



Australian Government

**Great Barrier Reef
Marine Park Authority**

**The Social and Economic Long Term Monitoring Program
for the Great Barrier Reef
2017**

Final Report to the Great Barrier Reef Marine Park Authority

Authors: Nadine A. Marshall¹, Matthew I. Curnock¹, Petina L. Pert¹, Genevieve
Williams¹

¹CSIRO, Land and Water

This report should be cited as:

Marshall, N.A. Curnock, M., Pert, P.L., Williams, G. (2017) *The Social and Economic Long Term Monitoring Program (SELTMP) for the Great Barrier Reef . Final Report*. Report to the Great Barrier Reef Marine Park Authority. Townsville, Australia (227pp.).

This publication is copyright. The Copyright Act 1968 permits fair dealing for study, research, information or educational purposes subject to inclusion of a sufficient acknowledgement of the source.

The views and opinions expressed in this publication are those of the authors and do not necessarily reflect those of the Australian Government or the Minister for the Environment.

While reasonable effort has been made to ensure that the contents of this publication are factually correct, the Commonwealth does not accept responsibility for the accuracy or completeness of the contents, and shall not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on, the contents of this publication.

Contents

EXECUTIVE SUMMARY.....	8
INTRODUCTION.....	13
Report scope	15
METHODS.....	15
Survey Design	15
Survey Administration	16
Data Analysis and Presentation	17
Secondary Data Collection	20
RESULTS.....	20
A. Resident Results.....	20
A1. Resident aspirations, capacities and stewardship (ACS)	20
1.1 Aspirations (ACS1).....	20
1.2 Capacity and education (ACS2).....	22
1.3 Stewardship (ACS3).....	26
A2. Community Vitality (CV)	29
2.1 Relationship with the Reef (CV4).....	29
2.2 Community health (CV3).....	30
2.3 Community satisfaction (CV4).....	33
2.4 Wellbeing (CV4).....	40
2.5 Resource Use (ACS3).....	43
A3. Culture and Heritage (CH)	48
3.1 Values of residents (CH1, CH2, CH3).....	48
A4. Economic value	58
4.1 Economic viability (EV1-5).....	58
A5. Governance (G)	58
5.1 Confidence and support in management (G3).....	58
5.2 Equity Issues (EV4).....	64
5.3 Trust in networks (G4).....	65
5.4 Sources of information (G4).....	69
B. Tourist Results.....	75
B1. Tourist aspirations, capacities and stewardship	75
1.1 Aspirations (ACS1).....	75
1.2 Capacity and education (ACS2).....	76

1.3 Stewardship (ACS3).....	77
B2. Community vitality.....	80
2.2 Community (tourist) health.....	80
2.3 Community (tourist) satisfaction.....	82
2.4 Wellbeing (tourist).....	83
2.5 Resource Use.....	84
B3. Culture and Heritage.....	84
3.1 Values to tourists.....	84
B4. Economic value.....	90
4.1 Economic viability.....	90
B5. Governance.....	90
5.1 Confidence and support in management (G3).....	90
5.2 Equity Issues (EV4).....	90
5.3 Trust in networks (G4).....	90
5.4 Sources of information (G4).....	95
C. Tourism Operator Results.....	100
C1. Tourism operator aspirations, capacities and stewardship.....	100
1.1 Aspirations (ACS1).....	100
1.2 Capacity and education (ACS2).....	102
1.3 Stewardship (ACS3).....	104
C2. Community vitality within tourism operators.....	105
2.1 Relationship with the Reef (CV4).....	105
2.2 Community health (CV3).....	106
2.3 Community satisfaction (CV4).....	107
2.4 Wellbeing (CV4).....	110
2.5 Resource Use (ACS3).....	112
C3. Culture and Heritage of tourism operators.....	113
3.1 Values of tourism operators.....	113
C4. Economic value of tourism operators.....	119
4.1 Economic viability (EV1-5).....	119
C5. Governance of the tourism industry.....	119
5.1 Confidence and support in management (G3).....	119
5.2 Equity Issues (EV4).....	121
5.3 Trust in networks (G4).....	122

5.4 Sources of information (G4)	126
D. Commercial Fisher Results	132
D1. Aspirations, capacities and stewardship	132
1.1 Aspirations (ACS1)	132
1.2 Capacity and education (ACS2)	133
1.3 Stewardship (ACS3)	136
D2. Community vitality	137
2.1 Relationship with the Reef (CV4)	137
2.2 Community health (CV3)	137
2.3 Community satisfaction (CV4)	139
2.4 Wellbeing (CV4)	142
2.5 Resource Use (ACS3)	144
D3. Culture and Heritage	145
3.1 Values of commercial fishers	145
D4. Economic value	150
4.1 Economic viability (EV1-5)	150
D5. Governance	151
5.1 Confidence and support in management (G3)	151
5.2 Equity Issues (EV4)	152
5.3 Trust in networks (G4)	153
5.4 Sources of information (G4)	157
E. National Residents	163
DISCUSSION.....	171
REFERENCES	172
Appendix One: Resident Survey	174
Section B. In the following section we would like to know a bit more about your relationship with the Great Barrier Reef region.....	176
Section C. In this section we would like to know a little more about you.....	178
Appendix Two: Tourist Survey.....	181
Section B. In the following section we would like to know a bit more about your relationship with the Great Barrier Reef region and perceptions of the Great Barrier Reef.....	183
Section C. In this section we would like to know a little more about you.....	185
Appendix Three: Tourism Operator Survey	187
Section C. In this section we would like to know a little more about you.....	191
Appendix Four: Commercial Fisher Survey 2017.....	194

Section C. In this section we would like to know a little more about you.....	197
Appendix Five: National Survey 2017	201
Appendix Six: Maps 2017	205

ACKNOWLEDGMENTS

We would like to sincerely acknowledge the collaborative nature of this work that has involved special colleagues that are not formally on the project: Margaret Gooch, Allan Dale, Matt Curnock, Gena Williams, and Georgina Gurney. It is with deep gratitude that we also acknowledge Jeremy Goldberg and Emily Hassett for their extraordinary assistance with the collection of the data presented in this report. We also wish to acknowledge the superb survey skills and professionalism of our survey team:

Emily Blanch
Paul Finn
Lorin McIntosh
Mercedes Pisano
Kirsten Inglis
Rolf Schlagloth
Maggie Inglis
Cassandra Inglis
Kristy Brown
Elisabeth Dalton
Carly Haack
Elysha Emrich
Tianie Baidon
Lisa Del Riccio
Brock Bergseth
Christopher Ernst
Brianna Stimpson
Robyn Bell
Debbie Legge
Marenn Sagar
Teneille Hielscher
Callandra Luckie
Freda Nicholson
Sophie Essberger
Laura Richardson
Sophie Holt
Bethany Adomanis
Anna Ender
Aaron Halliwell
Simone Shomaker
Tracy MacKeracher
Erica Malpass
Madeline McKenzie
Jay Jackson
Jaelin Allen-Simmons
Bree McCutcheon
Tara Belthouser
Dale French
Sally Obst
Julia Faulkner
Flavia Santamaria
Jodi Jones
Ed Sacre
Bish Elyas
Nathan Fitzgerald

EXECUTIVE SUMMARY

The aim of the Social and Economic Long-Term Monitoring Program (SELTMP) 2017 report is to provide a status update on the human dimension of the Great Barrier Reef (Reef). The long-term monitoring program has undertaken its second major data collection period. It includes 1,933 local residents, 1,804 domestic and international tourists, 94 tourism operators, 91 commercial fishers, and 1,028 national residents (total of 3,922 surveys). Residents and tourists were surveyed using face-to-face techniques in 14 townships within the Great Barrier Reef region (defined as the GBR World Heritage Area and Marine Park, together with the GBR catchment, bounded by Bundaberg in the south, Cape York in the north and the Great Dividing Range in the west). Marine Park tourism operators and commercial fishers were surveyed by telephone. Others were surveyed across Australia via an online survey, and are referred to as 'national residents'.

Results are presented within this report and also via online dashboards, where end-users, including the public and other researchers, may access the data. The dashboards can be found at <https://research.csiro.au/seltmp/>. The online dashboards were developed to enable GBR managers, researchers, and the wider community to explore and interrogate SELTMP survey data directly. *This report should be used as an accompaniment to the online dashboards (with the report providing appropriate citation details), as results are replicated in both sources.*

Results are organised for the Reef 2050 Integrated Monitoring and Reporting Program (RIMReP), according to the Human Dimension Clusters identified by Gooch et al. (2017). These clusters are: (i) community aspirations, capacity, and stewardship, (ii) community vitality, (iii) cultural and heritage, (iv) economic viability, and (v) governance.

I. Community Aspirations, Capacity and Stewardship

Residents

Residents had high aspirations around the Great Barrier Reef (Reef). Residents aspired to doing, "more to help protect the Reef" (84.5%). They also aspired to learning, "more about the condition of the Reef" (77.6%), and would, "like to do more to improve water quality in [their] waterways" (80.6%). However, residents suggested that their capacity to be a steward of the Reef was low to moderate, where, for example, only 44.3% felt that they "have the necessary knowledge and skills to reduce any impact that [they] have on the Reef", and 30.5% felt that they "do not have the time or opportunity required to reduce any impact that [they] might have on the Reef". Stewardship aspirations were relatively high. For example, 83.7% of residents, "make every effort to use energy efficiently in [their] home and workplace". Only 16.1% felt that, "it is not [their] responsibility to protect the Reef".

Tourists

Tourists also had relatively high aspirations around the Reef. For example, nearly 82% of all tourists in the study aspired to doing "more to help protect the Reef". Capacity was variable. Some 62.7% of tourists felt that they "can make a personal difference in improving the health of the Reef", whilst only 29.9% felt that they "have the necessary knowledge and skills". Tourists had strong stewardship aspirations where, for example, 82.5% "make every effort to use energy efficiently in [their] home and workplace", and 79.3% "re-use or recycle most goods and waste". Some 19% of tourists felt that "it is not [their] responsibility to protect the Reef".

Tourism Operators

Tourism operators within the Reef aspired to doing “more to help protect the Reef” (85.1%), and had high capacity to do so; where 85.1% suggested that they “feel like [they] can contribute to Reef management”, and only 10.8% felt that they “cannot make a personal difference in improving the health of the Reef”. Some 68% thought that climate change was an immediate threat requiring urgent attention”. Stewardship levels were also high where for example, 91.1% of tourism operators “make every effort to use energy efficiently in [their] home and workplace”. Only 1.1% felt that “it is not [their] responsibility to protect the Reef”. Some 86.2% had fuel efficient engines and 52.1% reported that they participated in GBRMPA’s Eye on the Reef monitoring program.

Commercial Fishers

A moderate proportion of the commercial fishing industry aspired to doing “more to help protect the Reef” (66.7%) or learning (65.9%). Capacity was also moderate, where, for example, 28.7% felt that they “cannot make a personal difference in improving the health of the Reef”. However, over 88% felt that they had “the necessary knowledge and skills to reduce any impact that [they] have on the Reef”. Some 67% were “not worried about climate change impacts”, where 42.5% required further evidence that climate change was a threat. Some 91.2% of commercial fishers “make every effort to use energy efficiently in [their] home and workplace”, but only 68.2% “re-use or recycle most goods and waste”. Only 10.2% felt that “it is not [their] responsibility to protect the Reef”. Some 80.2% of commercial fishers participate in industry best practices via a code of practice or Memorandum of Understanding (MOU).

National Residents

Australians remain proud of the Reef (85% in 2017; unchanged from 2013), but they are less optimistic about its future (54% in 2017 cf. 56% in 2013). There has been a movement away from individual responsibility around the Reef (38% in 2017 cf. 63% in 2013) towards collective responsibility of the nation to protect the Reef (80% in 2013 cf. 82% in 2017).

II. Community Vitality

Residents

Residents had a very positive association with the Reef, given that the first words that came to mind when they thought of the Reef were beautiful (15%), coral (12.5%), and fish (6.2%). Health and wellbeing were very much intertwined with that of the Reef. Some 79.7% “value the Reef because it makes [them] feel better physically and/or mentally”. Only 20.6% “would not be personally affected if the health of the Reef declined”, and 71.8% suggested that “thinking about coral bleaching makes [them] feel depressed”. Residents were particularly worried about coral condition, freshwater ways, and rubbish on the beaches in their area, and worried about mangrove health, and estuarine and marine fish. For example only 40.5% of residents stated that, “the coral reefs in [their] area are in good condition”.

Tourists

Tourists had a very strong positive association with the Reef, where the first words that came to mind when thinking of the Reef were 'beautiful' (16.5%), 'coral' (15.8%) and 'fish' (8.2%). Some 64.0% of tourists "value the Reef because it makes [them] feel better physically and/or mentally", and 50.9% suggested that "the Reef contributes to [their] quality of life and wellbeing". Some 59.5% suggested that, "thinking about coral bleaching makes [them] feel depressed". Around 58% of tourists paid to go on an organised tour.

Tourism operators

Tourism operators' first words that came to mind were coral (13.8%), beautiful (6.3%), and fishing (4%), suggesting a strong positive association. Only 4.4% reported that they "would not be personally affected if the health of the Reef declined", and 89.2% stated that "the Reef contributes to [their] quality of life and wellbeing", where 61.1% suggested that "thinking about coral bleaching makes [them] feel depressed". Only 59.1% stated that they, "feel optimistic about the future of the Reef". Tourism operators were moderately satisfied with the condition of the environment in their [NRM] region. For example 56.0% stated that, "the coral reefs in [their] [NRM] region are in good condition". Only 20.2% were "not worried about climate change impacts on the Reef. Tourism operators have been working within the Reef for a mean of 24.0 years.

Commercial fishers

Commercial fishers had a strong positive association with the Reef given that the first words that came to mind when they thought of the Reef were beautiful (15%), coral (13.9%) and fish (7.1%). In terms of health, only 3.3% of commercial fishers reported that they "would not be personally affected if the health of the Reef declined", but only 37.9% suggested that, "thinking about coral bleaching makes [them] feel depressed". Some 82.0% stated that "the Reef contributes to [their] quality of life and wellbeing". Some 77.9% stated that "the coral reefs in [their] region are in good condition", and 79.8% thought that the "estuarine and marine fish in [their] region are in good condition".

National Residents

Australians see that climate change, pollution and agricultural run-off are the biggest threats to the Reef. The Reef is still considered Australia's most inspiring landmark, however, people are finding the Reef less inspiring since 2013 (30% in 2017 cf. 29% in 2013), but this decline is consistent across all landmarks.

III. Culture and Heritage

Residents

The contemporary cultural and heritage value of the Reef was high for residents on all 18 cultural services examined. In order of importance, 96% valued the Reef because it is "a great asset for the economy", 95.9% "value[d] the Reef because it supports a variety of life", and 95.1% that the "the aesthetic beauty of the Reef is outstanding". Some 95.2% of residents

felt “proud that the Reef is a World Heritage Area” (WHA), and 90.0% of residents “value the Reef because it attracts people from all over the world”.

Tourists

Domestic and International tourists derived significant cultural services from the Reef. Some 95.5% said “I value the Reef because it supports a variety of life, such as fish and corals”, and 93.7% valued the Reef because “the Reef is a great asset for the economy”. Some 92.5% of tourists felt “proud that the Reef is a World Heritage Area [WHA]”, and 90.9% said that they “value the Reef because we can learn about the environment through scientific discoveries”.

Tourism operators

All tourism operators valued the Reef because “the Reef is a great asset for the economy of the region”. Additionally, 98.9% “value the Reef because it supports a variety of life” and 97.9% “value the Reef because it attracts people from all over the world”. Nearly 95% stated that “the aesthetic beauty of the Reef is outstanding”. The Reef was valued by 95.7% “because it supports a desirable and active way of life”. Also 93.6% felt “proud that the Reef is a WHA”, where 91.1% reported that they “value the Reef because it exists, even if [they] don’t benefit from it”.

Commercial fishers

Most (97.8%) commercial fishers valued “the Reef for the fresh seafood it provides”, and 96.7% “because it supports a variety of life”. Some 90.0% valued the, “aesthetic beauty”. Only 85.6% valued the Reef because it, “is a great asset for the economy of the region”.

National Residents

This group valued the Reef mostly for its biodiversity (86%), outstanding beauty (85%), and for the pride that they have in its World Heritage Area status (85%).

IV. Economic Value

Marine tourism

The viability of marine tourism businesses was moderate. For example, we found that 54.3% of tourism operators suggested that their “business [had] not performed this year as well as last year”. However, 75.5% of tourism operators in the Reef stated that they are “optimistic about the future of [their] business in the Reef”. Most (95.7%) had insurance for their business assets. Most (60.6%) had a business turnover of less than \$100,000. Most derived only part of their household income from tourism. Most businesses employed less than five employees.

Commercial fishing

Only 50.6% of commercial fishers said that they were “optimistic about the future of [their] business in the Reef”. And 46.2% suggested that their “business [had] not performed this year as well as last year.” We also found that only 59.3% had insurance for their assets. Many fishers (35%) had a revenue of over \$500,000 during the previous 12 months.

V. Governance

Residents

Local residents were moderately confident in, and supportive of, Reef management. Some 48% felt “confident that the Reef is well managed”, whilst only 23.8% thought that “enough is being done to effectively manage the Reef”. Some 66% of residents were supportive of the rules and regulations, and 26.8% felt that they “do not have fair access to the Reef”. There were moderate to high levels of trust in government and Reef management, with word of mouth (51.8%) being the most relied upon source of information.

Tourists

Tourists did not have strong confidence in Reef management. For example, only 16.3% thought that “enough is being done to effectively manage the Reef”. Tourists tended to trust scientists the most (83.4%) and the most important sources of information were local radio (48.4%), national/regional radio (48.2%), and free to air television (46.7%).

Tourism operators

The marine tourism industry was moderately confident in, and supportive of, Reef management. Only 23.3% thought that “enough is being done”, however 60.6% felt, “confident that the Reef is well managed”. Nearly 80% felt that they had “fair access to the Reef compared to other user groups”, where 36.1% felt “that future generations have been adequately considered”. They mostly trusted friends, family and work colleagues, (74.4%) as well as scientists (74.4%), and relied on word of mouth (48.9%) for information, local radio (35.6%), and news media websites (35.6%).

Commercial fishers

Results suggest that only 38.8% of commercial fishers thought that “enough is being done to effectively manage the Reef”, where 52.8% felt “confident that the Reef is well managed”. Some 40.7% suggested that they “support the current rules and regulations that affect access and use of the Reef”, where only 34.4% of commercial fishers felt that they did “not have fair access to the Reef compared to other user groups”. Commercial fishers were less trusting of typical sources of information about environmental issues than other stakeholders. Word of mouth (52.9%), local radio (38.6%), and national/regional radio (37.5%) were most important.

National residents

Results suggest that government (state and federal) have low trust with the Australian public (<20%). The most trusted organisation to report on environmental issues is the CSIRO (53%). CSIRO has been the most trusted organisation in reporting environmental issue over the past seven years.

INTRODUCTION

In 2011 the Social and Economic Long Term Monitoring Program (SELTMP) for the Great Barrier Reef (Reef) was initiated through funding from the National Environment Research Program (NERP). The SELTMP was a novel attempt to monitor the social and economic dimensions of social-ecological change in a globally and nationally important region. It was established to represent the current status and condition of the major user groups of the Reef with the potential to simultaneously consider trends, interconnections, conflicts, dependencies and vulnerabilities. The design of SELTMP was based on the DPSIR model (Drivers – Pressures – State- Impact – Response) that underpins the Millennium Ecosystem Assessment (Millennium Ecosystem Assessment 2005). Indicator groups in the SELTMP were categorised as; (i) resource use and dependency, (ii) ecosystem benefits and well-being, and (iii) drivers of change (indirect and direct drivers), each of which are described below (Figure 1). The adapted SELTMP framework enabled data needs and gaps to be identified, and guided the process to decide which indicators would be most informative and feasible to monitor (Marshall et al. 2016).

The baseline dataset for SELTMP was collected in 2013 (SELTMP 2013), and data were collected through secondary datasets where existing and new datasets were created where not, using standard survey techniques. Baseline results from SELTMP surveys were obtained from 210 commercial-fishers and 119 marine-based tourism operators using telephone techniques; 2,877 tourists and 3,181 local residents using face-to-face techniques; and 2,002 other Australians (national residents) using online facilities.

In 2017 the SELTMP was commissioned by the Great Barrier Reef Marine Park Authority (GBRMPA) to collect and interpret a second data point. In this instance, data were to be integrated into the Reef 2050 Integrated Monitoring and Reporting Program (RIMReP). The RIMReP was conceptualised to meet the requirements of the GBRMPA's 'Reef 2050 Long Term Sustainability Plan' (Reef 2050 Plan) that outlines how the Outstanding Universal Value of the World Heritage Area are to be monitored and managed. The Reef 2050 Plan has an Outcomes Framework with seven overarching themes each with their own outcomes, objectives, targets, values and attributes that reflect the priority areas identified by government and partners. Four of the themes describe the human dimensions of the system; (i) governance, (ii) community benefits, (iii) economic benefits, and (iv) heritage. The monitoring and modelling program for the Reef and its adjacent catchment (RIMReP) is expected to track the progress towards targets and objectives of the Reef 2050 Plan, and the current purpose of the SELTMP is to provide data to directly address each of these four themes. In early 2018, a comprehensive list of indicators addressing these four themes was proposed by the RIMReP Human Dimensions Expert Group, organised into five clusters: Aspirations, Capacity and Stewardship (ACS), Community Vitality (CV), Culture and Heritage (CH), Economic Values (EV) and Governance (G) (Gooch et al., 2018).

The aim of this report is to provide a status update on the SELTMP 2017 and to show how results will be accessible and linked to identified objectives, targets and actions in the Reef 2050 Plan. The report is structured around the above five clusters for the purposes of ongoing comparison and analyses of trends of indicators linked to the Reef 2050 Plan.

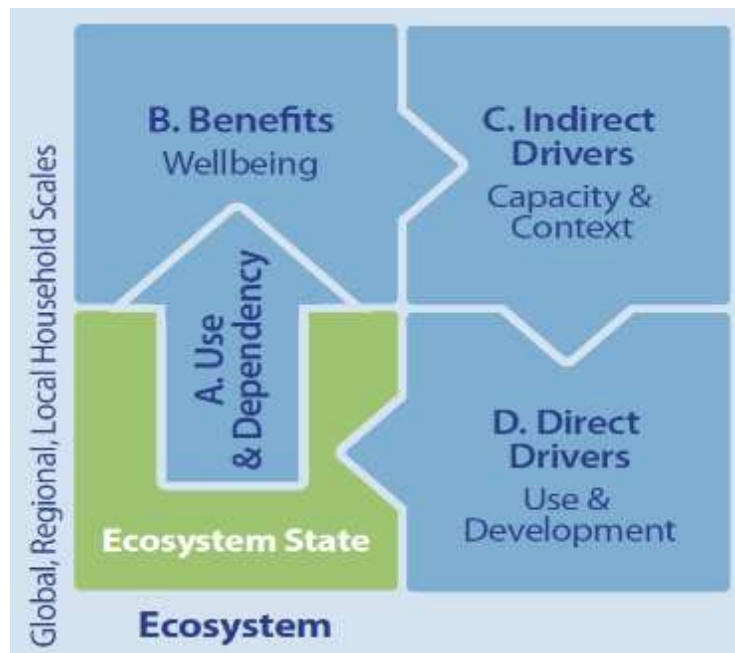


Figure 1. The SELTMP conceptual framework based on the DPSIR framework and Millennium Ecosystem Assessment Framework. The human dimension of the Great Barrier Reef is represented by the four components (in light blue): A. Use and Dependency, B. Human Wellbeing, C. Capacity and Context, and D. Use and Development. It suggests that the level of human and community wellbeing is determined, in part, by how people use and depend on the Reef (“A” in Figure 2). Human and community wellbeing (“B”) influences the Reef (Ecosystem State) by influencing the social and economic context or indirect drivers within the system (“C”), within which direct drivers are allowed or not allowed to occur (“D”). Opportunities for strategies and interventions that can halt, reverse, or change a process exist at several points within the cycle (Assessment 2005). Marshall et al. 2016.

A brief summary of the changes made to SELTMP 2017

Our aim was to produce a SELTMP that was robust through time whilst also adaptive to changing needs and new insights. There are three main changes that occurred in the development of the SELTMP 2017. The first change is around the governance of the Program. The Great Barrier Reef Marine Park remains the key client, and thus driver, of the work, and has been closely involved in the key developments within the SELTMP. However, there are no longer working groups formally involved in the direction and planning of the SELTMP. Instead, and given that planning processes are no longer necessary, linkages with end users, government, industry and community have become informal and more about communicating about SELTMP processes, activities and data. The SELTMP 2017 is closely linked with the NESP project on human dimensions lead by Professor Allan Dale based at the Cairns Institute, James Cook University. The human dimension clusters are reported in Gooch et al. (2017) and will be used within the RIMReP.

The second main change is that an additional framework was used to check whether the indicators directly fed into RIMReP requirements. The human dimensions framework for the RIMReP was constructed by Gooch et al. (2017), based on the Reef 2050 Plan themes. The framework is based on five clusters representing the human dimensions of the Great Barrier Reef. The indicator clusters were initially based on work by Vella et al. (2015) and have been refined through various processes. In particular, the Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES), which recognises that healthy human systems depend (either directly or indirectly) on a healthy ecosystem (Diaz et al. 2018), have influenced the clusters.

The third main difference between SELTMP 2017 and SELTMP 2013 is that some modifications were made to the SELTMP 2017 survey on the basis of gaps identified through the Gooch et al. (2017) framework. Some questions became redundant in the SELTMP 2013 survey, and some new survey questions were identified and included. The survey changes were developed in collaboration with GBRMPA, industry and each of the NRM groups. The 2017 survey is certainly longer than that in 2013, and more thorough in many instances. However, it is anticipated that it will provide more in depth information about (i) resource use and resource user profiles, (ii) sources of environmental information and levels of trust associated with each potential sources, (iii) perceptions of management of creeks and other freshwater systems entering the lagoon, and (iv) a broader range of held values associated with the Great Barrier Reef. The final surveys used in 2017 are presented in Appendices 1-4.

We highlight that there have not been any major differences in the methodological approach between 2013 and 2017, and state that the majority of data across the years should be comparable where survey questions have remained the same through time.

Report scope

This report presents a snapshot of summary results of the SELTMP 2017 surveys, including basic frequency analyses and mean scores from scaled response questions, with limited discussion. In-depth analyses, interpretation and discussion of the data are not presented here. Such analyses will be presented in separate sectoral reports, provide comparisons of the 2013 and 2017 data and insights into key changes between the sampling periods. In addition, science papers investigating trends and relationships from the SELTMP data will be prepared over the coming months, and GBRMPA will be given the opportunity to provide advice and input prior to their submission for publication.

Additionally, online dashboards were developed for presentation of the SELTMP 2017 results, to enable GBR managers, researchers, and the wider community to explore and interrogate SELTMP survey data directly; available at <https://research.csiro.au/seltmp/>. This report should be used as an accompaniment to the online dashboards (with the report providing appropriate citation details), as results are replicated in both sources.

METHODS

Survey Design

The Social and Economic Long Term Monitoring Program (SELTMP) for the Great Barrier Reef was designed in 2011 to ensure both policy relevance and science credibility. To ensure policy relevance we established working groups with each of the major sectors; commercial fishing, marine tourism, coastal communities, recreation, and ports and shipping. We also instituted a group for cross-cutting issues of drivers of change and wellbeing. The working groups comprised representatives and technical experts from community, government, research and industry. To increase policy relevance, minimise redundancy and maximize end-user engagement, we also facilitated a high level steering committee and a scientific and stakeholder advisory panel. Each of these groups were instrumental in selecting and prioritising the variables and indicators included in the program.

To ensure science credibility, we modified the DPSIR framework used in the Millennium Ecosystem Assessment (MA) to guide the process of indicator choice. As an established conceptual scientific model that focused on drivers, pressures, states, impacts on and responses of systems, the MA framework helped ensure the program results would align with other data sets of similar intent and helped establish program credibility in the eyes of stakeholders. The framework enabled data needs and gaps to be identified, and guided the process to decide which indicators from the advisory panels would endure. The framework is presented in Marshall *et al.* (2016).

Once information gaps were identified and indicators established, a master survey, or survey template, was designed that included all the data needs in a generic survey form. The template survey was then used to develop five separate surveys that targeted each of the main user groups of the Great Barrier Reef: national residents (i.e. Australians living outside of the Reef region), coastal residents (i.e. residents living along the coast adjacent to the Reef), tourists, tourism operators and commercial fishers. The first question in the survey remains as asking participants to list the first words that come to mind when they think of the Great Barrier Reef. Most survey questions were presented as a statement and were based on other studies where possible (Marshall et al. 2017). Respondents were asked to rate how strongly they agreed with each statement using a ten-point rating scale. A ten-point rating scale was considered appropriately sensitive to detect subtle changes through time. Ten-point scales are also widely recognisable within the community and easy to 'teach'. The lack of a mid-point allowed for better interpretation rather than; undecided, unknown, depends, sometimes, not sure, neutral, cannot be bothered, etc. (38). If respondents were unsure of their views about a statement, they were able to leave their response as blank. An initial version of the 2017 survey was pilot-tested with around 5-20 people within each user group to ensure that the questions were readable and unambiguous. The final versions of each survey can be viewed in Appendices 1-5.

Survey Administration

A mixed methods approach was used to better target each stakeholder group, and ethics approval was obtained through CSIRO for all stakeholder groups (CSSHREC 050/17). National residents were surveyed in September 2017 via an online research panel provided by an external marketing company (Pollinate). Pollinate has access to a geographically and demographically representative sample of national residents who are prepared to complete surveys in exchange for online credit points that could be converted into gifts or goods. The number of questions posed to this group however was considerably reduced from the main survey. Only 8 key questions were included in the National survey, and GBRMPA was provided the opportunity to review the questions prior to administration.

Coastal residents of the Great Barrier Reef region (defined as the GBR World Heritage Area and Marine Park, together with the GBR catchment, bounded by Bundaberg in the south, Cape York in the north and the Great Dividing Range in the west; see Figure 2) and tourists in the region were surveyed using face-to-face methods across each of the main population centres (Cairns, Mission Beach, Ingham, Townsville, Airlie Beach, Mackay, Gladstone, Yeppoon and Bundaberg). Residents were defined as people who live within the Reef catchment (east of Great Dividing Range, from Bundaberg to Cape York), while tourists lived anywhere outside of that area, whether that be elsewhere in Australia or internationally. We employed and trained 46 casual staff and deployed them to public places such as parks, shopping centres, market places, airports, marinas, sporting areas, festivals, information centres, museums, jetties, caravan parks, lookouts, etc. While we sought to capture a demographically representative sample of tourists by using a combination of convenience sampling and quota sampling (Bryman 2012), we note that a limitation of the study was the availability of surveys in English language only; thus some non-English speaking tourist market segments are likely to be under-represented in our results (e.g. the growing Chinese market). Interviewers were equipped with an Apple mini-iPad loaded with an iSurvey application. Surveys were completed within 1 month (29 May 2017 and 24 July). A total of 1,933 surveys were completed by residents, and 1,804 were completed by tourists, making a total of 3,737 face-to-face surveys.

Marine tourism operators and commercial fishers were interviewed by telephone and these interviews were completed on 1st Dec 2017. We were able to access these stakeholders through our own contacts databases, publicly-available data, and personal contacts. We surveyed 94 tourism operators and 92 commercial fishers (fishers were in possession of at least one license with access to the Reef). Tourism operators were contacted by email, and commercial fishers received a letter in the mail to their home address, and invited to participate in the study. They were then called on either their mobile phone or landline and an appointment was made to undertake the survey where permission was granted. We obtained a response rate of 63% (94 completed + 55 declined) for tourism operators able to be contacted. Our fisher contact list only contained landline numbers and home addresses, and given that the database was initiated in 1999, many of the numbers were disconnected. We think that commercial

fishers have shifted from using landline numbers to mobile phone numbers. We highlight that if we are to survey commercial fishers in 2019, then the contacts database will be need to be updated. The response rate for commercial fishers was 40% (91 accepted +141 declined). These numbers are reduced from 2013.

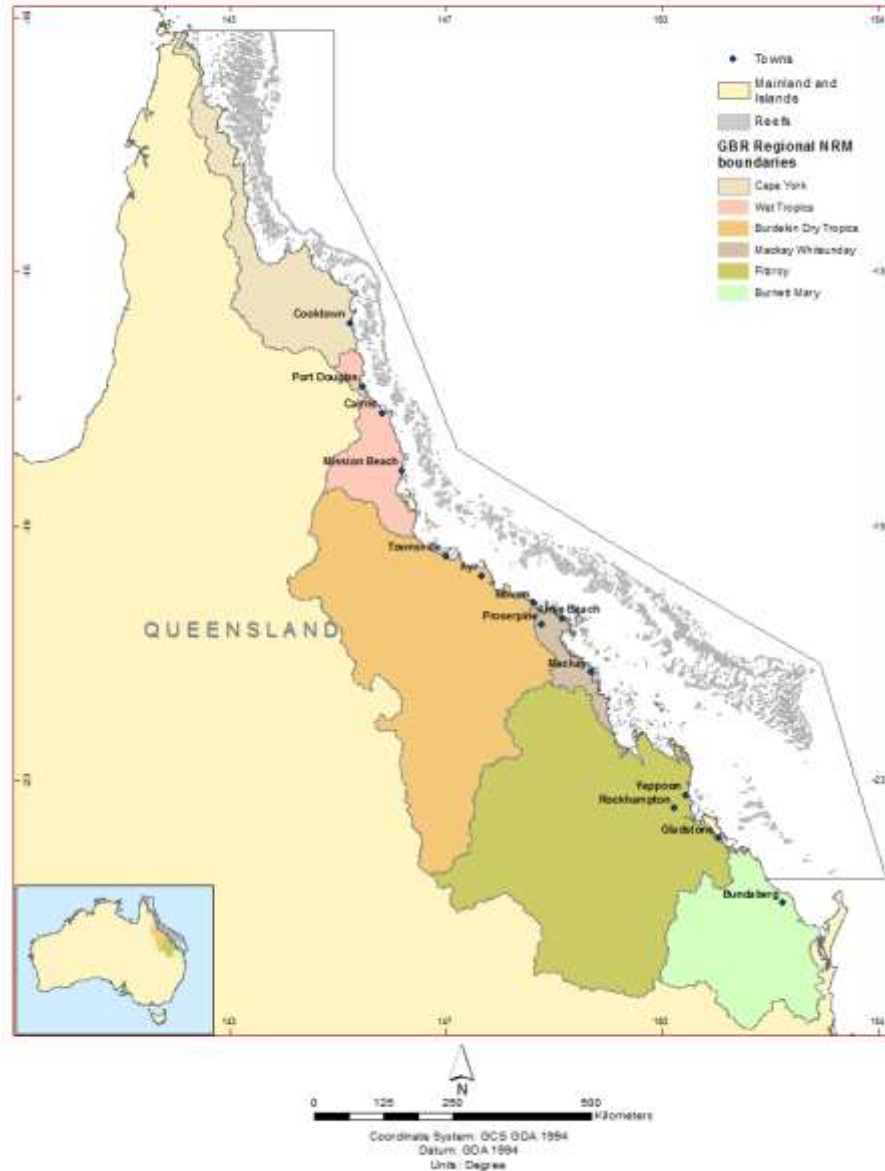


Figure 2. Locations included in SELTMP 2013 and 2017 sampling of the “GBR region”, defined as the GBR World Heritage Area and Marine Park, together with the GBR catchment, bounded by Bundaberg in the south, Cape York in the north and the Great Dividing Range in the west.

Data Analysis and Presentation

Data are provided as percentages of the sample population, means and standard errors, for each stakeholder group. Analysis by NRM region is also provided in this report. Readers who prefer an analysis by age, gender, NRM, or LGA may access the data and select for each group accordingly.

The results in this report are presented firstly by each stakeholder group (residents, tourists, tourism operators, commercial fishers and national residents), secondly by human dimension clusters, and thirdly by concepts that map to the human dimension attributes identified by Gooch et al. (2018). The survey questions used as indicators for each concept are presented in Table 1.

Table 1. The five SELTMP dashboards. Concepts are organised according to Dale et al.'s framework for bench-marking the human dimension, and codes are identified accordingly.

Human Dimension Cluster	Concepts	Survey questions
1. Aspirations, capacity and stewardship	Aspirations (ACS1)	<ul style="list-style-type: none"> I would like to do more to help protect the Reef I would like to do more to improve water quality in the waterways in my region
	Capacity and education (ASC2)	<ul style="list-style-type: none"> I feel like I can contribute to Reef management I have the necessary knowledge and skills to reduce any impact that I have on the Reef I cannot make a personal difference in improving the health of the Reef I do not have the time or opportunity required to reduce any impact that I might have on the Reef I am not worried about climate change impacts on the Reef Climate change is an immediate threat requiring urgent attention What do you think are the three (3) most serious threats to the Great Barrier Reef? Do you have university or TAFE education?
	Stewardship (ACS3)	<ul style="list-style-type: none"> I make every effort to use energy efficiently in my home and workplace I re-use or recycle most goods and waste I rarely consider the environmental impact of the production process for goods and services that I purchase I don't usually make any extra effort to reduce the waste that I generate It is not my responsibility to protect the Reef I feel a social expectation to reduce any impact that I might have on the Reef Are you part of a Reef based club or community group such as a spear-fishing club in your region? b. If yes: Name a. Are you part of an environmental community based group? Name
2. Community vitality	Community health (CV3)	<ul style="list-style-type: none"> I value the Reef because it makes me feel better physically and/or mentally I would not be personally affected if the health of the Reef declined Thinking about coral bleaching makes me feel depressed
	Satisfaction (CV4)	<ul style="list-style-type: none"> The freshwater areas (e.g. rivers, creeks) in my region are not in good condition The coral reefs in my region are in good condition There is too much rubbish (plastics and bottles) on the beaches in my region I am worried about the status of freshwater fish in region The mangroves in my region are in good health The estuarine and marine fish in my region are in good condition I like the colour clarity of water along the beaches in my region.
	Wellbeing (CV3)	<ul style="list-style-type: none"> The Reef contributes to my quality of life and wellbeing I feel optimistic about the future of the Reef I love that I live beside the Reef I live in this region because of the Reef.

	Relationship with Reef (CV4)	<ul style="list-style-type: none"> What are the first words that come to mind when you think of the Great Barrier Reef?
	Resource use and resource user profiles (Different for tourists and residents) (ACS3)	<ul style="list-style-type: none"> Have you ever visited the Great Barrier Reef? (including all land and water from the beaches on the coast, the bays and creeks, the islands, the shoals and seafloor, the open waters, and of course the coral reefs) In the previous 12 months, how many days did you visit the Great Barrier Reef for recreation? Thinking about all of your visits to the Great Barrier Reef in the last 12 months, what proportion of your time was spent at each of the following Reef environments When visiting the Great Barrier Reef, how far do you normally travel from your home? When visiting the Great Barrier Reef in the last 12 months, how often did you travel by...own boat etc. Thinking about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef (18 activities listed): Thinking about the entire Great Barrier Reef area, would you be able to identify your favourite place? What is the name of this favourite place?
3. Culture and Heritage	Values (CH1) (CH3) (CH4)	<ul style="list-style-type: none"> I feel proud that the Reef is a World Heritage Area The Reef is part of my identity The Reef is an important part of my culture The Reef is a great asset for the economy of the region I value the Reef because it supports a variety of life, such as fish and corals The aesthetic beauty of the Reef is outstanding The Reef supports a desirable and active way of life I value the Reef for the fresh seafood it provides I value the Reef because it attracts people from all over the world I value the Reef because of its rich traditional owner heritage I value the Reef because it provides a place where people can continue to pass down wisdom, traditions and a way of life I value the Reef because we can learn about the environment through scientific discoveries The Reef inspires me in artistic or thoughtful ways I value the Reef because it is spiritually important to me I value the Reef because it exists, even if I don't benefit from it
4. Economic value	Economic viability (EV1) (EV2) (EV3) (EV4) (EV5)	<p>ONLY FOR: commercial fisher and marine tourism operator surveys</p> <ul style="list-style-type: none"> How long have you been involved in the Reef tourism industry? How long has your current business been operating? What proportion of your household income came from tourism in the last financial year? How many employees (FTE) did your operation employ over the previous 12 months? Do you have insurance for your business assets? Could you please indicate (approximately) your business turnover (entire revenue) for the past 12 months, in broad categories?
5. Governance	Confidence in management (G3)	<ul style="list-style-type: none"> Enough is being done to effectively manage the Reef I am confident that the Reef is well managed I feel confident that the freshwater areas in my region are well managed I can contribute to Reef management
	Equity issues (EV4)	<ul style="list-style-type: none"> I do not have fair access to the Reef compared to other user groups Future generations have been adequately considered in the management of the Reef
	Support for management (G3)	<ul style="list-style-type: none"> I support the rules and regulations that affect access and use of the Reef

		<ul style="list-style-type: none"> I support the current rules and regulations that affect access and use of freshwater areas (rivers and creeks in my region)
	Traditional vs. progressive (G2)	<ul style="list-style-type: none"> “Progressive” rather than, “traditional” on a ten point scale with traditional at one end, and progressive at the other.
	Trust in networks (G4)	<ul style="list-style-type: none"> On a scale of 1-10, how much do you trust the information you receive about the Reef from the following groups? (11 listed)
	Sources of Information (G4)	<ul style="list-style-type: none"> On a scale of 1-10, how much do you rely on each of the following for news about your region and the world? (16 listed)
	Demographic Information (CV1)	<ul style="list-style-type: none"> In what year were you born? What is your current home postcode? Are you currently married or have a partner? Do you have university of TAFE education?

Secondary Data Collection

In 2013, SELTMP presented data from existing regional datasets where possible to meet data needs and avoid redundancy. This meant reviewing the published literature or developing new liaisons for data sharing. Where existing data did not exist, data were collected through the SELTMP surveys (primary data). The bringing together of the secondary (existing) and primary data sources was an important feature of the program enabling integration across social and economic datasets, accessibility of a range of datasets, interpretation of existing data within a natural resource management context, and a, “one-stop shop” of social and economic data for Reef managers. This function is now being provided by RIMReP, where Gooch *et al.* (2017) and Williams *et al.* (2017) provide the existing data.

RESULTS

Results are currently publically accessible at: <https://research.csiro.au/seltmp/> through five dashboards, each representing a Human Dimension Cluster. The online dashboards were developed to enable GBR managers, researchers, and the wider community to explore and interrogate SELTMP survey data directly. *Note: The SELTMP 2017 data presented below are replicated in the online dashboards at <https://research.csiro.au/seltmp/>, and users of the dashboards are thus able to cite this report (Marshall *et al.*, 2018) when using SELTMP 2017 data from the online dashboards.*

A. Resident Results

A1. Resident aspirations, capacities and stewardship (ACS)

1.1 Aspirations (ACS1)

Residents had high aspirations for the Great Barrier Reef. Residents aspired to doing, “more to help protect the Reef” (84.5%). They also aspired to learning, “more about the condition of the Reef” (77.6%), and would, “like to do more to improve water quality in [their] waterways” (80.6%) (Figures 3-4).

