) for the GBR region. This report presents a picture of the GBR community at large, mainly through secondary socio-economic data collected for Local Government Areas (LGA), and provides context for survey data presented in other reports in this series. This report depicts the current state of coastal community characteristics and relationships with the GBR, and drivers of change.

Key findings

Key findings in this report include:

- Stakeholders identified demographics, climate change and variability (including extreme weather), and economics as three top drivers of change in coastal communities.
- Population growth patterns in the GBR region are highly diverse. Between 2012 and 2013, some areas experienced population growth (e.g. Gladstone LGA at 4.1%) while others decline (Hinchinbrook LGA at -0.9%). Net migration in 2011 was greatest from Cassowary Coast LGA.
- Effects of resource industries with fly-in fly-out work arrangements are especially pronounced in the southern part of the region. In 2011, Isaac LGA had the highest non-resident population, population mobility in the five preceding years, income and median house price, and the lowest Socio-Economic Indexes for Areas (SEIFA) value (a measure of socio-economic disadvantage).
- Between 2012 and 2013, resident population increased from 871,908 to 889,486. As a percentage of the projected resident population of QLD, the GBR's projected resident population decreased from 20% in 2012 to 18% in 2013.
- GBR coastal residents engage modestly in environmental stewardship activities. Survey data suggests that a range of environmental behaviours are adopted for different reasons, and are most often economically-driven.
- Major events with potential to drive change in coastal communities in 2014 included Tropical Cyclone Ita and associated heavy rains and floods, port development and its potential impacts on the GBR, and local activism on climate change.

SELTMP 2014: COASTAL COMMUNITIES IN THE GREAT BARRIER REEF

Introduction

This chapter is focused on relationships between coastal communities and the Great Barrier Reef (GBR); it concerns people as well as organisations and businesses that make up these communities. Coastal communities and the GBR have a mutually beneficial relationship: communities benefit from their proximity to the GBR, allowing easy access and a sense of connection to reef ecosystems. In deriving benefits from the GBR, these communities also have impacts on the reef, some of which are negative.

However, coastal residents and organisations are often best-placed to serve as the GBR's custodians, due to their knowledge of and identification with the reef. These varied relationships are underpinned by community perceptions and motivations, as well as various drivers of change that are both internal and external to the community. Here we focus on the web of human-reef relationships that are not unique to a particular end-user group, but rather to the community at large. In addition to demographic and socio-economic variables these include impacts on the reef, conservation and stewardship efforts, environmental behaviours, and broader drivers of change influencing coastal communities. Hence, this report provides a regional community context for survey data included in other reports in this series.

Communities can be defined in a number of ways. They may share a locality, a sense of belonging, or a social network (Taylor 2003; Blackshaw 2010). They may be defined by a minimum population number or extent of services or urbanisation. Communities may not be static; numbers may ebb and flow with seasons or economic opportunities. For this report, we take a broad view of coastal communities, and define a coastal community as a Local Government Area (LGA) adjacent to the Great Barrier Reef. We chose this definition as LGAs are a common geographical structure used by Australian Bureau of Statistics which is the source of some data needed to monitor coastal communities as well as by other agencies and research initiatives. In addition, LGAs are a manageable geographic area and easily recognisable by readers. For some variables we use other definitions, such as where data are available at a different scale, or only for specific LGAs, and we will endeavour to supplement this data when new sources and updates become available.

SELTMP 2014: COASTAL COMMUNITIES

Reporting scale and location

Much of the data in this report is presented for Local Government Areas (LGA). Datasets denoted with an asterisk (*) were compiled and presented in *Queensland Regional Profiles: Resident Profile for SELTMP Region*, Queensland Government Statistician's Office, Queensland Treasury and Trade.

20 LGAs are included in this report:

Torres Shire Council
Cook Shire Council
Lockhart River Aboriginal Shire Council
Hope Vale Aboriginal Shire Council
Wujal Wujal Aboriginal Shire Council
Douglas Shire Council
Cairns Regional Council
Yarrabah Aboriginal Shire Council
Cassowary Coast Regional Council
Hinchinbrook Shire Council
Palm Island Aboriginal Shire Council
Townsville City Council
Burdekin Shire Council
Whitsunday Regional Council
Mackay Regional Council
Isaac Regional Council
Livingstone Shire Council
Rockhampton Regional Council
Gladstone Regional Council
Bundaberg Regional Council

**Total Area:
257, 298.5 km²
14.87% of QLD**



Figure 1. Local Government Areas included in this report.

SELTMP 2014: COASTAL COMMUNITIES

Demographics: Resident population and non-resident workers

Resident population, 2013p

Region: 887,409
(18% of QLD population)

Torres:	3,603
Cook:	4,393
Lockhart River:	529
Hope Vale:	1,080
Wujal Wujal:	285
Douglas:	11,473
Cairns:	157,081
Yarrabah:	2,681
Cassowary Cst:	28,694
Hinchinbrook:	11,700
Palm Island:	2,590
Townsville:	189,238
Burdekin:	17,888
Whitsunday:	34,016
Mackay:	121,909
Isaac:	24,275
Livingstone:	35,505
Rockhampton:	82,538
Gladstone:	63,955
Bundaberg:	93,976

Source: ABS 3218.0,
*Regional Population
Growth, Australia, 2012-13
and Queensland Treasury
and Trade estimates**

Non-resident workers

Number of people working in
LGA with place of usual
residence in a different LGA:

Torres:	158
Cook:	843
Lockhart River:	9
Hope Vale :	67
Wujal Wujal:	31
Cairns:	2190
Yarrabah:	130
Cassowary Cst:	803
Hinchinbrook:	206
Palm Island:	68
Townsville:	1417
Burdekin:	379
Whitsunday:	1317
Mackay:	1554
Isaac :	9558
Rockhampton:	1128
Gladstone:	1282
Bundaberg:	661

Source: ABS 2011 Census of
Population and Housing

- The smallest population was in Wujal Wujal LGA (285 people).
- Townsville LGA had the largest population (189,238 people).
- Isaac LGA had the greatest number of non-resident workers (9,558), while Lockhart River had the lowest (9).

SELTMP 2014: COASTAL COMMUNITIES

Demographics: Age and Gender

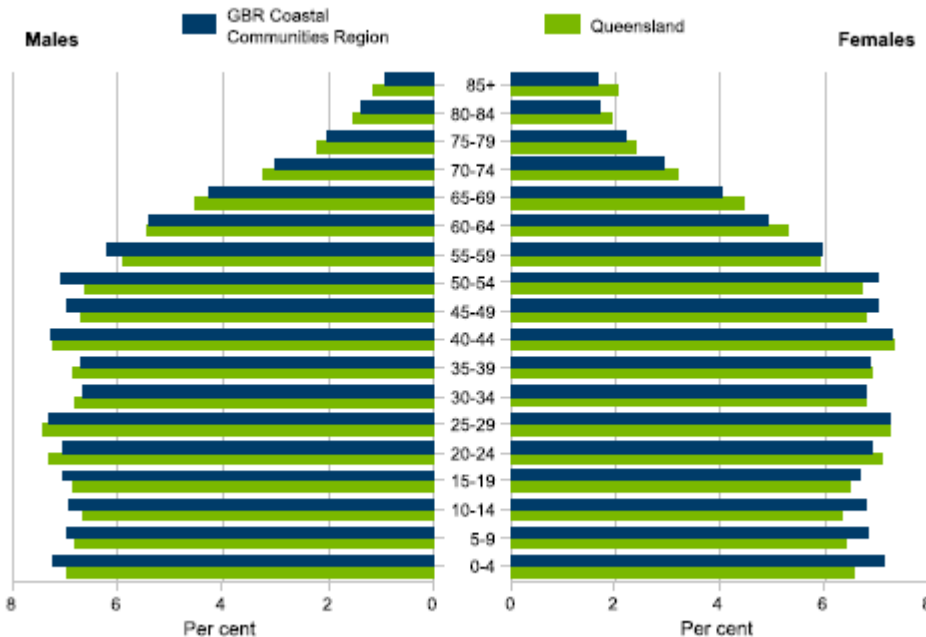


Figure 2. Resident population by age group and sex for GBR coastal communities region and Queensland as at 30 June 2012. Ref: ABS, Population by Age and Sex, Regions of Australia, 2012.

- Yarrabah LGA had the youngest mean population, at 22.9 years. Hinchinbrook LGA had the oldest, at 46.4 years.
- At 98.1%, Yarrabah LGA had the highest % indigenous population. Isaac LGA had the lowest, at 2.8 %.
- There were an additional 6691 persons aged 65+ in the region since 2012

Age (total and %)

0-14:	181,044 (20.8)
15-24:	119,309 (13.7)
25-44:	242,060 (27.8)
45-64:	221,262 (25.5)
65+:	105,654 (12.2)

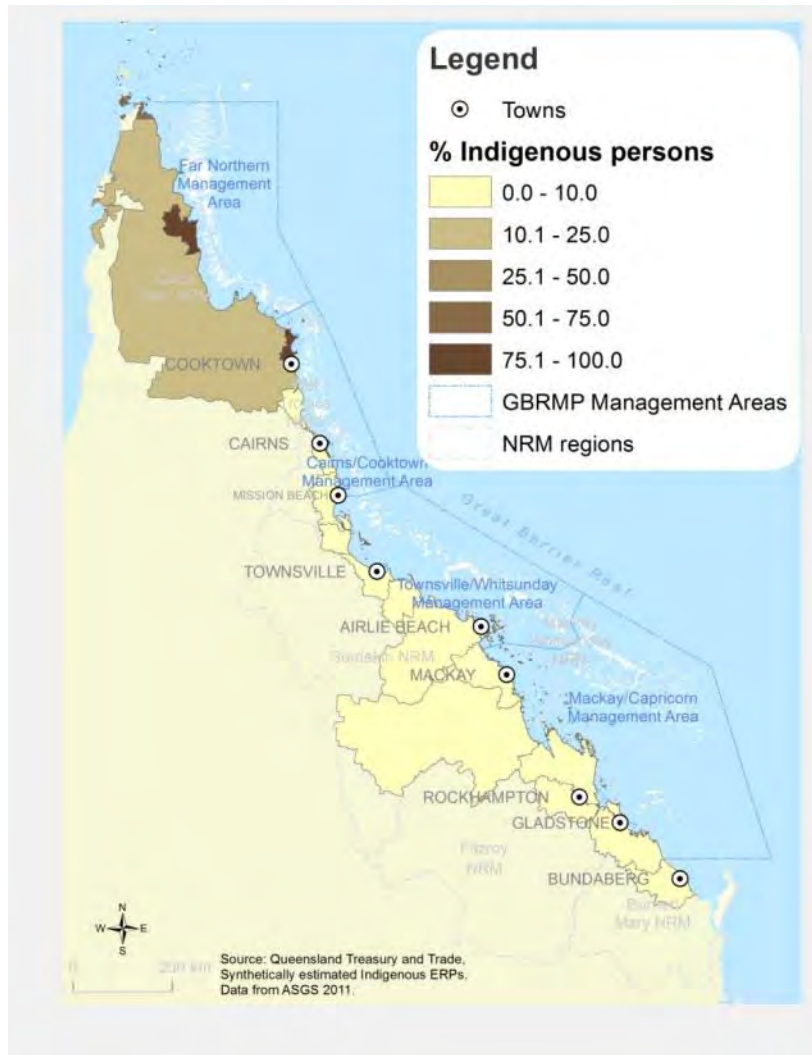
Median Age in years 2012p and Change (2007-2012p) (%)

Torres:	28.2 (1.4)
Cook:	37.4 (-2.6)
Lockhart River:	27.8 (2.0)
Hope Vale :	25.6 (0.0)
Wujal Wujal:	24.1 (-2.9)
Douglas:	40.2 (4.4)
Cairns:	36.3 (1.0)
Yarrabah:	22.9 (1.9)
Cassowary Cst:	42.4 (1.8)
Hinchinbrook:	46.4 (2.5)
Palm Island:	25.3 (2.8)
Townsville:	33.1 (0.2)
Burdekin:	40.9 (0.8)
Whitsunday:	37.4 (0.0)
Mackay:	35.6 (-0.1)
Isaac:	31.7 (0.4)
Livingstone:	41.2 (2.9)
Rockhampton:	36.8 (0.2)
Gladstone:	35.1 (0.2)
Bundaberg:	43.2 (1.6)

Source: ABS 3218.0, *Regional Population Growth, Australia, 2012-13 and Queensland Treasury and Trade estimates**

SELTMP 2014: COASTAL COMMUNITIES

Demographics: Indigenous Population



Indigenous population (%)

Total indigenous persons (%)

Torres:	2,063	(63.3)
Cook:	831	(20.0)
Lockhart River:	430	(89.0)
Hope Vale:	926	(94.1)
Wujal Wujal:	252	(93.7)
Douglas:	927	(8.6)
Cairns:	13,438	(9.2)
Yarrabah:	2,339	(97.1)
Cassowary Cst:	2,593	(9.4)
Hinchinbrook:	654	(5.7)
Palm Island:	2,201	(94.2)
Townsville:	10,703	(6.1)
Burdekin:	892	(5.1)
Whitsunday:	1,333	(4.2)
Mackay:	4,912	(4.4)
Isaac:	604	(2.7)
Livingstone:	1,110	(3.4)
Rockhampton:	4,888	(6.4)
Gladstone:	2,049	(3.5)
Bundaberg:	2,981	(3.3)

Source: Queensland Treasury and Trade, Synthetically Estimated Indigenous ERPs. Data from ASGS 2011.

- Cairns LGA had the largest number of Indigenous persons (13,438) while Wujal Wujal had the smallest (252)
- Yarrabah LGA had the highest percentage of Indigenous persons (97.1%) while Isaac had the lowest (2.7%)

Figure 3. Indigenous persons as percentage of total population by LGA.

SELTMP 2014: COASTAL COMMUNITIES

Demographics: Population density

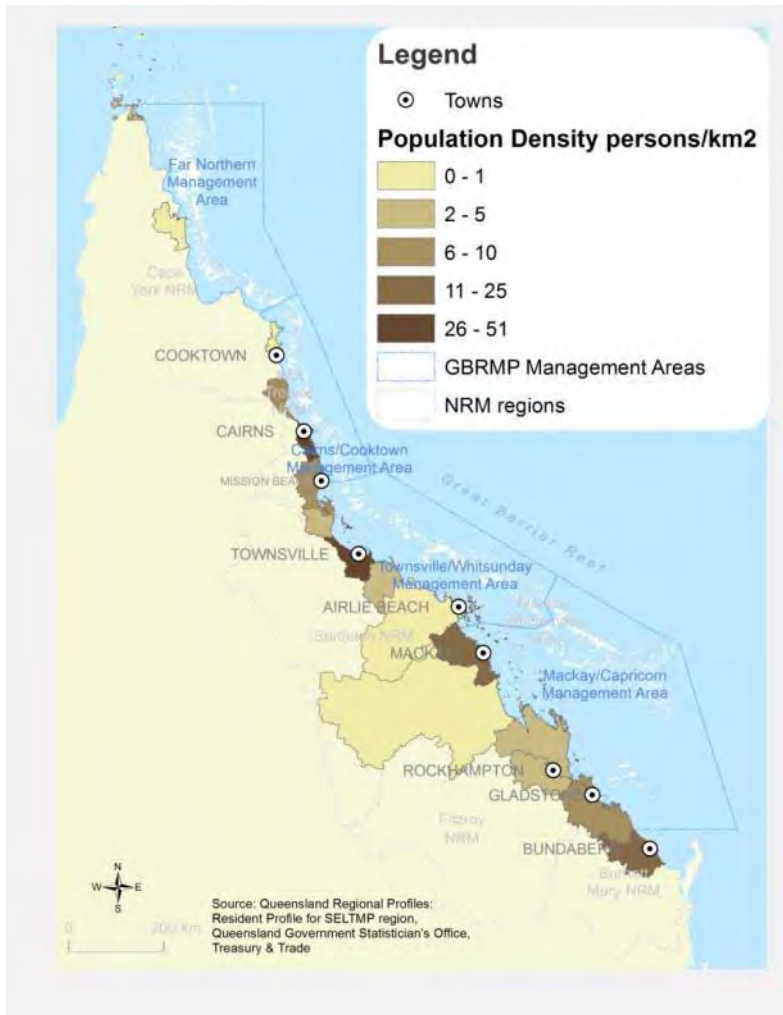


Figure 4. Population density per km², by LGA.

Population density 2013p (persons/km²)

Region:	10.25
Torres:	4.07
Cook:	0.04
Lockhart River:	0.15
Hope Vale:	0.97
Wujal Wujal:	25.45
Douglas:	4.69
Cairns:	38.04
Yarrabah:	16.82
Cassowary Cst:	6.11
Hinchinbrook:	4.16
Palm Island:	36.53
Townsville:	50.62
Burdekin:	3.54
Whitsunday:	1.42
Mackay:	15.99
Isaac:	1.05
Livingstone:	3.02
Rockhampton:	4.50
Gladstone:	6.10
Bundaberg:	14.57

Source: ABS 3218.0, *Regional Population Growth, Australia, 2012-13 and Queensland Treasury and Trade estimates**; Figure 4.

- The least densely populated LGA was Cook (0.04 persons/km²).
- The most densely populated was Townsville (50.62 persons/km²)

SELTMP 2014: COASTAL COMMUNITIES

Demographics: Population change

Population projections for region to 2036 (number of persons)

2016:	946,606
2021:	1,048,645
2026:	1,150,442
2031:	1,253,948
2036:	1,360,778

Source: Queensland Government population projections, 2013 edition (medium series) and Queensland Treasury and Trade estimates.*

The highest projected growth rate to 2036 was for Gladstone LGA (2.9%), while the lowest was for Wujal Wujal (-0.7%)*. The largest natural increase was in Townsville (+1,904 persons). The largest decrease in assumed net migration was for Cassowary Coast (- 591 persons).

* Estimated Resident Population

Average annual growth rate, 2011-2036 (%)

Region: 1.9

Torres:	0.4
Cook:	1.1
Lockhart River:	-0.6
Hope Vale:	1.4
Wujal Wujal:	-0.7
Douglas:	1.4
Cairns:	1.9
Yarrabah:	1.5
Cassowary Cst:	0.4
Hinchinbrook:	-0.2
Palm Island:	1.2
Burdekin:	0.4
Whitsunday:	1.7
Mackay:	2.2
Isaac:	1.9
Livingstone:	2.5
Rockhampton:	1.6
Gladstone:	2.9
Bundaberg:	1.1

Source: Queensland Government population projections, 2013 edition (medium series) and Queensland Treasury and Trade estimates. 2011 data are estimated resident population*

Natural increase (number of persons)

Region: 7,750

Torres:	77
Cook:	32
Lockhart River:	13
Hope Vale :	19
Wujal Wujal :	0
Douglas:	96
Cairns:	1,618
Yarrabah:	60
Cassowary Cst:	158
Hinchinbrook :	-21
Palm Island:	115
Townsville:	1,904
Burdekin:	43
Whitsunday :	279
Mackay:	1,195
Isaac :	407
Livingstone:	179
Rockhampton :	660
Gladstone:	646
Bundaberg:	270

Source: ABS 3301.0, Births, Australia, 2012; ABS 3302.0, Deaths, Australia, 2012 and Queensland Treasury and Trade estimates*

Assumed net migration (number of persons)

Region: -591

Torres:	-74
Cook:	219
Lockhart River:	-34
Hope Vale :	39
Wujal Wujal :	-7
Douglas:	n.a.
Cairns:	-401
Yarrabah:	-59
Cassowary Cst:	-591
Hinchinbrook :	-79
Palm Island:	95
Townsville:	442
Burdekin:	-235
Whitsunday :	-193
Mackay:	315
Isaac :	-5
Livingstone:	n.a.
Rockhampton :	-388
Gladstone:	711
Bundaberg:	-346

Source: ABS 3218.0, Regional Population Growth, Australia, various editions; ABS 3301.0, Births, Australia, unpublished data; ABS 3302.0, Deaths, Australia, unpublished data*

SELTMP 2014: COASTAL COMMUNITIES

Demographics: Population mobility

Number of persons with change of address 1 Year Ago (%)

Same address: 609,171
 Different address within QLD: 122,220
 Within rest of Australia: 16,639
 Overseas: 8,555
 Total with different address: 149,499* (18.4)

Proportion with different address

Torres:	16.9
Cook:	16.0
Lockhart River:	9.0
Hope Vale:	7.0
Wujal Wujal:	7.5
Douglas:	19.8
Cairns:	20.0
Yarrabah:	5.8
Cassowary Cst:	15.0
Hinchinbrook:	11.5
Palm Island:	5.1
Townsville:	20.0
Burdekin:	12.0
Whitsunday:	19.9
Mackay:	17.6
Isaac:	25.3
Livingstone:	16.8
Rockhampton:	17.0
Gladstone:	19.6
Bundaberg:	16.3

Source: ABS 3301.0, *Births, Australia, 2012*; ABS 3302.0, *Deaths, Australia, 2012* and Queensland Treasury and Trade estimates*^a; Figure 5

Number of persons with change of address 5 Years Ago (%)

Same address: 366,113
 Different address within QLD: 260,184
 Within rest of Australia: 44,838
 Overseas: 29,220
 Total with different address: 339,537* (44.3)

Proportion with different address

Torres:	39.8
Cook:	35.4
Lockhart River:	13.8
Hope Vale:	12.0
Wujal Wujal:	12.1
Douglas:	42.6
Cairns:	48.1
Yarrabah:	8.9
Cassowary Cst:	35.9
Hinchinbrook:	29.3
Palm Island:	9.6
Townsville:	47.8
Burdekin:	32.0
Whitsunday:	43.7
Mackay:	43.9
Isaac:	52.5
Livingstone:	42.6
Rockhampton:	42.0
Gladstone:	45.4
Bundaberg:	42.9

Source: ABS 3301.0, *Births, Australia, 2012*; ABS 3302.0, *Deaths, Australia, 2012* and Queensland Treasury and Trade estimates*; Figure 6

Most mobile in past year:
 Isaac (25.3%)
 Least mobile in past year:
 Palm Island (5.1%)
 Most mobile in past 5 yrs:
 Isaac (52.5%)
 Least mobile in past 5 yrs:
 Yarrabah (8.9%)

^a Includes persons who stated that they were usually resident at a different address 1/5 years ago, but did not state that address.

SELTMP 2014: COASTAL COMMUNITIES

Demographics: Population mobility

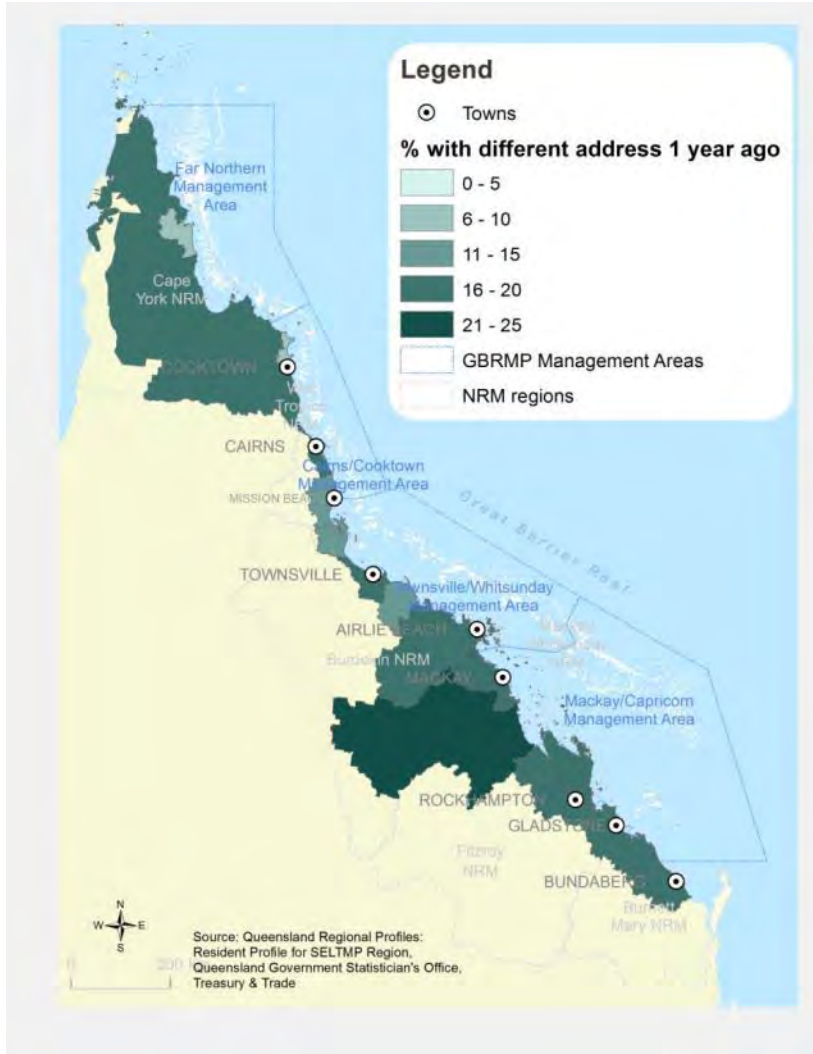


Figure 5. Proportion of population with address change within past year, by LGA.

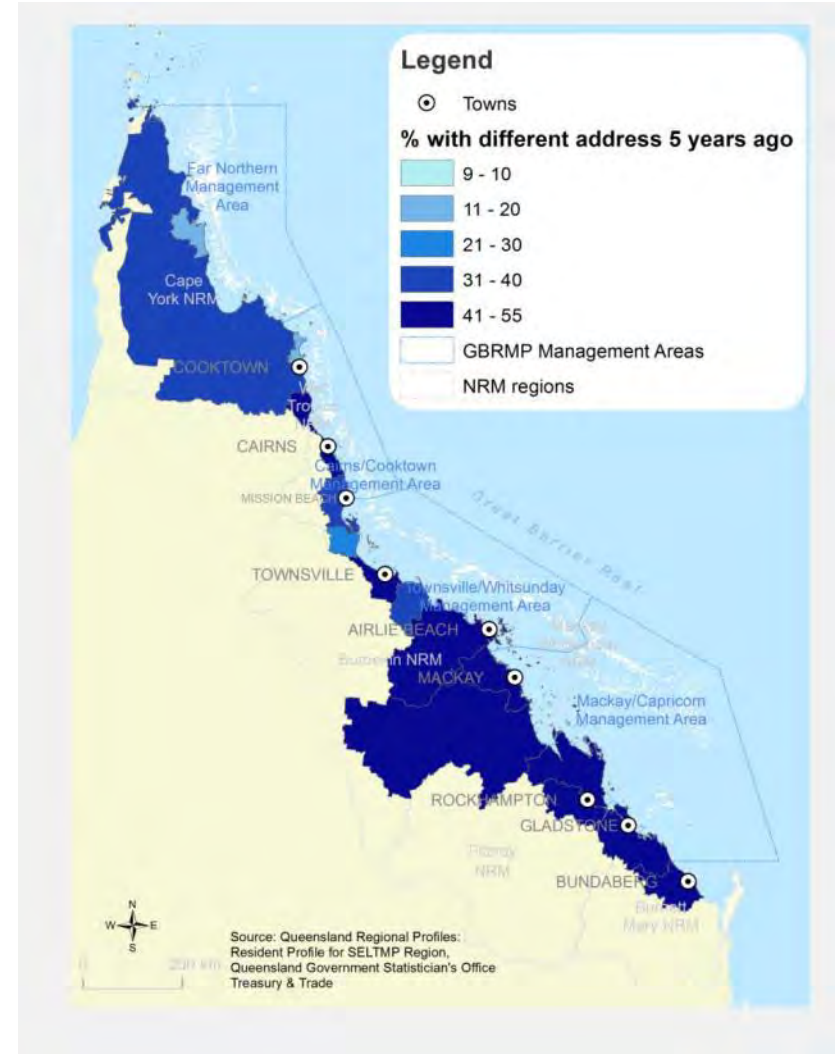


Figure 6. Proportion of population with address change within past 5 years, by LGA.