An analysis by NRM region suggests that residents within the Wet Tropics NRM region had higher aspirations to, “learn more about the condition of the Reef” than other regions (82%), and, “to do more to help protect the Reef” (88%) than any other NRM region, particularly the Fitzroy NRM region (68%). However, residents from the Mackay-Whitsundays NRM region (89%) ranked the highest for the aspirational statement, “I would like to do more to improve

water quality in my waterways (including rivers, creeks)", especially compared to the Fitzroy NRM region (68%). (Tables 2-4).

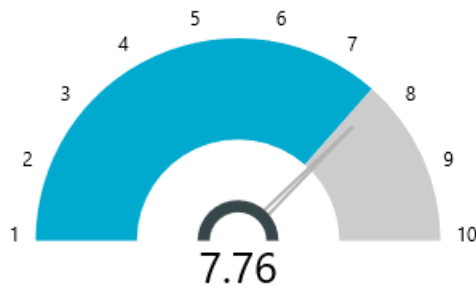


Figure 3. Responses to the survey question, “I would like to do more to help protect the Reef” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (residents, tourists, commercial fishers and tourism operators).

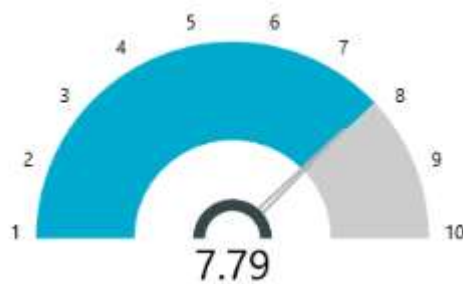


Figure 4. Responses to the survey question, “I would like to do more to improve water quality in my waterways” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (residents, tourists, commercial fishers and tourism operators).

Table 2. Proportion of respondents (by NRM region) who indicated agreement with the statement, “I would like to learn more about the condition of the Reef.”

NRM REGION	%
Wet Tropics (n=521):	82
Burdekin (n=659):	78
Mackay-Whitsundays (n=283):	78
Fitzroy (n=244):	68
Burnett-Mary (n=44):	79

Table 3. Proportion of respondents (by NRM region) who indicated agreement with the statement, “I would like to do more to help protect the Reef.”

NRM REGION	%
Wet Tropics (n=521):	88
Burdekin (n=659):	85
Mackay-Whitsundays (n=283):	88
Fitzroy (n=244):	72
Burnett-Mary (n=44):	83

Table 4. Proportion of respondents (by NRM region) who indicated agreement with the statement, “I would like to do more to improve water quality in my waterways (including rivers, creeks)”.

NRM REGION	%
Wet Tropics (n=521):	88
Burdekin (n=659):	85
Mackay-Whitsundays (n=283):	89
Fitzroy (n=244):	68
Burnett-Mary (n=44):	86

1.2 Capacity and education (ACS2)

Residents suggested that their capacity to be a steward of the Reef was low to moderate, where only 44.3% felt that they, “have the necessary knowledge and skills to reduce any impact that [they] have on the Reef”. Some residents (30.5%) felt that they, “do not have the time or opportunity required to reduce any impact that [they] might have on the Reef”. Only 58.3% of residents suggested that they, “feel like [they] can contribute to Reef management”. Similarly, only 30% felt that they, “cannot make a personal difference in improving the health of the Reef” (Figures 5-8).

Residents’ knowledge of the current ecological predicament of the Great Barrier Reef was variable. For example, 20% were, “not worried about climate change impacts on the Reef”, whilst 68% thought that climate change was an immediate threat requiring urgent attention” (Figure 9). Residents were also asked what they thought the three most serious threats to the Reef were. They suggested; (i) pollution, (ii) climate change, and (iii) fishing (Figure 10).

An analysis by NRM region suggests that residents within the Mackay-Whitsundays NRM region (53%) were more likely to feel that they have the necessary knowledge and skills to reduce any impact that they might have on the Reef than any other NRM region, particularly the Fitzroy NRM region (37%). Residents within the Burdekin NRM region (93%) were more likely to agree with the statement, “I value the Reef because we can learn about the environment through scientific discoveries”, especially in comparison with those in the Fitzroy NRM region. We also found that residents within the Burdekin region most strongly disagreed with the statement, “I CANNOT make a difference in improving the health of the Reef”, compared with other NRM regions, especially the Fitzroy NRM region. Residents from the Mackay-Whitsundays region (76%) most strongly disagreed with the statement, “I do not have the item or opportunity required to reduce any impact that I might have on the Reef” especially compared with the Fitzroy NRM region. In terms of responsibility, we found that residents from the Wet Tropic NRM region (87%) disagreed the most with the statement, “It is NOT my responsibility to protect the Reef”, especially compared with the Fitzroy NRM (74% disagreed) (Tables 5-9).

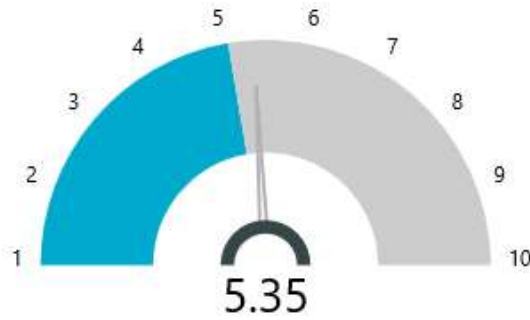


Figure 5. Responses to the survey question, “I have the necessary knowledge and skills to reduce any impact that I might have on the Reef” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

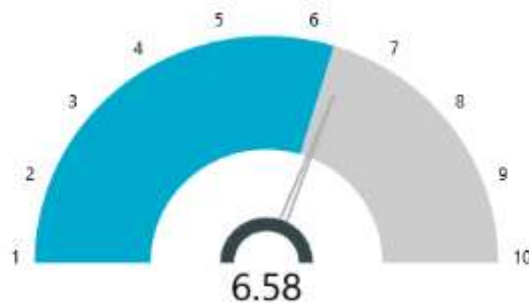


Figure 6. Responses to the survey question, “I do have the time or opportunity required to reduce any impact that I might have on the Reef” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).



Figure 7. Responses to the survey question, “I can make a personal difference in improving the health of the Reef” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

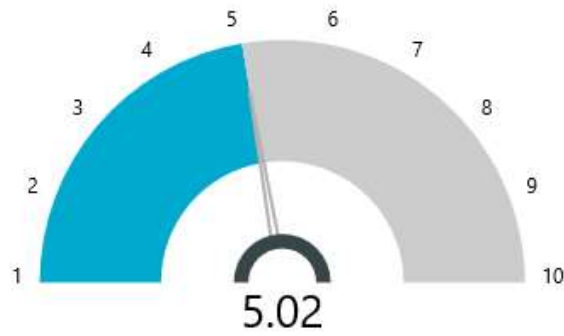


Figure 8. Responses to the survey question, “I have the necessary knowledge and skills to reduce any impact I might have on the Reef” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

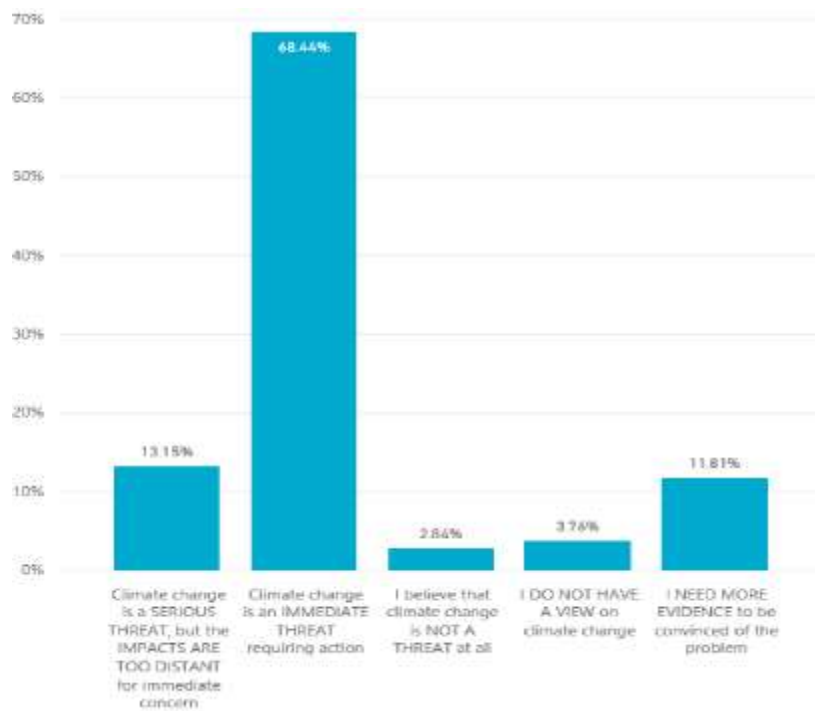


Figure 9. Responses to the survey question, “Which of the following statements best describes your beliefs about climate change?” (n=1934).

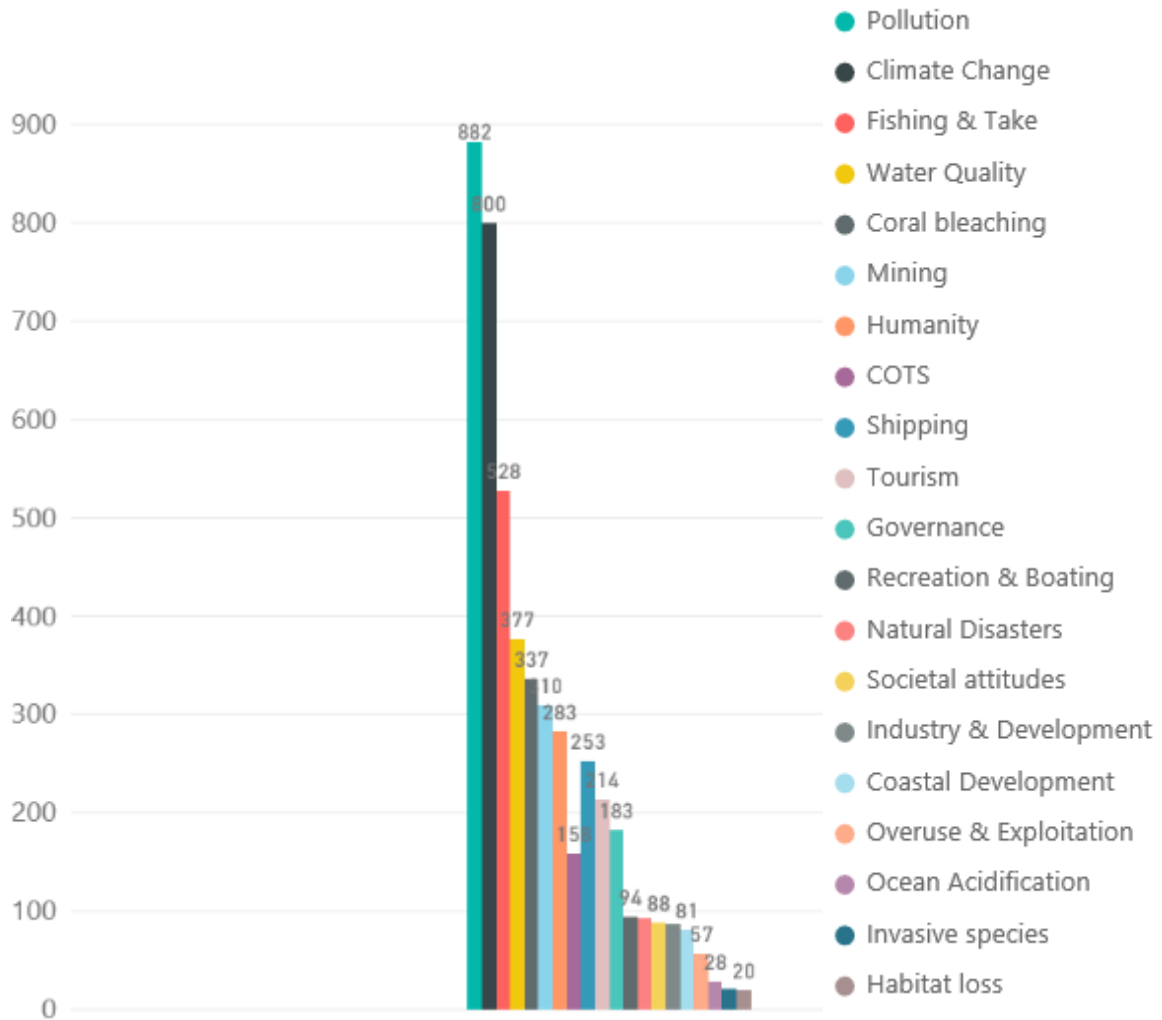


Figure 10. Responses to the survey question, “what do you see as the three biggest threats to the Reef?” (n=1934).

Table 5. Proportion of respondents (by NRM region) who indicated agreement with the statement, “I have the necessary knowledge and skills to reduce any impact that I might have on the Reef”

NRM REGION	%
Wet Tropics (n=521):	46%
Burdekin (n=659):	42%
Mackay-Whitsundays (n=283):	53%
Fitzroy (n=244):	37%
Burnett-Mary (n=44):	49%

Table 6. Proportion of respondents (by NRM region) who indicated agreement with the statement, “I value the Reef because we can learn about the environment through scientific discoveries.”

NRM REGION	%
Wet Tropics (n=521):	93
Burdekin (n=659):	93
Mackay-Whitsundays (n=283):	90
Fitzroy (n=244):	76
Burnett-Mary (n=44):	88

Table 7. Proportion of respondents (by NRM region) who indicated agreement with the statement, “I CANNOT make a difference in improving the health of the Reef.”

NRM REGION	% disagreed
Wet Tropics (n=521):	70
Burdekin (n=659):	73
Mackay-Whitsundays (n=283):	72
Fitzroy (n=244):	59
Burnett-Mary (n=44):	60

Table 8. Proportion of respondents (by NRM region) who indicated agreement with the statement, “It is NOT my responsibility to protect the Reef.”

NRM REGION	% disagreed
Wet Tropics (n=521):	87
Burdekin (n=659):	86
Mackay-Whitsundays (n=283):	86
Fitzroy (n=244):	74
Burnett-Mary (n=44):	84

Table 9. Proportion of respondents (by NRM region) who indicated agreement with the statement, “I DO NOT HAVE the time or opportunity required to reduce any impact that I might have on the Reef.”

NRM REGION	% disagreed
Wet Tropics (n=521):	70
Burdekin (n=659):	73
Mackay-Whitsundays (n=283):	76
Fitzroy (n=244):	55
Burnett-Mary (n=44):	69

1.3 Stewardship (ACS3)

Stewardship levels were relatively high within residents. Some 83.7% of residents, “make every effort to use energy efficiently in [their] home and workplace”, and 78.2%, “re-use or recycle most goods and waste”. Only 23.7% of residents, “rarely consider the environmental impact of the production process for goods and services that [they] purchase”, and 16.9%, “don’t usually make any extra effort to reduce the waste that I generate”. Some 16.1% felt that, “it is not [their] responsibility to protect the Reef”. SELTMP 2017 also found that 68.5%, “feel a social expectation to reduce any impact that [they] might have on the Reef” (Figures 11-15).

The proportion of residents who stated that they undertake a range of stewardship behaviours is presented in Figure 16.

Results also suggested that 7.4% of residents were part of a Reef based club or community group such as a spear-fishing club. 11.1% were part of an environmental community based group.

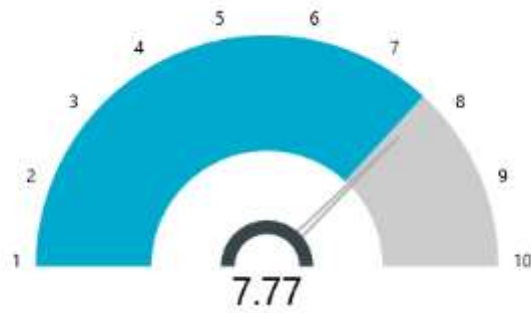


Figure 11. Responses to the survey question, “I make every effort to use energy efficiently in my home and workplace” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

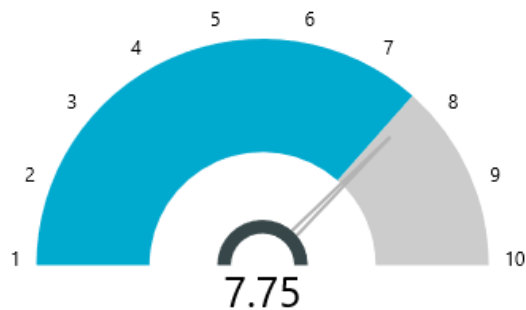


Figure 12. Responses to the survey question, “I reuse or recycle most goods and waste” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

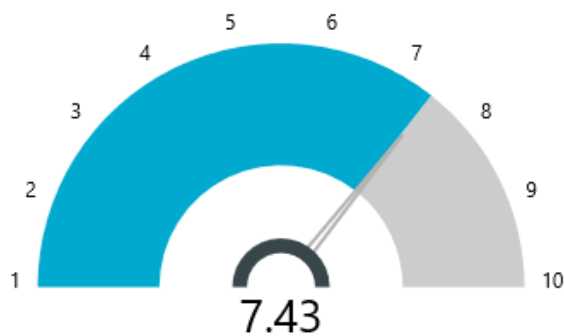


Figure 13. Responses to the survey question, “I rarely consider the environmental impact of the production process for goods and services that I purchase” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

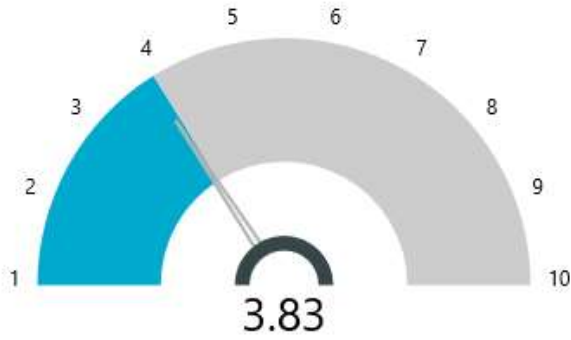


Figure 14. Responses to the survey question, "I usually make any extra effort to reduce the waste that I generate" (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

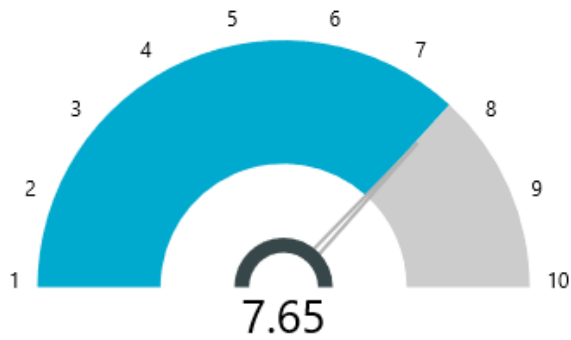


Figure 15. Responses to the survey question, "I feel a social expectation to reduce any impact that I might have on the Reef" (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

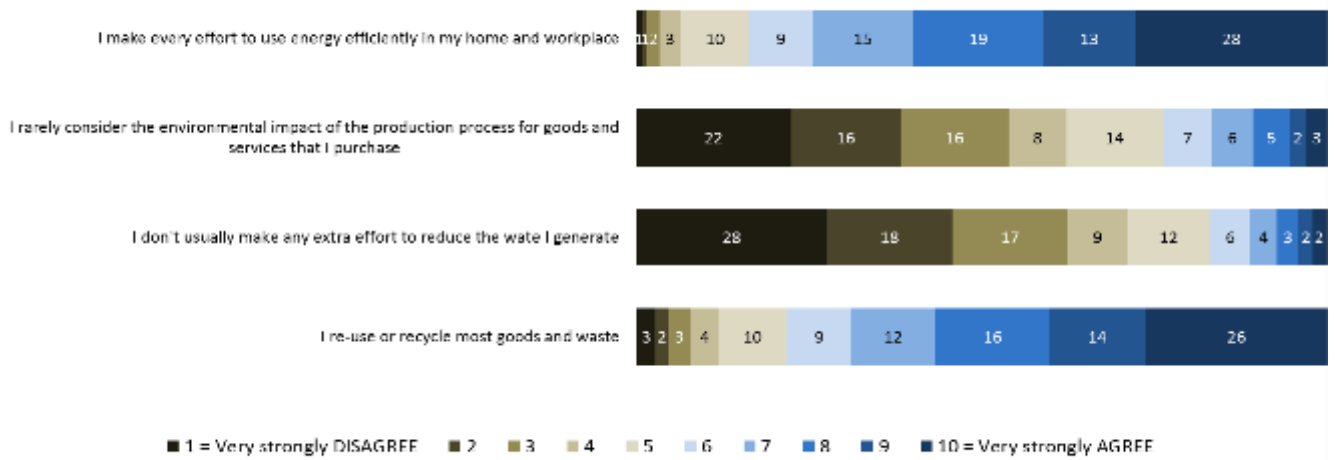


Figure 16. Proportion of respondents (Reef residents; n=1934) who indicated agreement with a series of statements about their stewardship behaviours

A2. Community Vitality (CV)

Levels of community vitality were moderate to high within the region in terms of community health, wellbeing, and satisfaction.

2.1 Relationship with the Reef (CV4)

Residents were asked for the first words that came to mind when they thought of the Great Barrier Reef and they offered (i), beautiful (15%) (ii) coral (12.5%), and (iii) fish (6.2%). These words suggest that local residents within the region have a positive association with the Reef (Figure 17).



Figure 17. Responses to the survey question, “What are the first words that come to mind when you think of the Reef?” (n=1934).

2.2 Community health (CV3)

Local residents suggested that their health was very much intertwined with that of the Reef. We found that 79.7% of residents, “value the Reef because it makes [them] feel better physically and/or mentally”. Only 20.6% of residents reported that they, “would not be personally affected if the health of the Reef declined”, and 71.8% suggested that, “thinking about coral bleaching makes [them] feel depressed” (Figures 18-20).

An analysis by NRM region shows that residents from within the Fitzroy region most agreed with the statement, “I value the Reef because it makes me feel better physically and/or mentally”. However, residents from the Burnett-Mary NRM region (83%) most highly rated their disagreement with the statement, I WOULD NOT be personally affected if the health of the Reef declined”. Residents from the Wet Tropics NRM region (76%) most highly rated their responses to the statement, “thinking about coral bleaching makes me feel depressed”, especially compared to residents in the Fitzroy region (60%) (Figures 21-22).

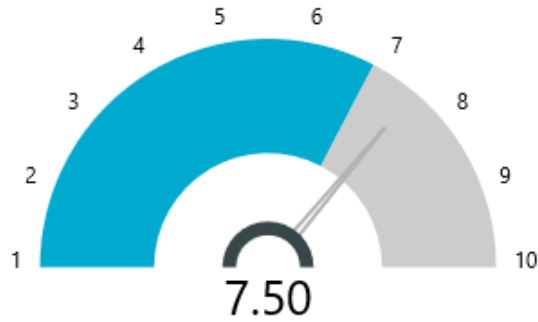


Figure 18. Responses to the survey question, “I value the Reef because it makes me feel better physically and/or mentally” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

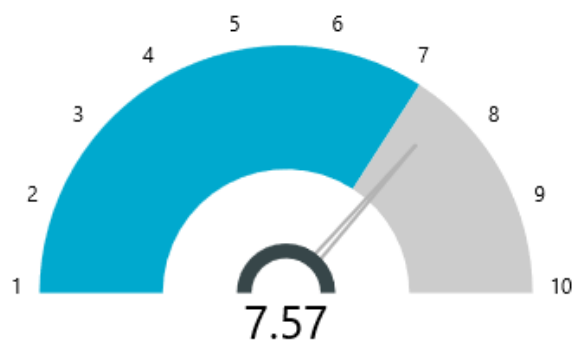


Figure 19. Responses to the survey question, “I would be personally affected if the health of the Reef declined” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

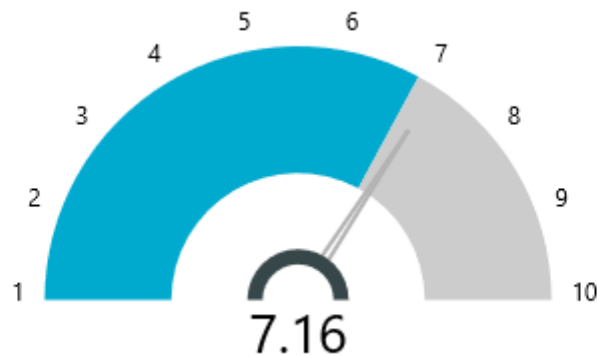


Figure 20. Responses to the survey question, “Thinking about coral bleaching makes me feel depressed” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

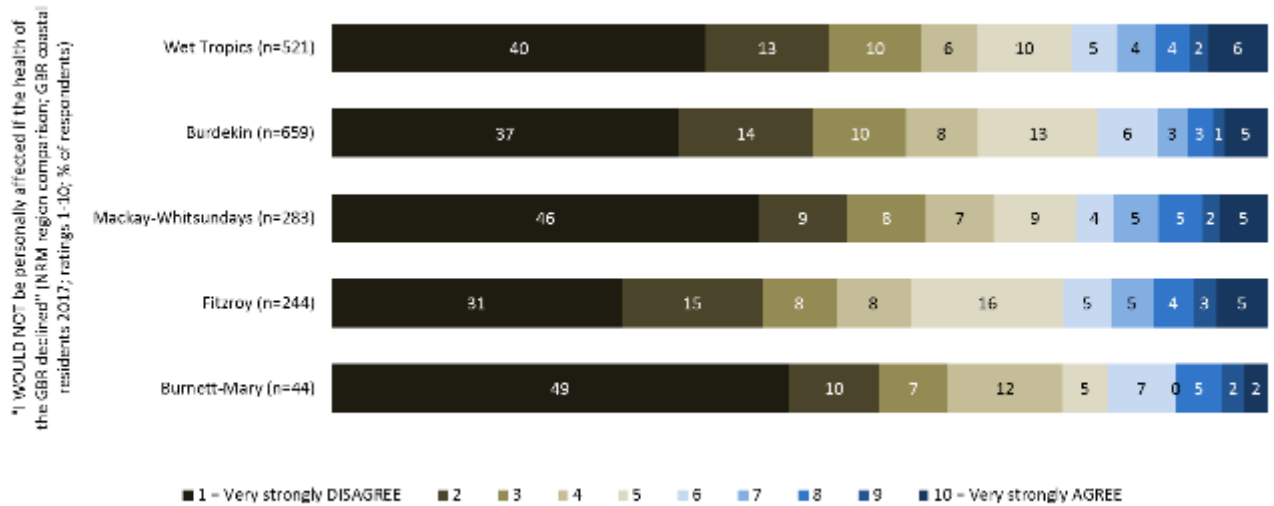


Figure 21. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement "I WOULD NOT be personally affected if the health of the Reef declined"

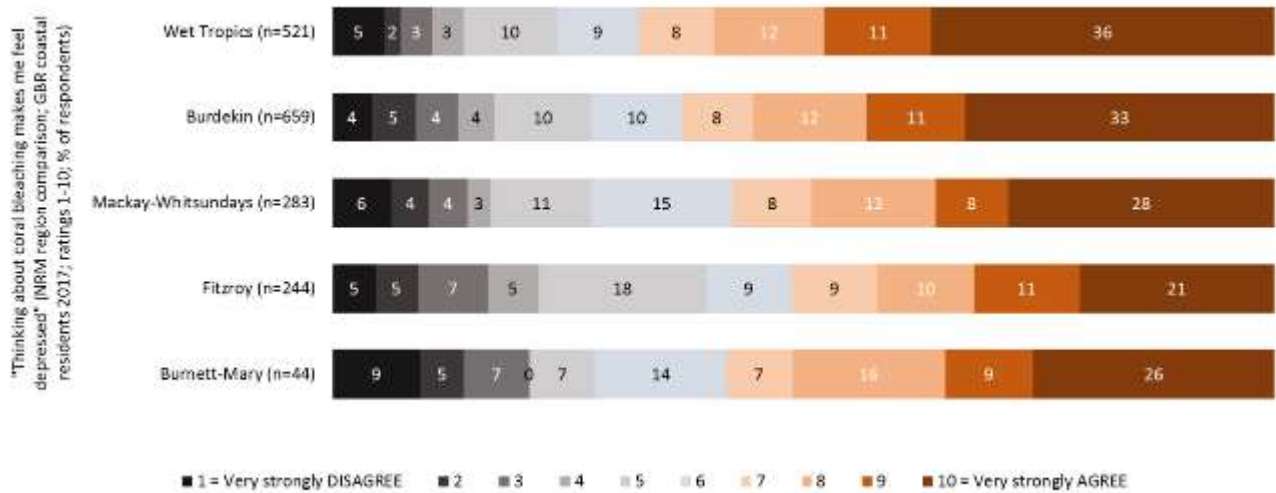


Figure 22. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement "Thinking about coral bleaching makes me feel depressed"

2.3 Community satisfaction (CV4)

Local residents were only moderately satisfied with current environmental conditions within the region. They were particularly worried about coral condition, freshwater ways, and rubbish on the beaches in their region, but they were also worried about mangrove health, and estuarine and marine fish. For example, only 40.5% of residents stated that, “the coral reefs in [their] region are in good condition”, and 53.9% thought, “the freshwater areas (e.g. rivers, creeks) in [their] region were in good condition”. Only 55.0% of residents said that they, “like the colour clarity of water along the beaches in [their] region. Some 79.5% of residents highlighted that, “there is too much rubbish (plastics and bottles) on the beaches in [their] region”, and 68.9% were, “worried about the status of freshwater fish in [their] region”. Some 51.4% thought that the, “mangroves in [their] region are in good health”, and 48.8% thought that the, “estuarine and marine fish in [their] region are in good condition” (Figures 23-30).

An analysis by NRM region suggested that residents within the Burnett-Mary region (71%) rated the coral reefs in their region more highly than in other NRM regions, particularly residents from within the Burdekin NRM region (33%). Residents from the Burdekin and Burnett-Mary NRM regions (82% respectively), were the most worried about the status of freshwater fish in their region. Residents within the Burnett-Mary NRM region rated the colour/clarity of water along the beaches in their region the most highly (95%), and residents within the Burdekin rated water clarity the lowest (44%). Similarly, residents from the Burnett-Mary rated the health of mangroves in their region most highly (74%), and those in the Burdekin rated mangrove health the lowest (49%). Burnett-Mary residents (74%) rated the condition of estuarine and marine fish most highly, and residents in the Burdekin the lowest (45%). However, residents from the Mackay-Whitsundays NRM region (83%) were most likely to agree that there is too much rubbish on their beaches whilst residents in the Burnett-Mary were the least likely (75%). Residents from the Wet Tropics and Burdekin NRMS (49% respectively) agreed that the freshwater areas in their region were not in good condition, whilst residents within the Fitzroy region were more likely to agree (38%) (Table 11 and Figures 31-37).

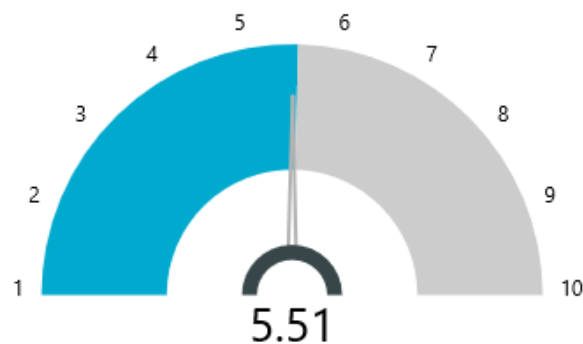


Figure 23. Responses to the survey question, “The freshwater areas in my region are in good condition” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

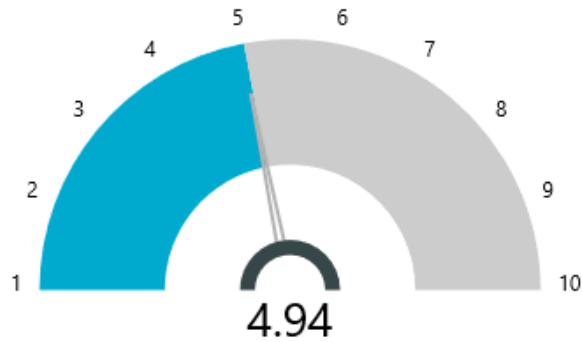


Figure 24. Responses to the survey question, “The coral reefs in my region are in good health” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

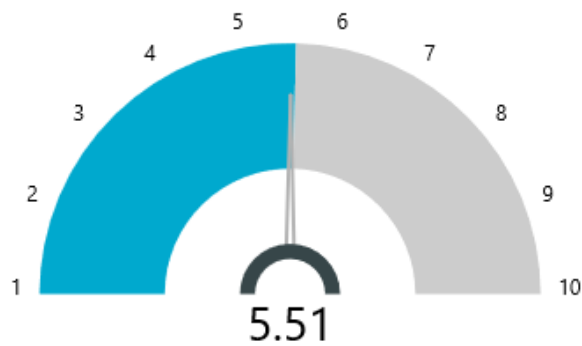


Figure 25. Responses to the survey question, “The freshwater areas (e.g. creeks, rivers) in my region are not in good condition” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

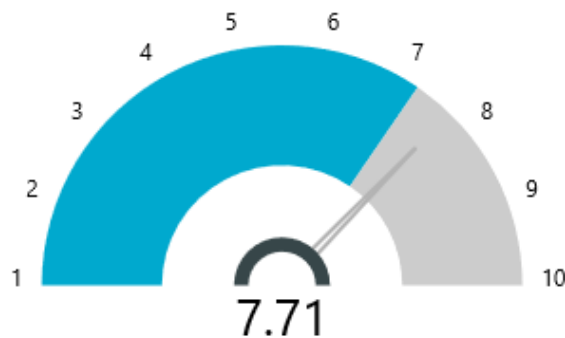


Figure 26. Responses to the survey question, “There is too much rubbish (plastics and bottles) on the beaches in my region” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

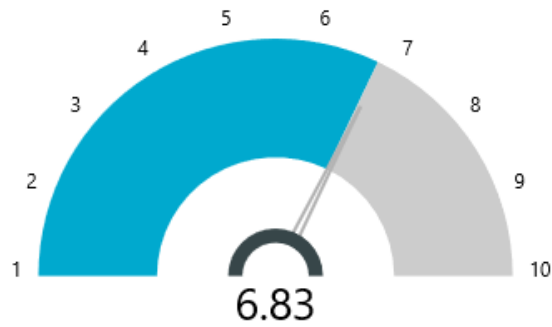


Figure 27. Responses to the survey question, “I am worried about the status of freshwater fish in my region” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

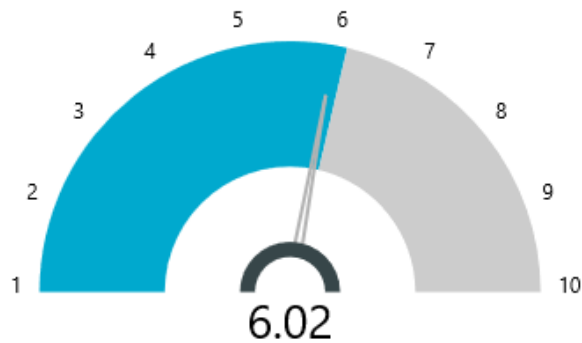


Figure 28. Responses to the survey question, “The mangroves in my region are in good health” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

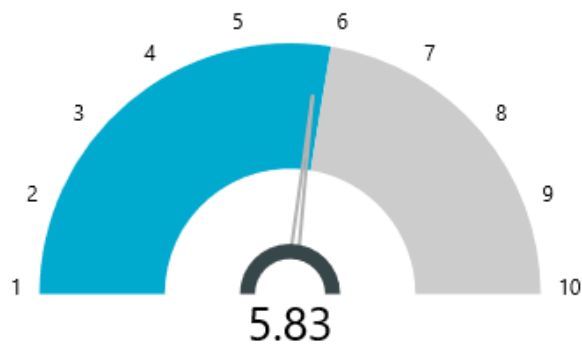


Figure 29. Responses to the survey question, “Estuarine and marine fish in my region are in good condition” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

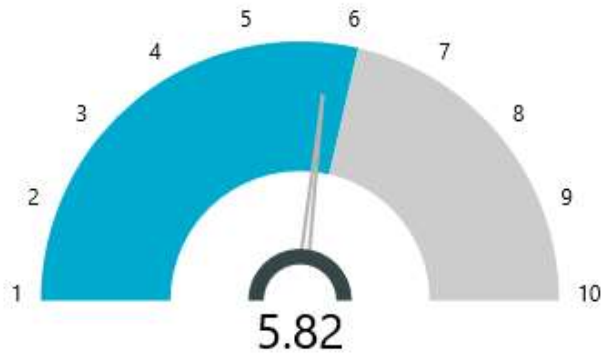


Figure 30. Responses to the survey question, “I like the colour clarity of water along the beaches in my region” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

Table 10. Proportion of respondents (by NRM region) who indicated agreement with the statement, “The coral reefs in my region are in good condition.”