SELTMP 2014: COASTAL COMMUNITIES

Demographics: Country of origin, language and family composition

Country of birth (number of persons and %)

Australia:	655,779 (79.5)
English-Speaking Background (ESB)	
Countries ^a :	59,347 (7.2)
Non-ESB Countries:	50,912 (6.2)
Total born overseas ^b :	110,258 (13.4)

Total born overseas (number and %)

Torres:	238 (7.3)
Cook:	958 (23.1)
Lockhart River:	0 (0.0)
Hope Vale:	0 (0.0)
Wujal Wujal:	0 (0.0)
Douglas:	2,087 (19.2)
Cairns:	29,516 (20.3)
Yarrabah:	0 (0.0)
Cassowary Cst:	3,671 (13.3)
Hinchinbrook:	1,225 (10.6)
Palm Island:	0 (0.0)
Townsville:	23,181 (13.3)
Burdekin:	1,458 (8.4)
Whitsunday:	4,438 (14.1)
Mackay:	13,243 (11.7)
Isaac:	2,232 (9.9)
Livingstone:	3,402 (10.4)
Rockhampton:	6,684 (8.7)
Gladstone:	7,185 (12.4)
Bundaberg:	10,750 (12.0)

Source: ABS, Census of Population and Housing, 2011, Basic Community Profile - B09 (usual residence) and Queensland Treasury and Trade estimates*; Figure 7

Proficiency in spoken English (number and %)

Speaks English only:	73,897 (67.0)
Speaks other language at home (total) ^c :	36,044 (32.7)
Speaks other language at home and speaks English...	
..very well/well:	30,183 (27.4)
..not well/not at all:	4,989 (4.5)

Speaks other language at home (number and %)

Torres:	92 (37.9)
Cook:	594 (61.6)
Lockhart River:	0 (0.0)
Hope Vale:	0 (0.0)
Wujal Wujal:	0 (0.0)
Douglas:	452 (21.8)
Cairns:	10,678 (36.2)
Yarrabah:	0 (0.0)
Cassowary Cst:	1,559 (42.5)
Hinchinbrook:	581 (47.5)
Palm Island:	0 (0.0)
Townsville:	7,514 (32.4)
Burdekin:	675 (46.2)
Whitsunday:	1,158 (26.1)
Mackay:	4,109 (31.0)
Isaac:	693 (31.0)
Livingstone:	598 (17.5)
Rockhampton:	2,918 (43.6)
Gladstone:	1,896 (26.4)
Bundaberg:	2,527 (23.5)

Source: ABS, Census of Population and Housing, 2011, Basic Community Profile - B11 and B13 (usual residence) and Queensland Treasury and Trade estimates*; Figure 8

Family composition (number and %)

Couple no children:	86,558 (40.1)
Couple with children:	91,248 (42.3)
One-parent family:	34,846 (16.2)
Total families ^d :	215,822

Total families (number)

Torres:	673
Cook:	859
Lockhart River:	103
Hope Vale:	223
Wujal Wujal:	70
Douglas:	2,701
Cairns:	37,530
Yarrabah:	524
Cassowary Cst:	7,448
Hinchinbrook:	3,221
Palm Island:	443
Townsville:	45,319
Burdekin:	4,754
Whitsunday:	7,720
Mackay:	30,169
Isaac:	5,258
Livingstone:	8,826
Rockhampton:	19,706
Gladstone:	15,219
Bundaberg:	25,053

Source: ABS, Census of Population and Housing, 2011, Basic Community Profile - B25 (families and persons) and Queensland Treasury and Trade estimates*

- Highest % born overseas: Cook LGA (23.1%)
- Highest % that speaks a language other than English at home: Hinchinbrook (47.5%).

^aExcludes persons who did not state their country of birth.

^bIncludes countries not identified

^cIncludes proficiency in English not stated. individually

^dIncludes other families

SELTMP 2014: COASTAL COMMUNITIES

Demographics: Population born overseas and language

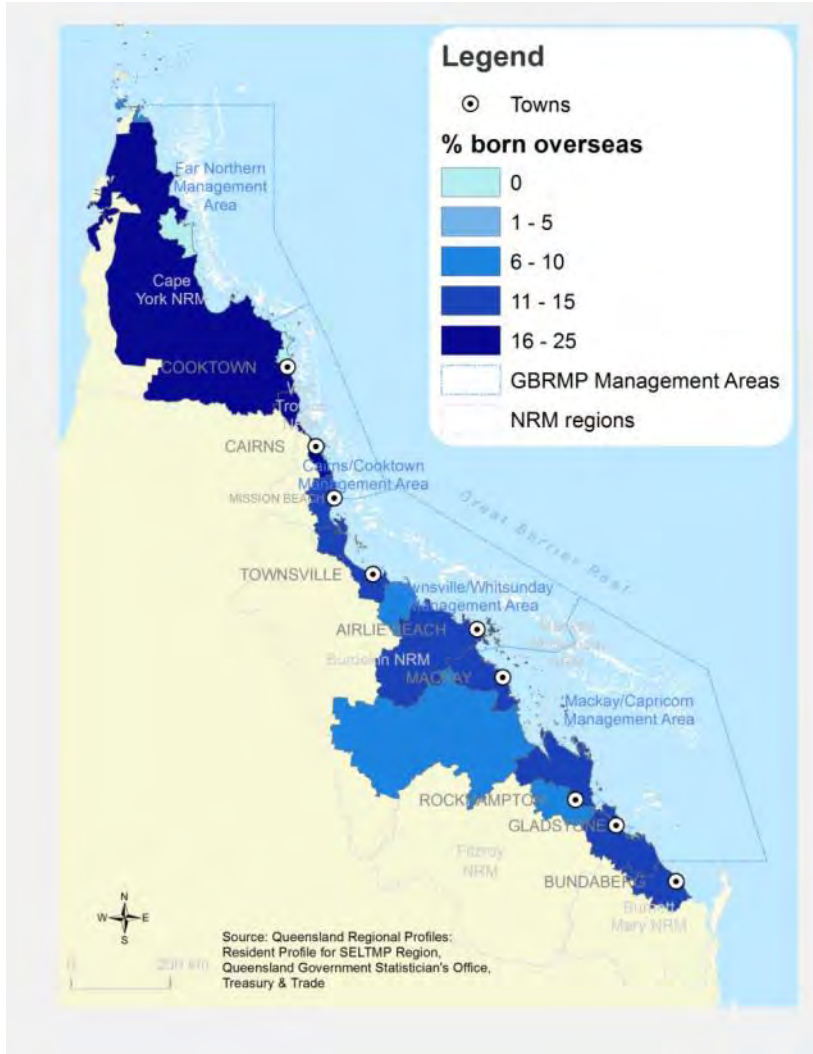


Figure 7. Persons born overseas by LGA (%).

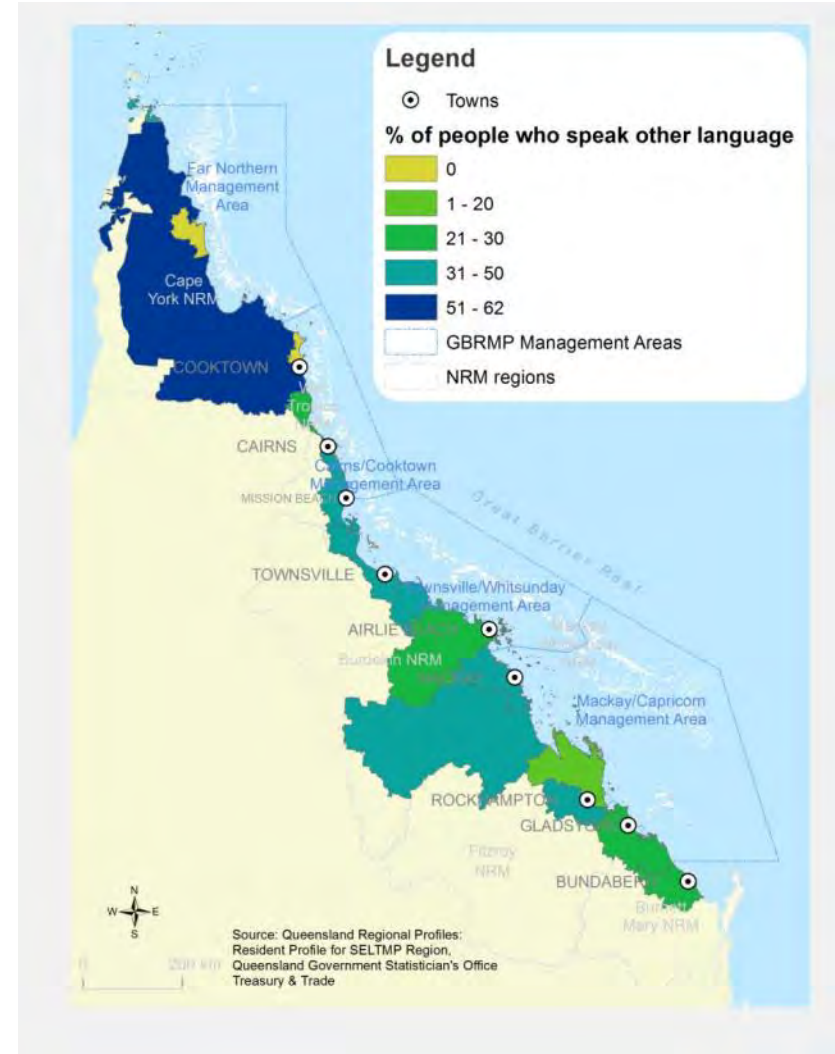


Figure 8. Population who speak a language other than English at home by LGA (%).

SELTMP 2014: COASTAL COMMUNITIES

Demographics: Education

Number of schools in LGA, 30 June 2013

Torres:	4
Cook:	7
Lockhart River:	1
Hope Vale:	1
Wujal Wujal:	0
Cairns:	56
Yarrabah:	2
Cassowary Cst:	27
Hinchinbrook:	18
Palm Island:	2
Townsville:	60
Burdekin:	20
Whitsunday:	18
Mackay:	57
Isaac:	19
Rockhampton:	58
Gladstone:	32
Bundaberg:	51

Source: *Queensland Regional Profiles: Resident Profile for SELTMP Region*, Queensland Government Statistician's Office, Queensland Treasury and Trade.

Highest level of schooling (number of persons and %)

Year 8 or below: 46,950 (7.5)
 Year 9 or 10 or equivalent: 207,683 (33.3)
 Year 11 or 12 or equivalent: 304,884 (48.8)

Year 11 or 12 or equivalent (number and %)

Torres:	1,149 (53.4)
Cook:	1,283 (38.4)
Lockhart River:	125 (36.9)
Hope Vale:	279 (41.6)
Wujal Wujal:	89 (43.2)
Douglas:	4,712 (54.9)
Cairns:	61,273 (56.3)
Yarrabah:	605 (39.9)
Cassowary Cst:	9,090 (42.4)
Hinchinbrook:	3,646 (40.1)
Palm Island:	573 (36.8)
Townsville:	72,659 (55.1)
Burdekin:	5,113 (38.7)
Whitsunday:	11,091 (44.6)
Mackay:	39,777 (46.6)
Isaac:	8,202 (50.2)
Livingstone:	11,069 (44.6)
Rockhampton:	26,268 (45.4)
Gladstone:	20,741 (48.3)
Bundaberg:	27,141 (39.1)

Source: ABS, Census of Population and Housing, 2011, Basic Community Profile - B16 (usual residence) and Queensland Treasury and Trade estimates*

Post-school Qualification (number of persons and %)

Bachelor degree or higher: 72,333 (11.1)
 Advanced diploma or diploma: 39,598 (6.1)
 Certificate: 145,414 (22.4)
 Persons with a qualification^a: 338,720 (52.1)

Persons with a qualification (number and %)

Torres:	1,293 (56.6)
Cook:	2,021 (59.5)
Lockhart River:	153 (43.5)
Hope Vale:	292 (42.4)
Wujal Wujal:	62 (29.2)
Douglas:	5,120 (58.1)
Cairns:	64,975 (57.3)
Yarrabah:	399 (25.2)
Cassowary Coast:	10,432 (46.9)
Hinchinbrook:	4,139 (43.5)
Palm Island:	440 (27.5)
Townsville:	73,995 (53.8)
Burdekin:	5,915 (43.0)
Whitsunday:	13,659 (53.5)
Mackay:	45,751 (51.5)
Isaac:	9,269 (54.9)
Livingstone:	13,540 (51.9)
Rockhampton:	29,645 (49.1)
Gladstone:	23,576 (52.8)
Bundaberg:	34,043 (47.0)

Source: ABS, Census of Population and Housing, 2011, Basic Community Profile - B01 and B40 (usual residence) and Queensland Treasury and Trade estimates*; Figure 10

Highest % with Year 11 or 12: Cairns (56.3%)
 Highest % with Post-School Qualification: Cook (59.5%)
 Highest % of population speaking another language at home: Burdekin: (61.6%)

^a Includes 'inadequately described' and 'not stated' level of education responses