NRM REGION	%
Wet Tropics (n=521):	38
Burdekin (n=659):	33
Mackay-Whitsundays (n=283):	45
Fitzroy (n=244):	56
Burnett-Mary (n=44):	71

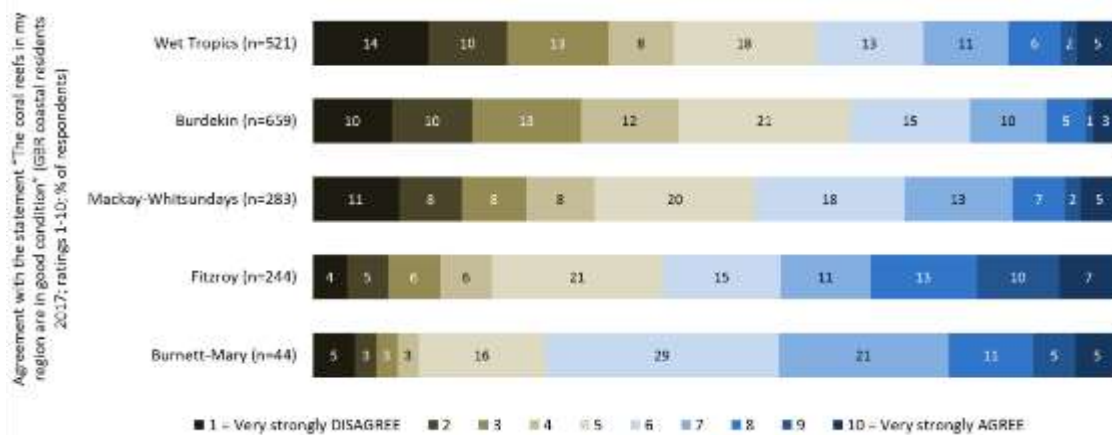


Figure 31. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement, “The coral reefs in my region are in good condition”:



Figure 32. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement "I am worried about the status of freshwater fish in my region"

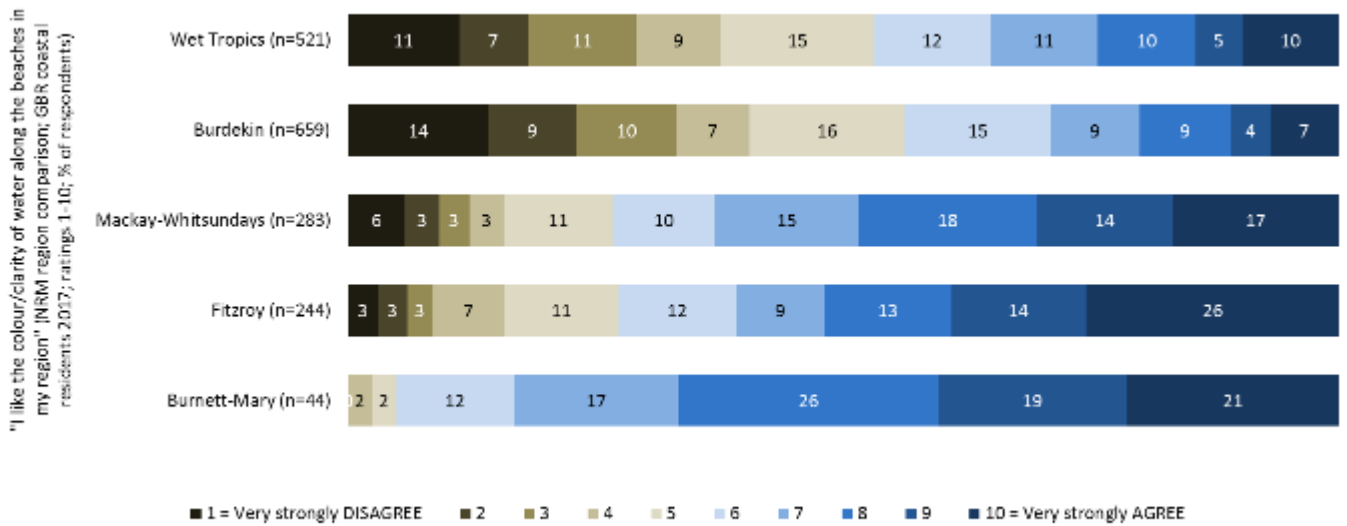


Figure 33. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement "I like the colour/clarity of water along the beaches in my region"

"The mangroves in my region are in good health" (NRM region comparison; GBR coastal residents 2017; ratings 1-10; % of respondents)

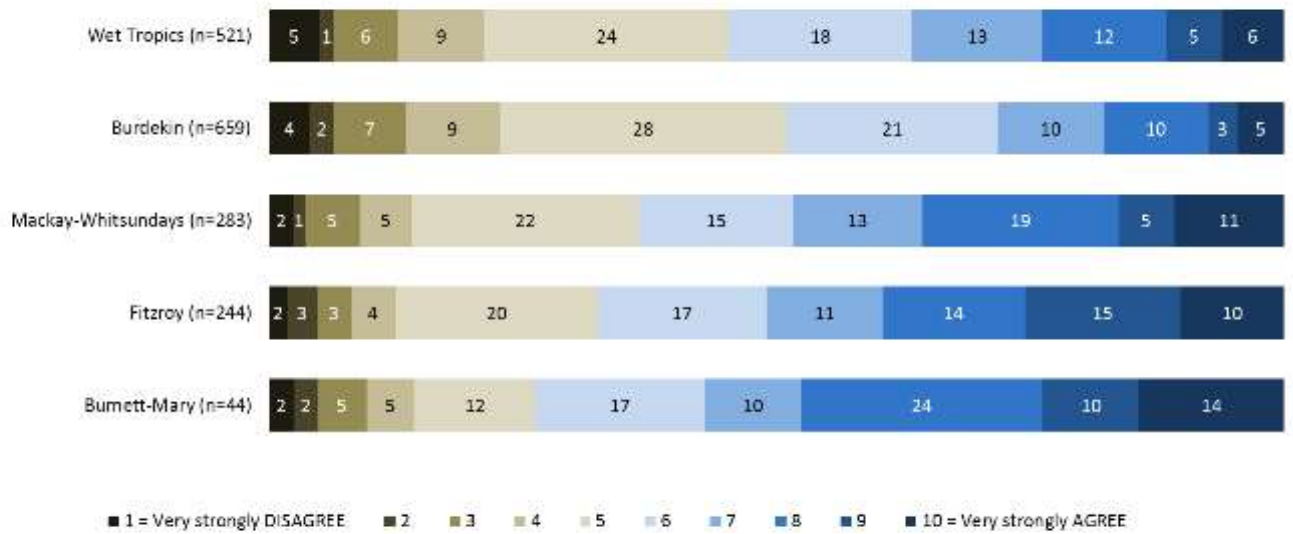


Figure 34. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement “The mangroves in my region are in good health”:

"There is too much rubbish (plastics and bottles) on the beaches in my region" (NRM region comparison; GBR coastal residents 2017; ratings 1-10; % of respondents)

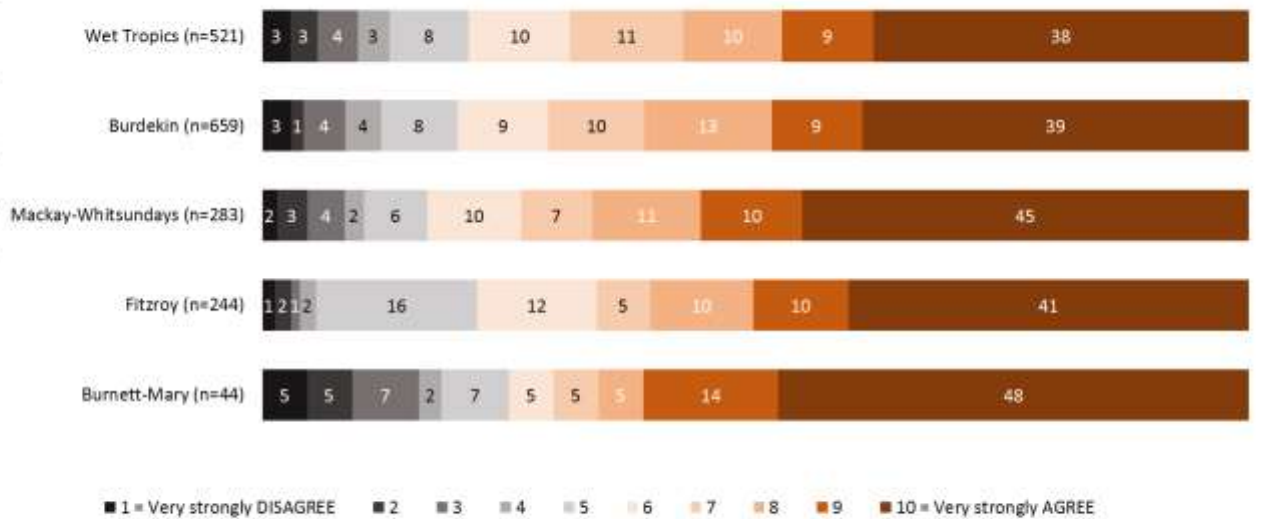


Figure 35. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement “There is too much rubbish (plastics and bottles) on the beaches in my region”

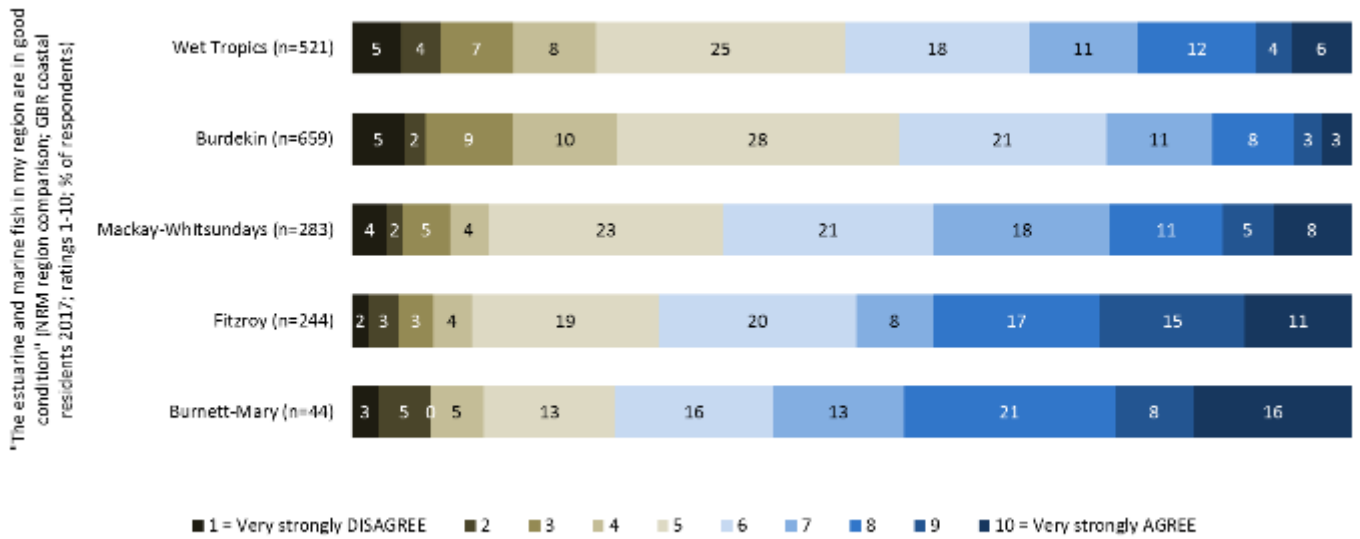


Figure 36. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement “The estuarine and marine fish in my region are in good condition”

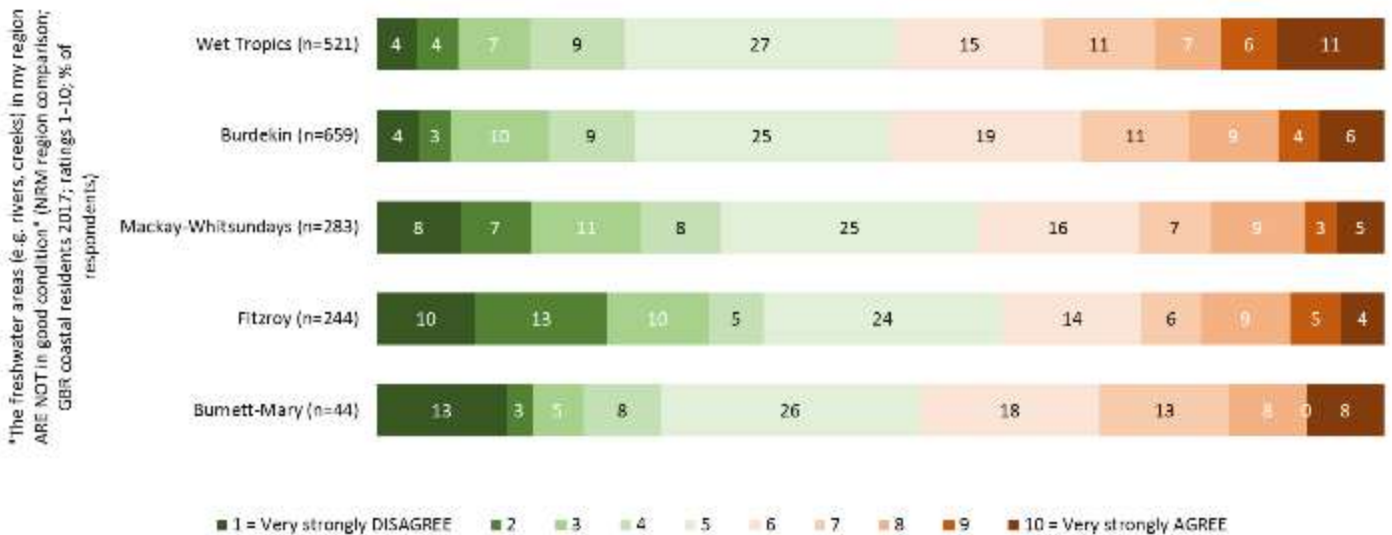


Figure 37. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement “The freshwater areas (e.g. rivers, creeks) in my region ARE NOT in good condition”

2.4 Wellbeing (CV4)

The wellbeing of local residents in this study was closely related to the Great Barrier Reef. Some 81.2% of local residents stated that, “the Reef contributes to [their] quality of life and wellbeing”, where 92.4% of residents stated that they, “love that [they] live beside the Reef”. However, only 47.7% stated that they, “feel optimistic about the future of the Reef”, and 79.7% were, “worried about climate change impacts on the Reef”, suggesting that any declines in Reef health would be interlinked with human wellbeing (Figures 38-41).

An analysis by NRM shows that residents in the Fitzroy region (87%) reported highest levels of agreements with the statement, “the Reef contributes to my quality of life and wellbeing”, especially compared to those in the Burnett-Mary NRM region (79%), however residents in the Wet Tropics provided more 10/10 responses to the statement. Residents within the Wet Tropics NRM region rated the statement, “I love that I live beside the Reef” most highly, especially compared with residents living within the Burnett –Mary NRM region (80%). Residents from the Fitzroy NRM region (61%) also rated their optimism about the future of the Reef most highly, especially compared with the Burdekin region (43%). Residents from the Burdekin and Burnett-Mary NRM regions were the most worried about climate change impacts on the Reef (Table 12 and Figures 42-44).

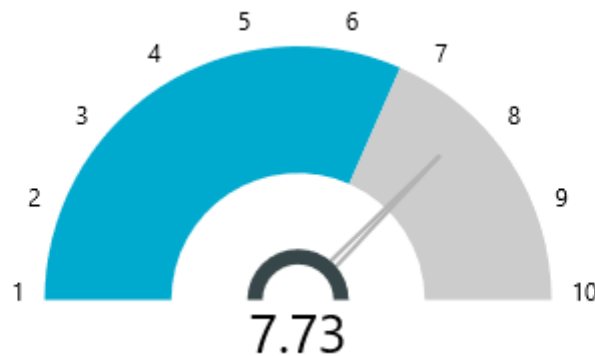


Figure 38. Responses to the survey question, “The Reef contributes to my quality of life and wellbeing” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

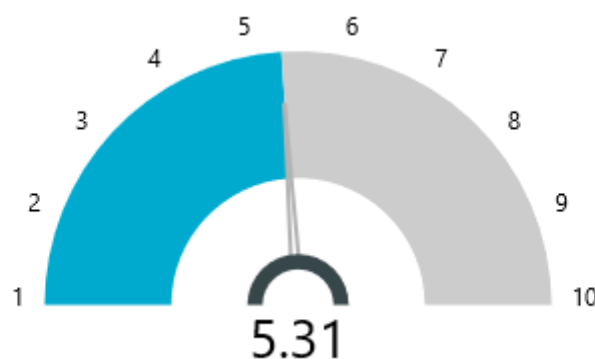


Figure 39. Responses to the survey question, “I feel optimistic about the future of the Reef” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

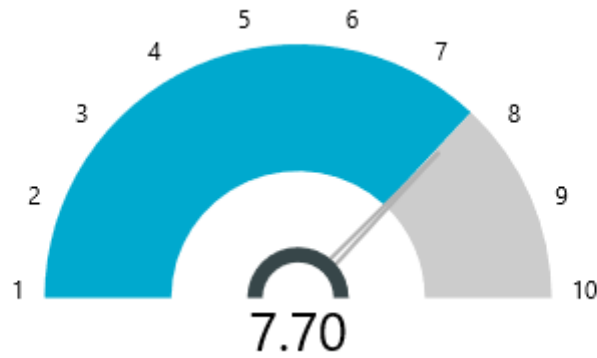


Figure 40. Responses to the survey question, “I am worried about climate change impacts on the Reef” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

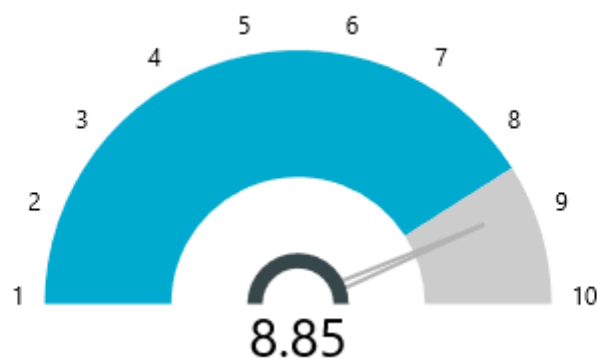


Figure 41. Responses to the survey question, “I love that I live beside the Reef” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

Table 11. Proportion of respondents (by NRM region) who indicated agreement with the statement “The Reef contributes to my quality of life and wellbeing”

NRM REGION	%
Wet Tropics (n=521):	83
Burdekin (n=659):	80
Mackay-Whitsundays (n=283):	86
Fitzroy (n=244):	87
Burnett-Mary (n=44):	79

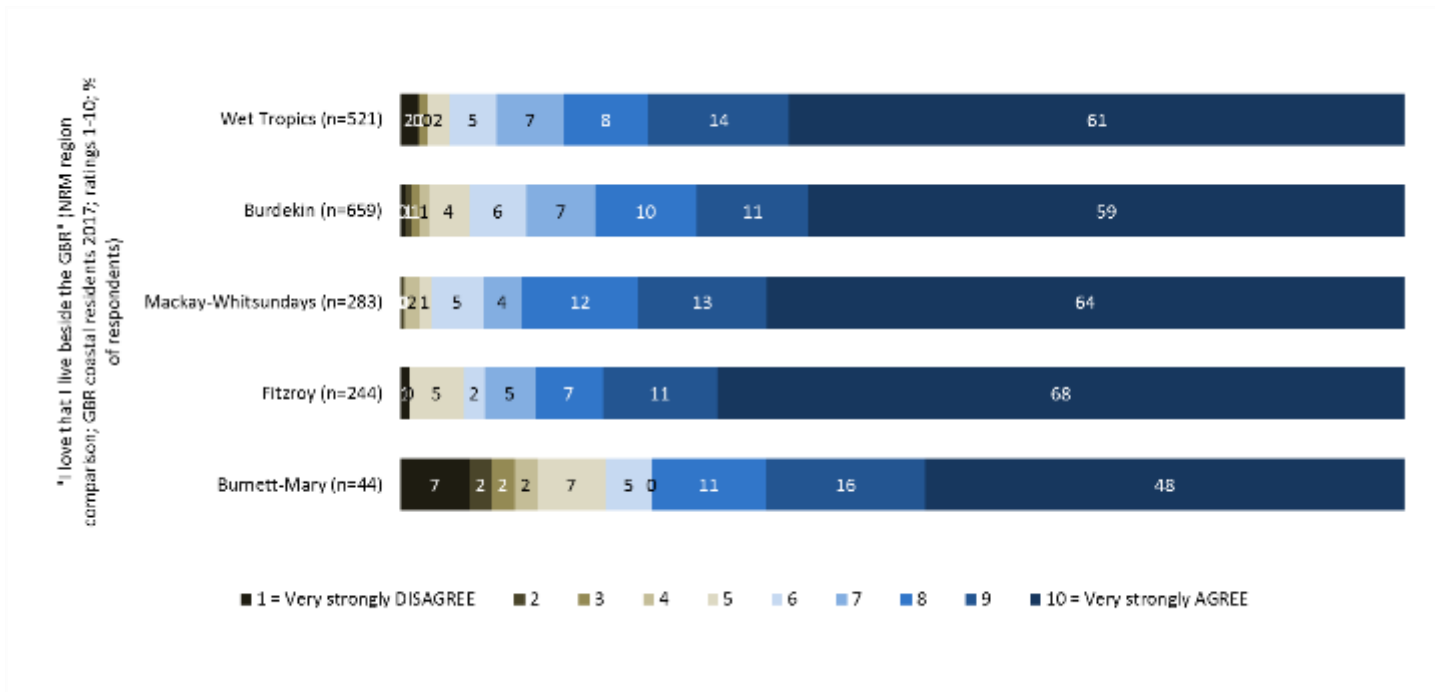


Figure 42. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement “I love that I live beside the Reef”

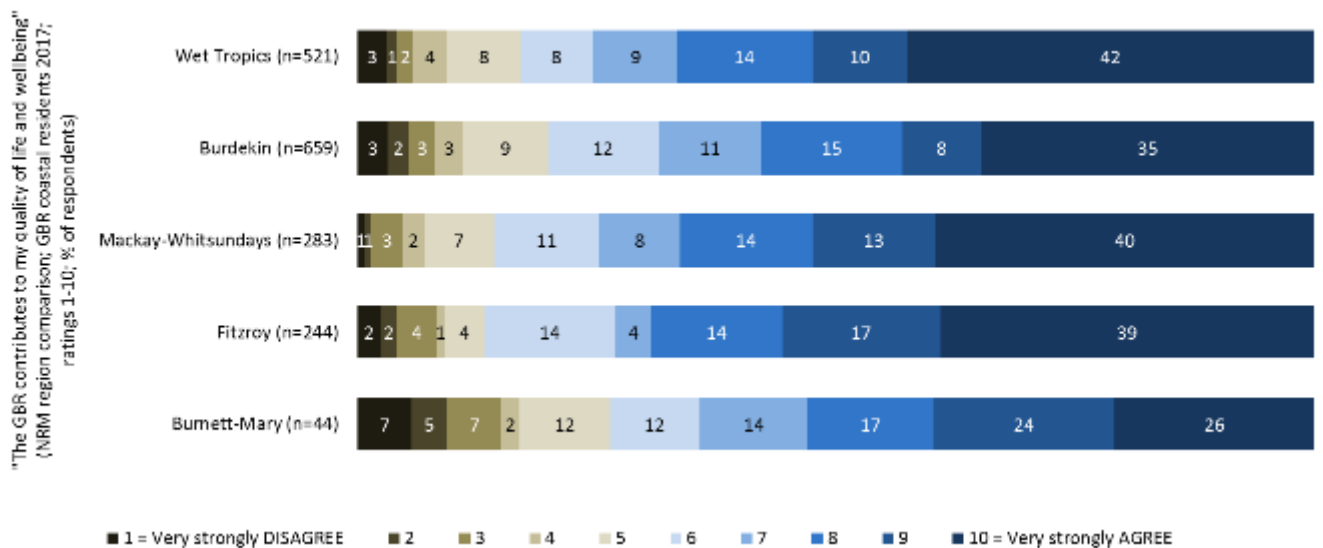


Figure 43. Responses to the statement, “The Reef contributes to my quality of life and wellbeing” within each NRM region.

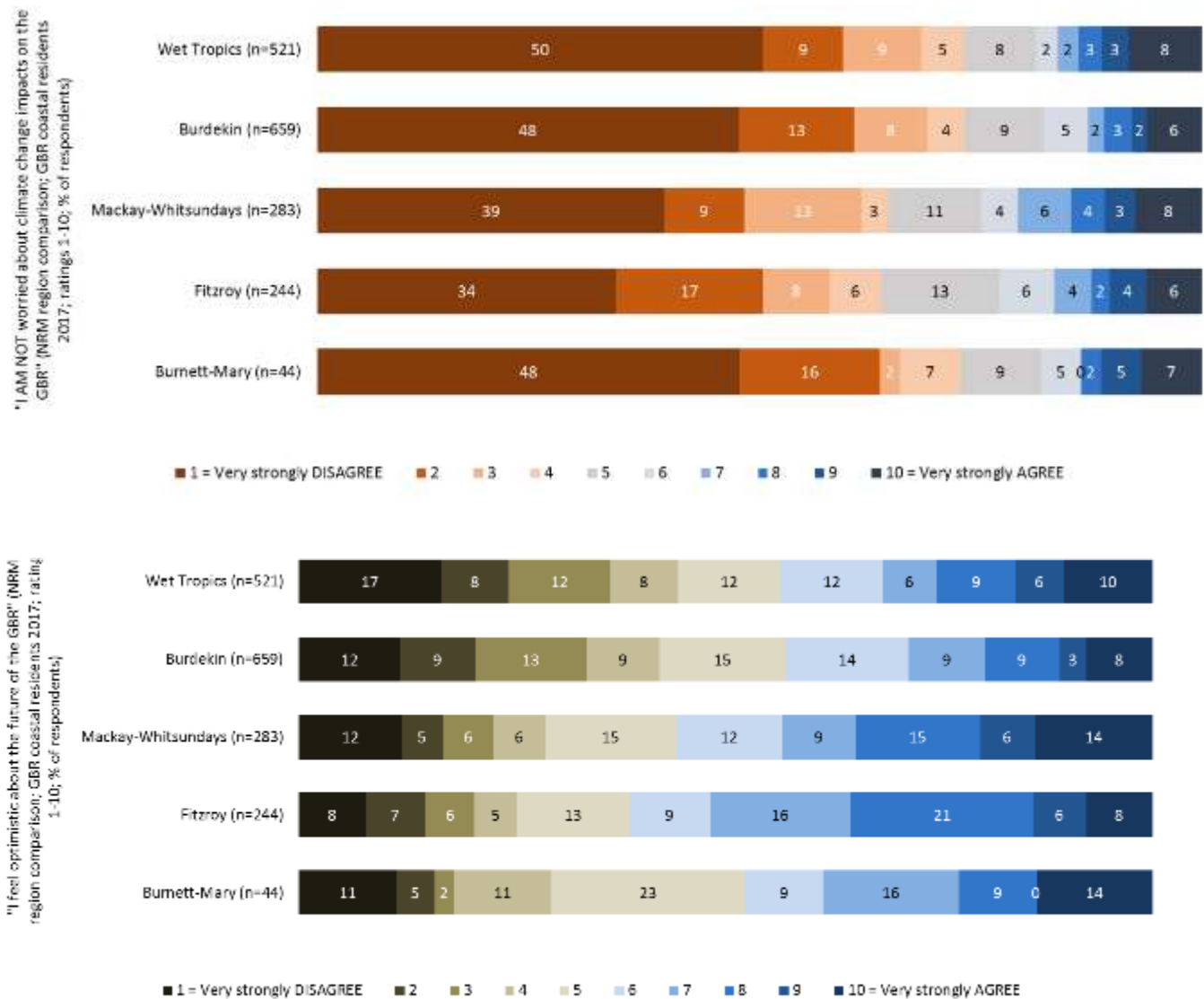


Figure 44. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement "I AM NOT worried about climate change impacts on the Reef"

2.5 Resource Use (ACS3)

An in-depth analysis of resource use and resource users is anticipated in 2017.

Results suggest that the Great Barrier Reef is an extremely well-used resource, particularly the beaches within the region. Residents within the region were both relatively new (transient) on the one hand, or well established on the other hand. Eight percent of the survey population had lived within the region for less than a year, whilst 31.9% had lived within the region for more than twenty years. Six percent of residents surveyed in this study had never visited the Reef. Typically, however, local residents spent a lot of recreational time within the Reef boundary. Results in Figure 46 suggest that residents will spend anything from one day at the Reef (8%) to more than 100 days (12.25%). Some 39.7% only travel less than 10km to visit the Reef whilst

13% travel more than 100km. Most residents travel by foot or personal vehicle to visit the Reef (38.9%). In, “thinking about all your visits to the Reef in the past 12 months, what proportion of your time was spent at each of the following Reef environments?” we found that residents spent most of their time at beaches (40%), and least of their time at shipwrecks (86%). More information about resident travel can be accessed via the dashboards (Figures 45-47). Maps suggesting where people’s favourite places are, as well as maps describing where each activity is undertaken within the region, can be found in Appendix 6.

Residents from the Fitzroy NRM (95%) visited the Reef more than any other NRM region, especially the Wet Tropics NRM (88%) (Table 13). Results presented in Figure 48 show the mean amount of time that residents within each of the NRM regions spend visiting the GRB for recreation. Residents within the Wet Tropics, Burdekin and Mackay-Whitsundays NRM regions rated sightseeing/exploration as their most important activity. Those in the Fitzroy region rated sunbathing/relaxing as their most important activity, and residents in the Burnett-Mary NRM region rated wildlife watching as their most important activity (Table 14). The importance of 18 activities within the region listed in Table 15.

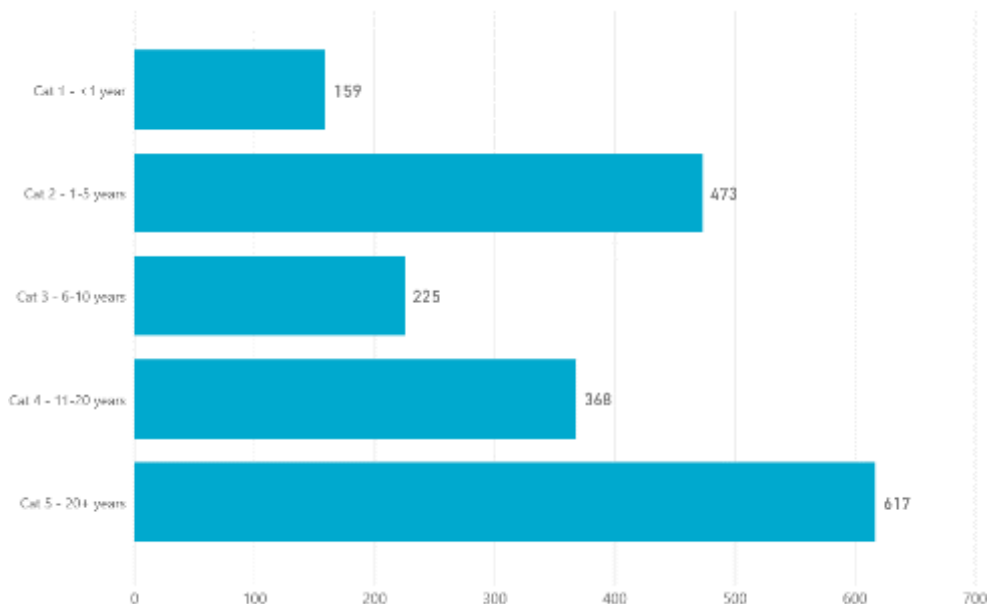


Figure 45. Responses to the question, “How many years have you lived within the Reef region”

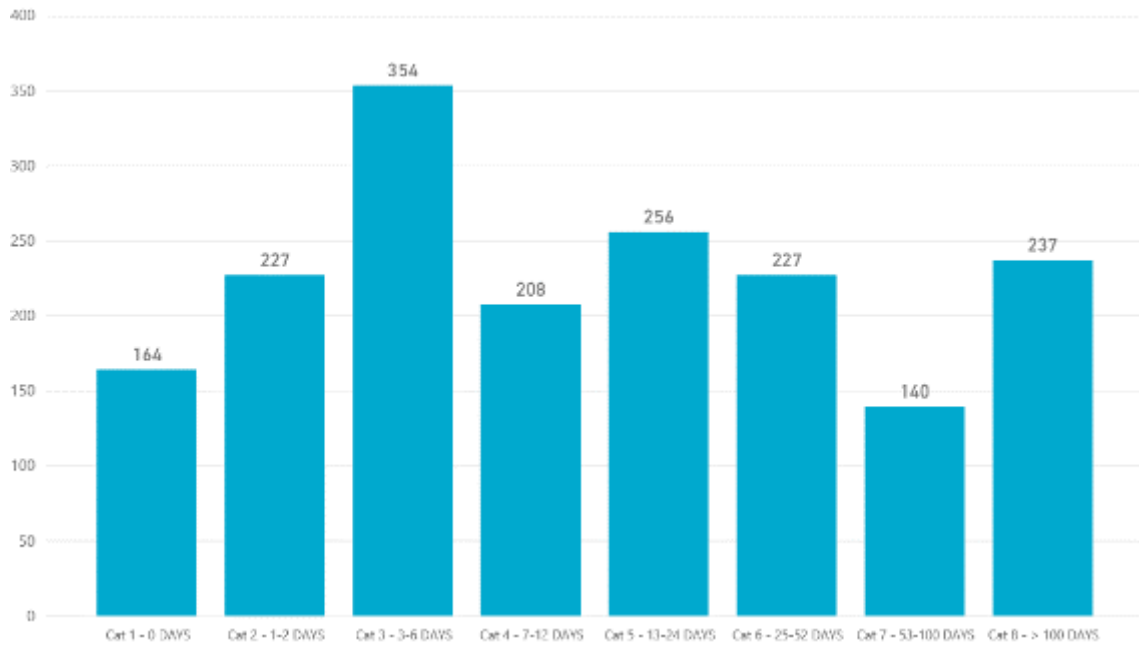


Figure 46. Responses to the question, “How many days did you visit the Reef in the previous 12 months” (categories provided).

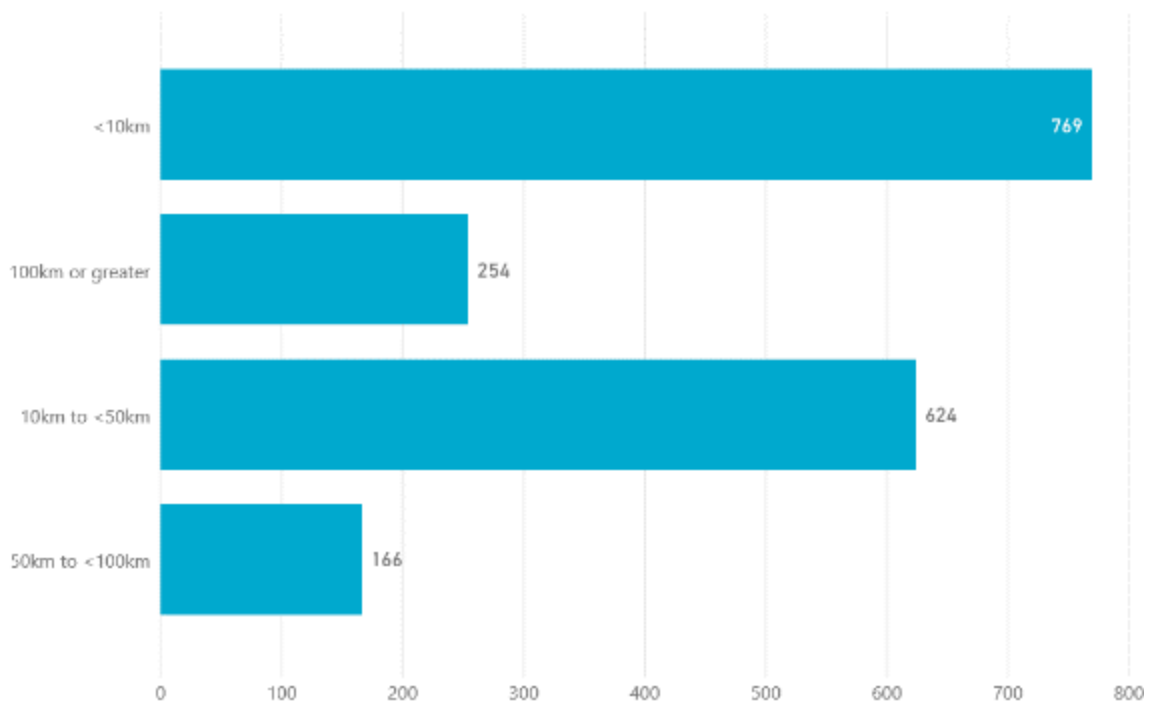


Figure 47. Responses to the question, “When visiting the Reef how far do you normally travel from your home?” (Categories provided).

Table 12. Proportion of respondents (by NRM region) who visited the Reef at least once in the last 12 months

NRM REGION	%
Wet Tropics (n=521):	88
Burdekin (n=659):	92
Mackay-Whitsundays (n=283):	94
Fitzroy (n=244):	95
Burnett-Mary (n=44):	90

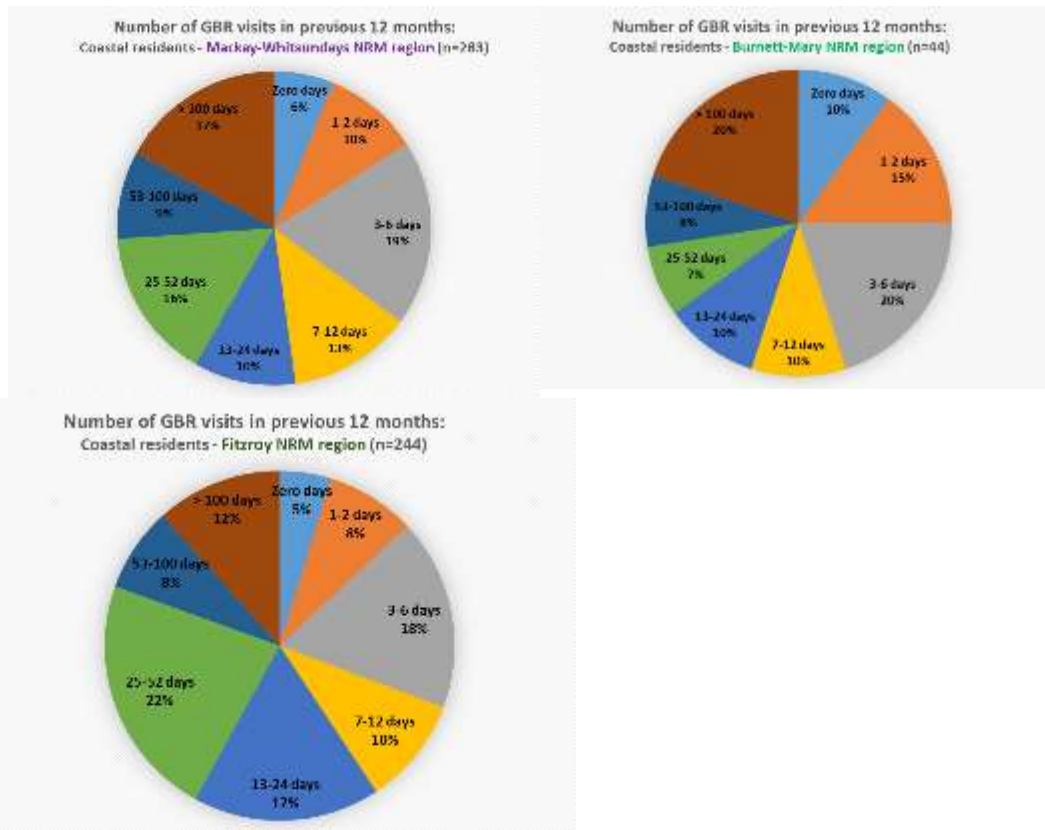


Figure 48. Responses to the question, "In the previous 12 months, how many days did you visit the Great Barrier Reef for recreation?"

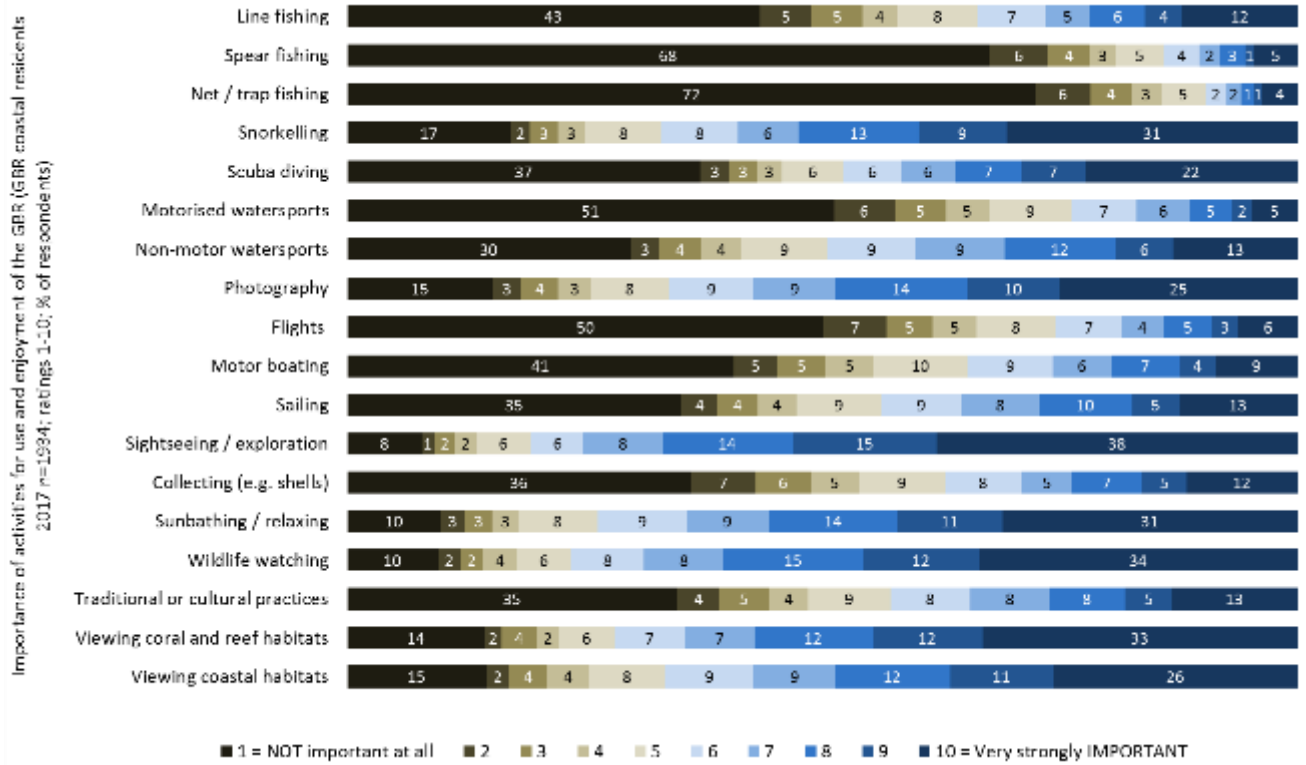


Figure 49. Overall ratings of the importance of activities contributing to residents' use and enjoyment of the Reef (all listed activities; n=1934)

Table 13. Responses to the survey question, "Thinking about all your Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Reef" (n=1934).

NRM REGION	Top ranked activity (mean rating; 1-10 scale)	2nd ranked activity (% of respondents)	3rd ranked activity (% of respondents)
Wet Tropics (n=521):	Sightseeing/exploration (7.96)	Wildlife watching (7.82)	Viewing coral and reef habitats (7.51)
Burdekin (n=659):	Sightseeing/exploration (7.90)	Wildlife watching (7.41)	Sunbathing/relaxing (7.23)
Mackay-Whitsundays (n=283):	Sightseeing/exploration (8.14)	Wildlife watching (7.66)	Viewing coral and reef habitats (7.61)
Fitzroy (n=244):	Sunbathing/relaxing (7.09)	Sightseeing/exploration (6.29)	Wildlife watching (5.49)
Burnett-Mary (n=44):	Wildlife watching (8.23)	Sightseeing/exploration (7.88)	Viewing coral and reef habitats (7.58)

Table 14. Responses to the survey question, “Thinking about all your visits to the Reef in the past 12 months, what proportion of your time was spent at each of the following Reef environments?” (n=1934).

Habitat / Environment	Not at all	Not very often (1-25% of my Reef visits)	Less than half of my Reef visits (26-50%)	More than half of my visits (51-75%)	Most of my time was spent in this environment
Beaches	8%	11%	14%	26%	40%
Creeks and estuaries	32%	33%	20%	10%	5%
Islands and cays	33%	33%	18%	9%	6%
Inshore reefs	53%	26%	12%	6%	4%
Mid shelf and outer reefs	59%	23%	8%	6%	5%
Open water	55%	25%	8%	7%	4%
Shipwrecks	86%	11%	2%	1%	0%

A3. Culture and Heritage (CH)

3.1 Values of residents (CH1, CH2, CH3)

The contemporary cultural and heritage value of the Great Barrier Reef was high for local residents. SELTMP 2017 found that although only 55.5% of residents valued the Reef because, “it is an important part of [their] culture”, some 96% valued it because, “the Reef is a great asset for the economy of the region”, 95.9%, “value the Reef because it supports a variety of life, such as fish and corals”, and 95.1% reported that the, “the aesthetic beauty of the Reef is outstanding”. We found that 95.2% of residents felt, “proud that the Reef is a World Heritage Area”, and 90.0% of residents, “value the Reef because it attracts people from all over the world. Some 89.8%, “value the Reef because we can learn about the environment through scientific discoveries”. The Great Barrier Reef was valued by 89.5%, “because it supports a desirable and active way of life”, where 89.4% reported that they, “value the Reef because it exists, even if [they] don’t benefit from it”. In addition, 71.7%, “value the Reef because it provides a place where people can continue to pass down wisdom, traditions and a way of life”, and 70.0%, “value the Reef for the fresh seafood it provides”. Some 66% felt that, “the Reef is part of [their] identity”, and 65.9% said, they, “value the Reef because of its rich traditional owner heritage”. Similarly, 64.2% reported that it, “inspires [them] in artistic or thoughtful ways”, and, “53.9% reported that they, “value the Reef because it is spiritually important to [them]”. In sum, the Reef is an integral part of local culture, where local people derive a range of cultural ecosystem services from the Reef (Figures 50-63).

An analysis by NRM region suggests that residents within the Mackay-Whitsundays region (74%) had the strongest identity around the Reef within the region, whilst those in the Burden had the lowest (63%). Residents within the Fitzroy NRM region (94%) most highly valued the Reef because it supports a desirable and active way of life, especially compared to residents within the Wet Tropics (88%). They also rated the fresh seafood provided by the Reef most highly. Residents from the Burnett Mary NRM region rated the aesthetic beauty of the Reef most highly. Residents in the Burnett-Mary (74%) rated the value of the Reef in terms of its rich

Traditional Owner heritage the highest, and residents in the Fitzroy NRM region the lowest (49%). The spiritual values associated with the Reef were most highly valued by residents within the Wet Tropics NRM (64%) and the lowest by those in the Fitzroy NRM (47%). Residents from the Wet Topics and Burdekin NRMs (76% each) valued the Reef as a place to pass down traditions and a way of life, and those in the Fitzroy valued these aspects the lowest (52%). All residents highly valued the Reef because it supported a variety of life, such as fish and corals (>93%). All residents were proud of the world Heritage Area status associated with the Reef (>94%). All residents highly valued the intrinsic value of the Reef (>88%). All residents highly valued the economic values of the Reef (>96%) (Figures 50-72).