SELTMP 2014: COASTAL COMMUNITIES

Demographics: Education

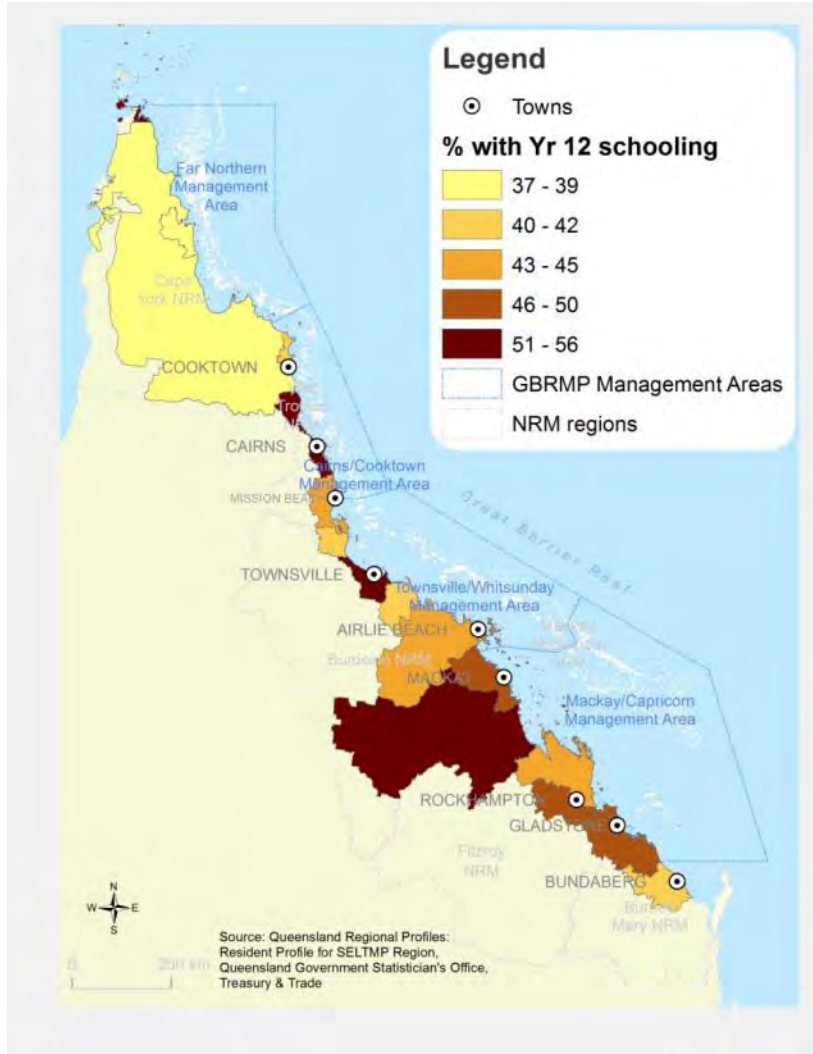


Figure 9. Persons completing Year 11 or 12 or equivalent by LGA (%)

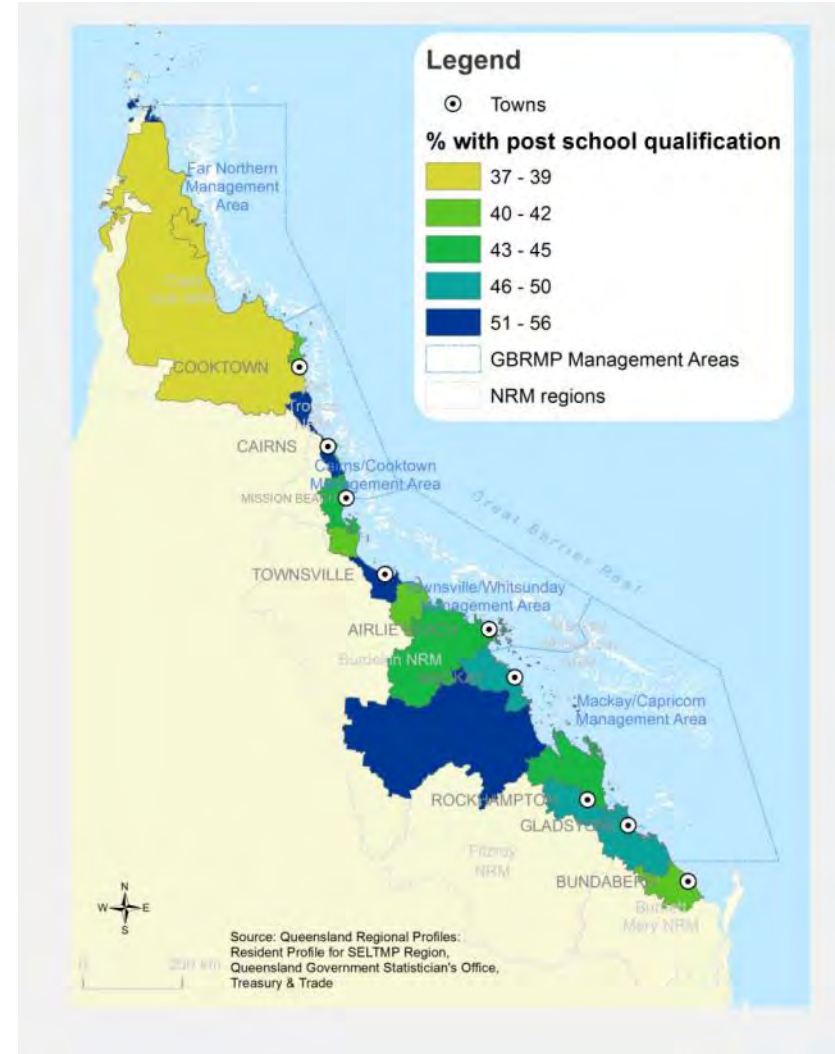
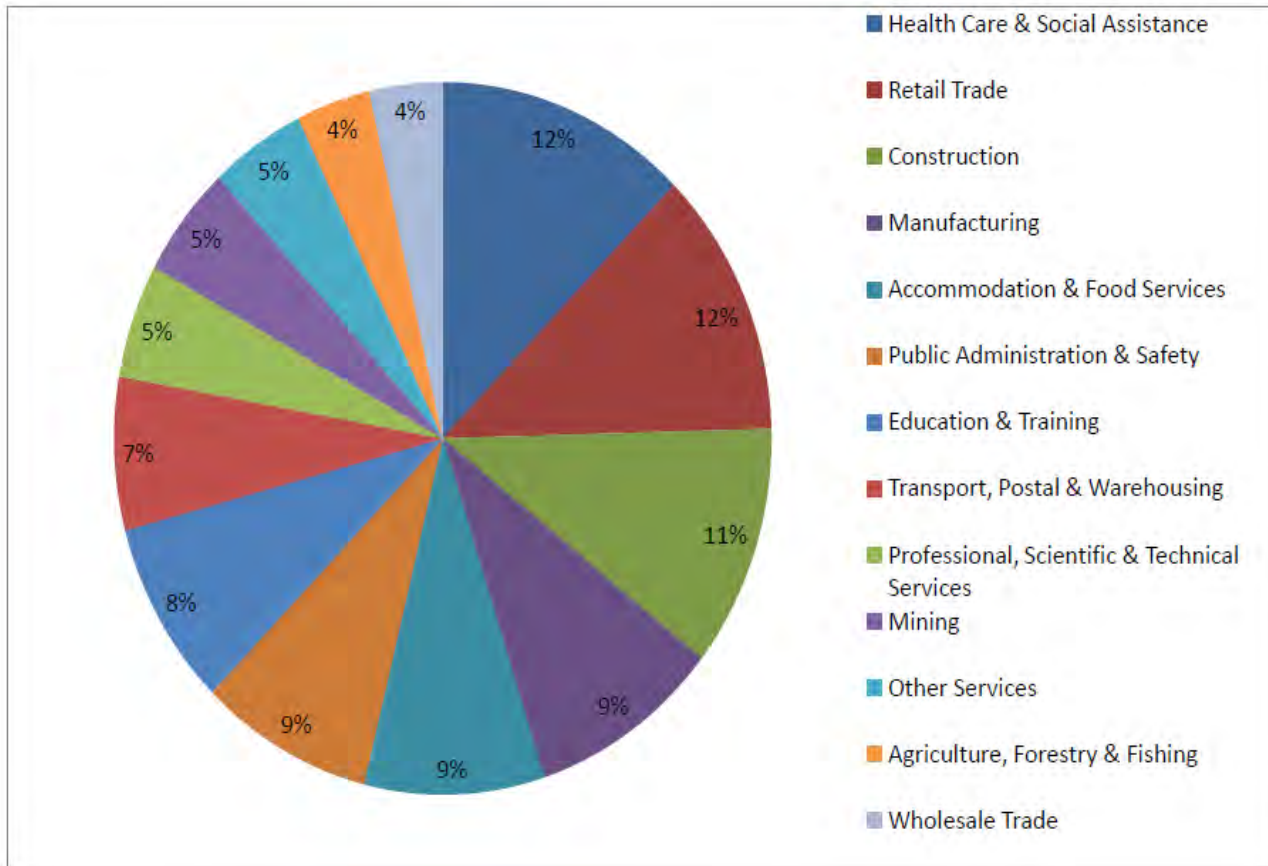


Figure 10. Persons with a post-school qualification by LGA (%)

SELTMP 2014: COASTAL COMMUNITIES

Employment by industry and occupation, 2011



Employment by Occupation (%), 2011

Technicians & trade workers:	68,477 (17.6)
Professionals:	57,958 (14.9)
Clerical & administrative workers:	51,005 (13.1)
Labourers:	46,406 (11.9)
Managers:	42,809 (11.0)
Community & personal service workers:	39,394 (10.1)
Sales workers:	36,340 (9.4)
Machinery operators & drivers:	39,041 (10.0)

Source: ABS, Census of Population and Housing, 2011, Basic Community Profile - B45 (usual residence) and Queensland Treasury and Trade estimates*

Figure 11. Employment by industry for the SELTMP Coastal Communities region. Region defined by 2011 LGA boundaries. Only industries with >10,000 employees are shown. Not shown: Administrative & Support Services (2.9%), Administrative & Support Services (1.7%), Rental, Hiring & Real Estate Services (1.7%), Electricity, Gas, Water & Waste Services (1.5%), Financial & Insurance Services (1.5%), Arts & Recreation Services (1.1%) and Information Media & Telecommunications (0.9%). Source: ABS, Census of Population and Housing, 2011, Basic Community Profile - B43 (usual residence) and Queensland Treasury and Trade estimates*

SELTMP 2014: COASTAL COMMUNITIES

Income

Median Total Personal Income, 2011 (\$/week)

Torres:	682
Cook:	497
Lockhart River:	312
Hope Vale:	294
Wujal Wujal:	257
Douglas:	586
Cairns:	624
Yarrabah:	274
Cassowary Cst:	503
Hinchinbrook:	478
Palm Island:	290
Townsville:	675
Burdekin:	540
Whitsunday:	621
Mackay:	705
Isaac:	1,052
Rockhampton:	584
Gladstone:	689
Bundaberg:	423

Source: ABS, Census of Population and Housing, 2011, Basic Community Profile - B02 and B17 and Queensland Treasury and Trade estimates*; Figure 13

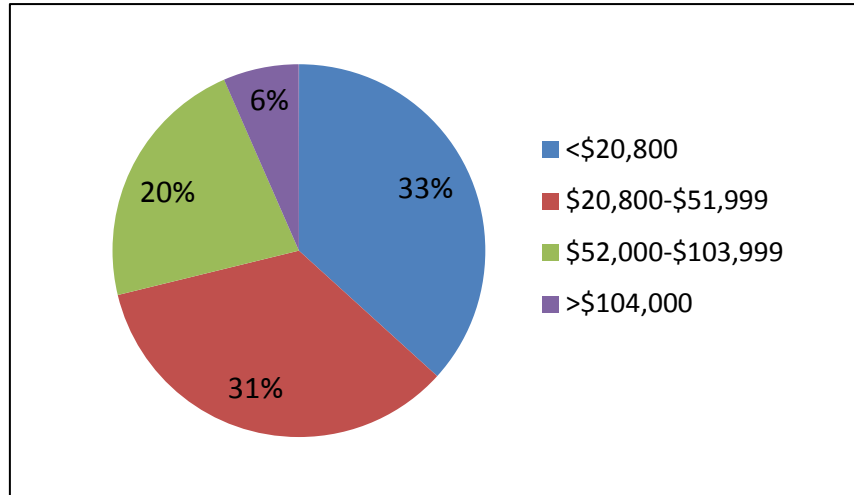


Figure 12. Gross individual yearly income in SELTMP coastal communities region. Source: ABS, Census of Population and Housing, 2011, Basic Community Profile - B02 and B17 and Queensland Treasury and Trade estimates*
(a) Includes personal income not stated.

- In 2011, the median total personal income for the region was \$31,406 per year, slightly higher than Queensland's median total personal income of \$30,524 per year.
- The highest median weekly personal income was for Isaac LGA (\$1,052). The lowest was for Wujal Wujal LGA (\$257).
- Isaac LGA had the highest median total personal income with \$54,704 per year.
- Wujal Wujal LGA had the lowest median total personal income with \$13,364 per year.