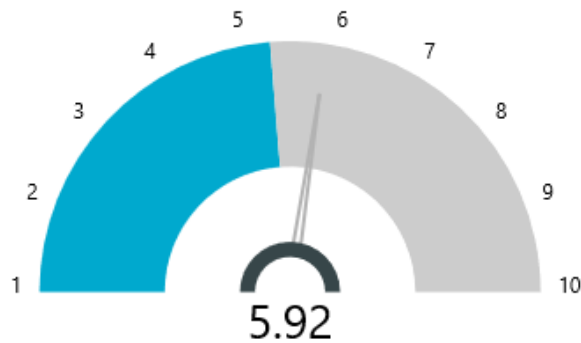


Figure 50. Responses to the survey question, “The Reef is an important part of my culture” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

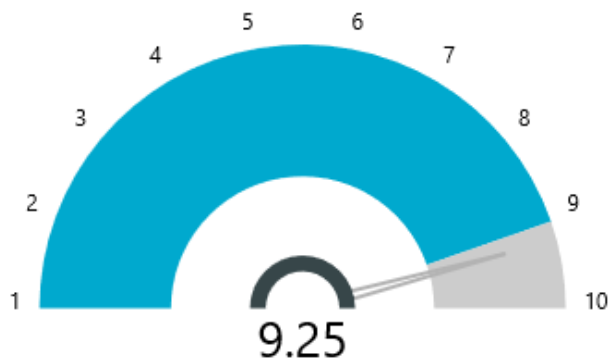


Figure 51. Responses to the survey question, “The Reef is a great asset for the economy of the region” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

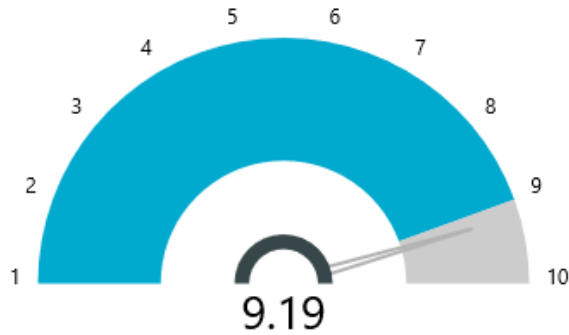


Figure 52. Responses to the survey question, “I feel proud that the Reef is a World Heritage Area” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

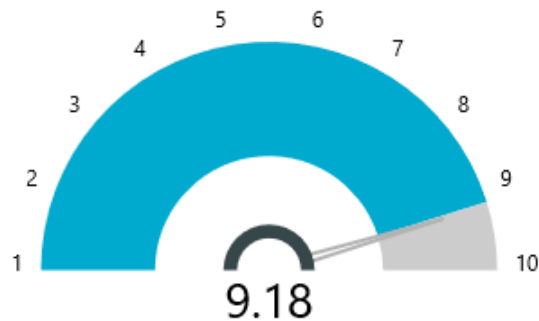


Figure 53. Responses to the survey question, “I value the Reef because it supports a variety of life such as fish and corals” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

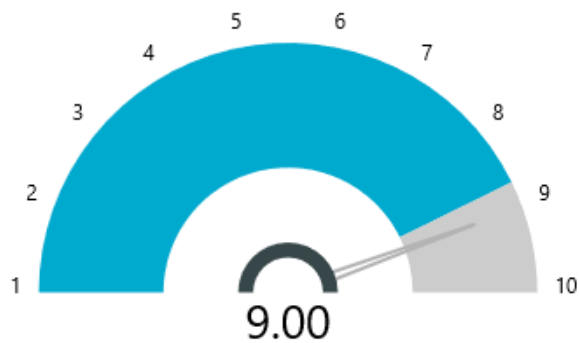


Figure 54. Responses to the survey question, “The aesthetic beauty of the Reef is outstanding” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

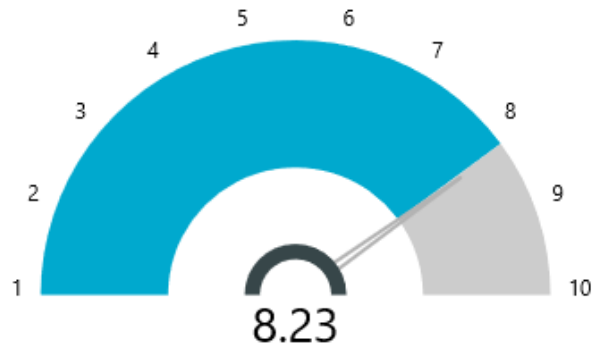


Figure 55. Responses to the survey question, “I value the Reef because it supports a desirable and active way of life” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

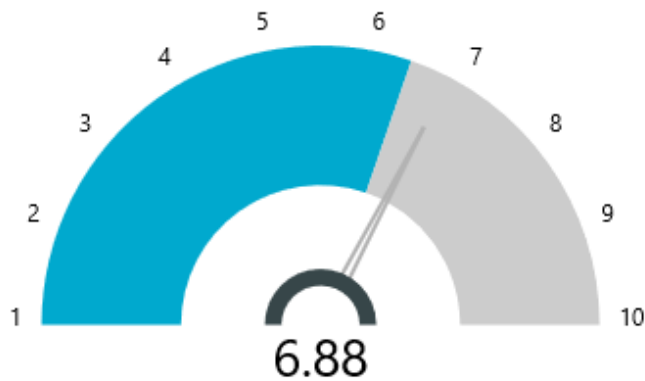


Figure 56. Responses to the survey question, “I value the Reef for the fresh seafood it provides” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

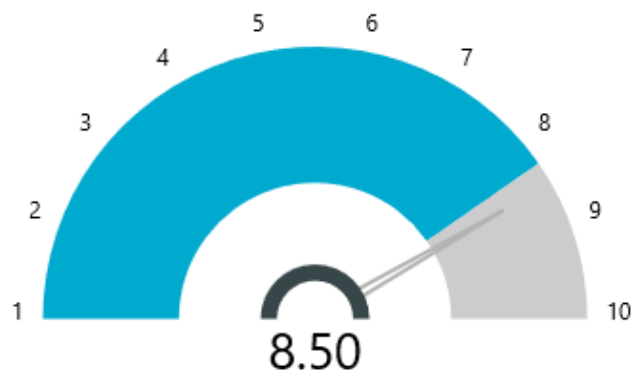


Figure 57. Responses to the survey question, “I value the Reef because it attracts people from all over the world” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

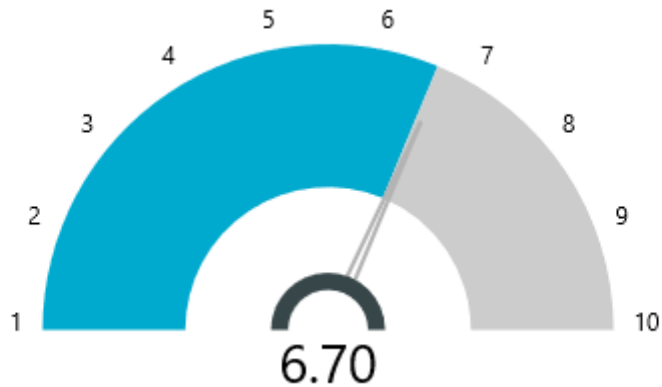


Figure 58. Responses to the survey question, “I value the Reef because of its rich traditional owner heritage” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

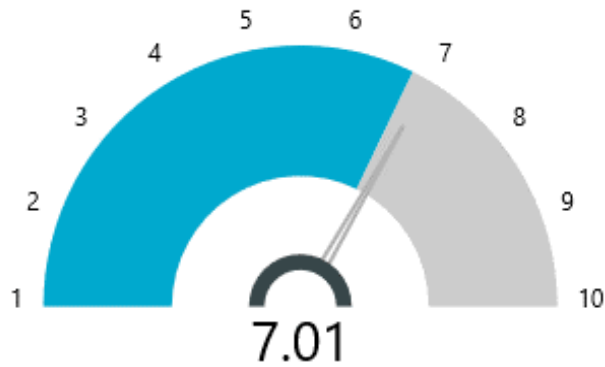


Figure 59. Responses to the survey question, “I value the Reef because it provides a place where people can continue to pass down wisdom, traditions and way of life” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

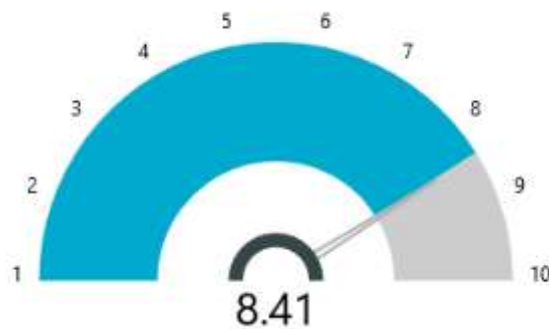


Figure 60. Responses to the survey question, “I value the Reef because we can learn about the environment through scientific discoveries” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

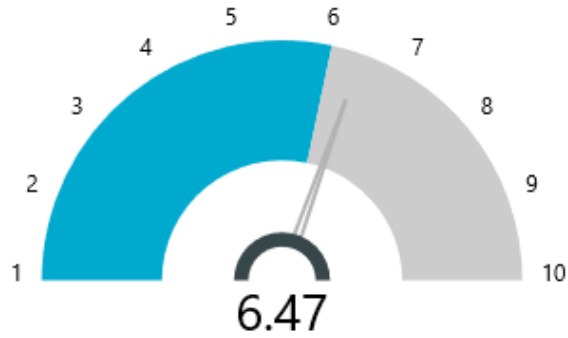


Figure 61. Responses to the survey question, “I value the Reef because it inspires me in artistic or thoughtful ways” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

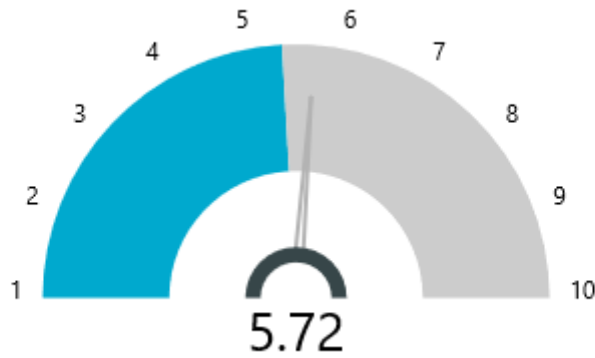


Figure 62. Responses to the survey question, “I value the Reef because it is spiritually important to me” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

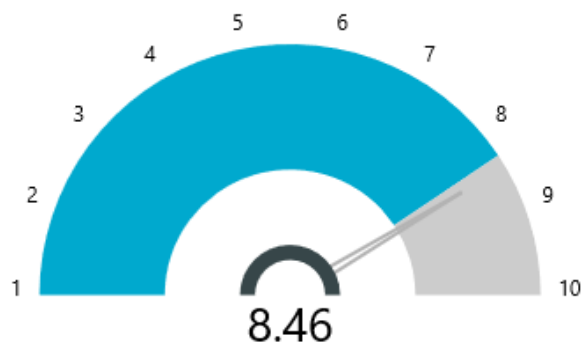


Figure 63. Responses to the survey question, “I value the Reef because it exists, even if I don’t benefit from it” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

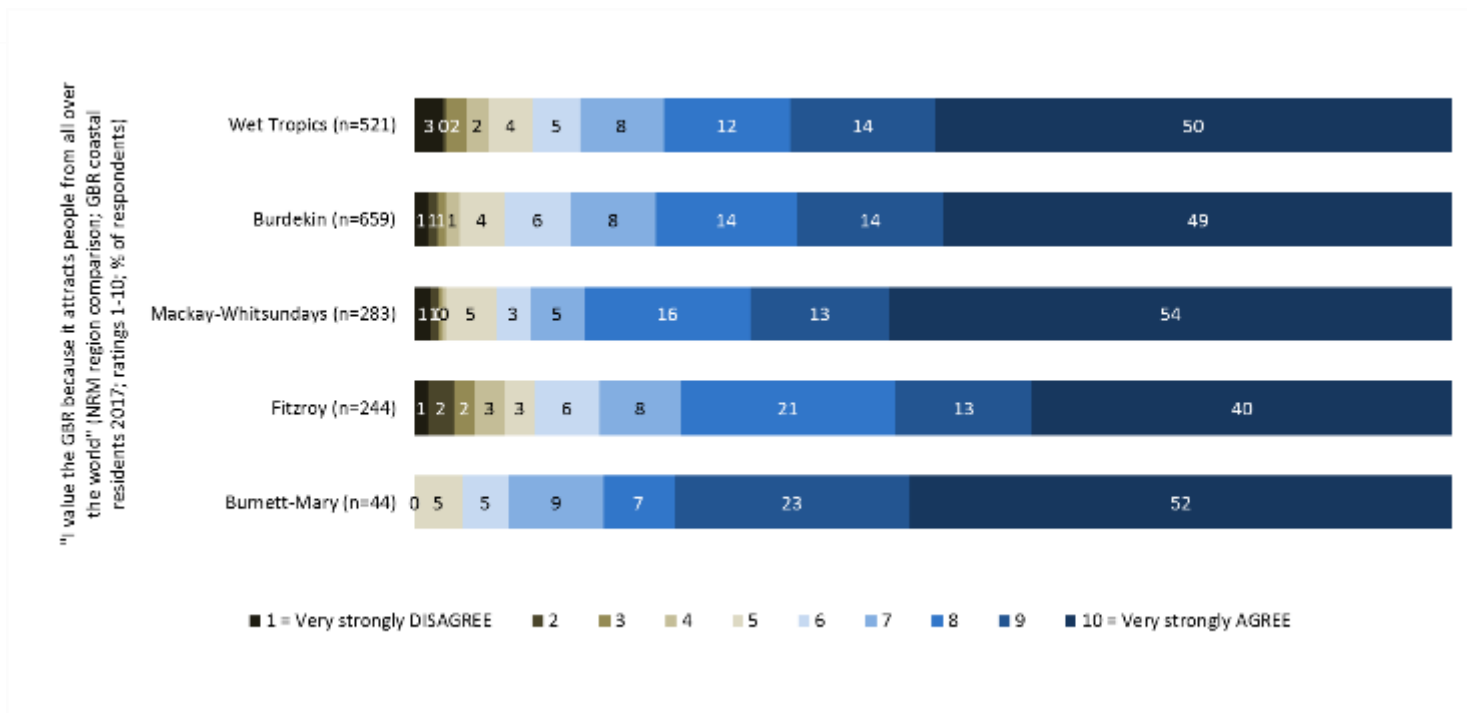


Figure 64. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement "I value the Reef because it attracts people from all over the world"

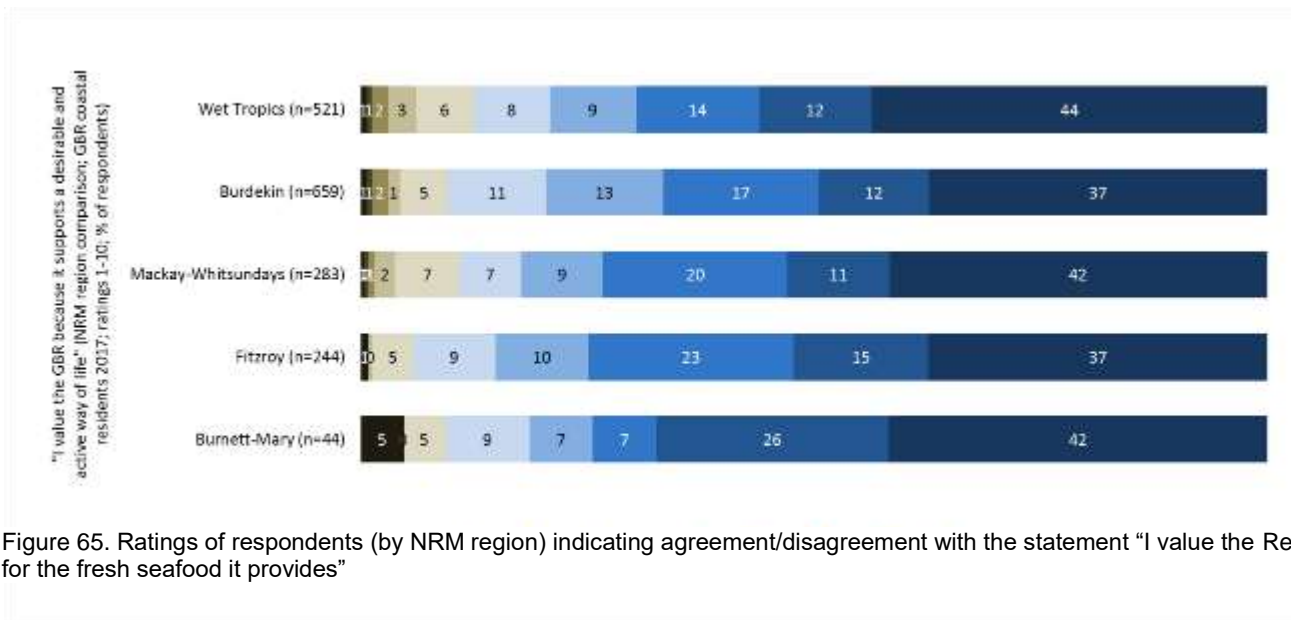


Figure 65. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement "I value the Reef for the fresh seafood it provides"

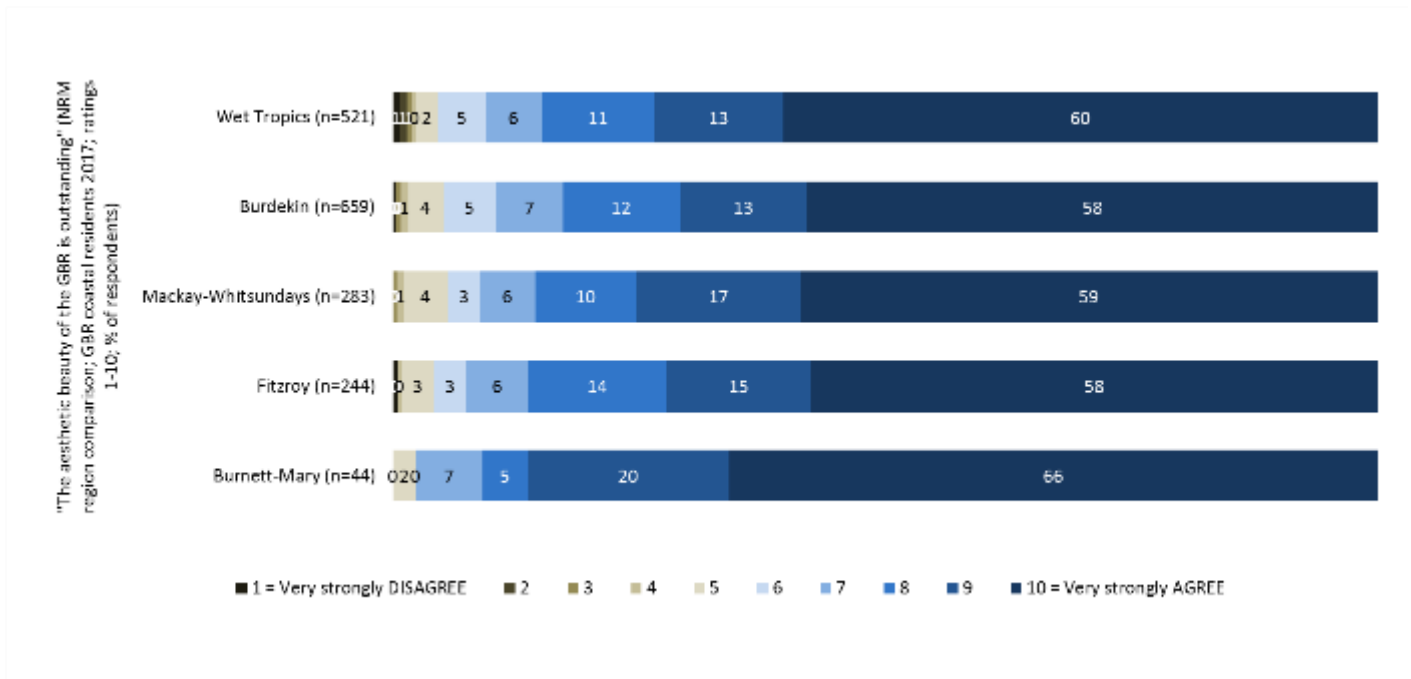


Figure 66. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement "The aesthetic beauty of the Reef is outstanding"

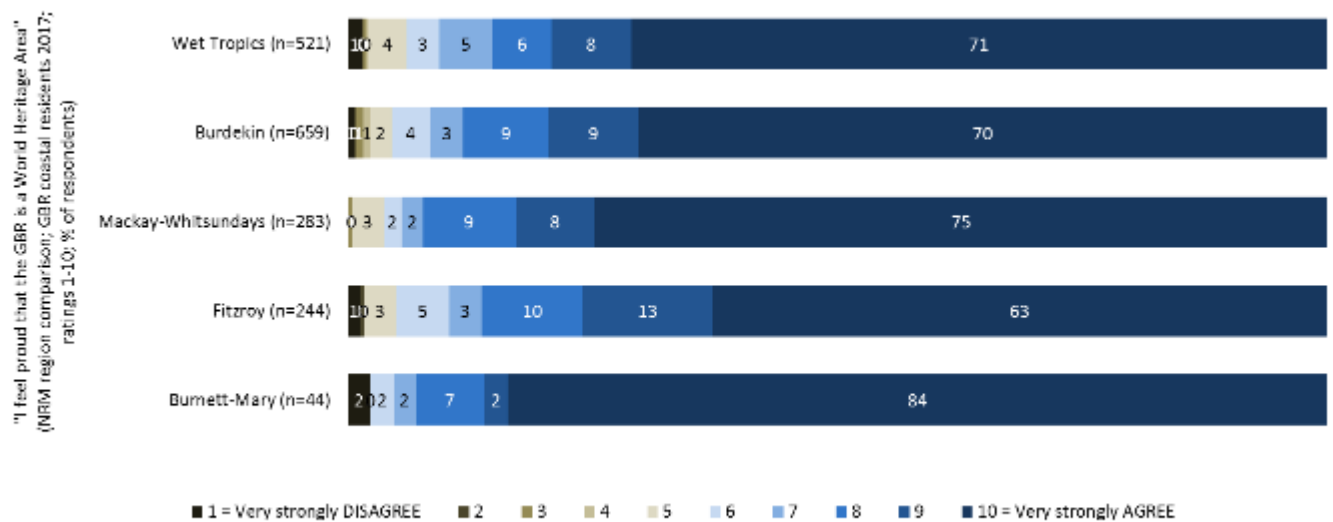


Figure 64. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement "I feel proud that the Reef is a World Heritage Area"

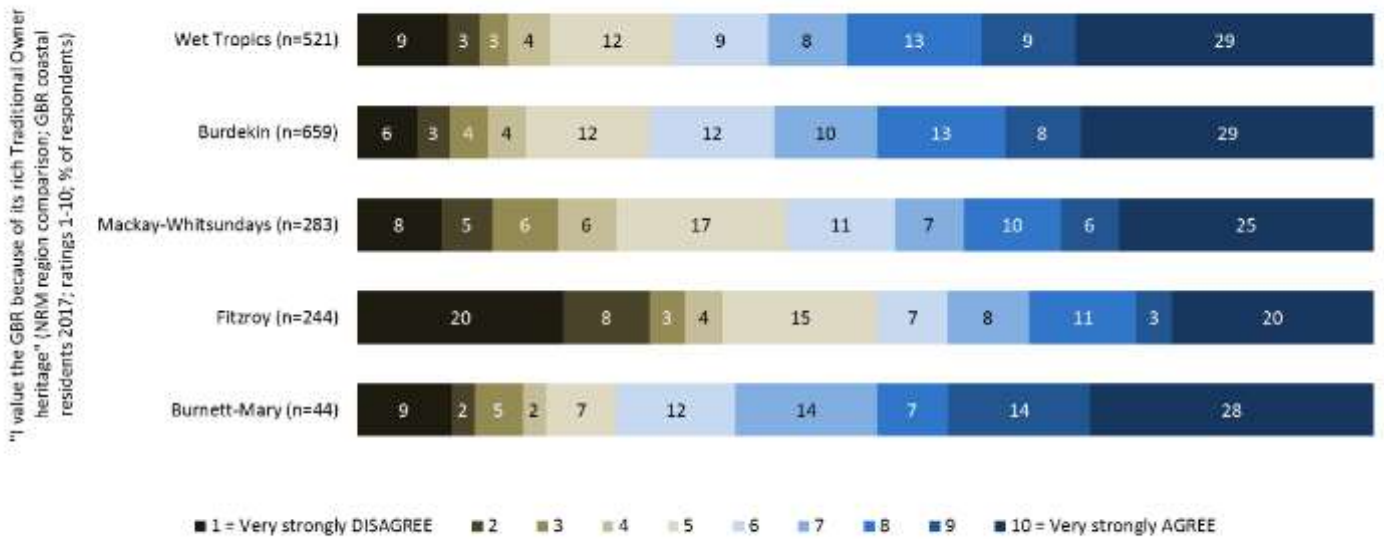


Figure 65. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement "I value the Reef because of its rich Traditional Owner heritage":

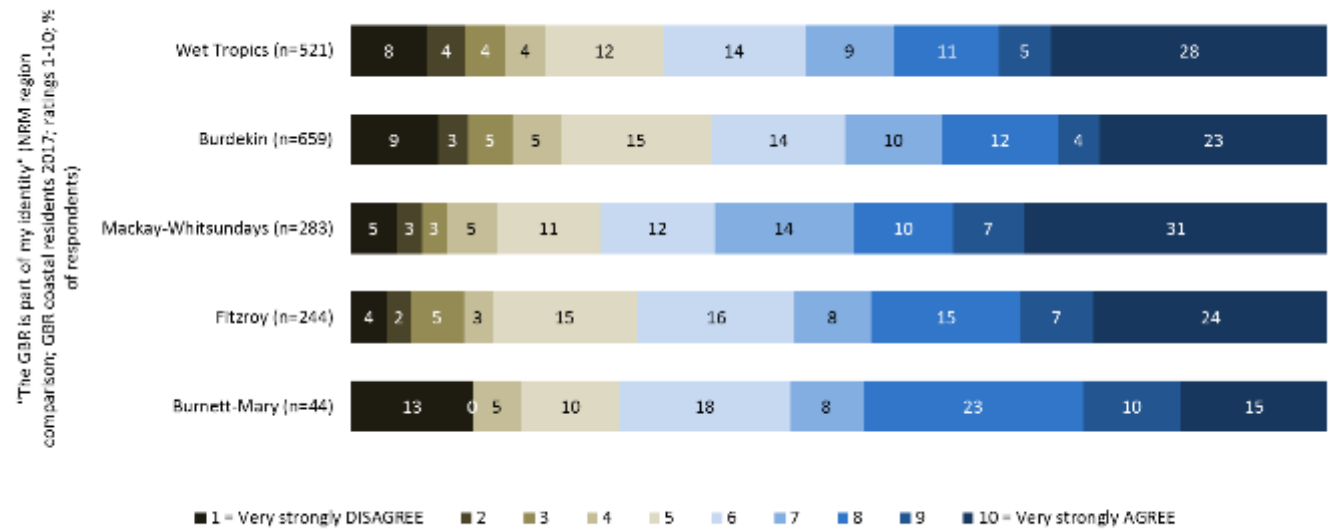


Figure 66. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement "The Reef is part of my identity"

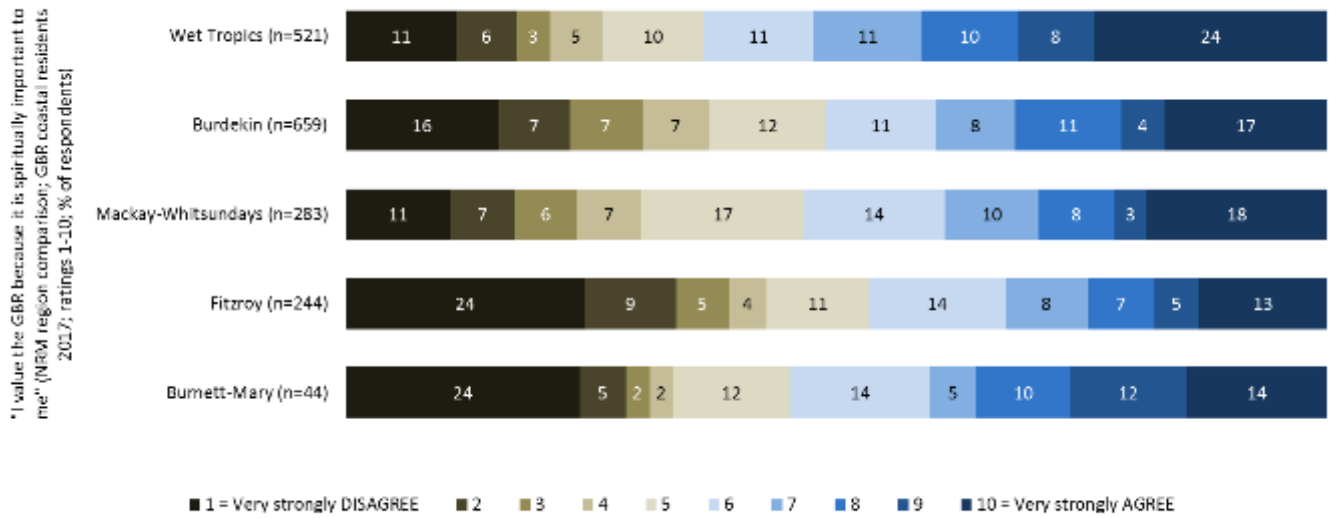


Figure 67. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement “I value the Reef because it is spiritually important to me”

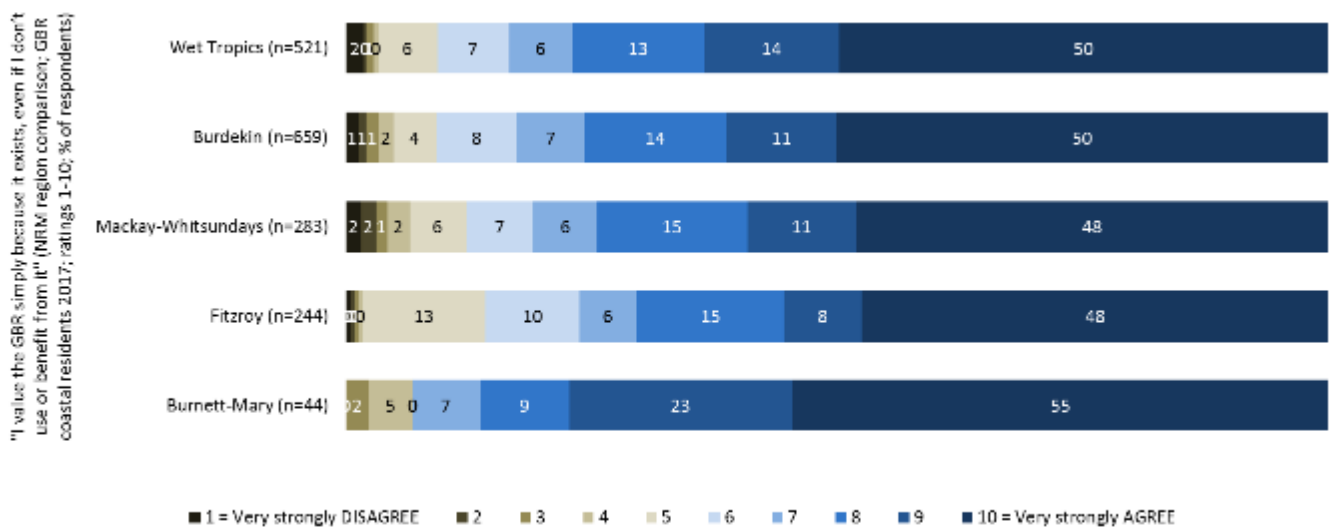


Figure 68. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement “I value the Reef simply because it exists, even if I don't use or benefit from it”

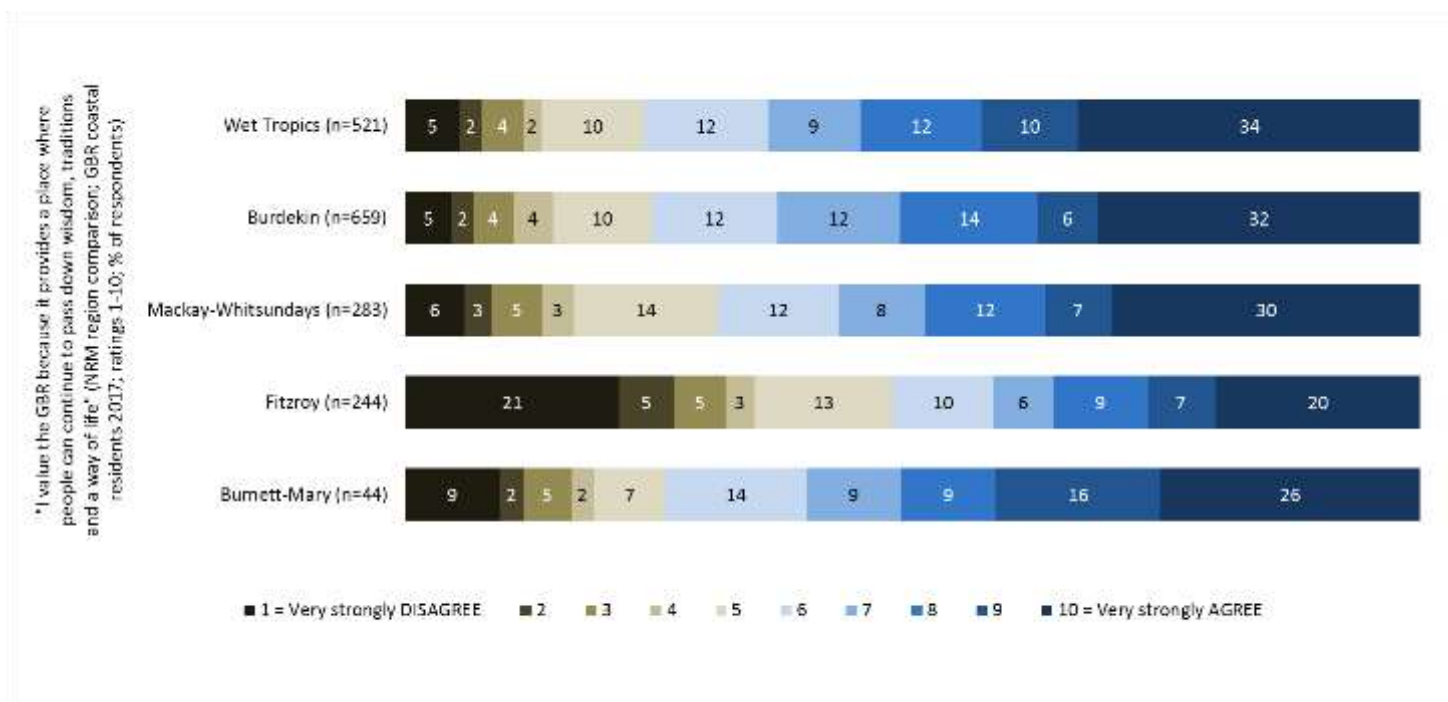


Figure 69. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement “I value the Reef because it provides a place where people can continue to pass down wisdom, traditions and a way of life”:

A4. Economic value

4.1 Economic viability (EV1-5)

Residents were assumed to not derive income from the Great Barrier Reef. Economic data were only collected for tourism operators and commercial fishers.

A5. Governance (G)

SELTMP 2017 data provides insight into the perceptions of management of the Great Barrier Reef, as well as the levels of connectivity within and between key sectors as well as information sources.

5.1 Confidence and support in management (G3)

Local residents were moderately confident in, and supportive of, Reef management. Some 23.8% of local residents thought that, “enough is being done to effectively manage the Reef”, whilst 48% felt, “confident that the Reef is well managed”. Residents were generally supportive of the rules and regulations, where 66.3% said, “I support the rules and regulations that affect access and use of the Reef” and 65.2% said that they, “support the current rules and regulations that affect access and use of freshwater areas (rivers and creeks in my region)”. Some 50.4% of residents suggested that they, “feel confident that the freshwater areas in [their] region are well managed”. And 55% felt that they, “can contribute to Reef management”. In addition, 73.1% of residents felt that they were, “progressive” rather than, “traditional” on a ten point scale with traditional at one end, and progressive at the other (Figures 73-80).

Residents within the Fitzroy NRM region (67%) were more confident in the management of the Reef whilst residents in the Mackay-Whitsundays NRM were the least confident (45%). Fitzroy

residents most agreed that enough is being done to effectively manage the Reef (32%), whilst Burdekin residents were the least supportive (19%). Residents within the Fitzroy NRM region (67%) were also the most confident that the freshwater areas in the region were well managed, and those in the Burdekin were the least confident (45%). Residents from the Fitzroy NRM (79%) were also the most supportive of the current rules and regulations that affect use and access, whilst those in the Wet Tropics were the least supportive (66%). Residents from the Burnett-Mary (83%) were most supportive of the rules and regulations that accept access and use of freshwater areas, whilst those in the Wet Tropics, Burden and Mackay-Whitsundays were the least supportive (69% each). Residents within the Wet Tropics and Burdekin (60% each), felt that they could contribute to management the most, which those in the Fitzroy NRM region felt like they could contribute the least (44%) (Figures 81-86).

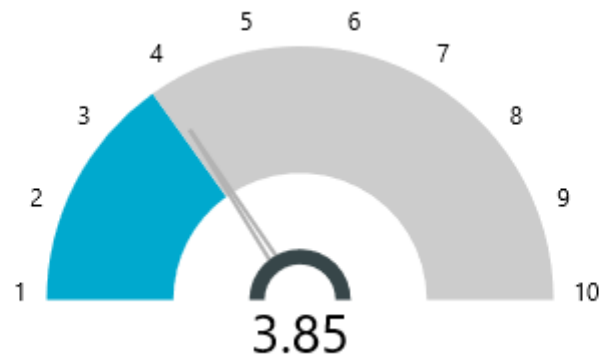


Figure 70. Responses to the survey question, “I think enough is being done to effectively manage the Reef” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

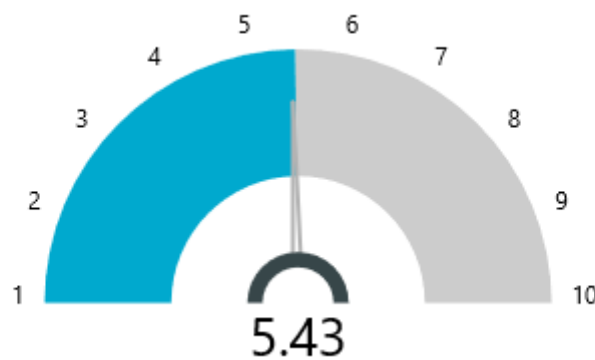


Figure 71. Responses to the survey question, “I am confident that the Reef is well managed” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

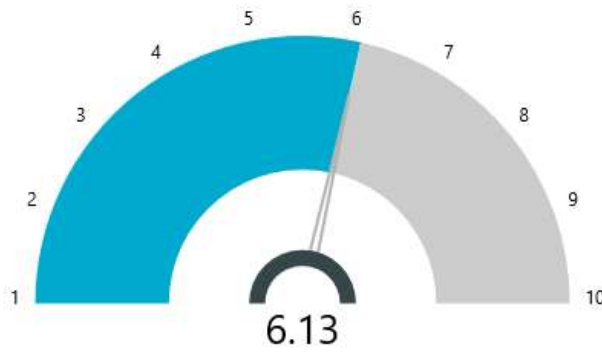


Figure 72. Responses to the survey question, “I feel confident that the freshwater areas in my region are well managed” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

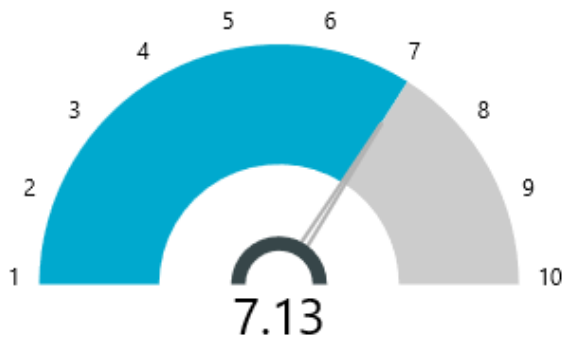


Figure 73. Responses to the survey question, “I do have fair access to the Reef compared to other user groups” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

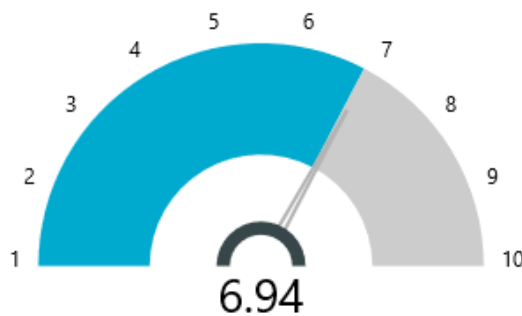


Figure 74. Responses to the survey question, “I support the rules and regulations that affect access and use of the Reef” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

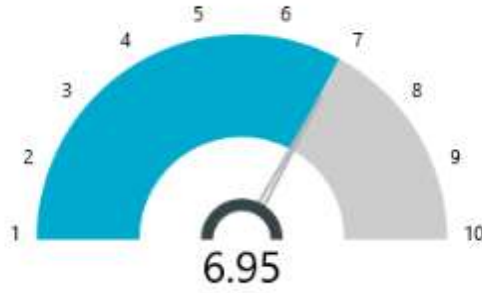


Figure 75. Responses to the survey question, “I support the current rules and regulations that affect access and use of freshwater areas (rivers and creeks in my region)” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

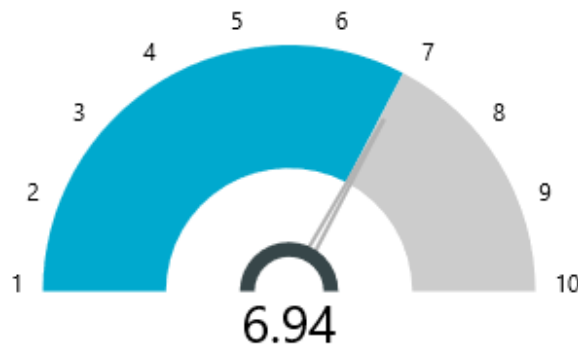


Figure 7976. Responses to the survey question, “I can contribute to Reef management” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).



Figure 77. Responses to the survey question, “In general, would you consider yourself to be more tradition or progressive” (n=1934). Responses are provided on a 10 point scale, where 1=very traditional and 10 = very progressive.

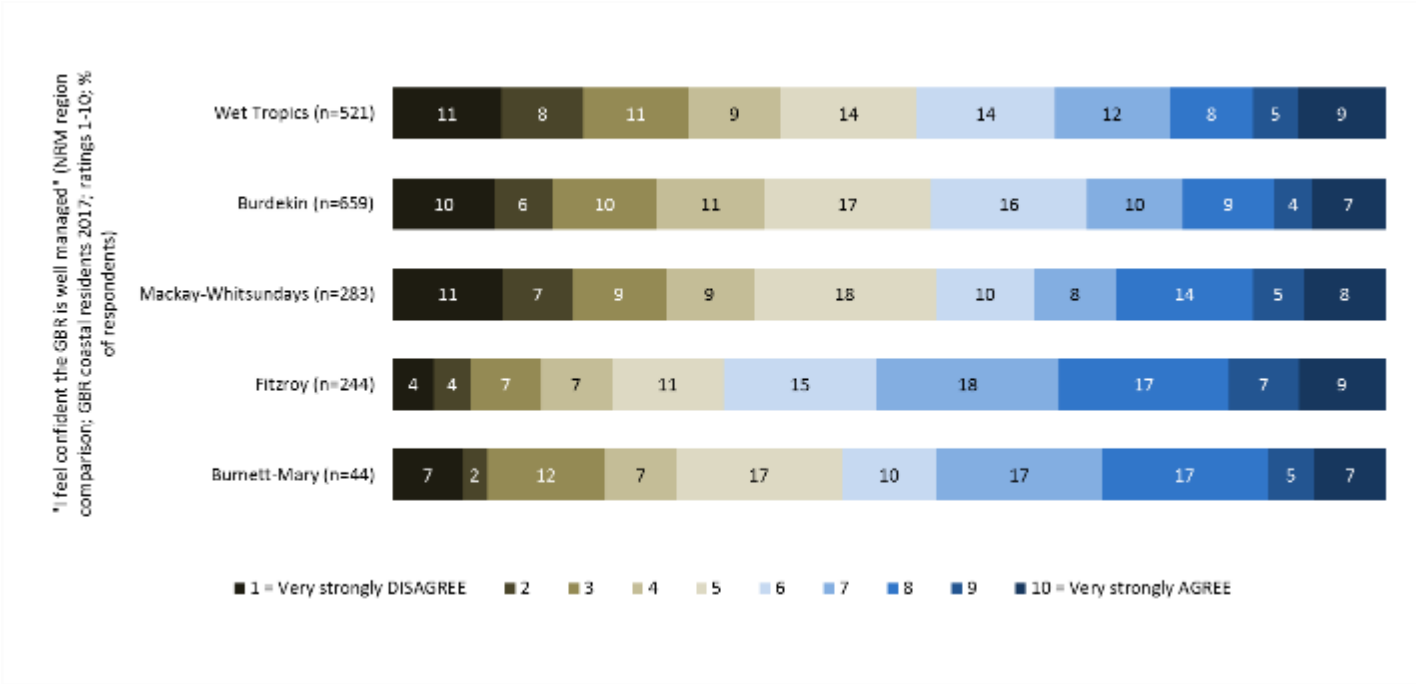


Figure 781. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement "I feel confident the Reef is well managed"

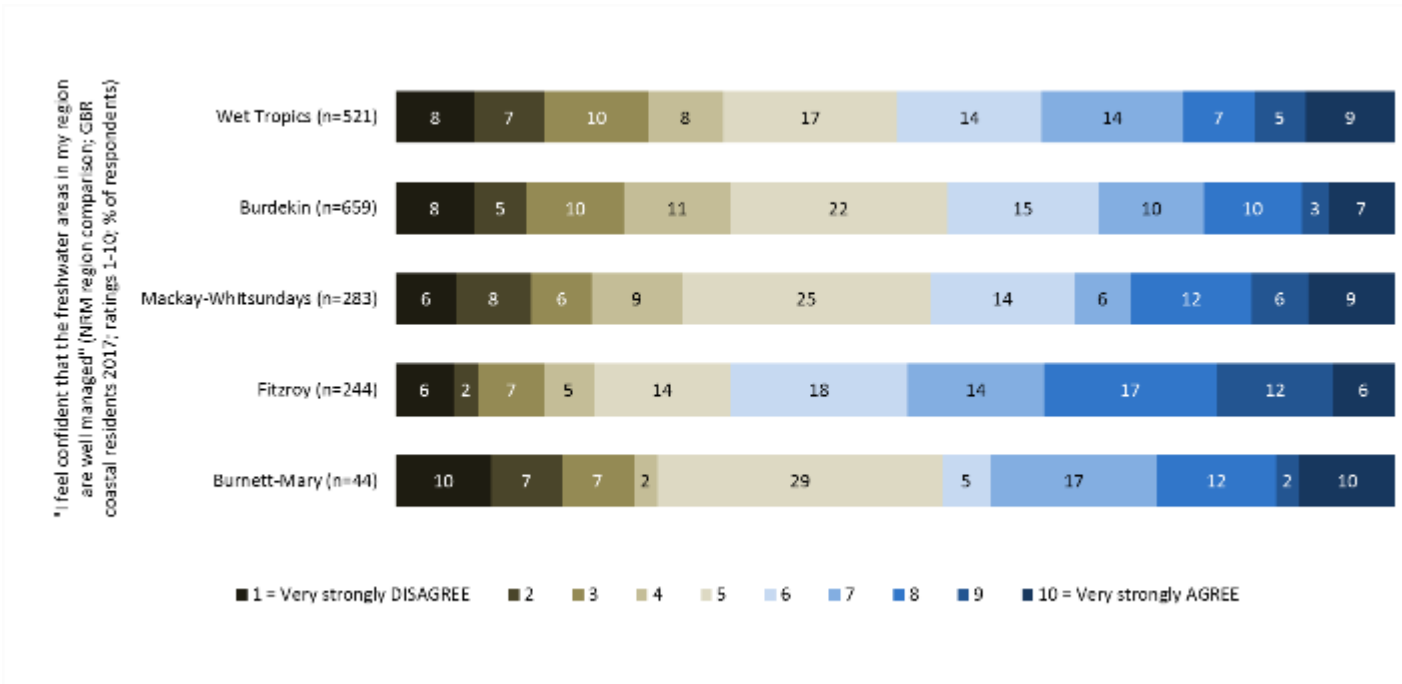


Figure 79. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement "I feel confident that the freshwater areas in my region are well managed"

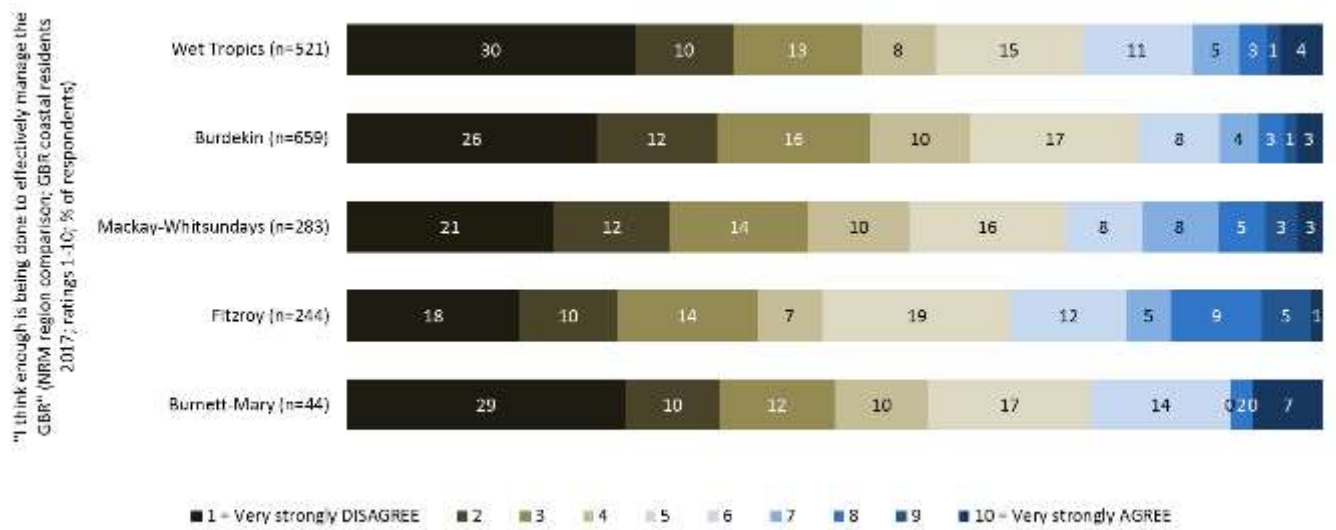


Figure 80. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement "I think enough is being done to effectively manage the Reef"

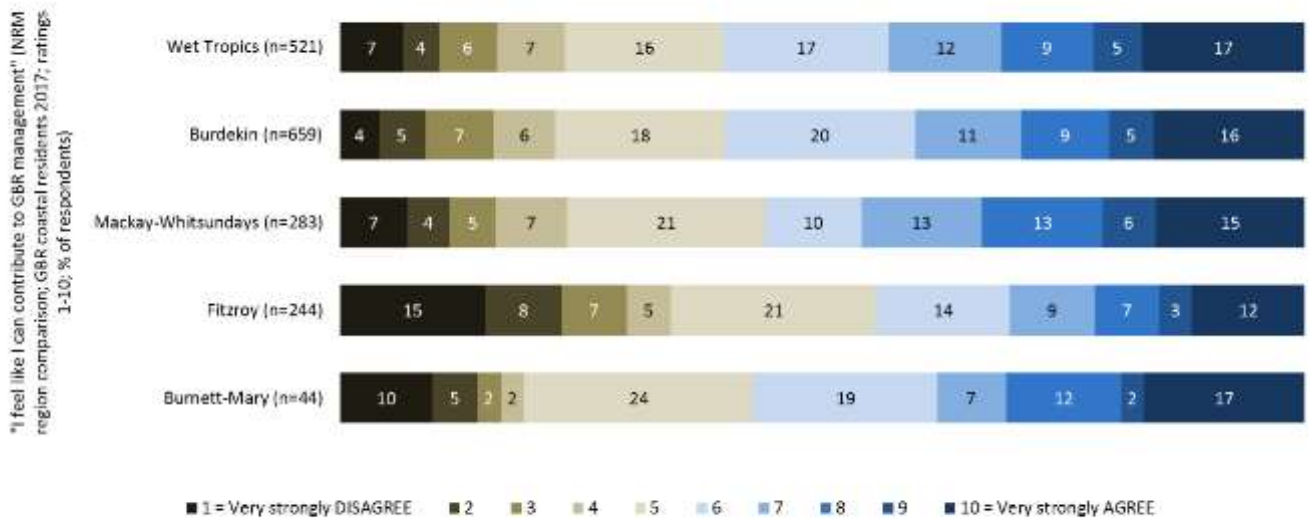


Figure 81. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement "I feel like I can contribute to Reef management"

"I support the current rules and regulations that affect access and use of the GBR" (NRM region comparison; GBR coastal residents 2017; ratings 1-10; % of respondents)

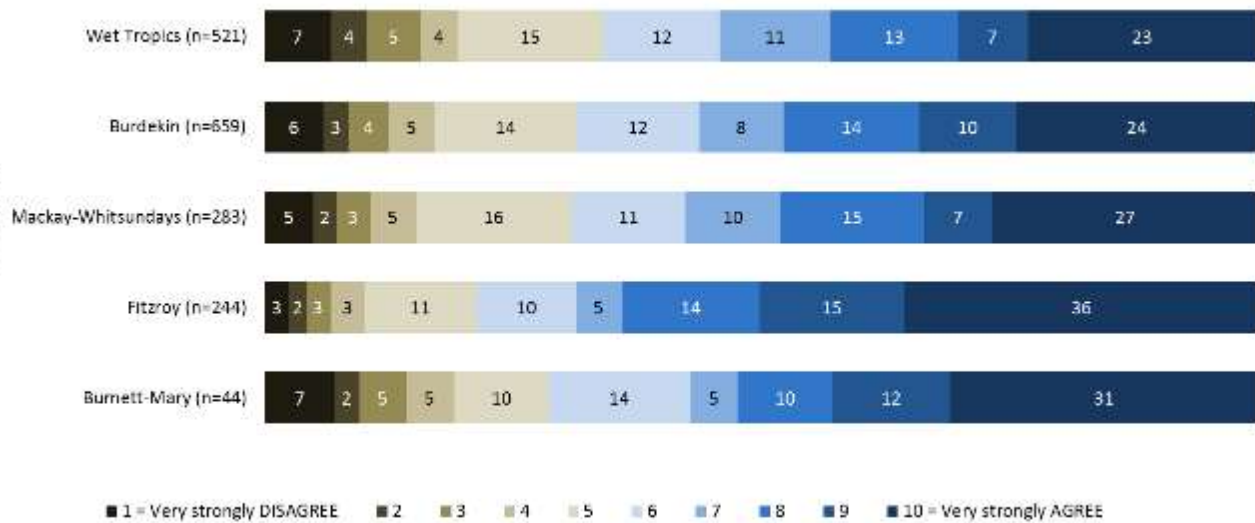


Figure 83. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement “I support the current rules and regulations that affect access and use of the Reef”

"I support the current rules and regulations that affect access and use of freshwater areas (rivers and creeks) in my region" (NRM region comparison; GBR coastal residents 2017; ratings 1-10; % of respondents)

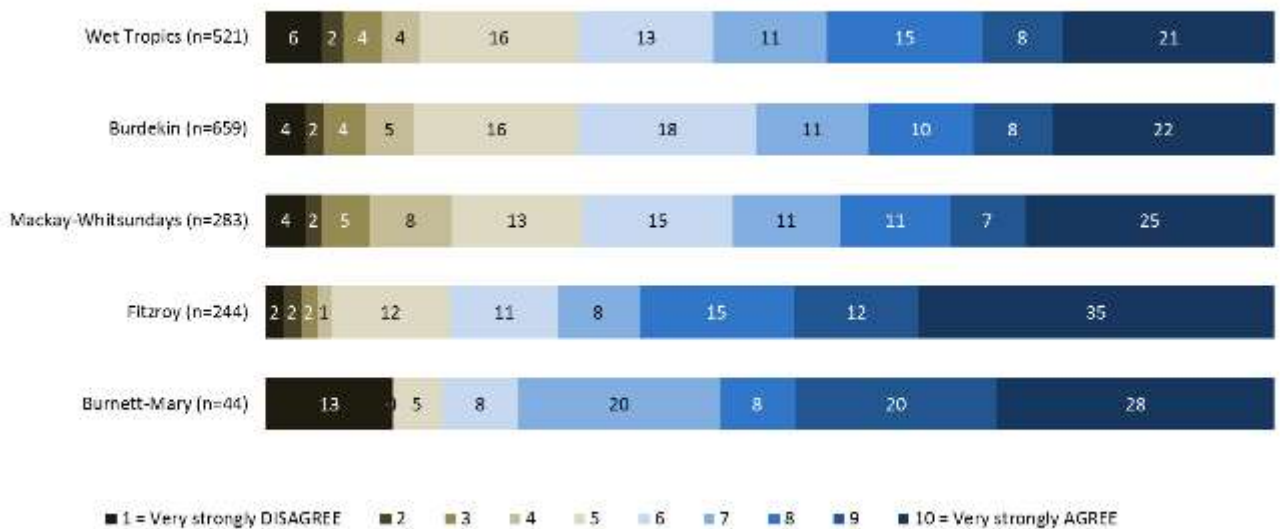


Figure 82. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement “I support the current rules and regulations that affect access and use of freshwater areas (rivers and creeks) in my region”

5.2 Equity Issues (EV4)

Local residents generally felt that the current governance of the Reef was somewhat equitable. Some 26.8% of residents felt that they, “do not have fair access to the Reef compared to other user groups, whilst only about a third of residents (32.3%) felt, “that future generations have been adequately considered in the management of the Reef” (Figure 87).

Residents from within the Burnett-Mary NRM (49%) were more likely to agree that they did not have fair access to the Reef compared to other groups, whilst residents from the Mackay-Whitsundays NRM were less likely to agree (22%) (Figure 88).



Figure 84. Responses to the survey question, “I feel that future generations have been adequately considered in the management of the Reef” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

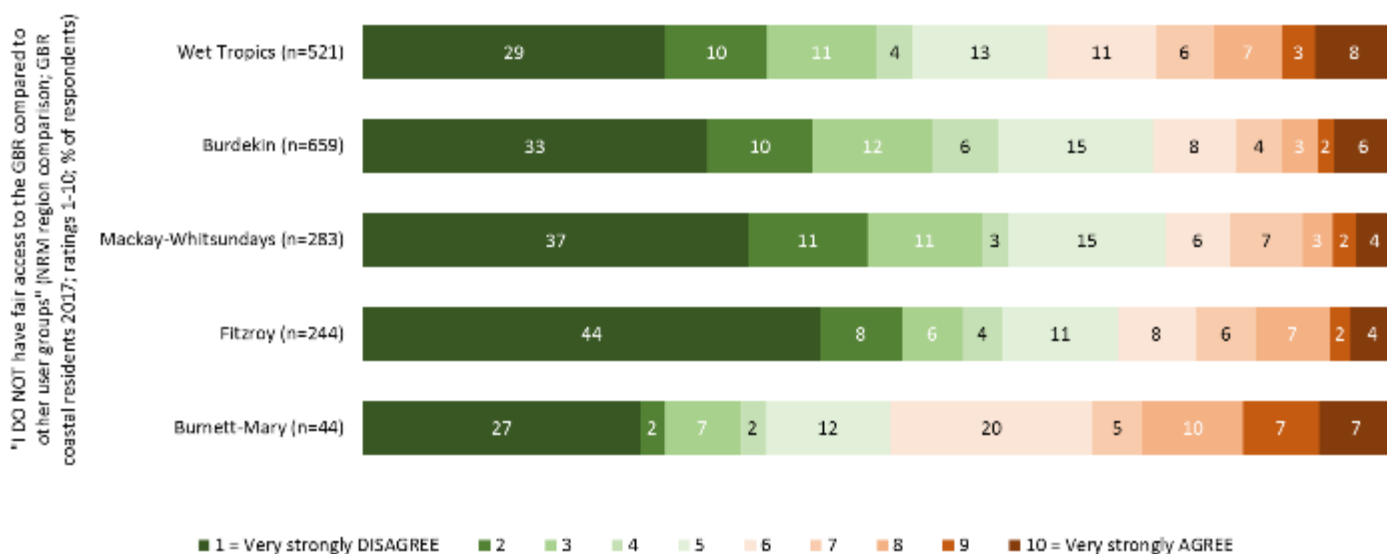


Figure 85. Ratings of respondents (by NRM region) indicating agreement/disagreement with the statement “I DO NOT have fair access to the Reef compared to other user groups

5.3 Trust in networks (G4)

Overall, SELMTP 2017 found that there were moderate to high levels of trust in government and Reef management. Some 76.2% of local residents trusted GBRMPA, whilst 36.6% trusted the Australian government and 39.9% trusted State government for information about the Reef. SELTMP 2017 found that 84.8% of local residents trusted scientist for information about the Reef, whilst 67.2% trusted friends, family and work colleagues, 46.0% trusted industry groups, 62.9% trusted international NGOs, 64.3% trusted Australian NGOs, 33.0% trusted lobby groups such as Get Up, 20.0% trusted news media journalists, and 20.5% trusted social media (Figures 89-99).

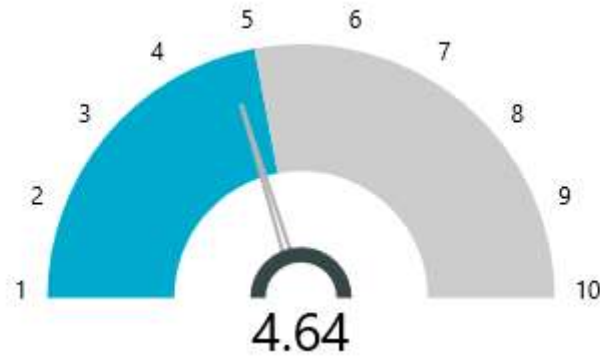


Figure 89. Responses to the survey question, “how much do you trust the information you receive about the Reef from the Australian Government?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

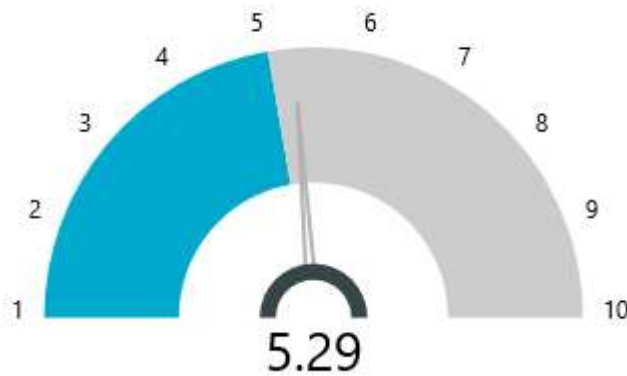


Figure 86. Responses to the survey question, “how much do you trust the information you receive about the Reef from Industry Groups?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

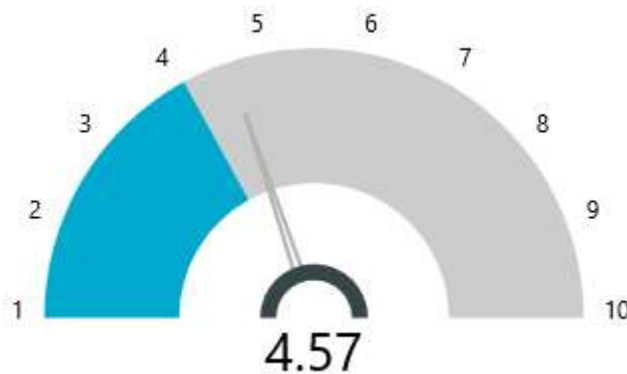


Figure 87. Responses to the survey question, “how much do you trust the information you receive about the Reef from Lobby Groups?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

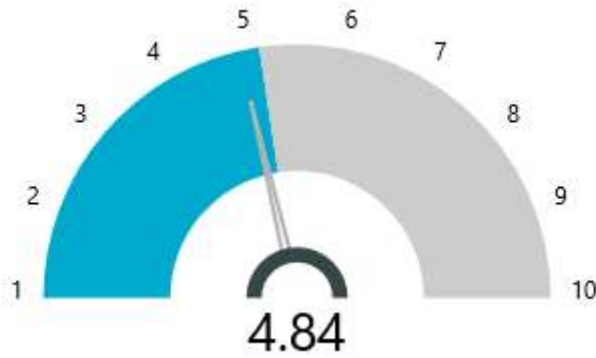


Figure 88. Responses to the survey question, “how much do you trust the information you receive about the Reef from Queensland government?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

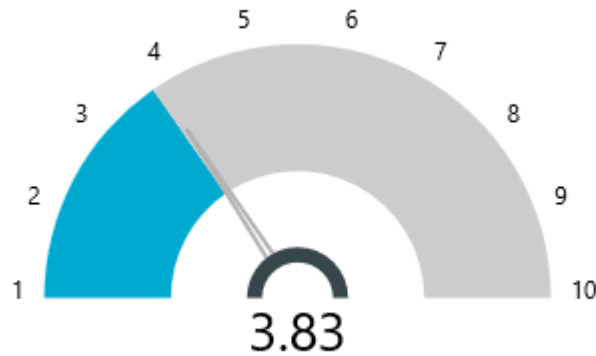


Figure 89. Responses to the survey question, “how much do you trust the information you receive about the Reef from social media commentators, bloggers?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

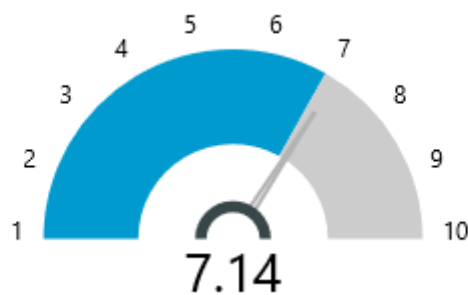


Figure 90. Responses to the survey question, “how much do you trust the information you receive about the Reef from GBRMPA?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

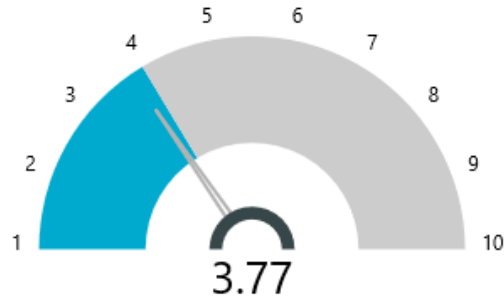


Figure 91. Responses to the survey question, “how much do you trust the information you receive about the Reef from new media journalists?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

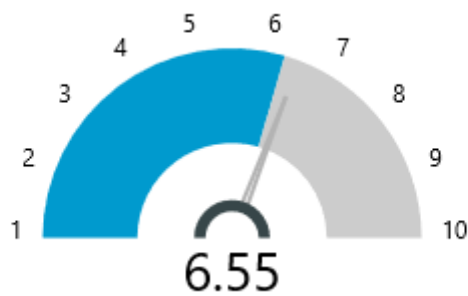


Figure 92. Responses to the survey question, “how much do you trust the information you receive about the Reef from friends, family etc.?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

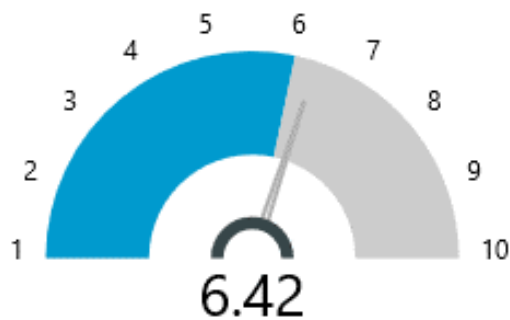


Figure 93. Responses to the survey question, “how much do you trust the information you receive about the Reef from Australian based NGOs?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

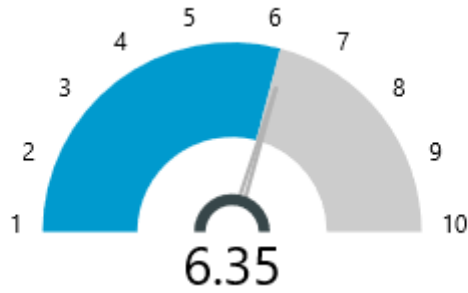


Figure 94. Responses to the survey question, “how much do you trust the information you receive about the Reef from International conservation NGOs?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

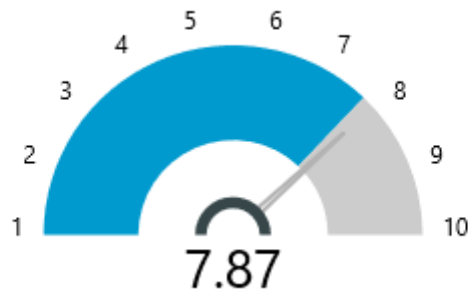


Figure 95. Responses to the survey question, “How much do you trust the information you receive about the Reef from scientists?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

5.4 Sources of information (G4)

SELTMP 2017 found that the most important sources of information about the Reef were word of mouth (51.8%), local radio (46.1%), news media websites (43.9%), local newspaper (37.3%), state/regional newspapers (31.3%), magazines (15.6%), free to air television (44.7%), pay tv (19.1%), digital streaming services (27.9%), national/regional radio (40.4%), online discussion forums (24.3%), Facebook (34.9%), twitter (11.6%), Instagram (15.9%), snapchat (10.3%), and YouTube (21%) (Figures 100-115).

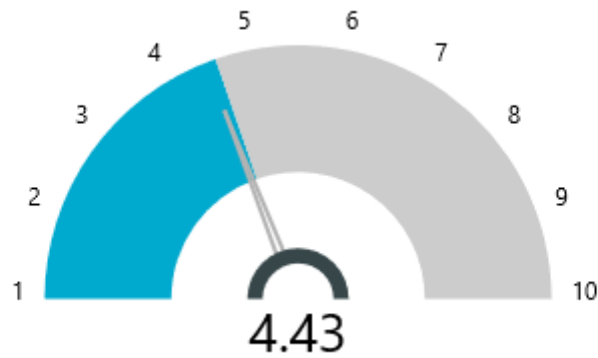


Figure 96. Responses to the survey question, “How much do you rely on local newspapers for news about your region and the world?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

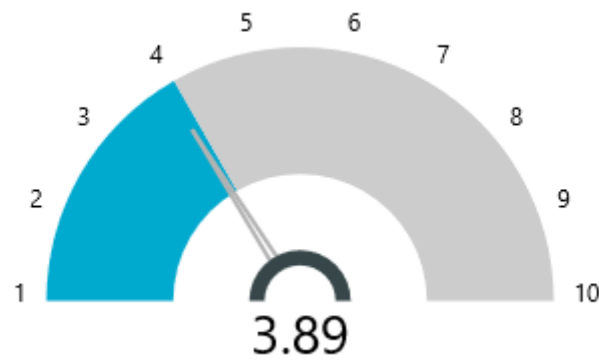


Figure 97. Responses to the survey question, “How much do you rely on digital streaming services for news about your region and the world?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

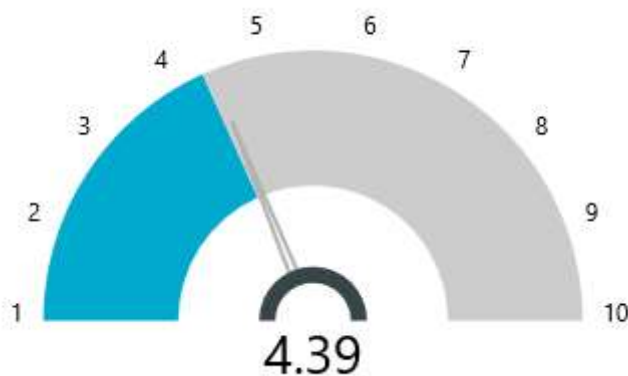


Figure 98. Responses to the survey question, “How much do you rely Facebook for new about your region and the world?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

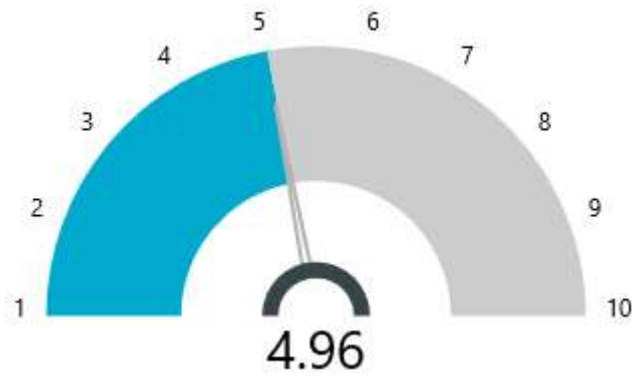


Figure 99. Responses to the survey question, “How much do you rely on free to air television for news about your region and the world?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

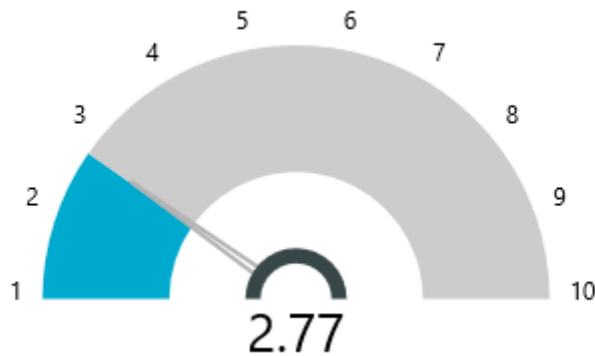


Figure 100. Responses to the survey question, “How much do you rely on Instagram for news about your region and the world?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

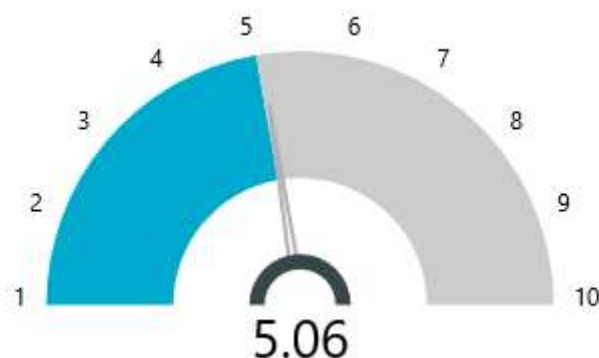


Figure 101. Responses to the survey question, “How much do you rely on local radio for news about your region and the world?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

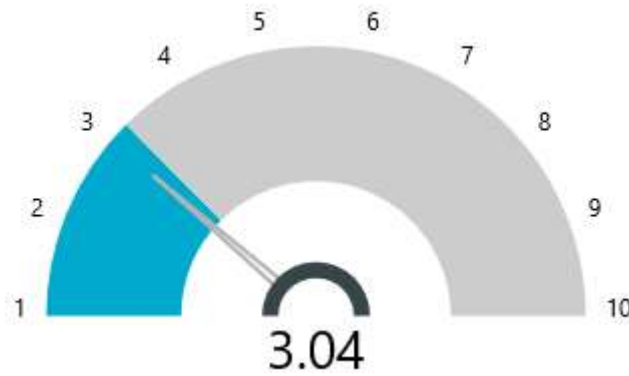


Figure 102. Responses to the survey question, “How much do you rely on magazines for news about your region and the world?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

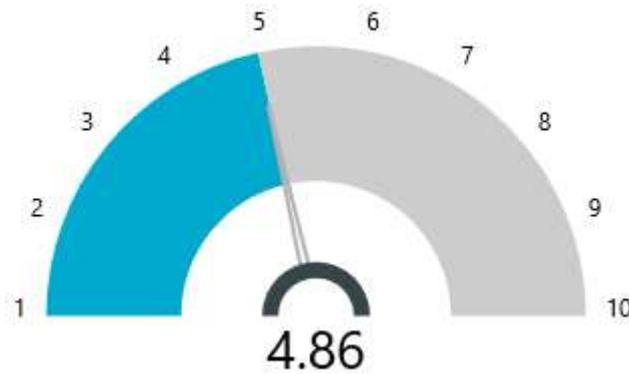


Figure 103. Responses to the survey question, “How much do you rely on national radio for news about your region and the world?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

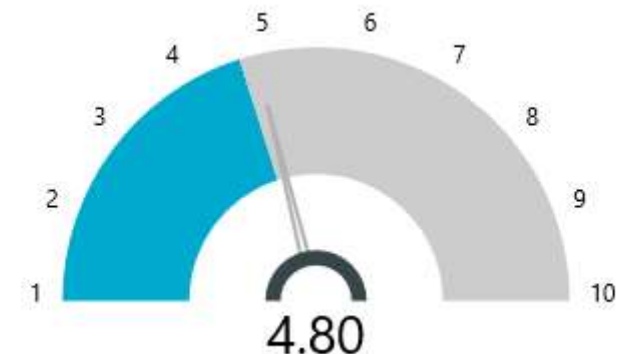


Figure 104. Responses to the survey question, “How much do you rely on news media websites for news about your region and the world?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

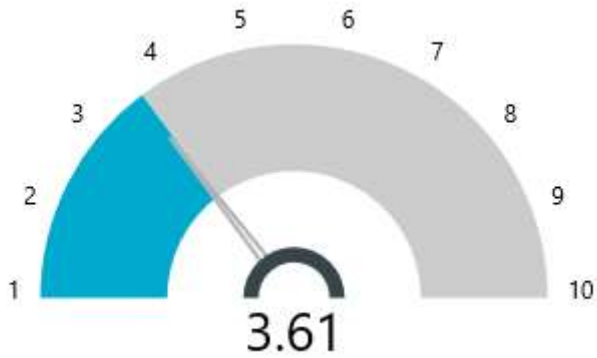


Figure 105. Responses to the survey question, “How much do you rely on online discussion forums for news about your region and the world?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

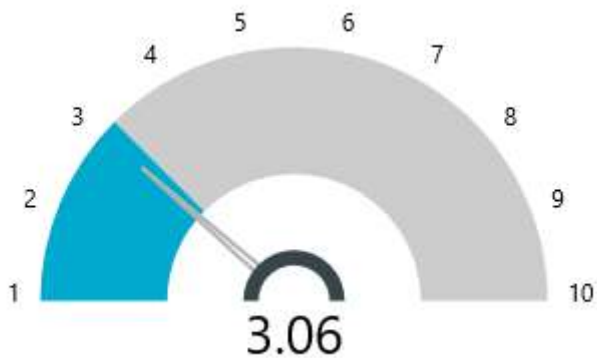


Figure 106. Responses to the survey question, “How much do you rely on pay TV for news about your region and the world?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

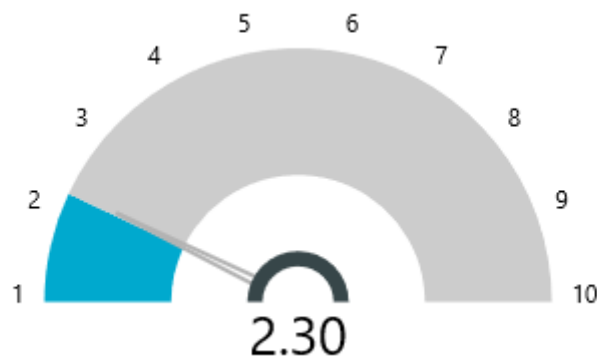


Figure 107. Responses to the survey question, “How much do you rely on snapchat for news about your region and the world?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

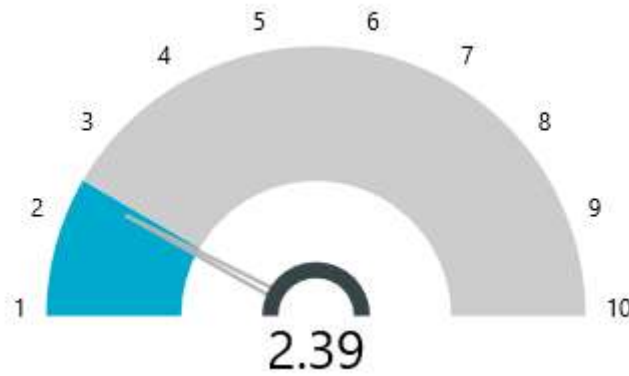


Figure 108. Responses to the survey question, “How much do you rely on twitter for news about your region and the world?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

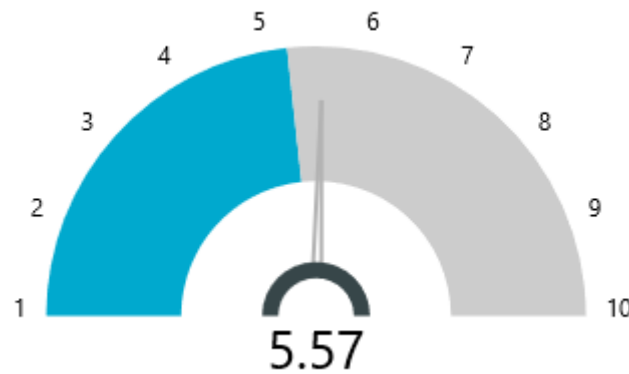


Figure 109. Responses to the survey question, “How much do you rely on word of mouth for news about your region and the world?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

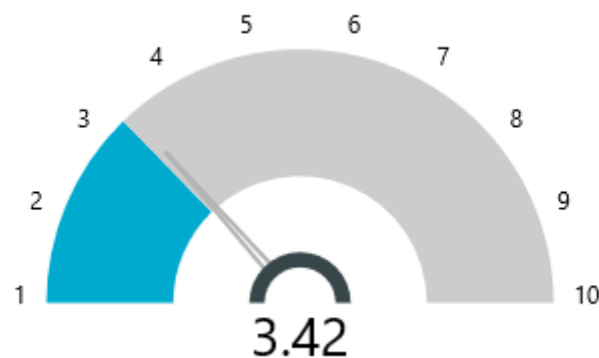


Figure 110. Responses to the survey question, “How much do you rely on YouTube for news about your region and the world?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

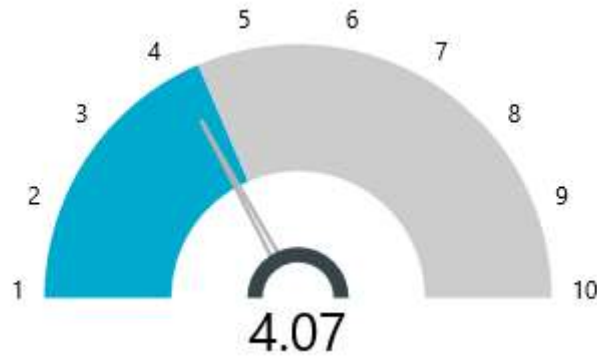


Figure 111. Responses to the survey question, “How much do you rely on state newspapers for news about your region and the world?” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

B. Tourist Results

B1. Tourist aspirations, capacities and stewardship

1.1 Aspirations (ACS1)

In 2017 tourists suggested that they had relatively high aspirations and levels of capacity and stewardship around the Great Barrier Reef. Nearly 82% of all tourists in the study aspired to doing, “more to help protect the Reef” (81.6%), and over 79% aspired to learning, “more about the condition of the Reef” (79.1%) (Figure 116).

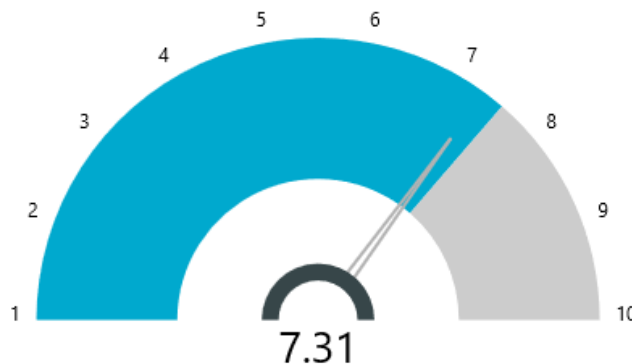


Figure 112. Responses to the survey question, “I would like to do more to help protect the Reef” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

1.2 Capacity and education (ACS2)

Tourists had a highly variable capacity for stewardship around the Reef. Some 62.7% of tourists sampled in this study felt that they, “can make a personal difference in improving the health of the Reef”. However, only 29.9% of tourists felt that they, “have the necessary knowledge and skills to reduce any impact that [they] have on the Reef”, and 60.0% felt that they, “do not have the time or opportunity required to reduce any impact that [they] might have on the Reef” (Figures 117-119).

Tourists’ knowledge or education around the current predicament of the Great Barrier Reef was also broad ranging. Some 68% thought that climate change was an immediate threat requiring urgent attention” (Figure 120).



Figure 113. Responses to the survey question, “I cannot make a personal difference in improving the health of the Reef” (n=1804). (Negatively worded in the survey but reversed for the Figure). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10=very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

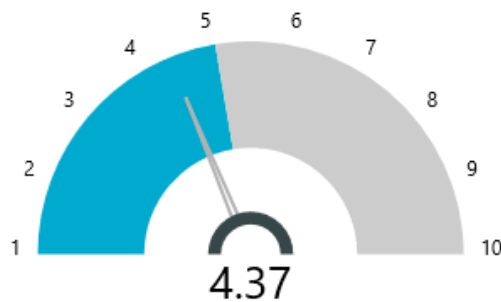


Figure 114. Responses to the survey question, “I have the necessary knowledge and skills to reduce any impact that I might have on the Reef” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

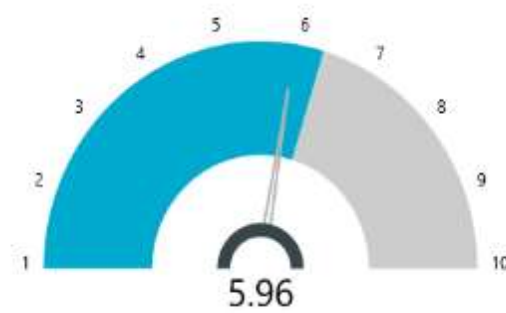


Figure 115. Responses to the survey question, “I do have the time or opportunity required to reduce any impact that I might have on the Reef” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

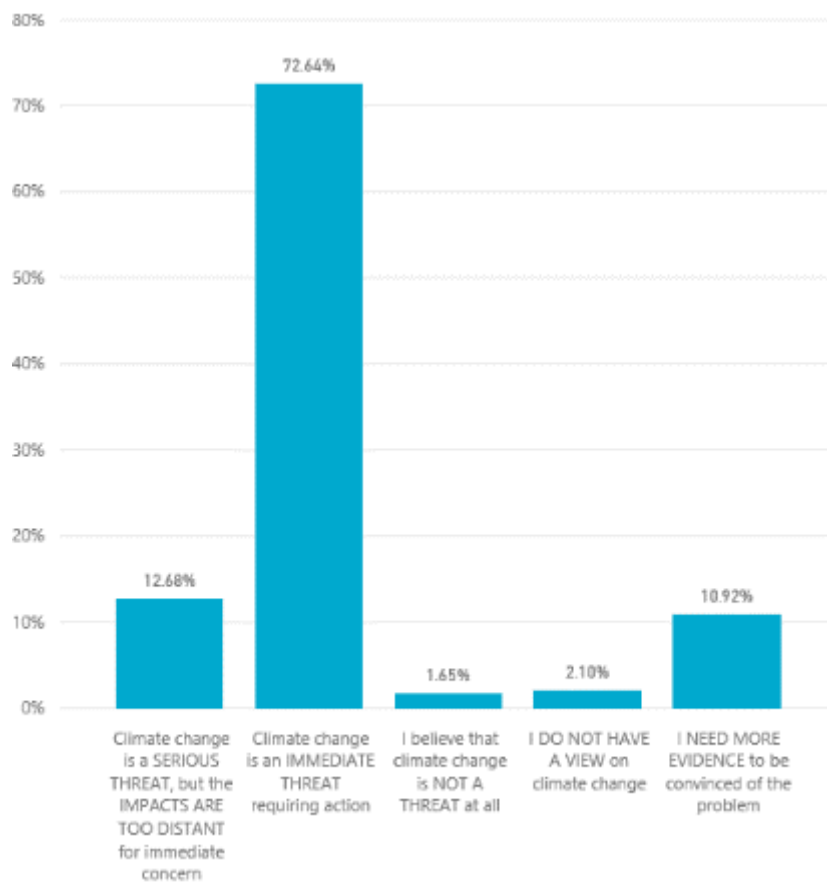


Figure 120. Responses to the survey question, “Which of the following statements best describes your beliefs about climate change?” (n=1804).