SELTMP 2014: COASTAL COMMUNITIES

Income

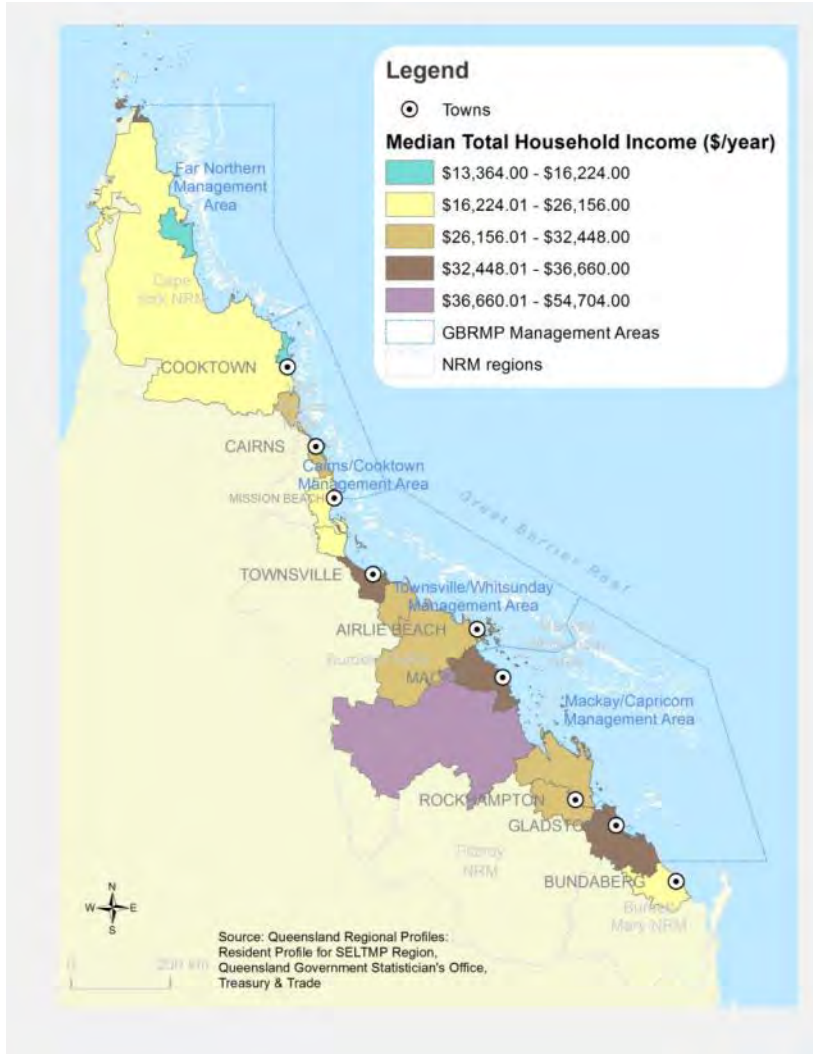


Figure 13. Median total household annual income by LGA (\$000).

SELTMP 2014: COASTAL COMMUNITIES

Unemployment and Labour Force

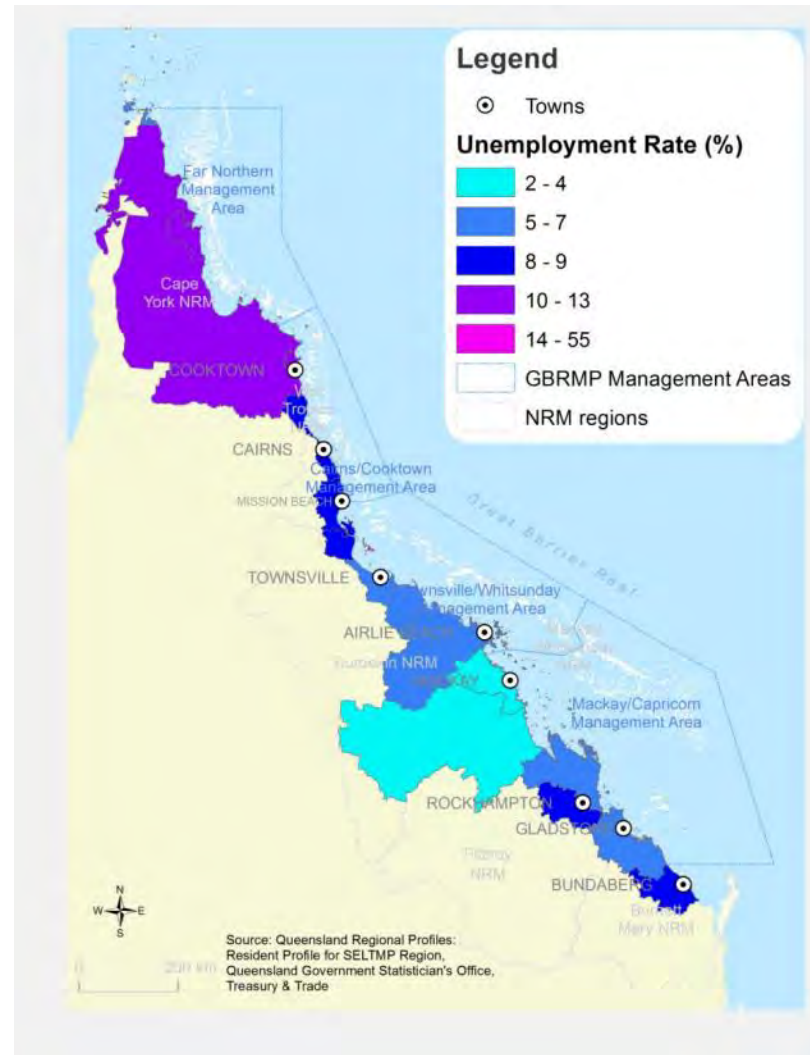
Unemployment & Labour Force

Unemployed: 31,099
 In Labour Force: 488,871
 Unemployment Rate: 6.4%

Unemployment Rate (%)

Torres:	10.0
Cook:	14.1
Lockhart River:	10.1
Hope Vale :	15.8
Wujal Wujal:	16.1
Douglas:	6.0
Cairns:	7.1
Yarrabah:	10.2
Cassowary Cst:	6.0
Hinchinbrook:	5.6
Palm Island:	11.6
Townsville:	5.5
Burdekin:	4.7
Whitsunday :	8.0
Mackay:	5.0
Isaac :	1.9
Livingstone:	7.5
Rockhampton :	8.2
Gladstone:	4.8
Bundaberg:	8.5

Source: Australian Government Department of Employment, *Small Area Labour Markets Australia*, various editions and *Queensland Treasury and Trade Estimates* for June quarter 2014*; Figure 14



- In 2011, the highest unemployment was in Wujal Wujal LGA (16.1%), while the lowest unemployment was in Isaac LGA (1.9%).

Figure 14. Unemployment rate.

SELTMP 2014: COASTAL COMMUNITIES

Income and Socio-economic Disadvantage

Socio-Economic Indexes for Areas (SEIFA), 2011

Quintile 1 (most disadvantaged):

24.2

Quintile 2: 25.3

Quintile 3: 20.2

Quintile 4: 16.7

Quintile 5: 13.6

Proportion of population in Quintile 1:

Torres: 49.4

Cook: 70.2

Lockhart River: 100.0

Hope Vale: 100.0

Wujal Wujal: 100.0

Douglas: 16.9

Cairns: 27.6

Yarrabah: 100.0

Cassowary Cst: 43.9

Hinchinbrook: 32.6

Palm Island: 100.0

Townsville: 13.4

Burdekin: 32.9

Whitsunday: 26.9

Mackay: 11.3

Isaac: 1.8

Livingstone: 10.1

Rockhampton: 35.2

Gladstone: 10.9

Bundaberg: 48.6

Source: ABS 2033.0.55.001, *Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia - Data only, 2011*, (Queensland Treasury and Trade derived)*; Figure 15

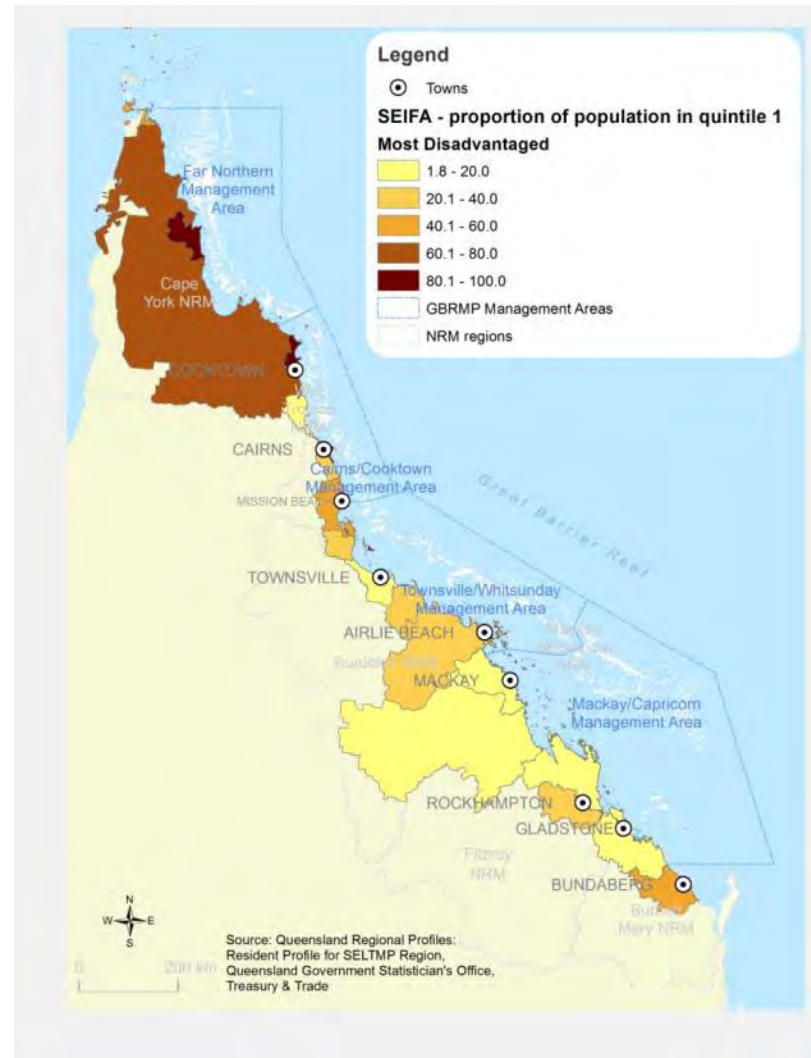


Figure 15. Proportion of population in Socio-Economic Indexes for Areas (SEIFA) Quintile 1 (most disadvantaged) by LGA.

- In 2011, 13.6% of the SELTMP Region's population was in the least disadvantaged quintile, while 24.2% were in the most disadvantaged quintile.
- The region is more disadvantaged than Queensland as a whole, where an equal proportion of the population is in each (20.0%).
- Isaac is the least disadvantaged LGA(1.8% in Quintile 1).

SELTMP 2014: COASTAL COMMUNITIES

Housing

Dwellings by tenure type (%) and dwelling structure

Fully owned:	82,900 (28.5)
Being purchased:	96,605 (33.2)
Rented:	100,871 (34.7)
Separate house:	237,964 (81.8)
Semi-detached:	14,917 (5.1)
Apartment:	31,861 (11.0)

	Percent of houses:	
	fully owned	rented
Torres:	7.7	77.8
Cook:	32.4	41.3
Lockhart River:	2.7	94.6
Hope Vale:	2.6	96.1
Wujal Wujal:	0	100
Douglas:	27.7	39.9
Cairns:	22.8	39.7
Yarrabah:	8.5	87.5
Cassowary Cst:	37.6	32.0
Hinchinbrook:	48.1	26.1
Palm Island:	4.1	92.8
Townsville:	23.2	37.3
Burdekin:	41.1	28.1
Whitsunday:	29.5	36.5
Mackay:	29.7	29.5
Isaac:	20.9	60.8
Livingstone:	35.1	26.2
Rockhampton:	30.1	32.9
Gladstone:	26.8	30.4
Bundaberg:	37.7	28.4

Source: ABS, Census of Population and Housing, 2011, Basic Community Profile - B32 (occupied private dwellings) and Queensland Treasury and Trade estimates*

Median house sale price (\$000), 12 months ending 30 June 2014

Torres:	n.a.
Cook:	253
Lockhart River:	n.a.
Hope Vale :	n.a.
Wujal Wujal :	n.a.
Douglas:	282
Cairns:	330
Yarrabah:	n.a.
Cassowary Cst:	260
Hinchinbrook:	245
Palm Island:	n.a.
Townsville:	355
Burdekin:	210
Whitsunday:	373
Mackay:	416
Isaac:	360
Livingstone:	410
Rockhampton:	305
Gladstone:	435
Bundaberg:	280

Source: Department of Natural Resources and Mines, Office of the Valuer-General, Property Sales and Queensland Treasury and Trade estimates*; Figure 16.

In 2011, the highest percentage of fully owned dwellings was in Hinchinbrook LGA (48.1%). The highest % of rented dwellings was in Wujal Wujal LGA (100%). Among LGAs with house sale price data, Gladstone LGA had the highest median house price (\$435k), while Burdekin LGA had the lowest median house price (\$210k).

Median mortgage repayment, 2011 (\$/month)

Torres:	1,817
Cook:	1,000
Lockhart River:	0
Hope Vale:	0
Wujal Wujal:	0
Douglas:	1,630
Cairns:	1,729
Yarrabah:	0
Cassowary Cst:	1,300
Hinchinbrook:	1,200
Palm Island:	2,167
Townsville:	1,860
Burdekin:	1,350
Whitsunday:	1,768
Mackay:	2,167
Isaac:	1,907
Livingstone:	1,883
Rockhampton:	1595
Gladstone:	2,000
Bundaberg:	1,350

Source: ABS, Census of Population and Housing, 2011, Basic Community Profile - B02.*

Median rental payment, 2011 (\$/week)

Torres:	117
Cook:	140
Lockhart River:	113
Hope Vale:	98
Wujal Wujal:	65
Douglas:	n.a.
Cairns:	250
Yarrabah:	120
Cassowary Cst:	200
Hinchinbrook:	152
Palm Island:	100
Townsville:	290
Burdekin:	180
Whitsunday:	260
Mackay:	310
Isaac:	64
Livingstone:	n.a.
Rockhampton:	250
Gladstone:	300
Bundaberg:	230

Source: ABS, Census of Population and Housing, 2011, Basic Community Profile - B02.