1.3 Stewardship (ACS3)

Stewardship levels were relatively high within tourists visiting the region. Some 82.5% of tourists, “make every effort to use energy efficiently in [their] home and workplace”, and 79.3%, “re-use or recycle most goods and waste”. Some 72.0% said that they, “always consider the environmental impact of the production process for goods and services that I purchase”. Similarly, 27.1% of tourists, “rarely consider the environmental impact of the production process for goods and services that [they] purchase”, and only 16.5%, “don’t usually make any extra effort to reduce the waste that [they] generate”. Some 19% felt that, “it is not [their] responsibility

to protect the Reef". SELTMP 2017 also found that 60.9%, "feel a social expectation to reduce any impact that [they] might have on the Reef" (Figures 121-126).

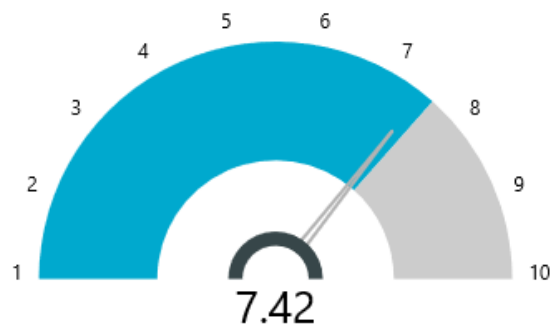


Figure 116. Responses to the survey question, "I make every effort to use energy efficiently in my home and workplace" (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

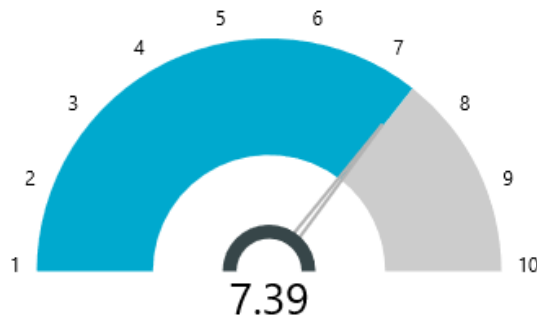


Figure 117. Responses to the survey question, "I reuse or recycle most goods and waste" (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

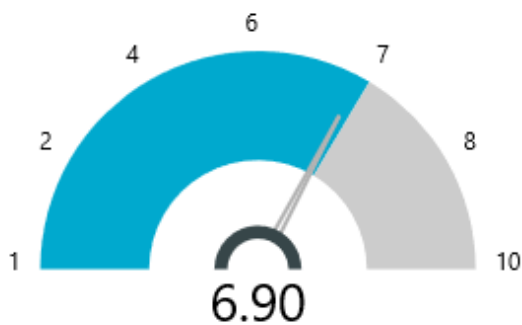


Figure 118. Responses to the survey question, "I rarely consider the environmental impact of the production process for goods and services that I purchase" (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

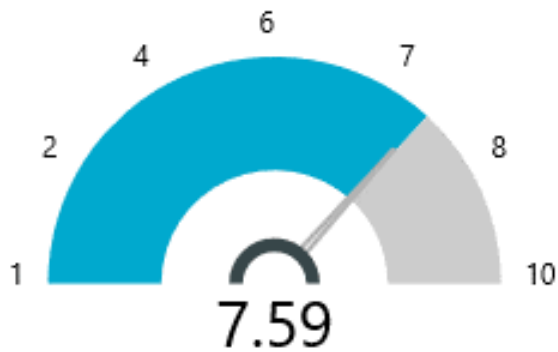


Figure 119. Responses to the survey question, "I don't usually make any extra effort to reduce the waste that I generate" (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

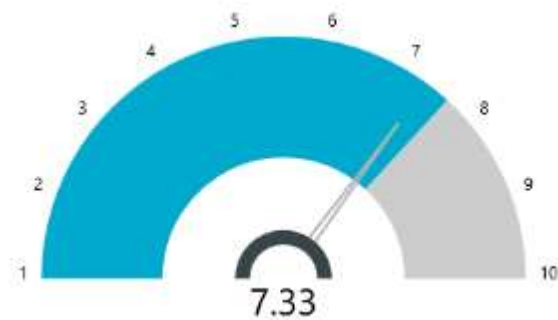


Figure 120. Responses to the survey question, "It is my responsibility to protect the Reef" (n=1804). (Negatively worded and reversed in the Figure). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).



Figure 121. Responses to the survey question, "I feel a social expectation to reduce any impact that I might have on the Reef" (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

B2. Community vitality

2.1 Relationship with the Reef (CV4)

The relationship that tourists have with the Reef is predominately positive. The first words that came to mind when tourists thought of the Reef are presented in Figure 127, and were 'beautiful' (16.5%), 'coral' (15.8%) and 'fish' (8.2%).

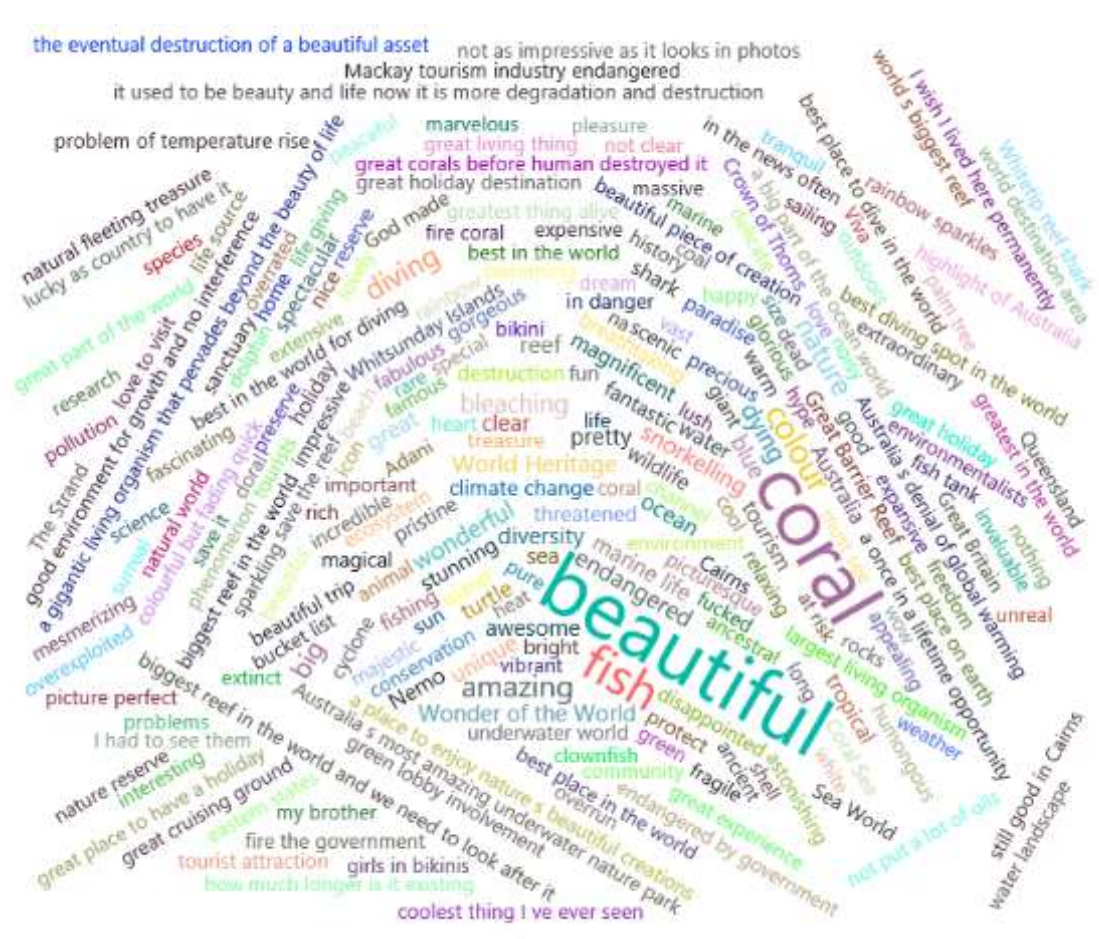


Figure 122. Responses to the survey question, "What are the first words that come to mind when you think of the Reef?" (n=1789).

2.2 Community (tourist) health

There appears to be a relatively strong link between the Reef and health of tourists visiting the region, and in this study, but not as strong as for residents. We found that 64.0% of tourists, "value the Reef because it makes [them] feel better physically and/or mentally", where 59.5% of them suggested that, "thinking about coral bleaching makes [them] feel depressed". Some 33.5% of tourists reported that they, "would not be personally affected if the health of the Reef declined" (Figures 128-130).

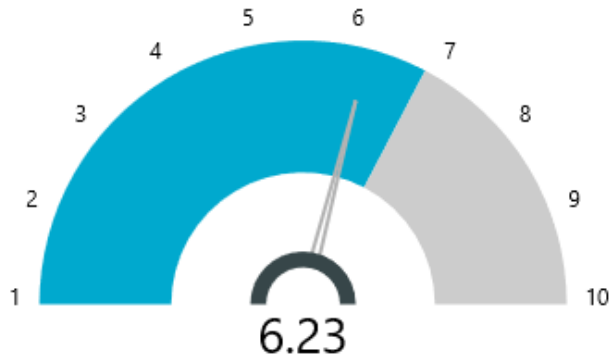


Figure 123. Responses to the survey question, “I value the Reef because it makes me feel better physically and/or mentally” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

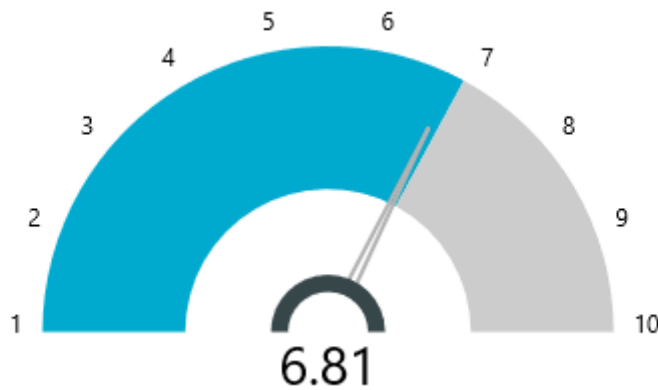


Figure 124. Responses to the survey question, “Thinking about the coral bleaching make me feel depressed” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

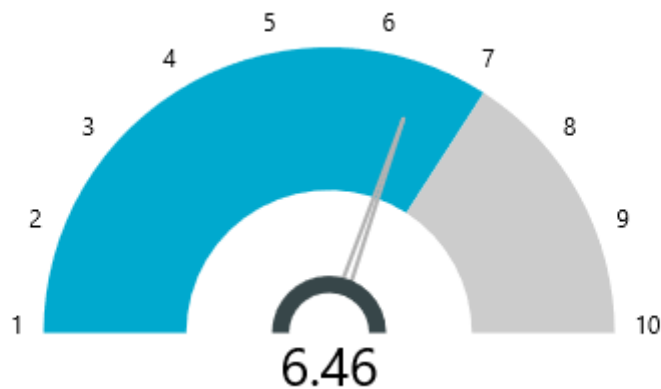


Figure 125. Responses to the survey question, “would not be personally affected if the health of the Reef declined” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

2.3 Community (tourist) satisfaction

Tourists rated their overall satisfaction with their most recent trip to the Great Barrier Reef using a scale of one-to-ten with a mean of 8.07 (standard error 0.05). They rated their satisfaction with the mean overall condition of this site as 7.13 (stand error 0.06). However, only 45.6% of tourists stated that, “the coral reefs that I have seen are in good condition”. Some 66.1% of tourists highlighted that, “there is too much rubbish (plastics and bottles) on the beaches”. We did find that 68.3% of residents said that they, “like the colour clarity of water along the beaches” (Figures 131-133).

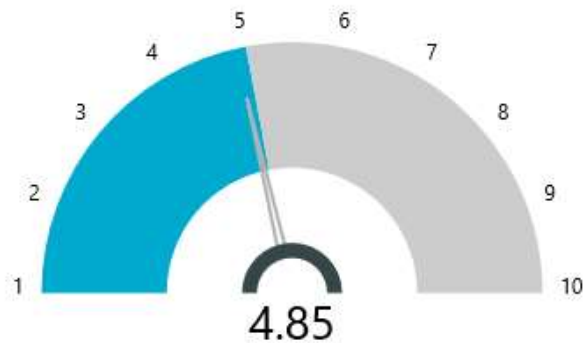


Figure 126. Responses to the survey question, “The coral reefs in my region are in good health” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

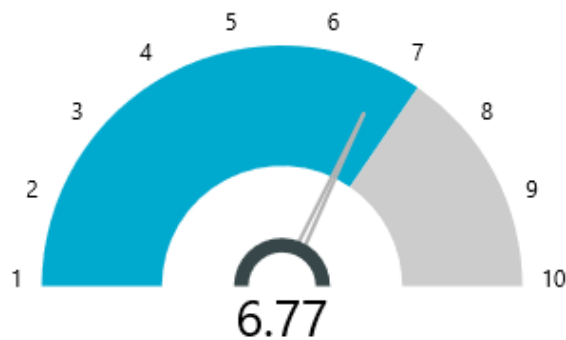


Figure 127. Responses to the survey question, “There is too much rubbish (plastics and bottles) on the beaches in my region” (n=1758). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

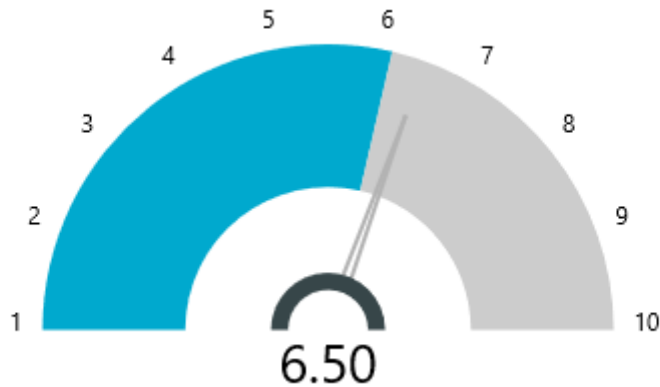


Figure 128. Responses to the survey question, “I like the colour clarity of water along the beaches” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

2.4 Wellbeing (tourist)

About half of the tourists surveyed in this study (50.9%) suggested that, “the Reef contributes to [their] quality of life and wellbeing” and 47.2% stated that they, “feel optimistic about the future of the Reef”. Some 80.9% of tourists in this study said that they, “love that [they] have visited the Reef” (Figures 134-136).

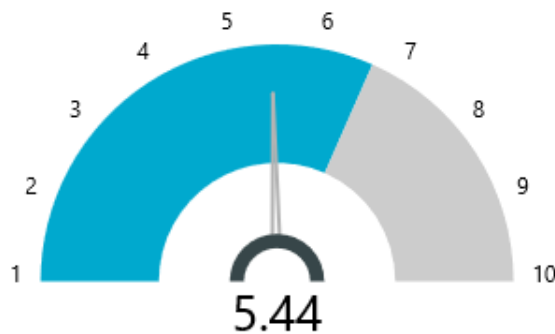


Figure 129. Responses to the survey question, “The Reef contributes to my quality of life and wellbeing” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

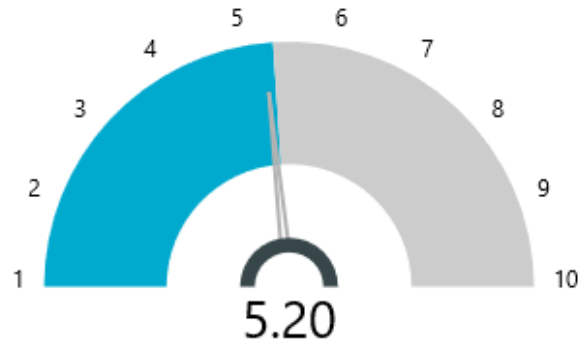


Figure 130. Responses to the survey question, “I feel optimistic about the future of the Reef” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

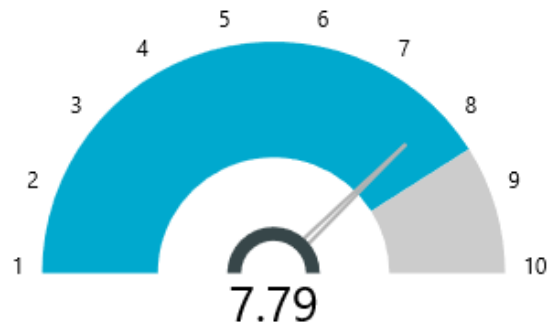


Figure 131. Responses to the survey question, “I love that I have visited the Reef” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

2.5 Resource Use

Tourists were asked to describe their most recent trip to the Great Barrier Reef. These places are listed in the dashboards. Some 57.9% of tourists said that they paid to go on an organised tour for this trip. Some 24.5% of tourists said that this trip was to a mainland beach. Some 29.6% of tourists said that they had been on trips beyond the beach in the past 12 months, and they got there using a commercial tour (57.7%), ferry (29.3%), someone else’s boat (6.2%), own boat (3.7%), or other means (3.2%). Most tourists travelled with more than 10 other people (33.9%), 2-5 other people (26.9%), or one other person (26.4%). Only 6.1% of tourists travelled alone.

B3. Culture and Heritage

3.1 Values to tourists

The Great Barrier Reef was not recognised by tourists in this study as having an important cultural role given that only 37.6% of tourists stated that, “the Reef is an important part of my culture” and only 37.6% felt that, “the Reef is part of [their] identity”. However, the Reef was highly valued in very many others ways (that subtly contribute to, or reflect, the culture of tourists). Some 95.5% said, “I value the Reef because it supports a variety of life, such as fish

and corals”, and 93.7% valued it because, “the Reef is a great asset for the economy of the region”. We also found that 92.5% of tourists felt, “proud that the Reef is a World Heritage Area”, and 90.9% said that they, “value the Reef because we can learn about the environment through scientific discoveries”. 89.7% reported, “the aesthetic beauty of the Reef is outstanding”. Some 88.0% of tourists said, “because it supports a desirable and active way of life”. 87.6% reported that they, “value the Reef because it exists, even if [they] don’t benefit from it”, and 83.8% of tourists said that they, “value the Reef because it attracts people from all over the world. A majority of tourists (68.8%) said they, “value the Reef because of its rich traditional owner heritage”, and 68.1% said that they, “value the Reef because it provides a place where people can continue to pass down wisdom, traditions and a way of life“. Some 57.0%, “value the Reef for the fresh seafood it provides”, and 55.9% reported that it, “inspires [them] in artistic or thoughtful ways. We also found that 40.0% reported that they, “value the Reef because it is spiritually important to [them]”. In sum the Reef provides a range of important cultural services to tourists (Figures 137-150).

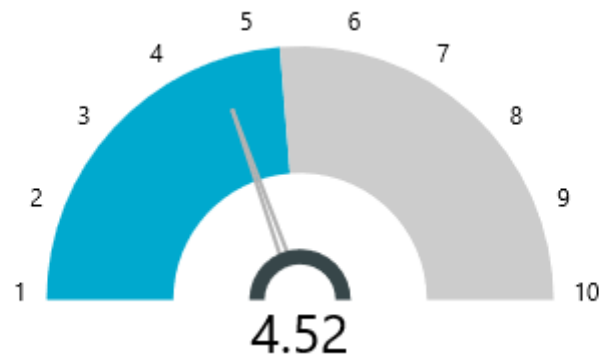


Figure 132. Responses to the survey question, “The Reef is an important part of my culture” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

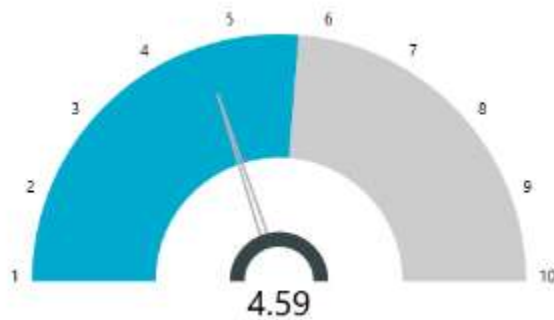


Figure 133. Responses to the survey question, “The Reef is part of my identity” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

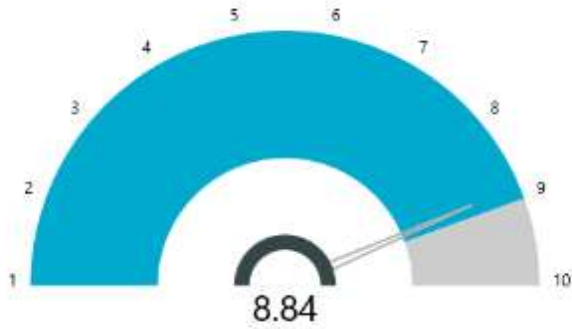


Figure 134. Responses to the survey question, “I feel proud that the Reef is a World Heritage Area” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

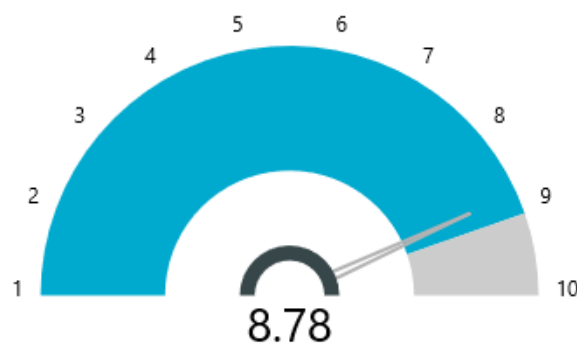


Figure 135. Responses to the survey question, “The Reef is a great asset for the economy of the region” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

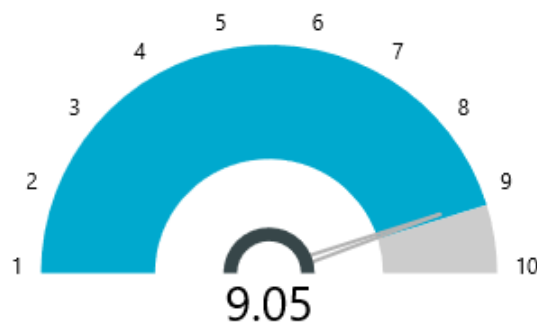


Figure 136. Responses to the survey question, “I value the Reef because it supports a variety of life such as fish and corals” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

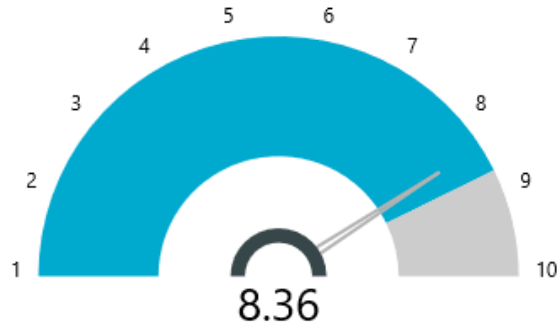


Figure 137. Responses to the survey question, “The aesthetic beauty of the Reef is outstanding” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

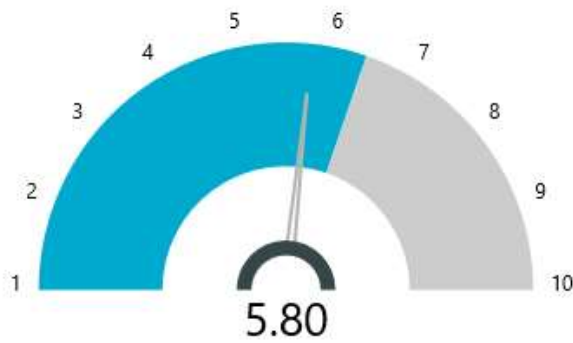


Figure 138. Responses to the survey question, “I value the Reef for the fresh seafood it provides” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

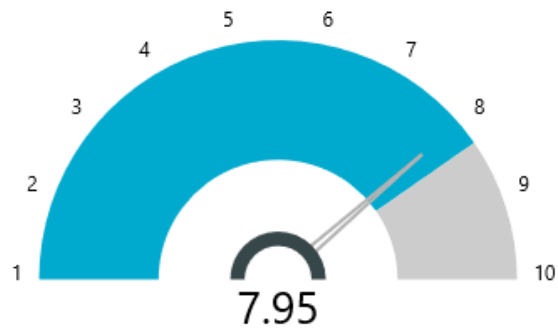


Figure 139. Responses to the survey question, “I value the Reef because it attracts people from all over the world” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

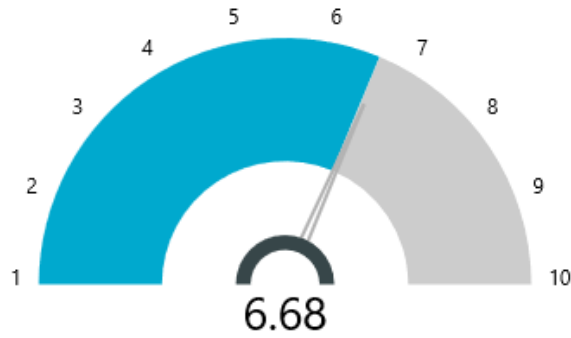


Figure 140. Responses to the survey question, “I value the Reef because of its rich traditional owner heritage” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

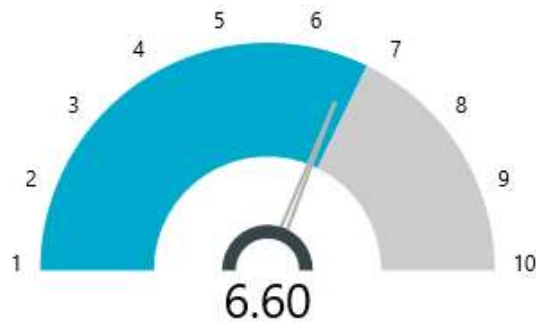


Figure 141. Responses to the survey question, “I value the Reef because it provides a place where people can continue to pass down wisdom, traditions and way of life” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

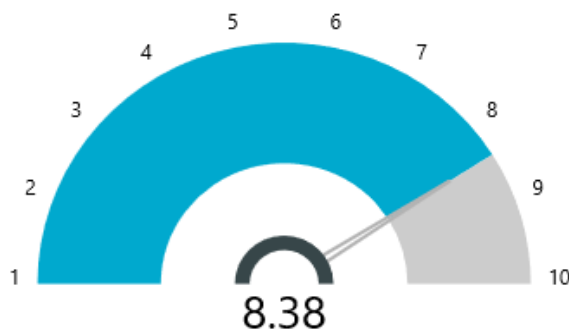


Figure 142. Responses to the survey question, “I value the Reef because we can learn about the environment through scientific discoveries” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

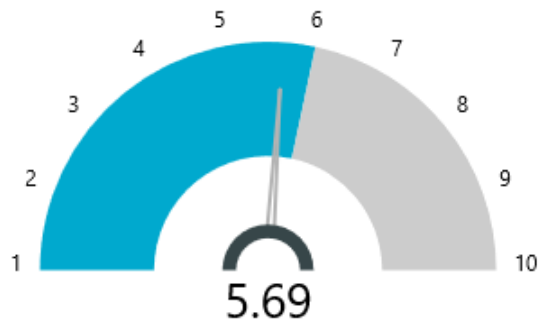


Figure 143. Responses to the survey question, “I value the Reef because it inspires me in artistic or thoughtful ways” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

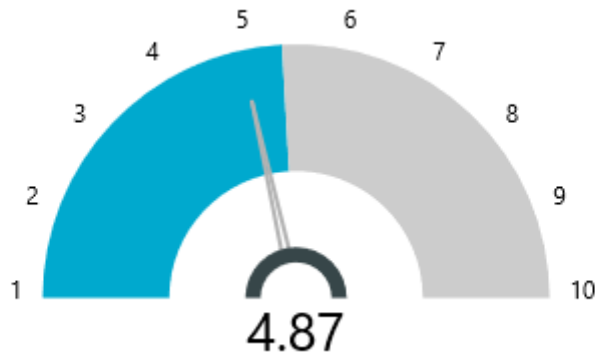


Figure 144. Responses to the survey question, “I value the Reef because it is spiritually important to me” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

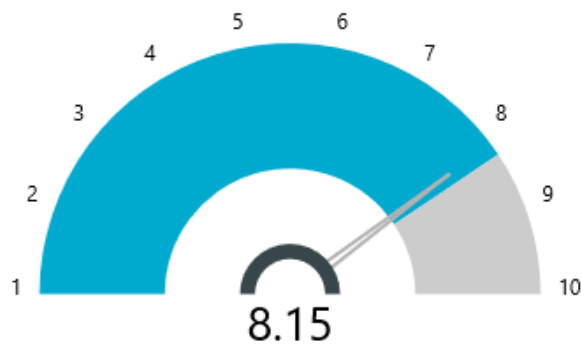


Figure 145. Responses to the survey question, “I value the Reef because it exists, even if I don’t benefit from it” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

B4. Economic value

4.1 Economic viability

The economic value of tourists was not assessed.

B5. Governance

5.1 Confidence and support in management (G3)

Tourists surveyed in this study did not have strong confidence in the management of the Great Barrier Reef. For example, only 16.3% of tourists thought that, “enough is being done to effectively manage the Reef”. We also found that 69.8% felt that they were, “progressive” rather than, “traditional” on a ten point scale with traditional at one end, and progressive at the other (Figures 151-152).

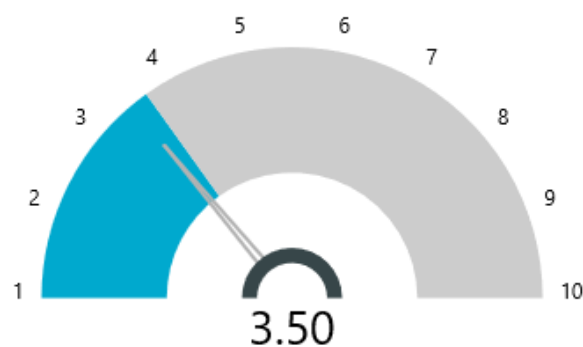


Figure 146. Responses to the survey question, “I think enough is being done to effectively manage the Reef” (n=1804). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

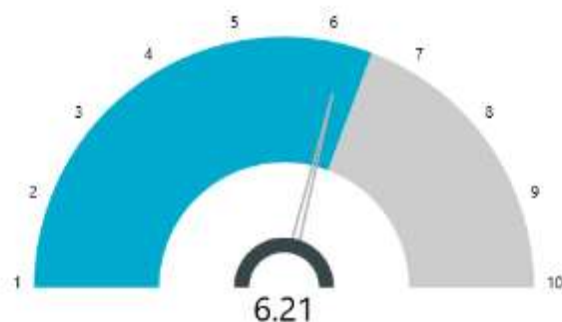


Figure 147. Responses to the survey question, “In general, would you consider yourself to be more tradition or progressive” (n=1804). Responses are provided on a 10 point scale, where 1=very traditional and 10 = very progressive.

5.2 Equity Issues (EV4)

Perceived equity was not surveyed for tourists.

5.3 Trust in networks (G4)

Overall, SELMTP 2017 found that there were moderate to high levels of trust in information received about the Reef across a range of information providers. Tourists tended to trust

scientists the most (83.4%) and 74.3% of local residents trusted GBRMPA. We found that 68.1% trusted international NGOs, 62.6% trusted Australian NGOs, and 62.2% trusted friends, family and work colleagues. Some 50.5% trusted the Australian government and 51.7% trusted State government for information about the Reef. SELTMP 2017 also found that 38.7% trusted industry groups, 26.0% trusted lobby groups such as Get Up, 31.0% trusted news media journalists, and 26.7% trusted social media (Figures 153-163).

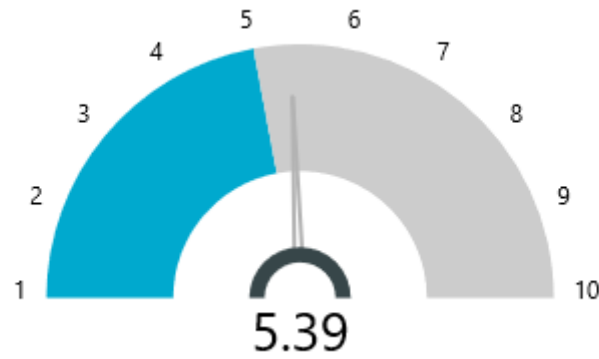


Figure 148. Responses to the survey question, “how much do you trust the information you receive about the Reef from the Australian Government?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

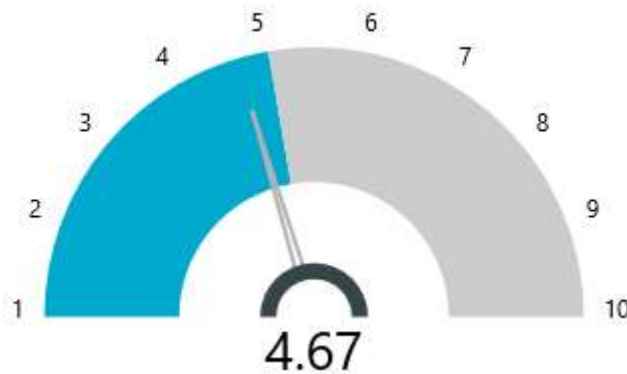


Figure 149. Responses to the survey question, “how much do you trust the information you receive about the Reef from Industry Groups?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

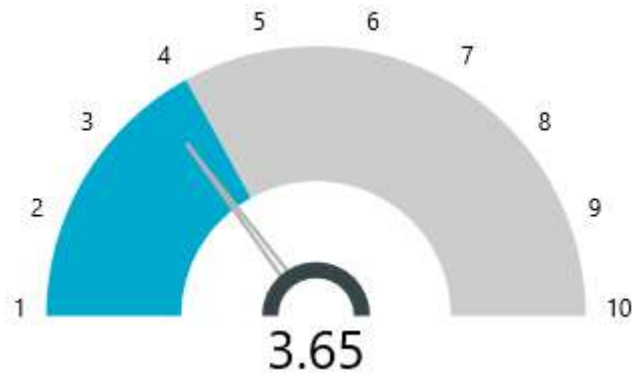


Figure 150. Responses to the survey question, “how much do you trust the information you receive about the Reef from Lobby Groups?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

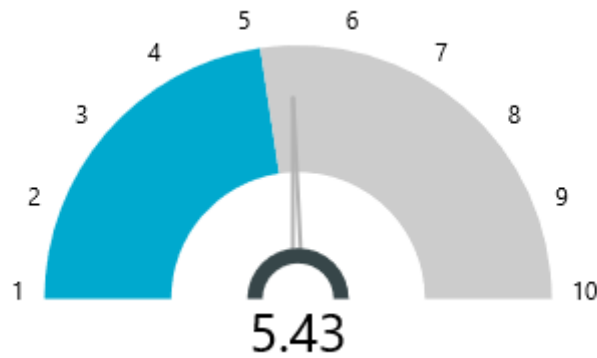


Figure 151. Responses to the survey question, “how much do you trust the information you receive about the Reef from Queensland government?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

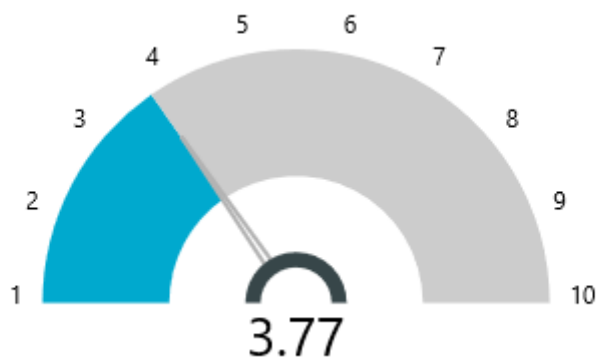


Figure 152. Responses to the survey question, “how much do you trust the information you receive about the Reef from social media commentators, bloggers?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

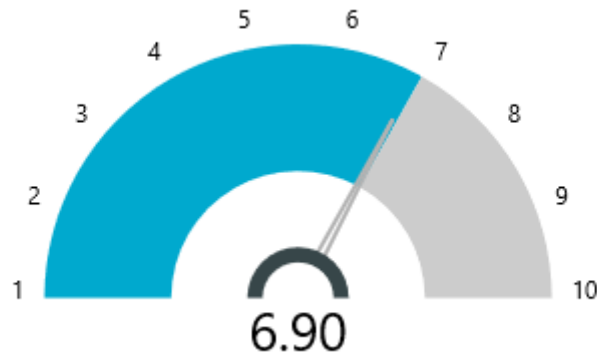


Figure 153. Responses to the survey question, “how much do you trust the information you receive about the Reef from GBRMPA?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

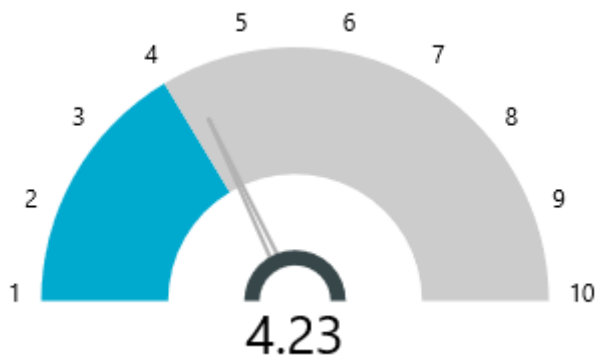


Figure 154. Responses to the survey question, “how much do you trust the information you receive about the Reef from new media journalists?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

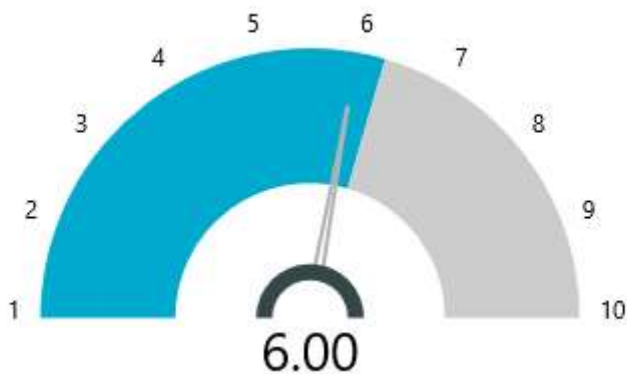


Figure 155. Responses to the survey question, “how much do you trust the information you receive about the Reef from friends, family etc.?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

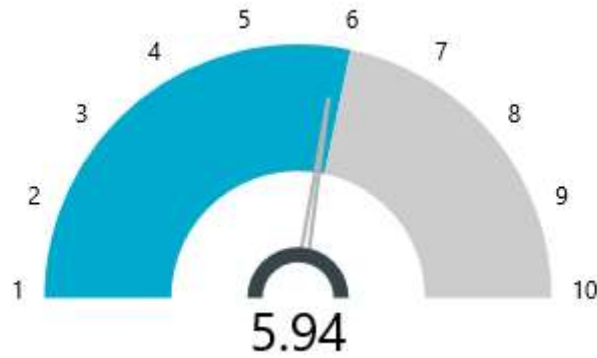


Figure 156. Responses to the survey question, “how much do you trust the information you receive about the Reef from Australian based NGOs?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

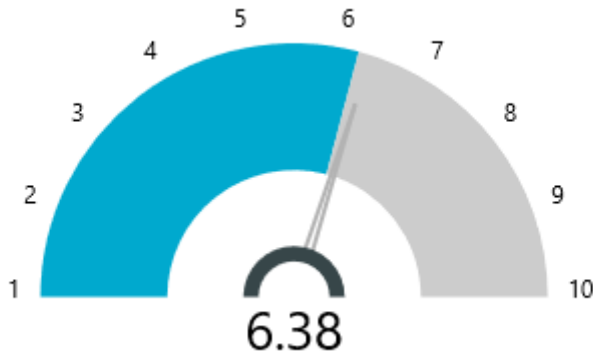


Figure 157. Responses to the survey question, “how much do you trust the information you receive about the Reef from International conservation NGOs?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

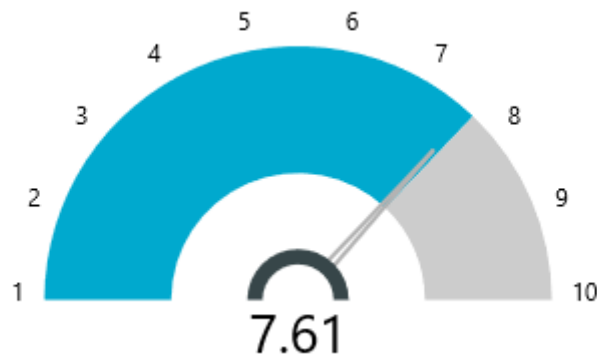


Figure 158. Responses to the survey question, “How much do you trust the information you receive about the Reef from scientists?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

5.4 Sources of information (G4)

SELTMP 2017 found that the most important sources of information about the Reef for tourists were: local radio (48.4%), national/regional radio (48.2%), free to air television (46.7%), word of mouth (46.2%), newspaper (44.2%), state/regional newspapers 44.2(%), news media websites (43.6%), digital streaming services (35.7%), Facebook (35.1%), online discussion forums (29.2%), YouTube (25.2%), pay tv (25.3%), local magazines (24.3%), Instagram (20.0%), twitter (16.0%), and snapchat (13.1%) (Figures 164-179).