SELTMP 2014: COASTAL COMMUNITIES

Housing

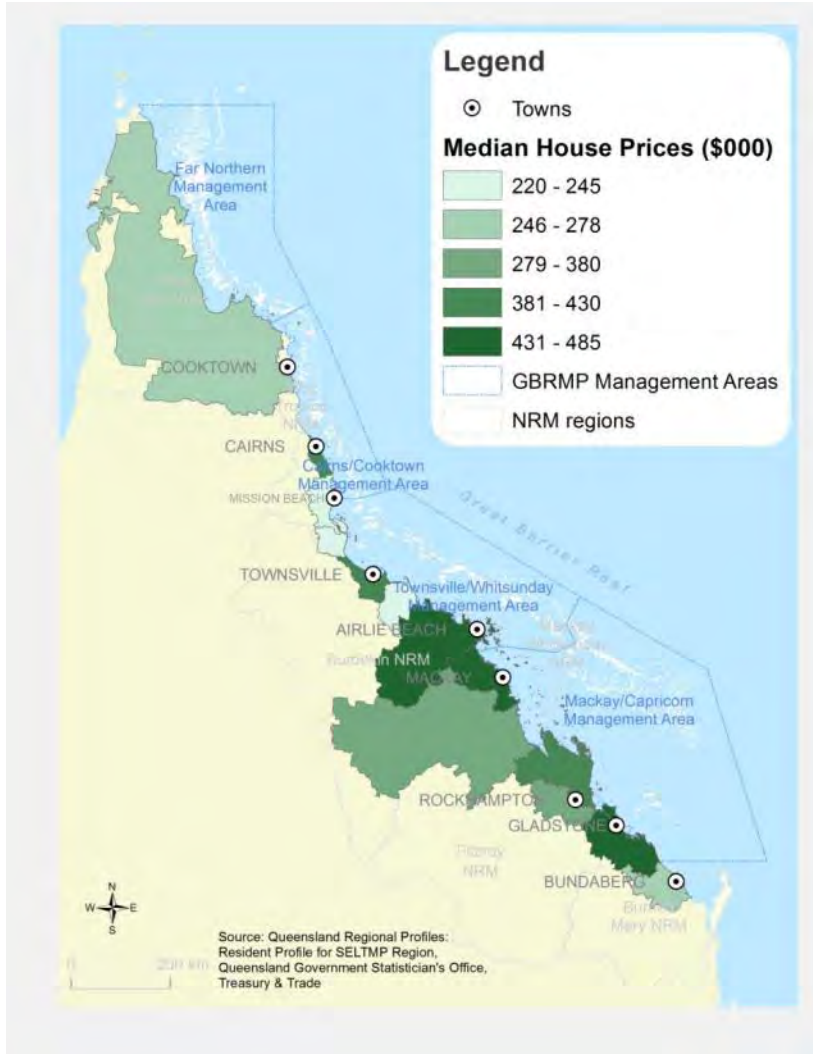


Figure 16. Median house prices by LGA (\$000).

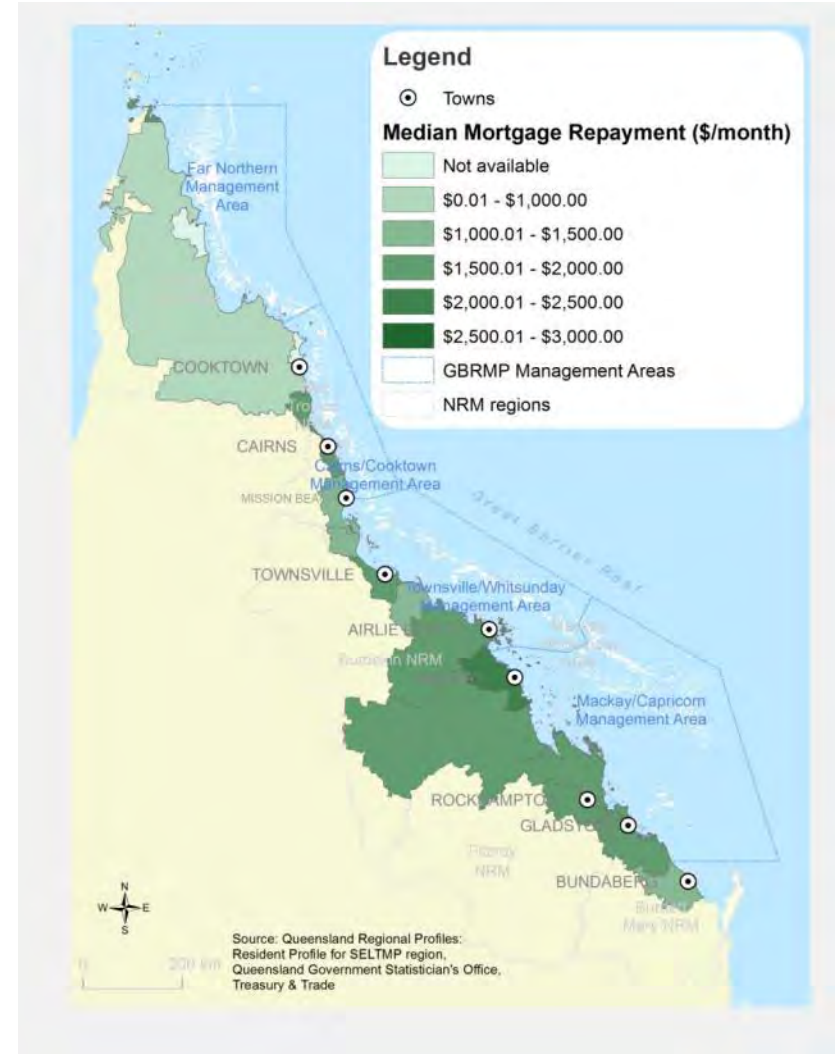


Figure 17. Median monthly mortgage repayment by LGA (\$/month)

SELTMP 2014: COASTAL COMMUNITIES

Sewage and Waste

Residential sewage connections

Cairns:	63,334
Hinchinbrook:	2052
Townsville:	59,767
Burdekin:	5243
Whitsunday:	8813
Mackay:	32,029
Rockhampton:	32,514
Gladstone:	17,260

Source: DLGP 2011; Figure 18

Total tonnage of domestic waste (t)

Cairns :	60,487
Hinchinbrook:	3,409
Townsville:	42,912
Burdekin:	17,500
Whitsundays:	12,520
Mackay:	29,402
Rockhampton:	37,351
Gladstone:	19,324

Source: DLGP 2011; Figure 19

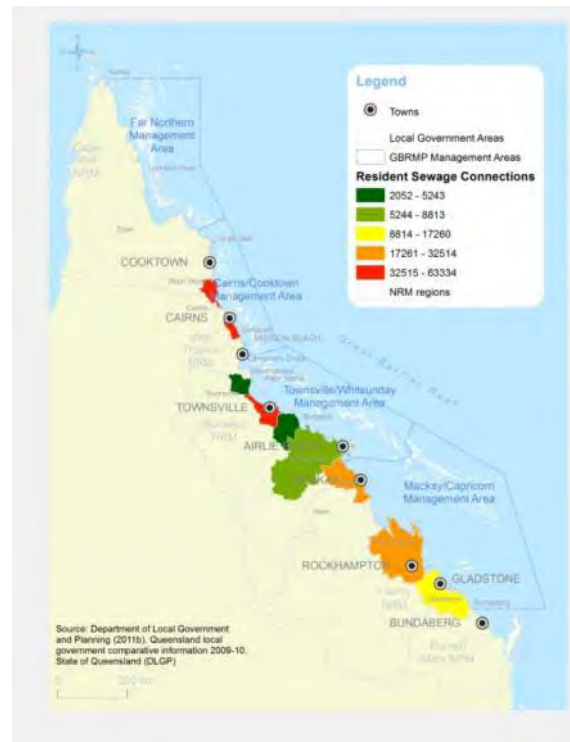


Figure 18. Resident sewage connections.

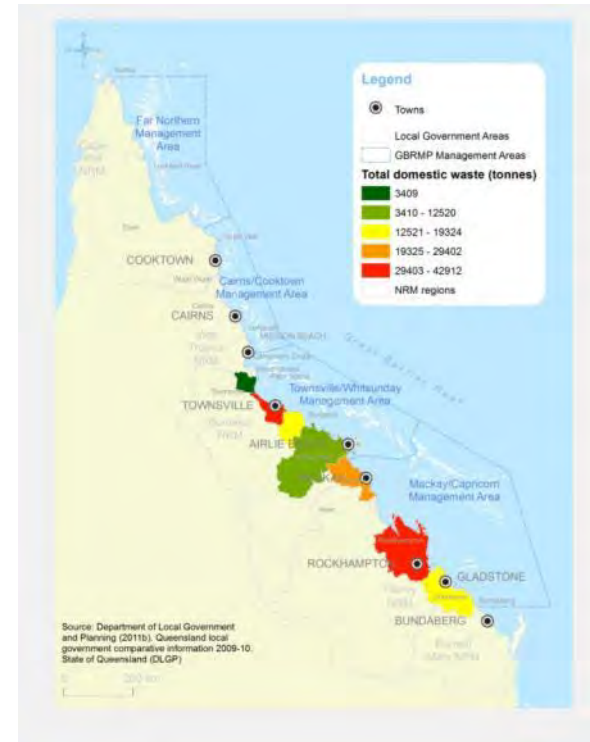


Figure 19. Total domestic waste.

SELTMP 2014: COASTAL COMMUNITIES

Internet Connections

Internet connections in occupied private dwellings, (number) ^{a,b,c,d}

No connection: 61,567
 Total connections: 217,755
 (74.9%)

Population with internet connection (%)

Torres:	56.3
Cook:	60.4
Lockhart River:	24.5
Hope Vale:	38.2
Wujal Wujal:	43.1
Douglas:	75.6
Cairns:	77.8
Yarrabah:	25.8
Cassowary Cst:	66.5
Hinchinbrook:	63.5
Palm Island:	88.3
Townsville:	78.6
Burdekin:	65.5
Whitsunday:	73.1
Mackay:	76.5
Isaac:	83.8
Livingstone:	76.0
Rockhampton:	70.5
Gladstone:	79.2
Bundaberg:	69.3

Source: ABS, Census of Population and Housing, 2011, Basic Community Profile - B35 (occupied private dwellings) and Queensland Treasury and Trade estimates)*; Figure 20

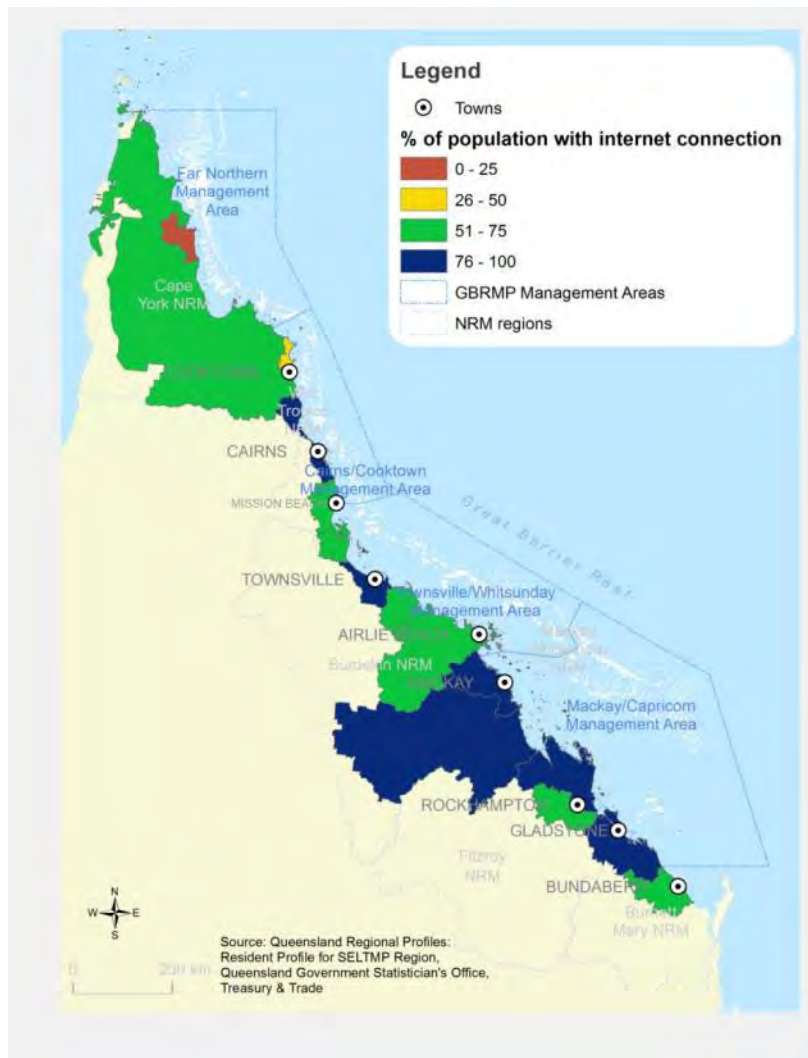


Figure 20. Population with internet connection in occupied private dwellings by LGA (%).

Highest % connected:
 Palm Island (88.3%)

Lowest % connected:
 Lockhart River (24.5%)

Number of dwellings in GBR region with no internet connection:
 61,567

- ^a Excludes visitors only and other not classifiable households.
- ^b Where a dwelling has more than one type of Internet connection only one is recorded.
- ^c Includes other Internet connection.
- ^d Includes Internet connection not stated.

SELTMP 2014: COASTAL COMMUNITIES

Emergency Information Sources

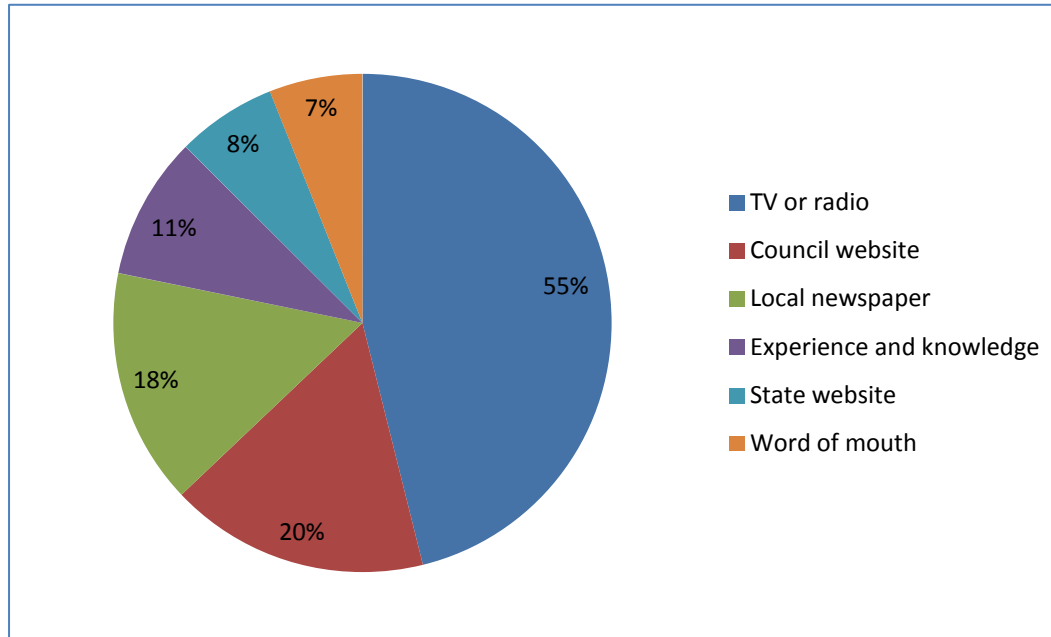


Figure 21. Townsville population using sources of emergency information (%). Source: Townsville City Council 2011.

SELTMP 2014: COASTAL COMMUNITIES

Protected Areas

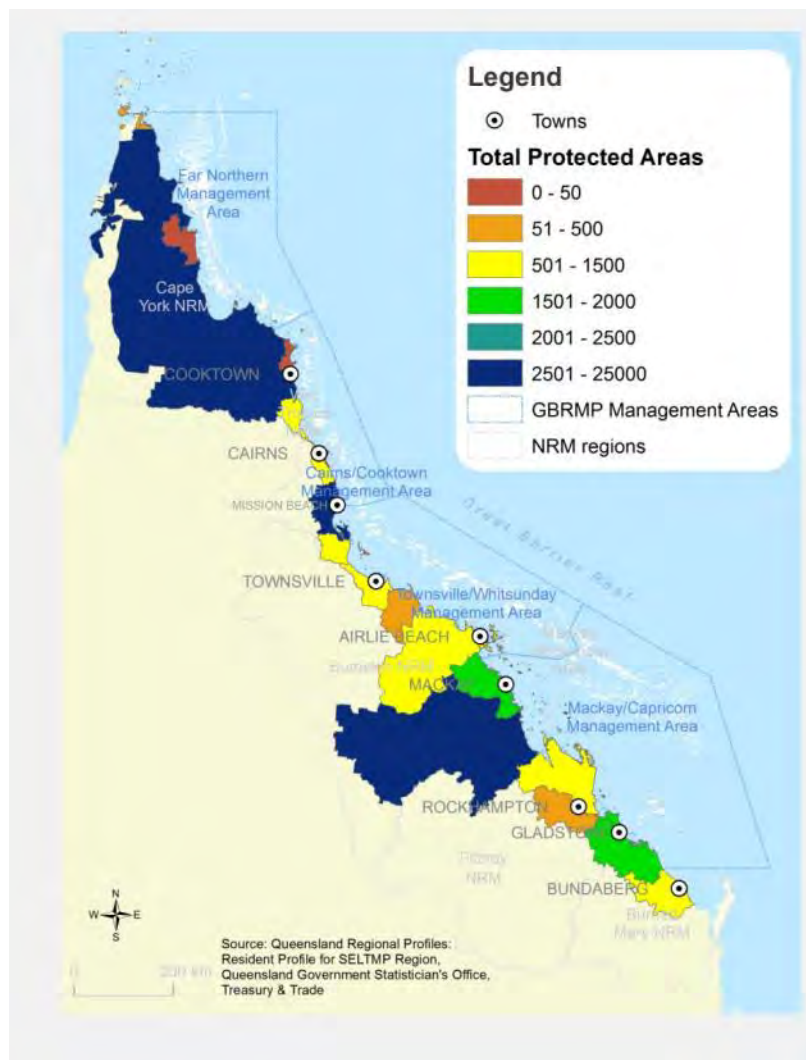
Protected Areas (km²) and %

National Park:	33,269.90
State Forest:	4,107.20
Timber Reserve:	11.2
Forest Reserve:	750.0

Total Protected Area (km²) and % of total area of LGA^{a,b}

Torres:	52.4	(5.91)
Cook:	21,074.10	(19.85)
Lockhart River:	2.7	(0.08)
Hope Vale:	0.6	(0.05)
Wujal Wujal:	0	(0)
Douglas:	1498	(61.27)
Cairns:	858.40	(20.79)
Yarrabah:	0.7	(0.44)
Cassowary Cst:	2843	(60.50)
Hinchinbrook:	993.50	(35.35)
Palm Island:	0	(0)
Townsville:	970.70	(25.96)
Burdekin:	217.70	(4.30)
Whitsunday:	1048.60	(4.39)
Mackay:	1634.1	(21.44)
Isaac:	2589.60	(11.16)
Livingstone:	756.40	(6.42)
Rockhampton:	427.60	(2.33)
Gladstone:	1782.70	(17.00)
Bundaberg:	1221.40	(18.94)

Source: Queensland Department of National Parks, Recreation, Sport and Racing and Queensland Treasury and Trade estimates*; Figure 22.



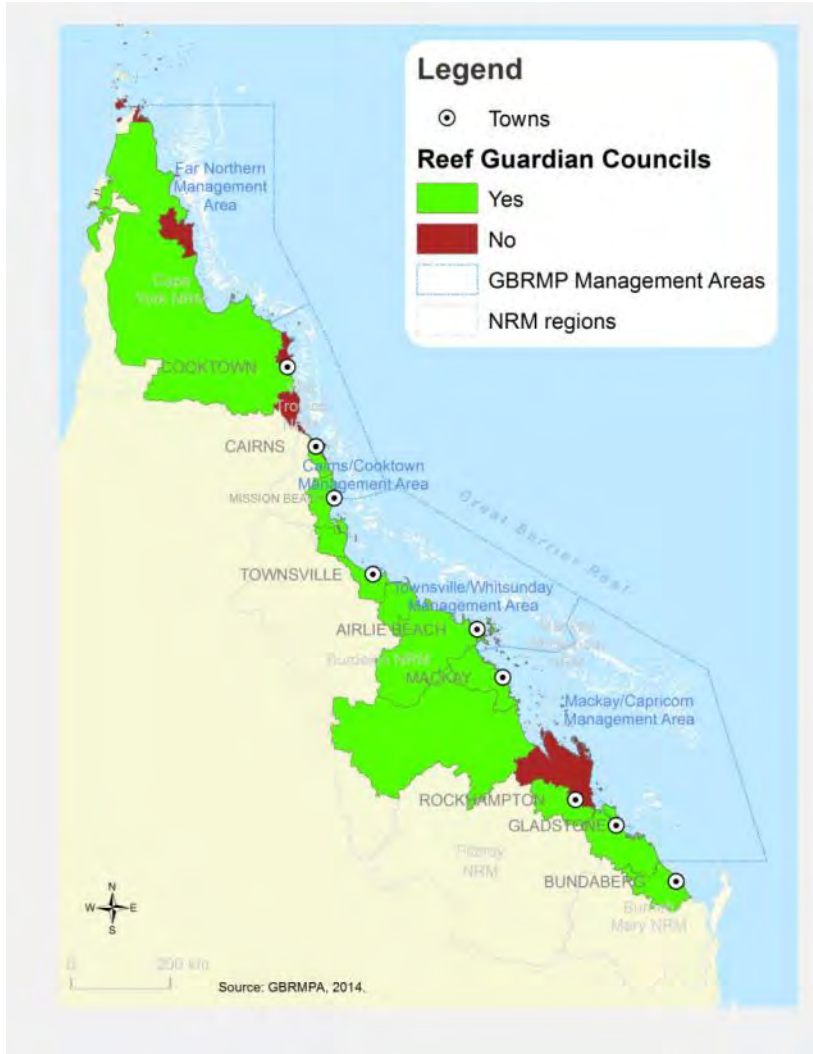
^a Source data current to 5 December 2012.

^B Includes Conservation Parks and Resource Reserves.

Fig 22. Total protected areas by LGA.

SELTMP 2014: COASTAL COMMUNITIES

Reef Guardian Programs



Reef Guardian program participants

Schools:	308
Councils:	15
Farmers and Graziers:	17
Fishing operations:	7

Source: Owens 2014 and <http://www.gbrmpa.gov.au/our-partners/reef-guardians>. Accessed 3 Dec 2014; Figure 23.

Figure 23. Location of Reef Guardian Council Programs.
Source: GBRMPA 2014.

SELTMP 2014: COASTAL COMMUNITIES

Volunteering and Environmental Behaviour

Volunteers aged 15 and older (% of population)

SELTMP Region: 17.7

Torres:	15.5
Cook:	19.5
Lockhart River:	12.5
Hope Vale:	8.7
Wujal Wujal:	12.3
Douglas:	20.6
Cairns:	17.6
Yarrabah:	11.3
Cassowary Cst:	19.1
Hinchinbrook:	23.1
Palm Island:	7.7
Townsville:	16.7
Burdekin:	22.1
Whitsunday:	17.0
Mackay:	15.9
Isaac:	20.4
Livingstone:	19.3
Rockhampton:	17.6
Gladstone:	19.3
Bundaberg:	18.3

Source: ABS, Census of Population and Housing, 2011, Basic Community Profile - B19 (usual residence) and Queensland Treasury and Trade estimates*

Participate in government incentive schemes (e.g. solar rebates)

Percent of coastal population

Region:	27
Cape York:	22
Far Northern:	14
Northern:	34
Central:	19
Southern:	35

Source: Young and Mar 2010

Walk, cycle, car pool or use public transport rather than driving (%)

Percent of coastal population

Region:	35
Cape York:	33
Far Northern:	30
Northern:	40
Central:	36
Southern:	35

Source: Young and Mar 2010



Use green electricity (e.g. solar, wind, wave, nuclear) (%)

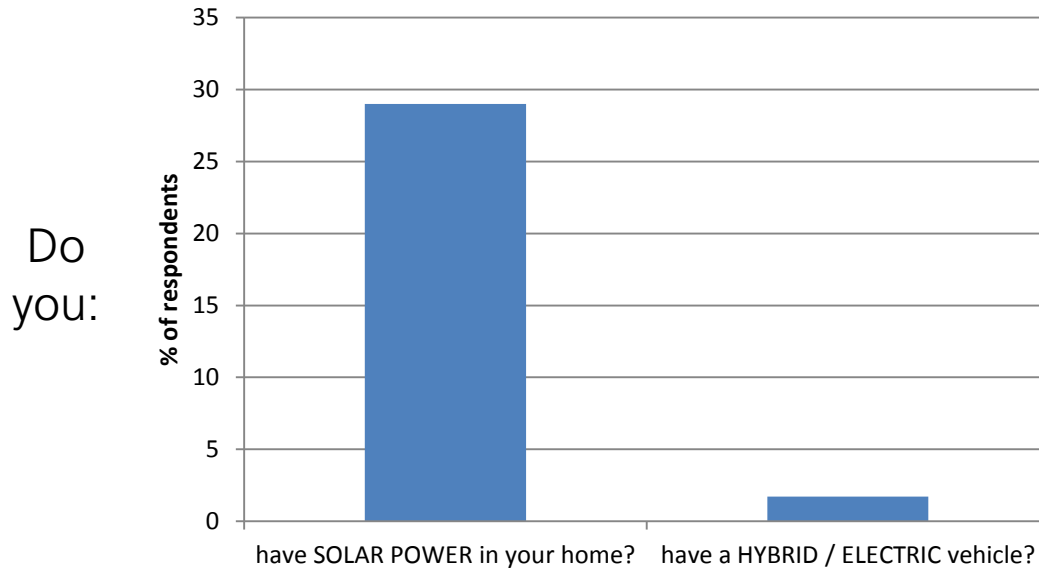
Percent of coastal population

Region:	18
Cape York:	17
Far Northern:	24
Northern:	16
Central:	15
Southern:	17

Source: Young and Mar 2010

SELTMP 2014: COASTAL COMMUNITIES

Environmental Behaviour

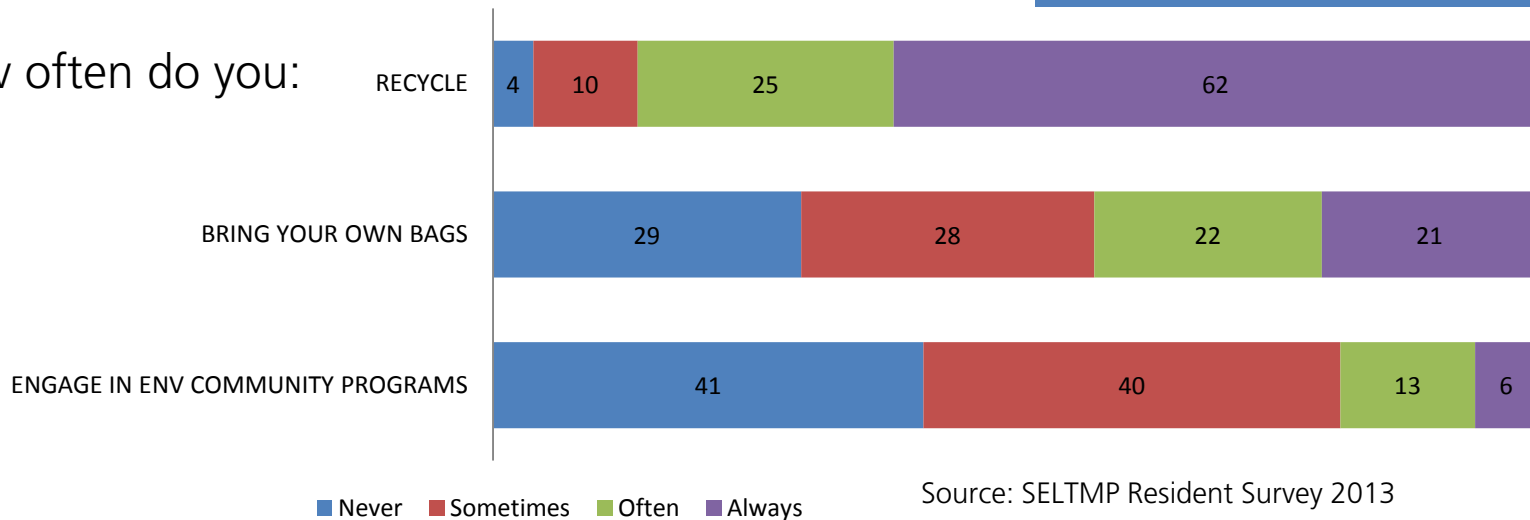


Top reasons for positive environmental behaviour (% of QLD coastal population)