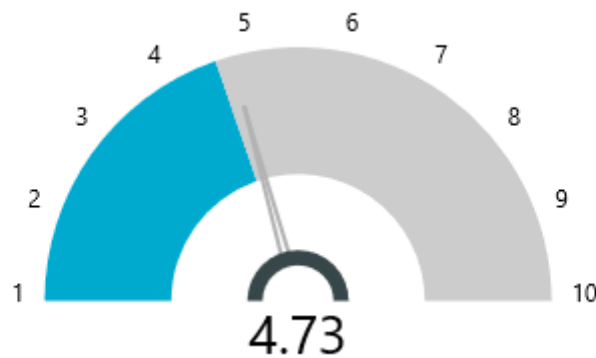


Figure 159. Responses to the survey question, “How much do you rely on local newspapers for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

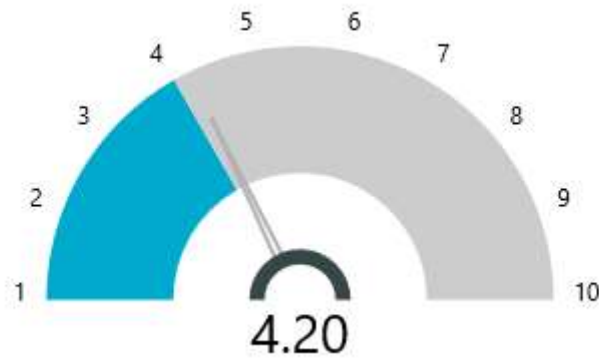


Figure 160. Responses to the survey question, “How much do you rely on digital streaming services for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

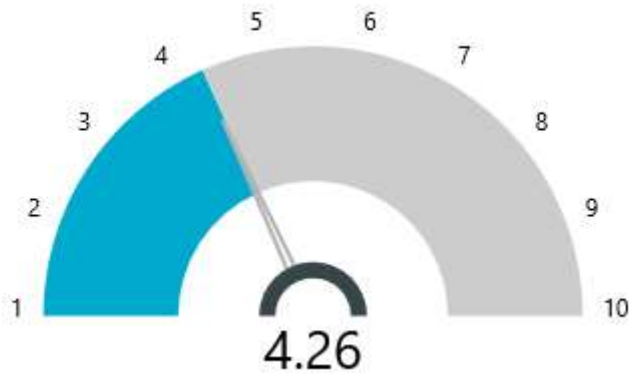


Figure 161. Responses to the survey question, “How much do you rely Facebook for new about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

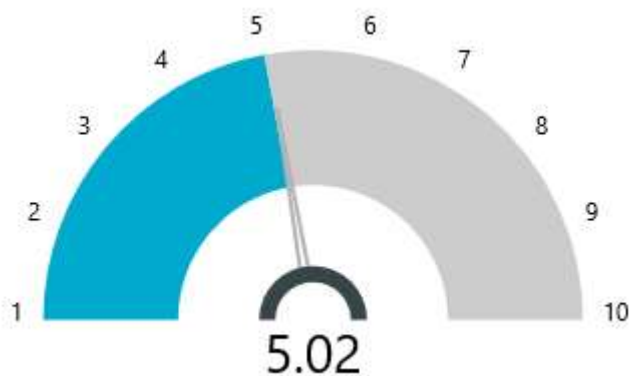


Figure 162. Responses to the survey question, “How much do you rely on free to air television for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

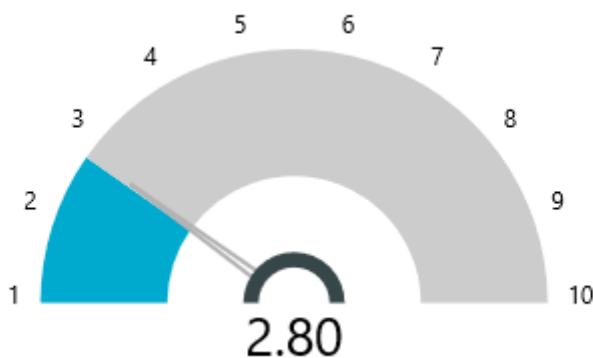


Figure 163. Responses to the survey question, “How much do you rely on Instagram for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

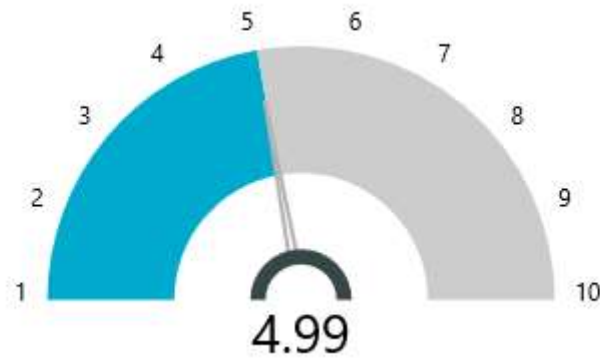


Figure 164. Responses to the survey question, “How much do you rely on local radio for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

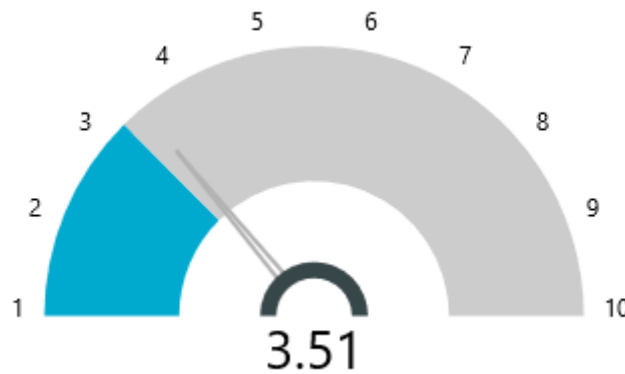


Figure 165. Responses to the survey question, “How much do you rely on magazines for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

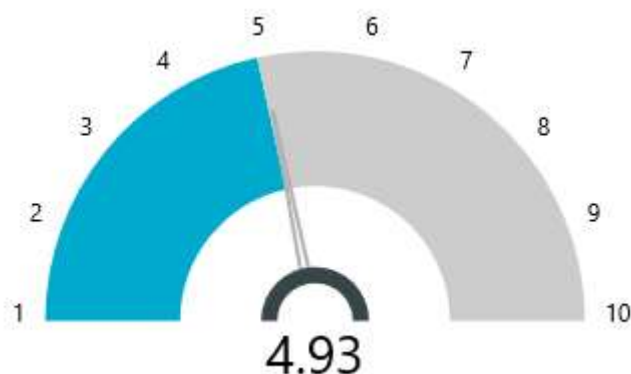


Figure 166. Responses to the survey question, “How much do you rely on national radio for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

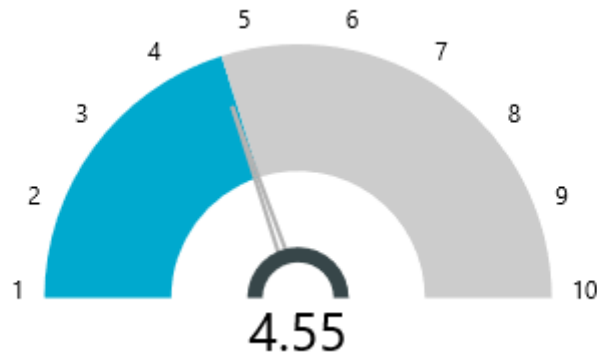


Figure 167. Responses to the survey question, “How much do you rely on news media websites for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

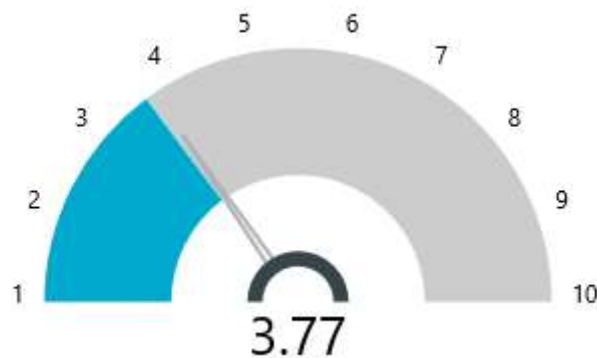


Figure 168. Responses to the survey question, “How much do you rely on online discussion forums for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

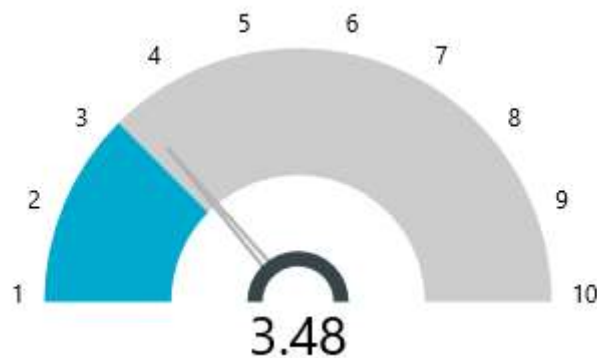


Figure 169. Responses to the survey question, “How much do you rely on pay TV for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

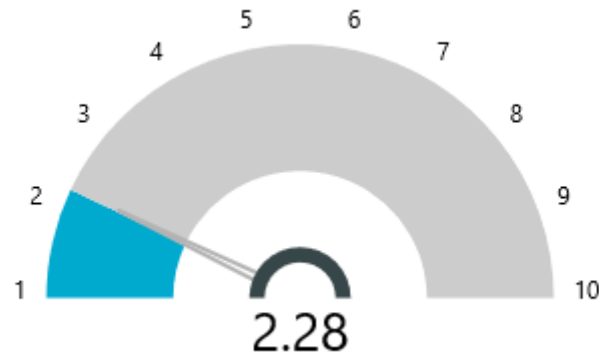


Figure 170. Responses to the survey question, “How much do you rely on snapchat for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

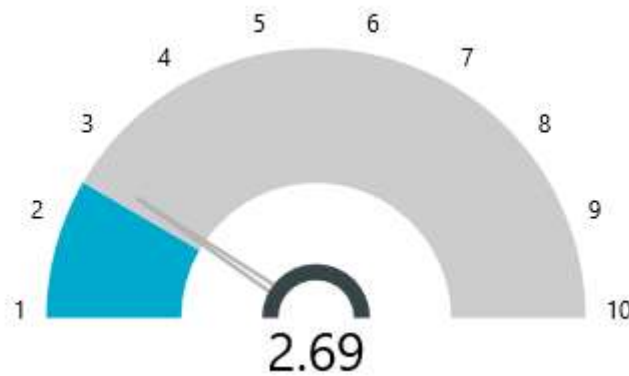


Figure 171. Responses to the survey question, “How much do you rely on twitter for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

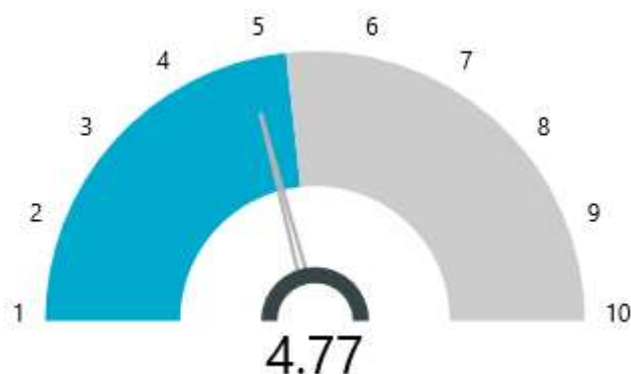


Figure 172. Responses to the survey question, “How much do you rely on word of mouth for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

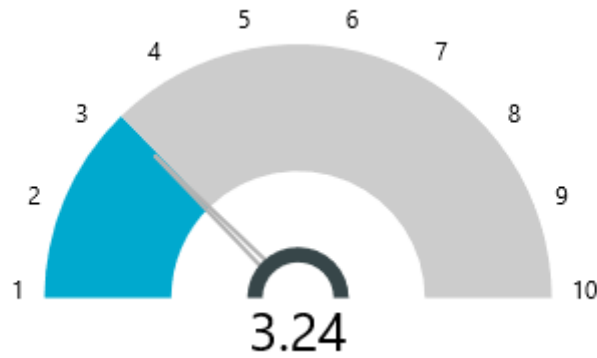


Figure 173. Responses to the survey question, “How much do you rely on YouTube for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

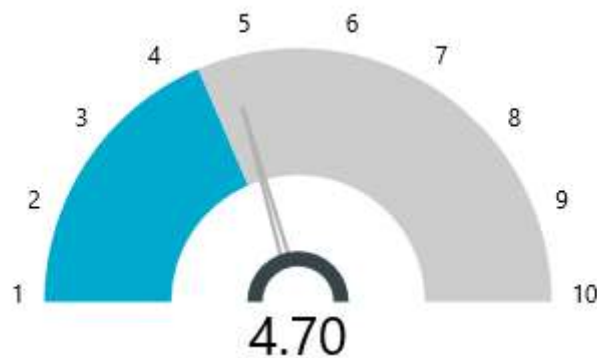


Figure 174. Responses to the survey question, “How much do you rely on state newspapers for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

C. Tourism Operator Results

C1. Tourism operator aspirations, capacities and stewardship

In 2017 tourism operators suggested that they had very high aspirations and levels of capacity and stewardship around the Great Barrier Reef.

1.1 Aspirations (ACS1)

Tourism operators within the Reef aspired to doing, “more to help protect the Reef” (85.1%), learning, “more about the condition of the Reef” (79.1%), and would, “like to do more to improve water quality in [their] waterways” (85.1%) (Figures 180-182).

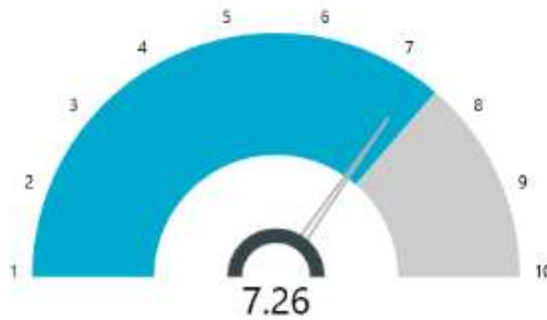


Figure 175. Responses to the survey question, “I would like to do more to help protect the Reef” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

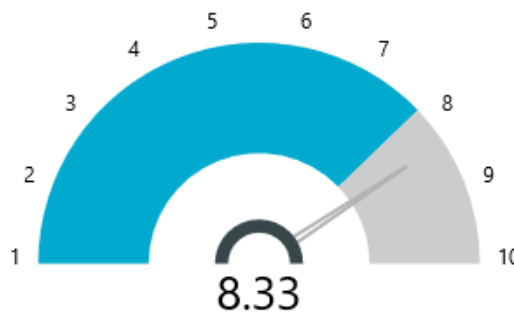


Figure 176. Responses to the survey question, “I would like to do more to improve water quality in my waterways” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

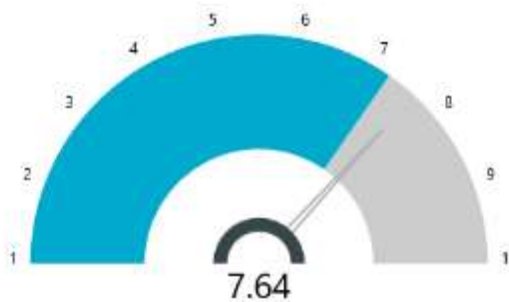


Figure 177. Responses to the survey question, “I would like to learn more about the condition of the Reef” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

1.2 Capacity and education (ACS2)

Tourism operators within the Reef region suggested that their capacity for stewardship was high, where 85.1% suggested that they, “feel like [they] can contribute to Reef management”. Nearly 83% (82.8%) felt that they, “have the necessary knowledge and skills to reduce any impact that [they] have on the Reef”, and only 10.8% felt that they, “cannot make a personal difference in improving the health of the Reef”, suggesting that nearly 90% of operators feel that they can make a personal difference. Only some operators (16.3%) felt that they, “do not have the time or opportunity required to reduce any impact that [they] might have on the Reef” (Figures 183-187).

Tourism operator’ knowledge or education around the current predicament of the Great Barrier Reef was variable. For example, nearly 80% were, “worried about climate change impacts on the Reef”, and 68% thought that climate change was an immediate threat requiring urgent attention” (Figure 188). Over 74% (74.5%) of tourism operators had completed a university or TAFE education.

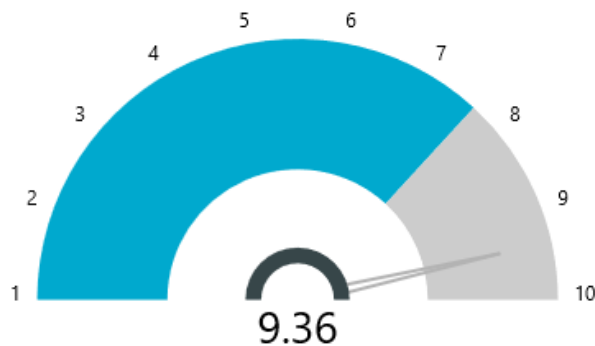


Figure 178. Responses to the survey question, “It is my responsibility to protect the Reef” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

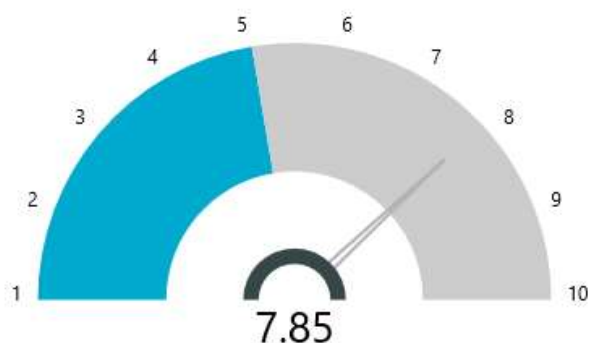


Figure 179. Responses to the survey question, “I have the necessary knowledge and skills to reduce any impact that I might have on the Reef” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

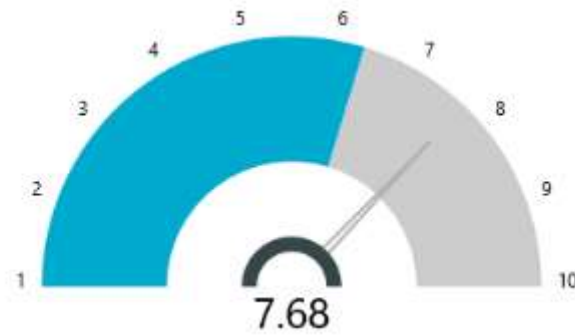


Figure 180. Responses to the survey question, "I do have the time or opportunity required to reduce any impact that I might have on the Reef" (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

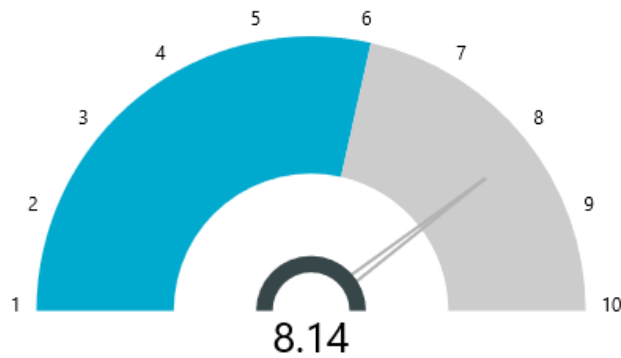


Figure 181. Responses to the survey question, "I feel I can contribute to Reef management" (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

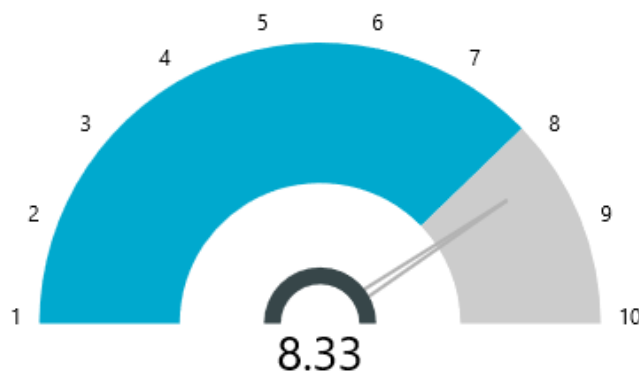


Figure 182. Responses to the survey question, "I can make a personal difference in improving the health of the Reef" (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

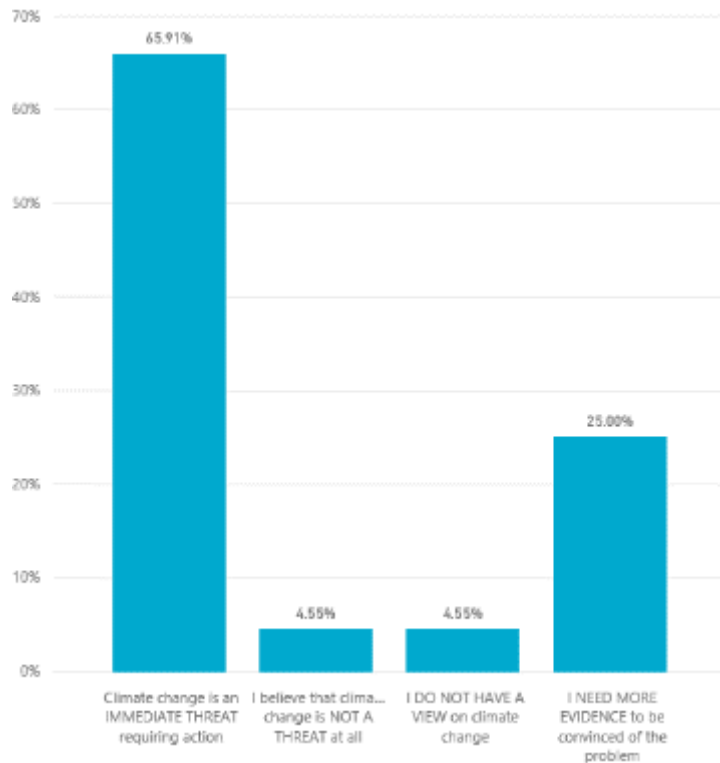


Figure 183. Responses to the survey question, “Which of the following statements best describes your beliefs about climate change?” (n=88).

1.3 Stewardship (ACS3)

Stewardship levels were very high within the marine tourism industry of the Great Barrier Reef. Some 91.1% of tourism operators, “make every effort to use energy efficiently in [their] home and workplace”, and 68.1%, “re-use or recycle most goods and waste”. Only 16.0% of tourism operators, “rarely consider the environmental impact of the production process for goods and services that [they] purchase”, and only 16%, “don’t usually make any extra effort to reduce the waste that I generate”. Similarly, only 1.1% felt that, “it is not [their] responsibility to protect the Reef”. SELTMP 2017 also found that 80.2%, “feel a social expectation to reduce any impact that [they] might have on the Reef (Figures 189).

Results from SELTMP 2017 found that 86.2% of tourism operators within the Reef region have fuel efficient engines, and 24.5% use an emissions calculator to plan their business operations. Some 14.9% of operators use carbon offsets to counter emissions, and 35.1% use green energy such as solar power on their vessels. Only 5.4% use alternative fuels such as biodiesel or ethanol. However, 83.0% of tourism operators participate in industry best practices via a code of practice, or MOU. Over 50% (52.1%) of tourism operators reported that they participate in GBRMPA’s Eye on the Reef monitoring program, and 33% of operators reported that they contribute to other scientific research and/or monitoring. We also found that 54.3% employ formally trained guides providing interpretation about the Reef.



Figure 184. Responses to the survey question, “I feel a social expectation to reduce any impact that I might have on the Reef” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

C2. Community vitality within tourism operators

Levels of community vitality were high to moderate within the region in terms of community health, wellbeing, and satisfaction.

2.1 Relationship with the Reef (CV4)

The relationship that tourism operators have with the Reef suggests that industry vitality is high and positive. Tourism operators were asked for the first words that came to mind when they thought of the Great Barrier Reef and they offered the words, coral (13.8%), beautiful (6.3%), and fishing (4%) (Figure 190).

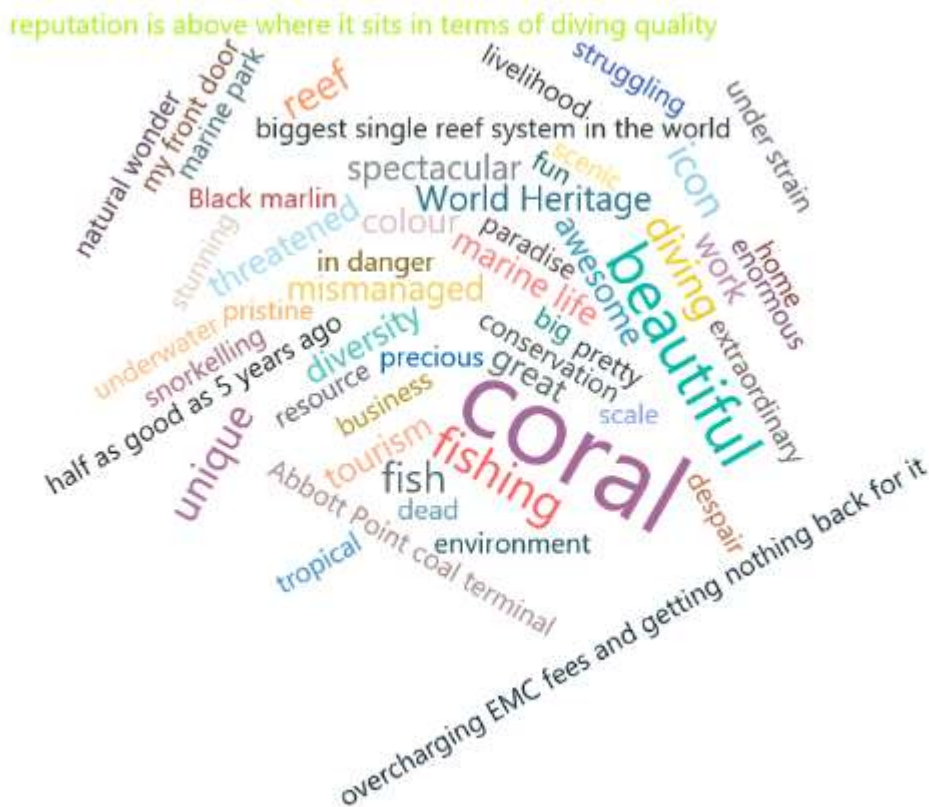


Figure 185. Responses to the survey question, “What are the first words that come to mind when you think of the Reef?” (n=1934).

2.2 Community health (CV3)

In terms of health, 74.4% of tourism operators stated that they, “value the Reef because it makes [them] feel better physically and/or mentally”. Only 4.4% of tourism operators reported that they, “would not be personally affected if the health of the Reef declined”, and 61.1% suggested that, “thinking about coral bleaching makes [they] feel depressed” (Figures 191-193).

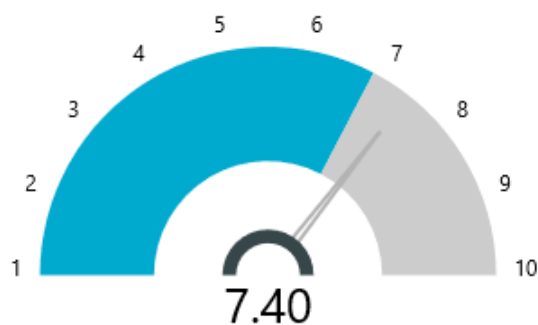


Figure 186. Responses to the survey question, “I value the Reef because it makes me feel better physically and/or mentally” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

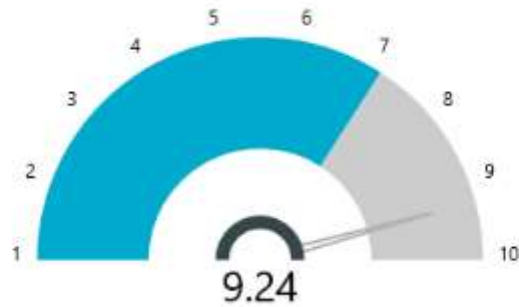


Figure 187. Responses to the survey question, “I would be personally affected if the health of the Reef declined” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

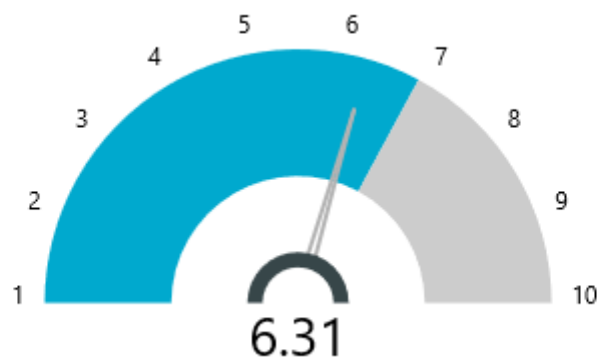


Figure 188. Responses to the survey question, “Thinking about coral bleaching makes me feel depressed” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

2.3 Community satisfaction (CV4)

Tourism operators were moderately to highly satisfied with the condition of the environment in their region. Only 56.0% of tourism operators stated that, “the coral reefs in [their] region are in good condition”. Some 75.5% thought that the, “mangroves in [their] region are in good health”, and 71.3% thought that the, “estuarine and marine fish in [their] region are in good condition”. Some 21.2% of tourism operators thought, “the freshwater areas (e.g. rivers, creeks) in [their] region are not in good condition”. Some 64.5% of tourism operators highlighted that, “there is too much rubbish (plastics and bottles) on the beaches in [their] region”. Only 48.9% of tourism operators said that they, “like the colour clarity of water along the beaches in [their] region (Figures 194-200).

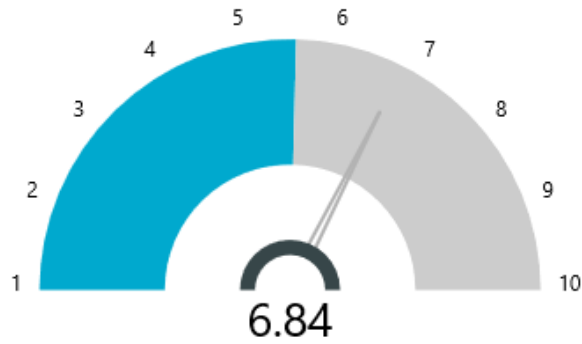


Figure 189. Responses to the survey question, “The freshwater areas in my region are in good condition” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

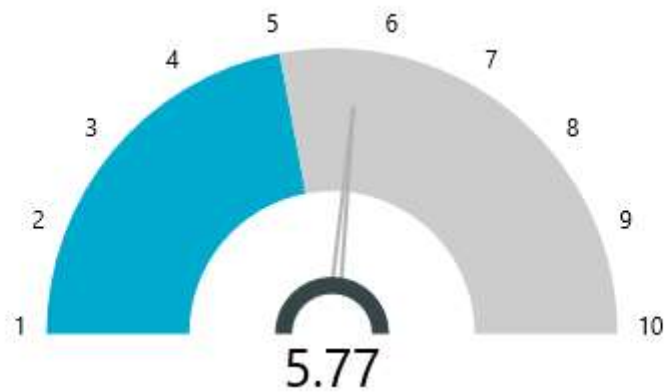


Figure 190. Responses to the survey question, “The coral reefs in my region are in good health” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

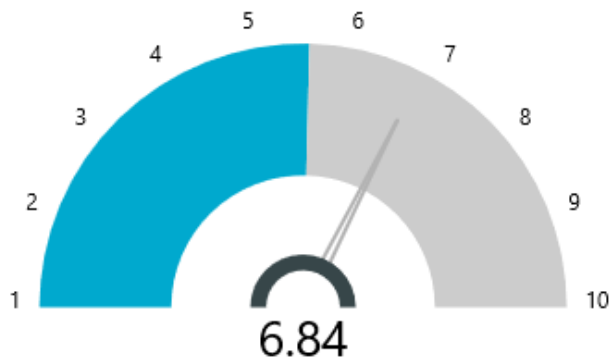


Figure 191. Responses to the survey question, “The freshwater areas (e.g. creeks, rivers) in my region are in good condition” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

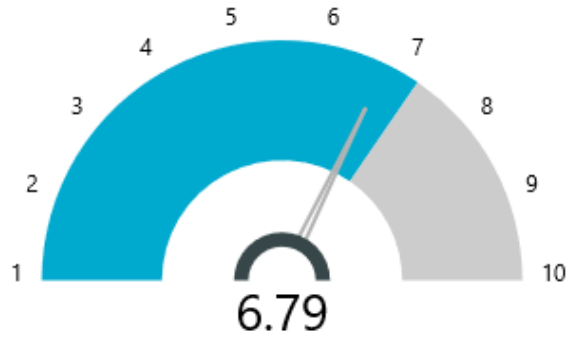


Figure 192. Responses to the survey question, “There is too much rubbish (plastics and bottles) on the beaches in my region” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

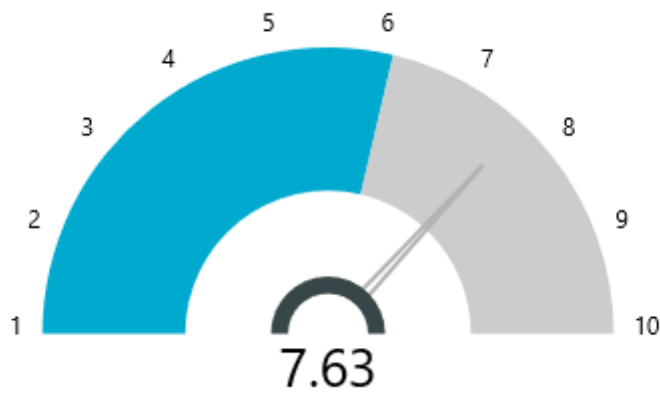


Figure 193. Responses to the survey question, “The mangroves in my region are in good health” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

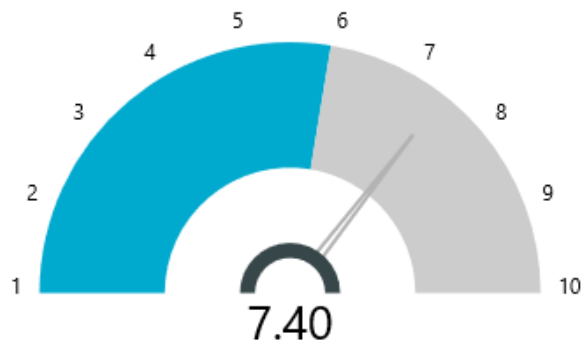


Figure 194. Responses to the survey question, “Estuarine and marine fish in my region are in good condition” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

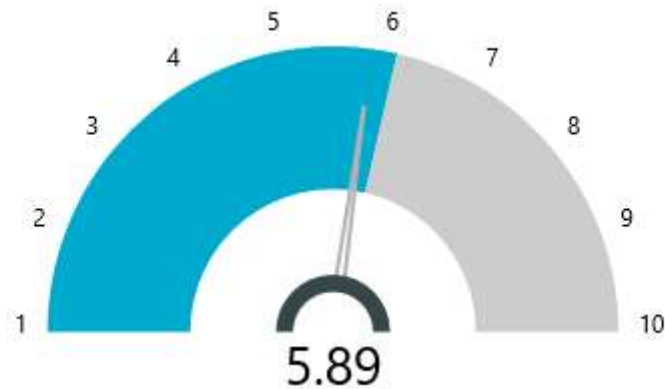


Figure 195. Responses to the survey question, “I like the colour clarity of water along the beaches in my region” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

2.4 Wellbeing (CV4)

Tourism operators appeared to derive significant wellbeing from the Reef, where 97.8% stated that they, “love that [they] live beside the Reef”, and 89.2% stated that, “the Reef contributes to [their] quality of life and wellbeing”. Some 62.8% suggested that they, “couldn’t think of being anything other than a tourism operator”, where, “the tourism industry is not just a job, it is my lifestyle’ (85.9%). However, only 20.2% of operators were, “not worried about climate change impacts on the Reef and 59.1% stated that they, “feel optimistic about the future of the Reef” (Figures 201-204).

Nearly 82% (81.9%) of tourism operators were married or had a partner.

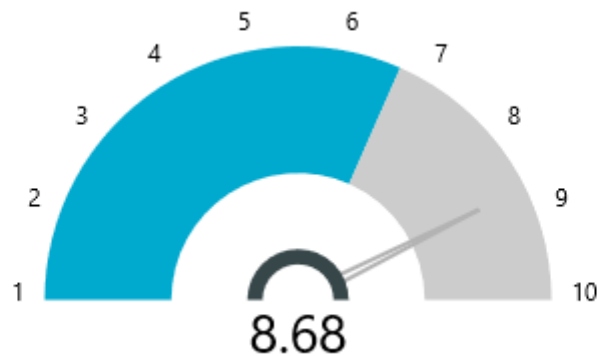


Figure 196. Responses to the survey question, “The Reef contributes to my quality of life and wellbeing” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

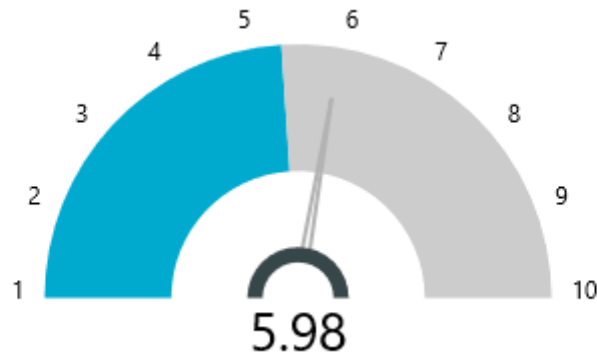


Figure 197. Responses to the survey question, “I feel optimistic about the future of the Reef” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

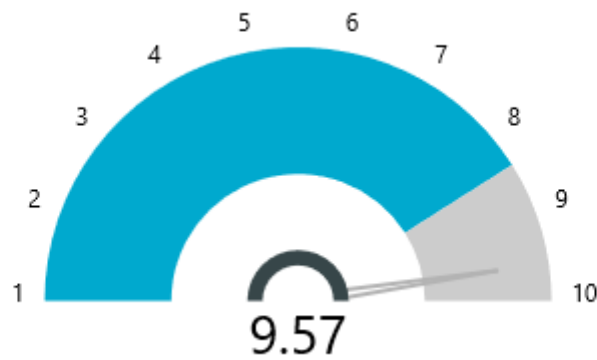


Figure 198. Responses to the survey question, “I love that I live beside the Reef” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

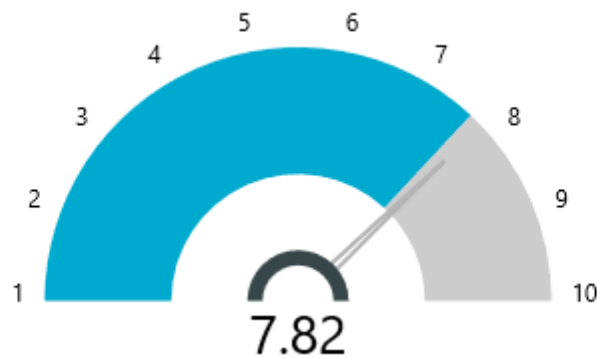


Figure 199. Responses to the survey question, “I am worried about climate change impacts on the Reef” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

2.5 Resource Use (ACS3)

Tourism operators have been working within the region for a mean of 24.0 years (SE=1.42 years), with most working (58.5%) and living within the region for over twenty years. Businesses have been operating for a mean of 20.0 years (se=1.14 years). Over 21% (21.3%) have been operating between 6-10 years, and 60.6% of all businesses have been operating for less than 20 years (Tables 15-17 and Figure 205). We found that 29.8% of tourism operators in the Reef used multiple ports.

Table 15. Responses to the survey question, "How long have you been involved in the Reef tourism industry?"

	Frequency	Percentage
Cat 1 - <1 year	3	3.2
Cat 2 - 1-5 years	4	4.3
Cat 3 - 6-10 years	16	17.0
Cat 4 - 11-20 years	16	17.0
Cat 5 - 20+ years	55	58.5
Total	94	100.0

Table 16. Responses to the survey question, "How long has your current business been operating?"

	Frequency	Percentage
Cat 1 = 1-5 years	6	6.4
Cat 2 = 6-10 years	20	21.3
Cat 3 = 11-15 years	12	12.8
Cat 4 = 16-20 years	15	16.0
Cat 5 = 21-25 years	9	9.6
Cat 6 = 26-30 years	15	16.0
Cat 7 = 31+ years	13	13.8
Total	94	100.0

Table 17. Responses to the survey question, "Where is your home port" (n=94).

	Frequency	Percentage
Airlie Beach	14	14.9
Cairns	20	21.3
Gladstone	2	2.1
Hamilton Island	3	3.2
Innisfail	1	1.1
Lucinda	1	1.1
Mackay	1	1.1
Magnetic Island	2	2.1
Port Douglas	10	10.6
Port Hinchinbrook	2	2.1
Townsville	5	5.3
Yeppoon	3	3.2
Yorkeys Knob	1	1.1

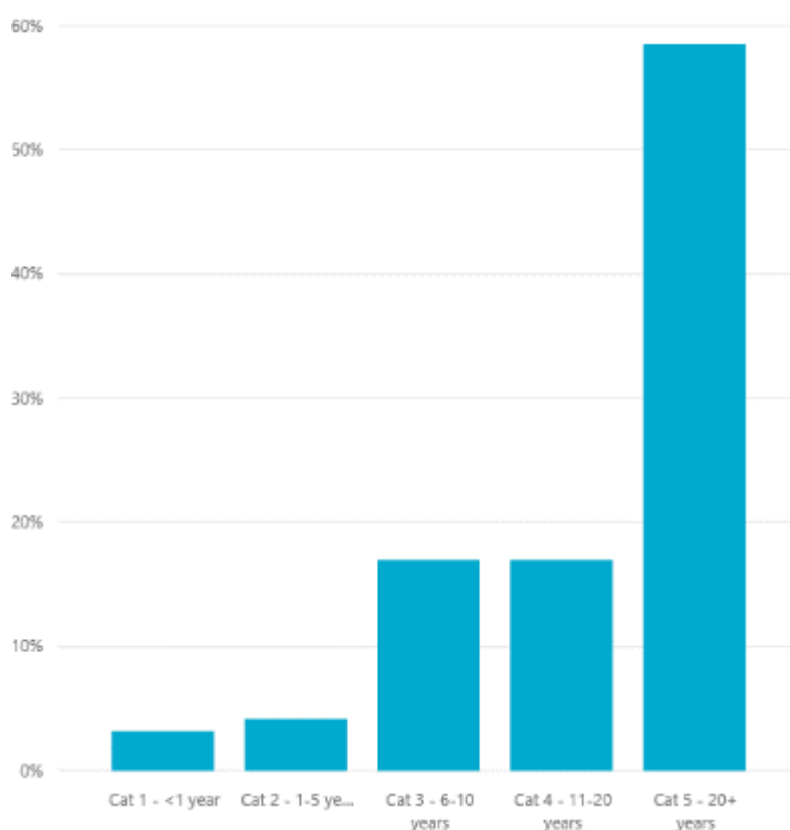


Figure 200. Responses to the survey question, "For how many years have you lived in the Reef region?"

C3. Culture and Heritage of tourism operators

3.1 Values of tourism operators

The contemporary cultural and heritage value of the Great Barrier Reef (Reef) was high for local tourism operators. One-hundred percent (100%) of tourism operators valued the Reef because, "the Reef is a great asset for the economy of the region, ". Similarly, 98.9% said, "I value the Reef because it supports a variety of life, such as fish and corals" and 97.9% of tourism operators said that they, "value the Reef because it attracts people from all over the world. Nearly 95% (94.6%) reported that, "the aesthetic beauty of the Reef is outstanding". The Great

Barrier Reef was valued by 95.7% of tourism operators, “because it supports a desirable and active way of life”. Results also showed that 93.6% of tourism operators felt, “proud that the Reef is a World Heritage Area”, where 91.1% reported that they, “value the Reef because it exists, even if [they] don’t benefit from it”. Some 91.5%, “value the Reef because we can learn about the environment through scientific discoveries”. The Reef was also valued for its contribution to culture, where 81.7% described that, “the Reef is part of [their] identity”, and 53.9% said, “it is an important part of my culture”. Some 55.1% said they, “value the Reef because of its rich traditional owner heritage”, where 70.8% said that they, “value the Reef because it provides a place where people can continue to pass down wisdom, traditions and a way of life”. Some 63.6% reported that the Reef, “inspires [them] in artistic or thoughtful ways”, where 54.4% reported that they, “value the Reef because it is spiritually important to [them]” (Figures 206-219).