Reason for behaviour:	
Turning off lights and appliances: to save money	75
Using energy efficient products: to save money	60
Buying local produce: to support local farmers/industry	49
Recycling: to protect the environment	41

Source: Young and Mar 2010

How often do you:



Source: SELTMP Resident Survey 2013

SELTMP 2014: COASTAL COMMUNITIES

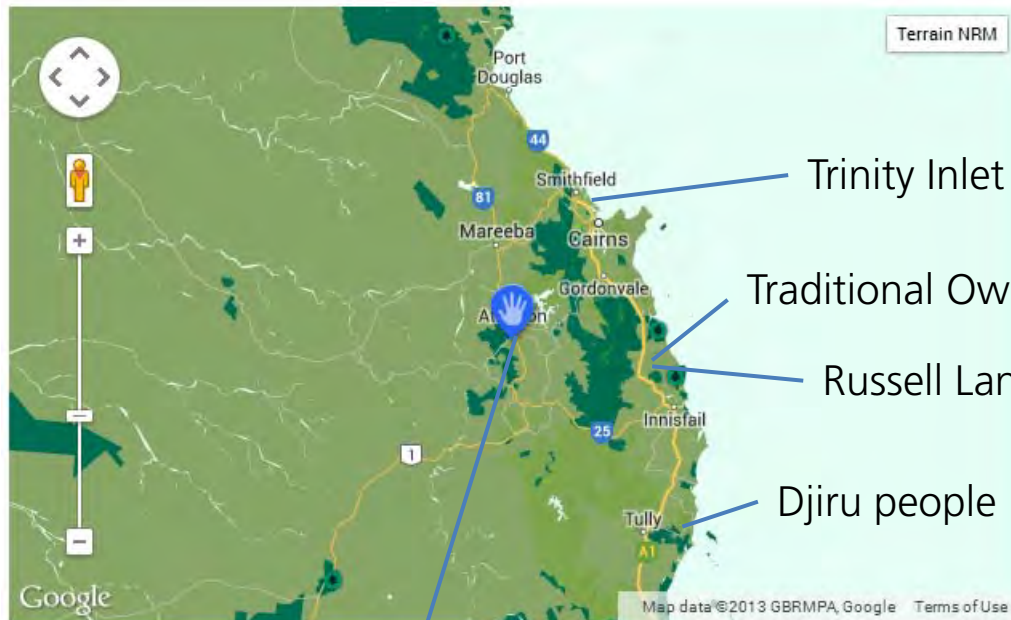
Local Coastal Community Groups in NQ Dry Tropics NRM Region

- [Alva Beach Sport, Recreation and Community Association Inc](#)
- [Arcadia Surf Life Saving Club](#)
- [Ayr Surf Life Saving Club](#)
- [Beyond Zero Emissions](#)
- [BirdLife Northern Queensland](#)
- [BirdLife Townsville](#)
- [Bluewater Catchment Landcare Inc](#)
- [Bowen Surf Life Saving Club](#)
- [Balgal Beach Boating and Leisure Club Inc](#)
- [Burdekin Fish Restocking Association](#)
- [Burdekin Bowen Integrated Floodplain Management Advisory Committee Inc.](#)
- [Coastal Dry Tropics Landcare Inc](#)
- [Conservation Volunteers Australia](#)
- [Crystal Creek Hut Owners Association](#)
- [Geoffrey Bay Coastcare](#)
- [Gudjuda Reference Group Aboriginal Corporation](#)
- [Haughton River Catchment Committee](#)
- [Hell Hole Creek Hut Owners and Anglers Organisation](#)
- [Lower Burdekin Landcare](#)
- [Magnetic Island Community Development Assoc Inc](#)
- [Magnetic Island Nature Care Association](#)
- [Marine Wildlife Foundation](#)
- [North Queensland Conservation Council](#)
- [North Queensland Underwater Explorers Club](#)
- [North Queensland Wildlife Care](#)
- [Olympus Crescent Coastcare](#)
- [Permaculture Townsville](#)
- [Queen's Beach Action Group](#)
- [Reef Check Australia](#)
- [Saunders Beach Community Centre](#)
- [Seagrass Watch](#)
- [Sea Turtle Foundation](#)
- [Society for Growing Australian Plants](#)
- [Tangaroa Blue Foundation](#)
- [Townsville Skindiving Club](#)
- [Toolakea Progress Association](#)
- [Toomulla Beach Coastcare](#)
- [Townsville Sportfishing Club](#)
- [TropEco](#)
- [Volunteering North Queensland](#)
- [West Point Coastcare](#)
- [Wildlife Preservation Society of Queensland, Townsville Branch](#)
- [Wunjunga Progress Association](#)

Source: NQ Dry Tropics. http://wiki.bdtprm.org.au/index.php?title=Local_Coastal_Community_Groups. Accessed 30 October 2013.

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Local Coastal Community Groups in Terrain NRM Region



Trinity Inlet Catchment Association Inc.

Traditional Owners Water Quality Projects

Russell Landcare and Catchment Group

Djiru people managing country at Mission Beach



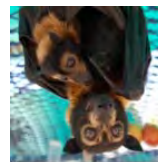
Atherton Tablelands:

Tolga Bat Rescue and Research Inc.

Tree Kangaroo & Mammal Group Inc.

Trees for the Evelyn and Atherton Tableland Inc. (TREAT)

Barron River Integrated Catchment Management Association



Source: Terrain: <http://www.terrain.org.au/Projects>. Accessed 27 November 2013.

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Local Coastal Community Groups in Cape York NRM Region



Source: Cape York NRM. <http://www.capeyorknrm.com.au/projects.html>. Accessed 27 November 2013.

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Drivers of Change

Key events and trends for GBR coastal communities in 2014

- ❖ Natural disasters: Tropical Cyclone Ita
- ❖ Federal Government grants and subsequently withdraws approval for dumping dredge spoil from Abbot Point port expansion on reef
- ❖ GBRWHA Strategic Assessment Report and 2014 Outlook Report released
- ❖ Mining slump: Townsville and Mackay register highest number of bankruptcies in Australia in a report by the Australian Financial Security Authority

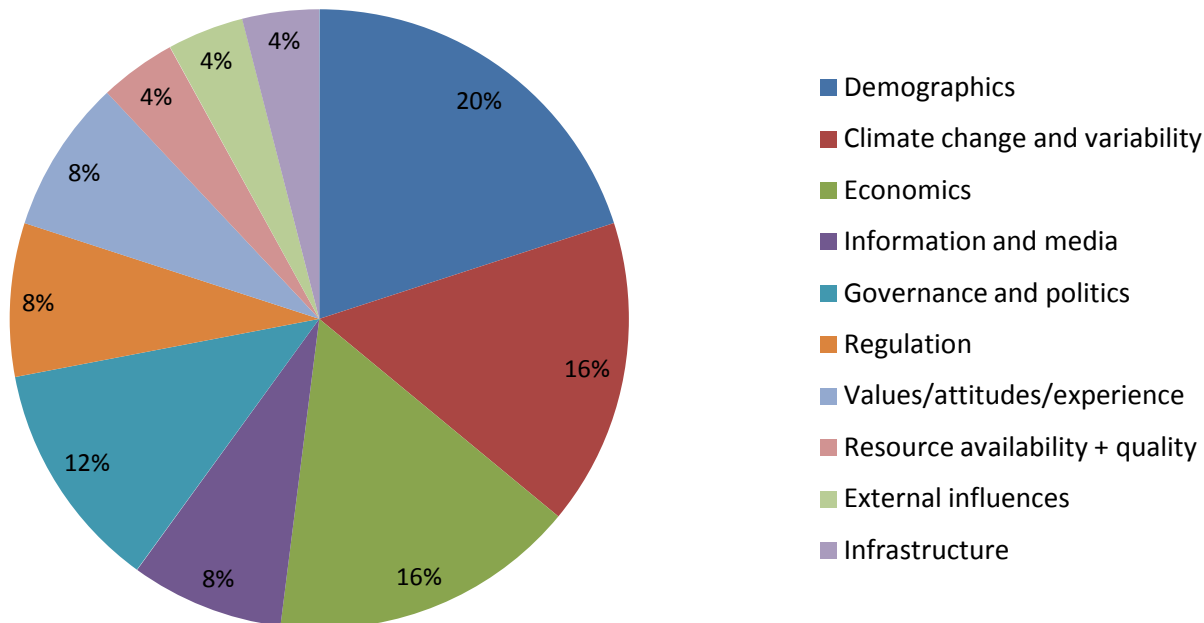


Figure 24. Drivers identified by SELTMP Coastal Communities Working Group in November 2011 Workshop, Townsville.

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Key Events in 2014: Natural disasters

Tropical Cyclone Ita, 11 April 2014

- Strongest cyclone in QLD since Yasi in 2011
- Made landfall near Cape Flattery
- Maximum wind gust of 300 kph
- Maximum sustained wind speed of 215 kph
- Cardwell and Tully each received over 300mm of rain in 24 hours
- Bowen received 110mm in one hour, resulting in flash flooding
- Greatest structural damage in Cooktown, with 16 buildings destroyed or severely damaged and 200 buildings affected.
- No reports of fatalities or serious injury in Australia; 22 deaths in Solomon Islands
- Five people rescued from floodwaters between Cooktown and Cairns
- Initial estimates placed damage in Queensland over A\$1 billion, excluding insurance claims
- 700 km stretch of sugarcane country suffered damage; roughly 80 percent of the sugarcane crop in the Herbert River District was destroyed
- As a result of Ita, the average cost of avocados, bananas, iceberg lettuce, and papaya increased

Sources: ABC Emergency, Wikipedia.
http://en.wikipedia.org/wiki/Cyclone_Ita.
Accessed 11 December 2014.



Flooding in Townsville following Tropical Cyclone Ita, April 2014. Photo: Erin Bohensky.

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Key Events in 2014: Port development

Number of coal ships in 2011: 1722
(Figure 24)

Abbot Point: 190 (201 bulk carriers in 2012/2013)

Hay Point: 892 (883 bulk carriers in 2012/2013)

Gladstone: 640 (1,869 bulk carriers in 2012/2013)

Source:

GPC (2011) Gladstone Ports Corporation Annual Report 2010/11 and North Queensland Bulk Ports Corporation Limited (2011) Annual Report 2010 -2011 *in* Greenpeace 2012

Trade Statistics for Queensland Ports 2012-2013



Abbot Point: 190

Hay Point: 892

Gladstone: 1,869

Figure 25. Queensland Port Activity. Source: QLD Dept of State Development, Infrastructure and Planning 2013

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Key Events in 2014: Climate activism



Townsville residents stuck their heads in the sand to protest the Australian Government's response to the United Nations Climate Summit in New York in September. Photo: Cranky Curlew Productions.

<http://www.news.com.au>

Climate change was again ranked as the greatest threat to the Great Barrier Reef by GBRMPA's 2014 Outlook Report



Climate march, New York City.
Photo: Andrew Burton/Getty Source: AFP.

SELTMP 2014: COASTAL COMMUNITIES IN THE GREAT BARRIER REEF

Conclusion

“SELTMP 2014: Coastal Communities in the Great Barrier Reef”, as part of a series of technical reports from the *Social and Economic Long Term Monitoring Program* (SELTMP; NERP Project 10.1) for the GBR region, has presented a sample of indicators of the current state of coastal community characteristics and relationships with the GBR, and drivers of change in coastal communities that reflect some of the priorities identified by coastal community stakeholders that participated in the project’s working group. Through mainly secondary socio-economic data, it serves to contextualise findings of survey data presented in other reports in this series. Together these data sources will be analysed to gain a better understanding of spatial and temporal trends relevant to the future of the GBR and social systems linked to it.

Key findings

Key findings in this report include:

- Stakeholders identified demographics, climate change and variability (including extreme weather), and economics as three top drivers of change in coastal communities.
- Population growth patterns in the GBR region are highly diverse. Between 2012 and 2013, some areas experienced population growth (e.g. Gladstone LGA at 4.1%) while others decline (Hinchinbrook LGA at -0.9%). Net migration in 2011 was greatest from Cassowary Coast LGA.
- Effects of resource industries with fly-in fly-out work arrangements are especially pronounced in the southern part of the region. In 2011, Isaac LGA had the highest non-resident population, population mobility in the five preceding years, income and median house price, and the lowest Socio-Economic Indexes for Areas (SEIFA) value (a measure of socio-economic disadvantage).
- Between 2012 and 2013, resident population increased from 871,908 to 889,486. As a percentage of the projected resident population of QLD, the GBR’s projected resident population decreased from 20% in 2012 to 18% in 2013.
- GBR coastal residents engage modestly in environmental stewardship activities. Survey data suggests that a range of environmental behaviours are adopted for different reasons, and are most often economically-driven.
- Major events with potential to drive change in coastal communities in 2014 included Tropical Cyclone Ita and associated heavy rains and floods, port development and its potential impacts on the GBR, and local activism on climate change.

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