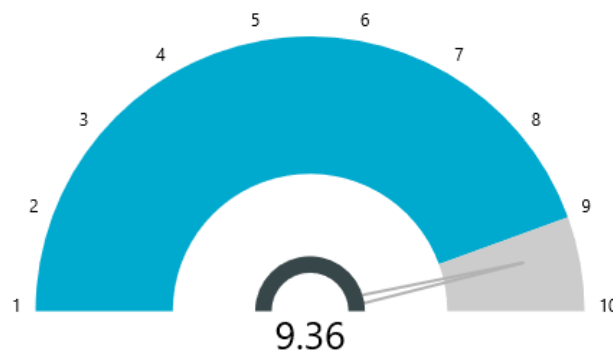


Figure 201. Responses to the survey question, “I feel proud that the Reef is a World Heritage Area” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

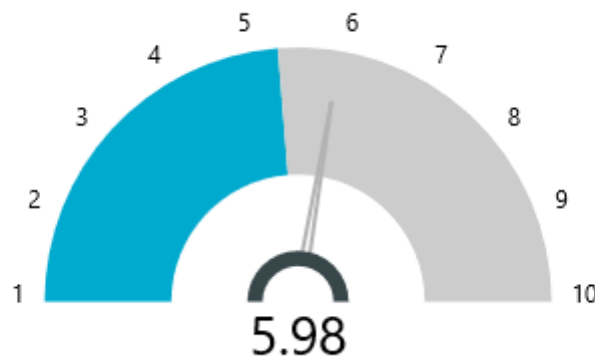


Figure 202. Responses to the survey question, “The Reef is an important part of my culture” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

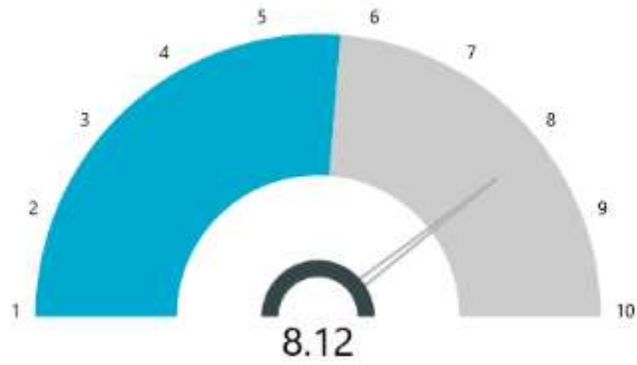


Figure 203. Responses to the survey question, “The Reef is part of my identity” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

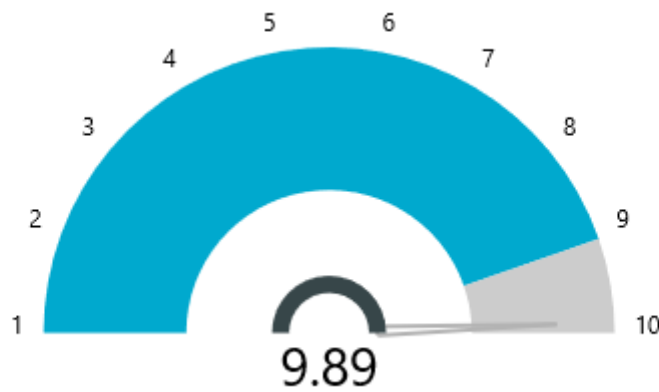


Figure 204. Responses to the survey question, “The Reef is a great asset for the economy of the region” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

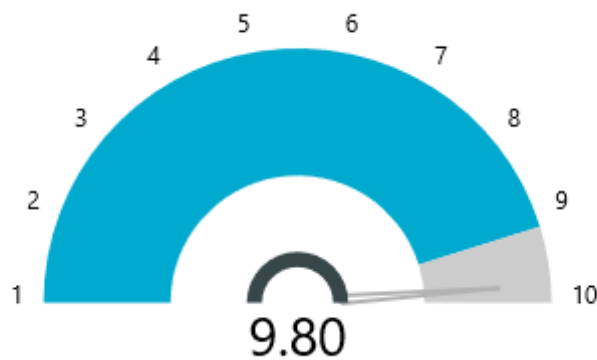


Figure 205. Responses to the survey question, “I value the Reef because it supports a variety of life such as fish and corals” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

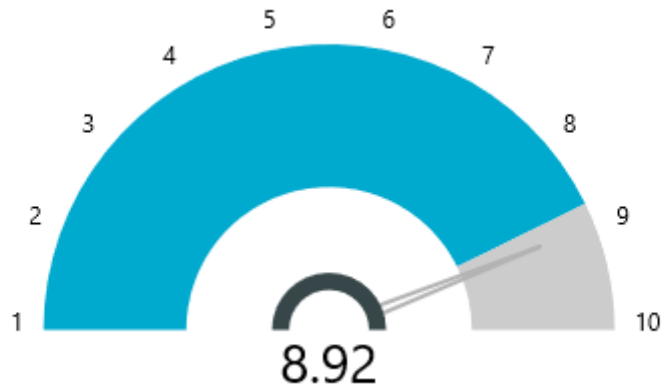


Figure 206. Responses to the survey question, “The aesthetic beauty of the Reef is outstanding” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

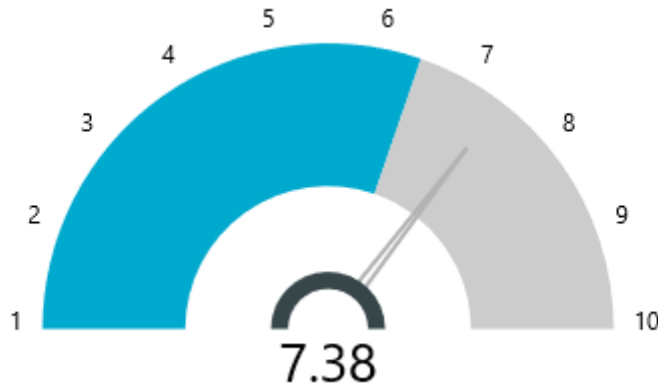


Figure 207. Responses to the survey question, “I value the Reef for the fresh seafood it provides” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

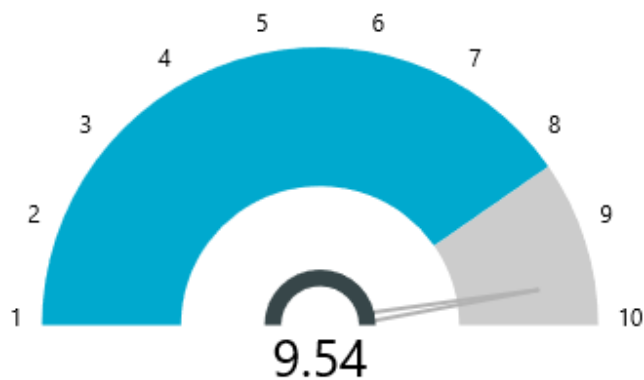


Figure 208. Responses to the survey question, “I value the Reef because it attracts people from all over the world” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

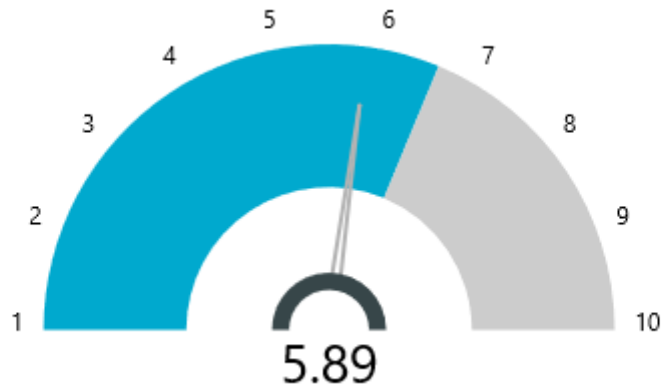


Figure 209. Responses to the survey question, “I value the Reef because of its rich traditional owner heritage” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

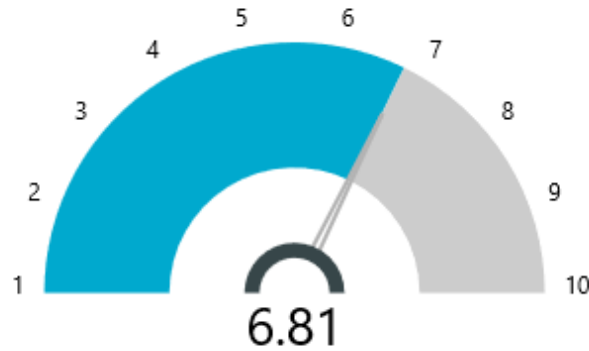


Figure 210. Responses to the survey question, “I value the Reef because it provides a place where people can continue to pass down wisdom, traditions and way of life” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

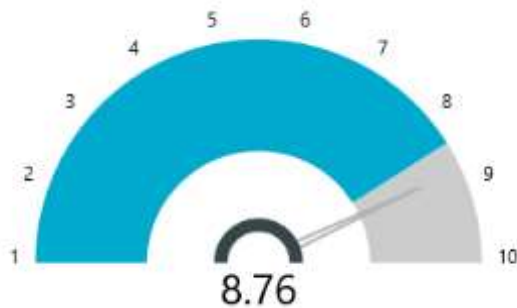


Figure 211. Responses to the survey question, “I value the Reef because we can learn about the environment through scientific discoveries” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

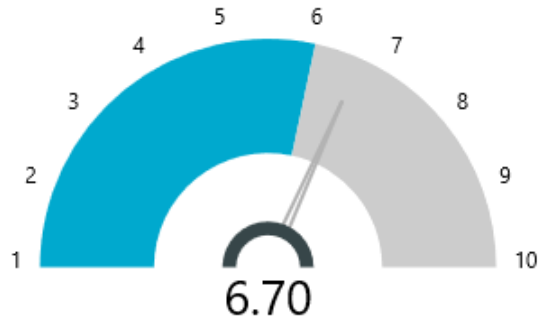


Figure 212. Responses to the survey question, "I value the Reef because it inspires me in artistic or thoughtful ways" (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

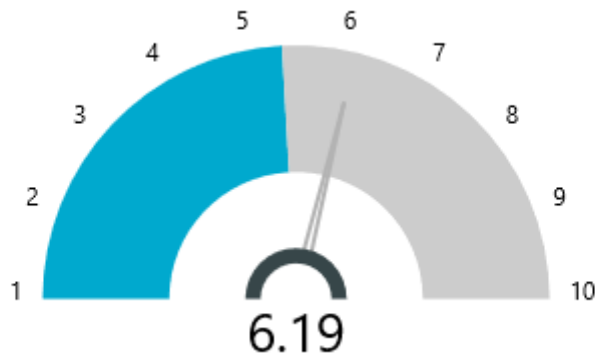


Figure 213. Responses to the survey question, "I value the Reef because it is spiritually important to me" (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

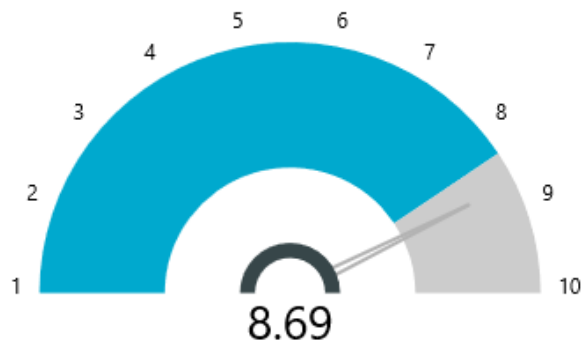


Figure 214. Responses to the survey question, "I value the Reef because it exists, even if I don't benefit from it" (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

C4. Economic value of tourism operators

4.1 Economic viability (EV1-5)

The viability of marine tourism businesses was variable. For example, we found that 54.3% of tourism operators suggested that their, “business has not performed this year as well as last year”. However, 75.5% of tourism operators in the Reef stated that they are, “optimistic about the future of [their] business in the Reef”. Some Most tourism businesses (95.7%) had insurance for their business assets. Most operators (60.6%) had a business turnover of less than \$100,000 (Table 18). Tourism operator households tended to derive only part of their household income from tourism. Only 62.8% of households derived most (76-100%) of their household income from the tourism industry, where 20% of industries obtained half of their household income from tourism. Most business only employed less than 5 employees.

Table 18. Responses to the survey question, “Could you please indicate (approximately) your business turnover (entire revenue) for the past 12 months, in broad categories t” (n=94).

	Frequency	Percentage
< \$20,000	4	4.3
\$100,001 to \$500,000	22	23.4
\$20,000 to \$100,000	10	10.6
\$500,000 to \$1M	8	8.5
Between \$1M to \$5M	16	17.0
More than \$5m	13	13.8
Total	94	100.0

C5. Governance of the tourism industry

5.1 Confidence and support in management (G3)

The marine tourism industry is moderately confident in, and supportive of, management within the region. Only 23.3% of marine based tourism operators thought that, “enough is being done to effectively manage the Reef”, however 60.6% felt, “confident that the Reef is well managed”. A large majority of the industry (85.1%) felt that they, “can contribute to Reef management”, where 66.0% said, “I support the rules and regulations that affect access and use of the Reef” and 67.0% said that they, “support the current rules and regulations that affect access and use of freshwater areas (rivers and creeks in my region)”. Some 74.4% marine tourism operators regarded themselves as, “progressive” rather than, “traditional” on a ten point scale with traditional at one end, and progressive at the other (Figures 220-225).

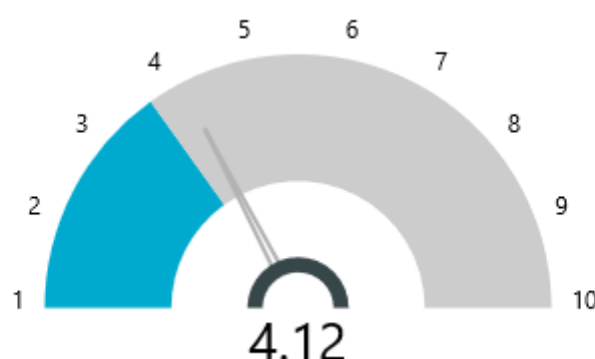


Figure 215. Responses to the survey question, “I think enough is being done to effectively manage the Reef” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

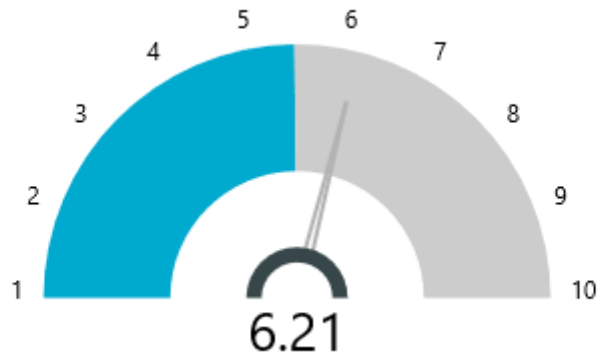


Figure 216. Responses to the survey question, “I am confident that the Reef is well managed” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

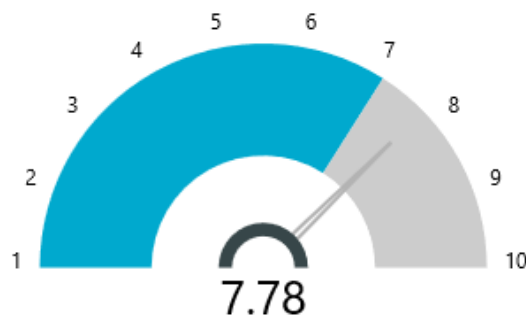


Figure 217. Responses to the survey question, “I do have fair access to the Reef compared to other user groups” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

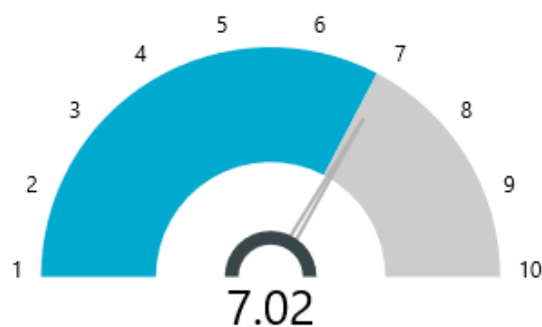


Figure 218. Responses to the survey question, “I support the rules and regulations that affect access and use of the Reef” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

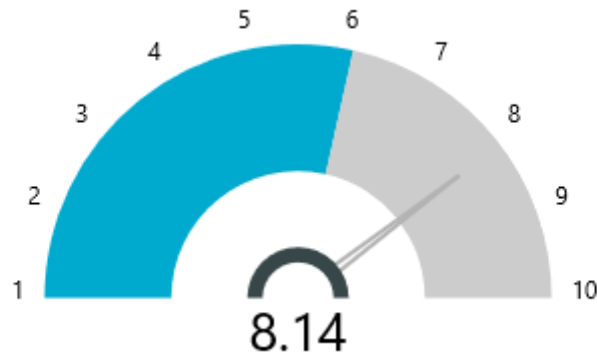


Figure 219. Responses to the survey question, “I can contribute to Reef management” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).



Figure 220. Responses to the survey question, “In general, would you consider yourself to be more tradition or progressive” (n=1934). Responses are provided on a 10 point scale, where 1=very traditional and 10 = very progressive.

5.2 Equity Issues (EV4)

Whilst 79.3% of tourism operators felt that they did, “have fair access to the Reef compared to other user groups”, only some tourism operators (36.1%) felt, “that future generations have been adequately considered in the management of the Reef” (Figures 226-227).

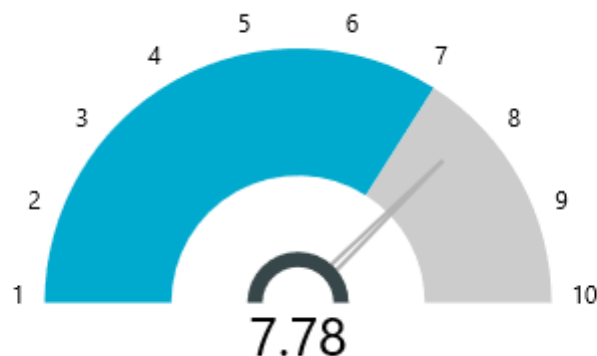


Figure 221. Responses to the survey question, “I have fair access to the Reef compared to other user groups” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

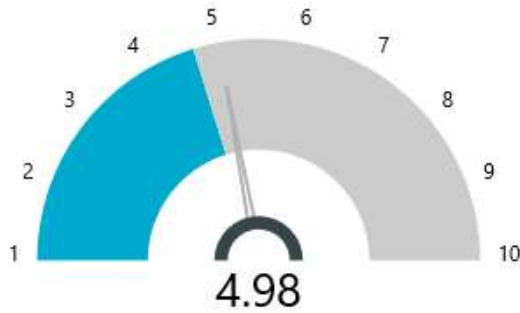


Figure 222. Responses to the survey question, “future generations have been adequately considered in the management of the Reef” (n=1934). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

5.3 Trust in networks (G4)

Results suggested that marine tourism operators mostly trusted friends, family and work colleagues, (74.4%) as well as scientists (74.4%). Some 71.4% of local tourism operators trusted GBRMPA, whilst 56.5% trusted the Australian government and 28.6% trusted the Queensland government for information about the Reef. We also found that 57.4% trusted industry groups, 52.3% trusted Australian NGOs, 46.7% trusted international NGOs, 22.2% trusted lobby groups such as Get Up, 16.7% trusted news media journalists, and 13.2% trusted social media bloggers (Figures 228-238).

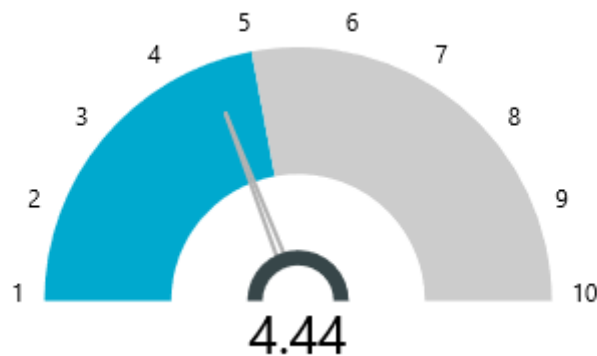


Figure 223. Responses to the survey question, “how much do you trust the information you receive about the Reef from the Australian Government?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

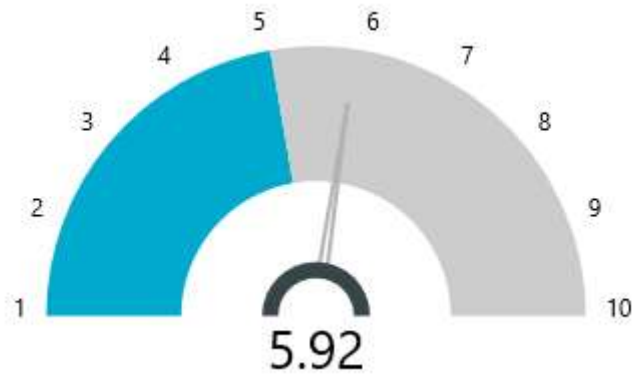


Figure 224. Responses to the survey question, “how much do you trust the information you receive about the Reef from Industry Groups?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

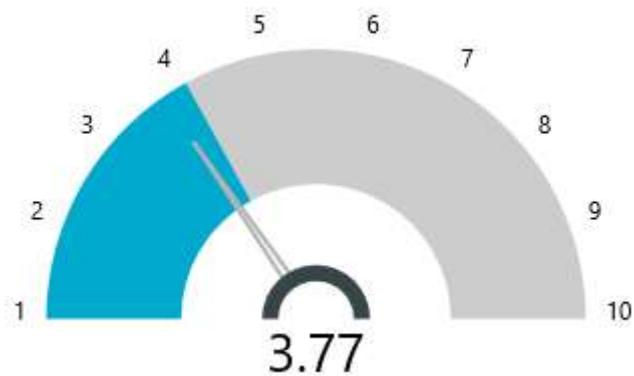


Figure 225. Responses to the survey question, “how much do you trust the information you receive about the Reef from Lobby Groups?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators)

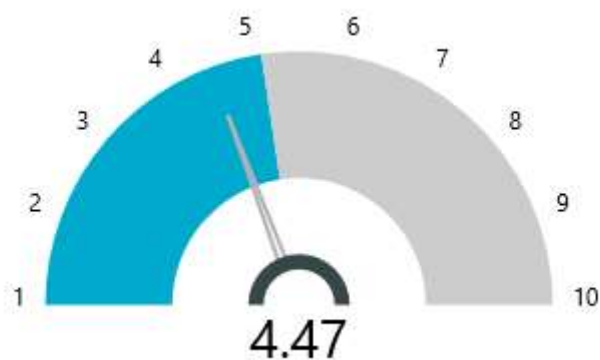


Figure 226. Responses to the survey question, “how much do you trust the information you receive about the Reef from Queensland government?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators)

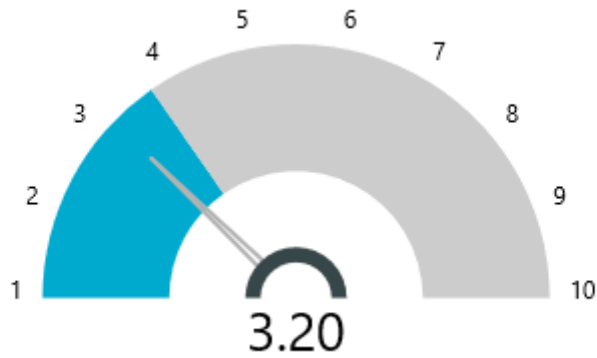


Figure 227. Responses to the survey question, “how much do you trust the information you receive about the Reef from social media commentators, bloggers?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators)

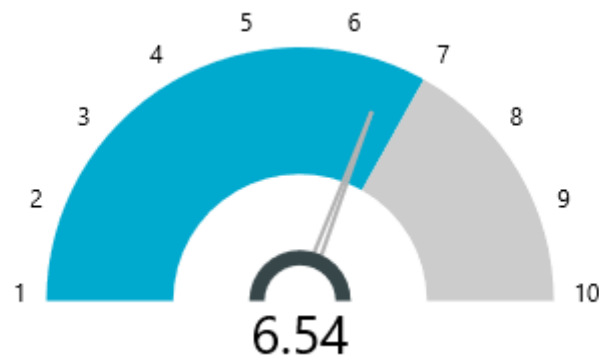


Figure 228. Responses to the survey question, “how much do you trust the information you receive about the Reef from GBRMPA?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators)

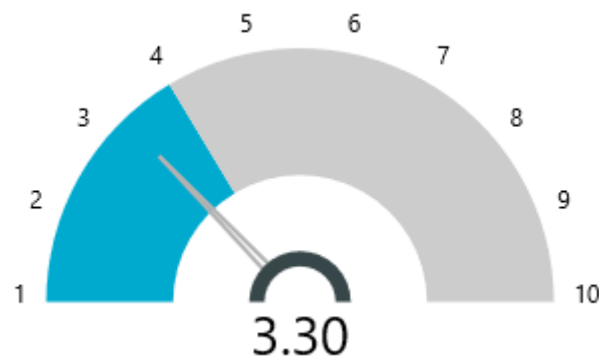


Figure 229. Responses to the survey question, “how much do you trust the information you receive about the Reef from new media journalists?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators)

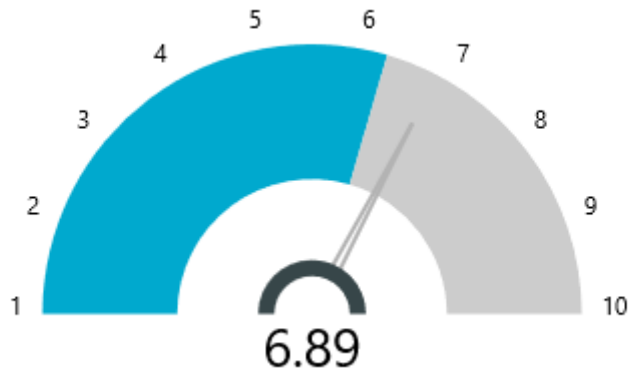


Figure 230. Responses to the survey question, “how much do you trust the information you receive about the Reef from friends, family etc.?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators)

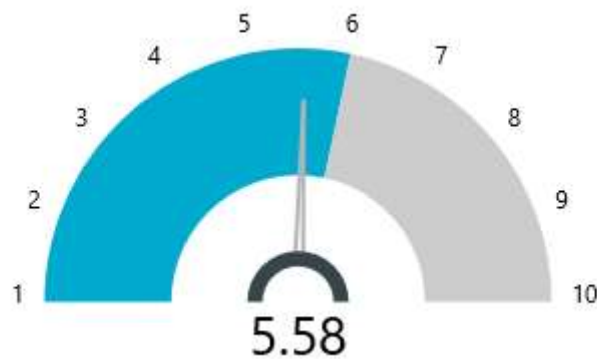


Figure 231. Responses to the survey question, “how much do you trust the information you receive about the Reef from Australian based NGOs?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators)

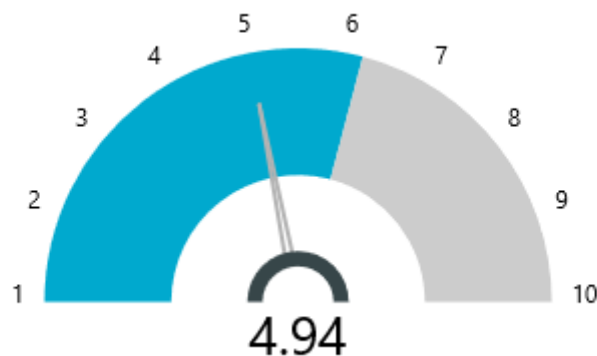


Figure 232. Responses to the survey question, “how much do you trust the information you receive about the Reef from International conservation NGOs?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators)

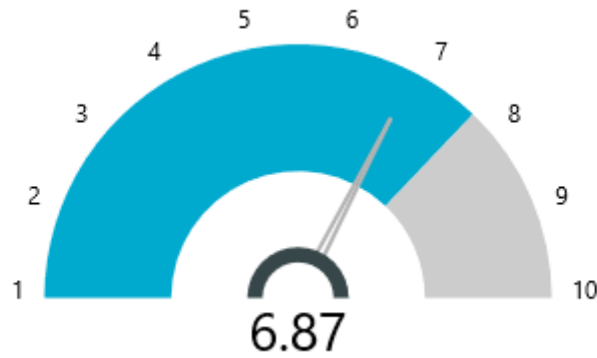


Figure 233. Responses to the survey question, “How much do you trust the information you receive about the Reef from scientists?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators)

5.4 Sources of information (G4)

Marine tourism operators appeared to mostly rely on word of mouth (48.9%) for information about the Reef. Other important sources of information were local radio (35.6%), news media websites (35.6%), local newspapers (32.2%), state/regional newspapers (27.8%), magazines (18.9%), free to air television (38.5%), pay tv (18%), digital streaming services (30.0%), national/regional radio (35.6%), online discussion forums (24.2%), Facebook (27.0%), twitter (5.6%), Instagram (11.1%), snapchat (4.4%), and YouTube (14.4%) (Figures 239-254).

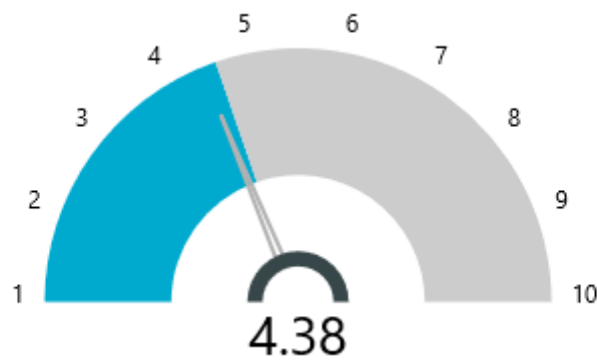


Figure 234. Responses to the survey question, “How much do you rely on local newspapers for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

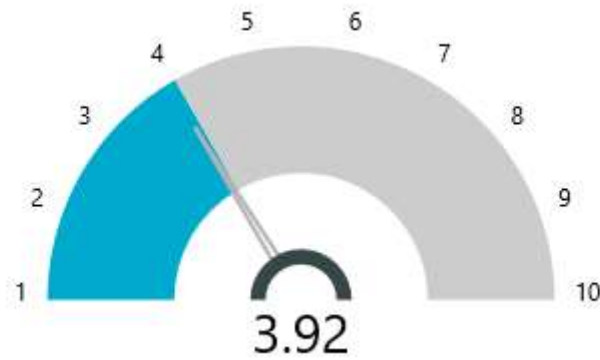


Figure 235. Responses to the survey question, “How much do you rely on digital streaming services for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators)

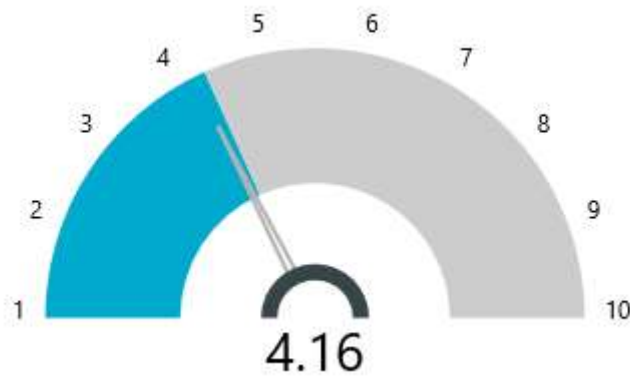


Figure 236. Responses to the survey question, “How much do you rely Facebook for new about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

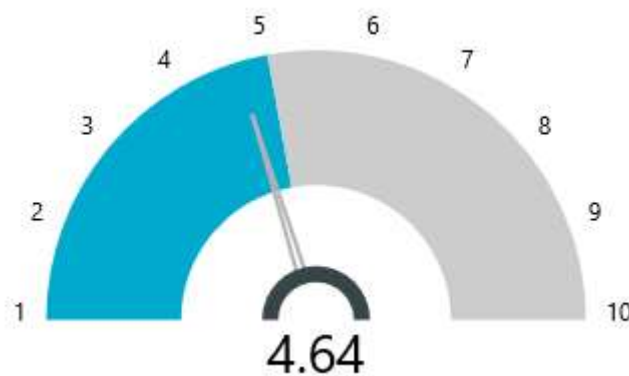


Figure 237. Responses to the survey question, “How much do you rely on free to air television for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

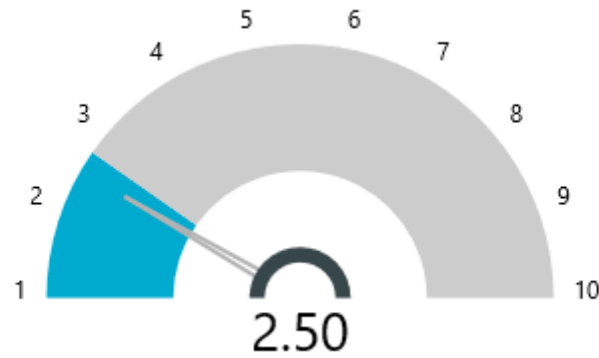


Figure 238. Responses to the survey question, “How much do you rely on Instagram for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators)

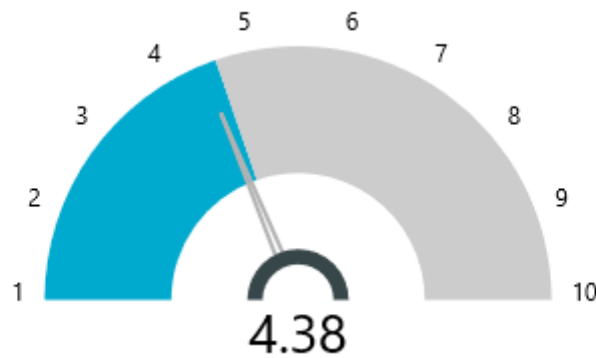


Figure 239. Responses to the survey question, “How much do you rely on local radio for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

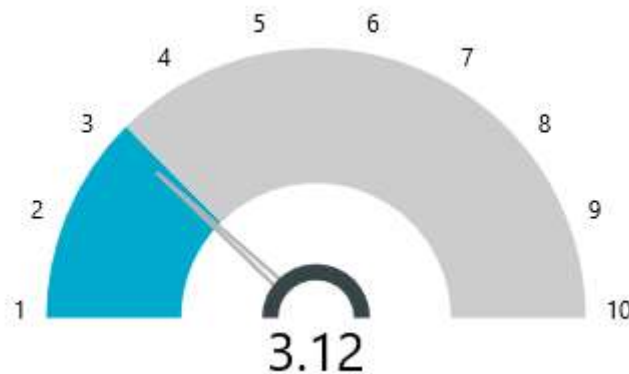


Figure 240. Responses to the survey question, “How much do you rely on magazines for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators)

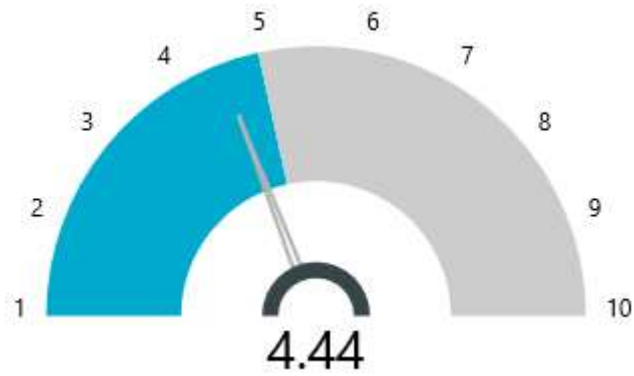


Figure 241. Responses to the survey question, “How much do you rely on national radio for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

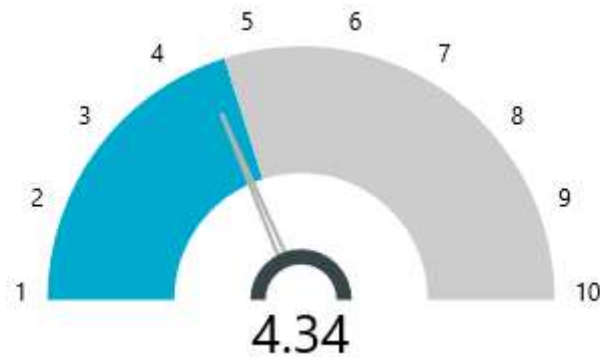


Figure 242. Responses to the survey question, “How much do you rely on news media websites for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

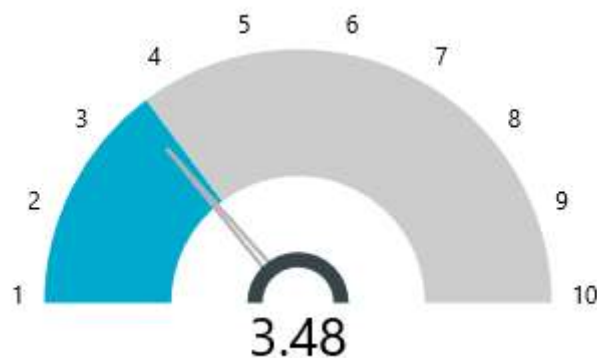


Figure 243. Responses to the survey question, “How much do you rely on other discussion forums for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

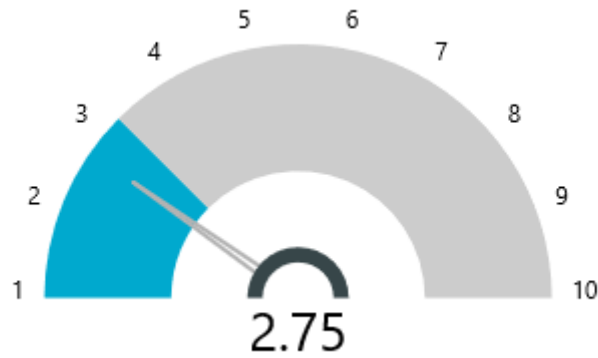


Figure 244. Responses to the survey question, “How much do you rely on pay TV for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

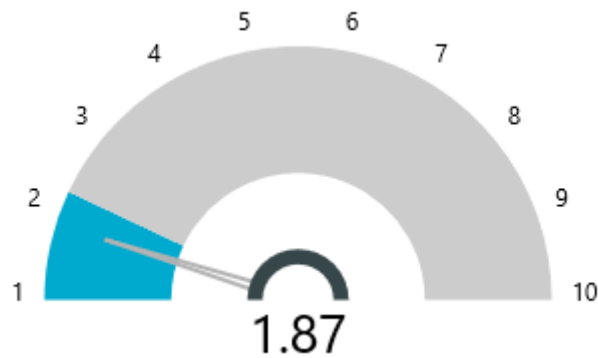


Figure 245. Responses to the survey question, “How much do you rely on snapchat for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

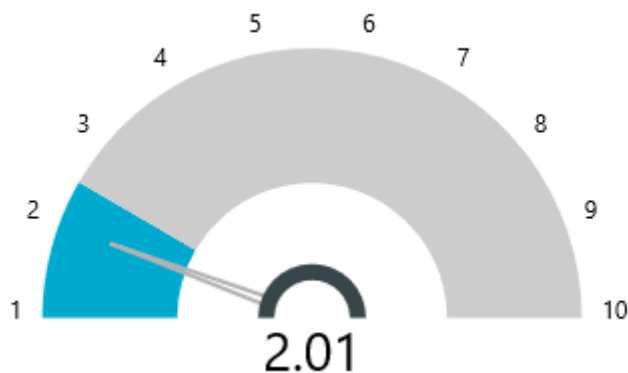


Figure 246. Responses to the survey question, “How much do you rely on twitter for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

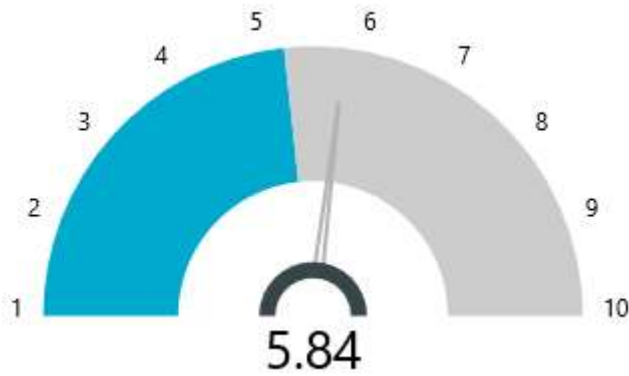


Figure 247. Responses to the survey question, “How much do you rely on word of mouth for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

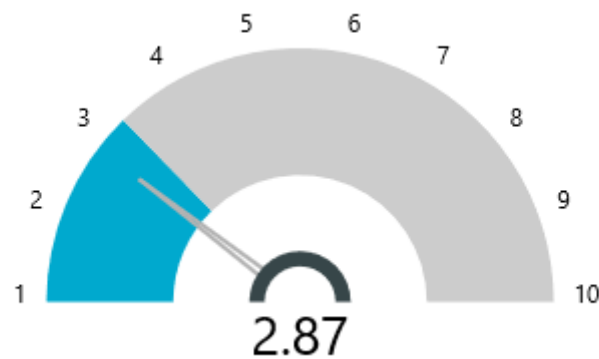


Figure 248. Responses to the survey question, “How much do you rely on YouTube for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

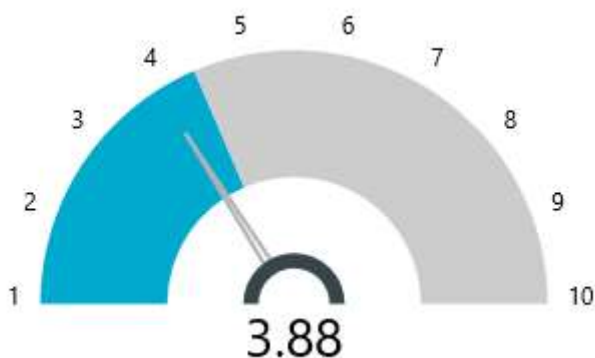


Figure 249. Responses to the survey question, “How much do you rely on state newspapers for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

D. Commercial Fisher Results

D1. Aspirations, capacities and stewardship

In 2017 commercial fisher suggested that they had relatively high aspirations and levels of capacity and stewardship around the Great Barrier Reef.

1.1 Aspirations (ACS1)

Commercial fishers aspired to doing, “more to help protect the Reef” (66.7%), learning, “more about the condition of the Reef” (65.9%), and would, “like to do more to improve water quality in [their] waterways” (72.6%) (Figures 225-258).

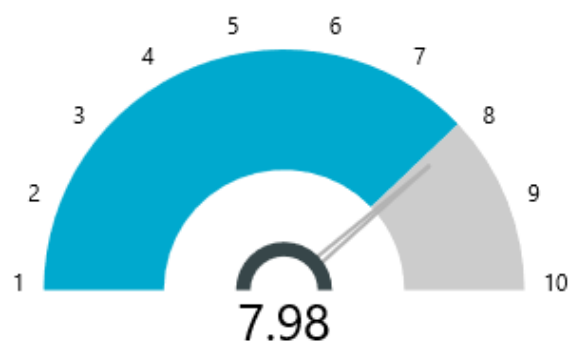


Figure 250. Responses to the survey question, “I would like to do more to improve water quality in my waterways” (n=88). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

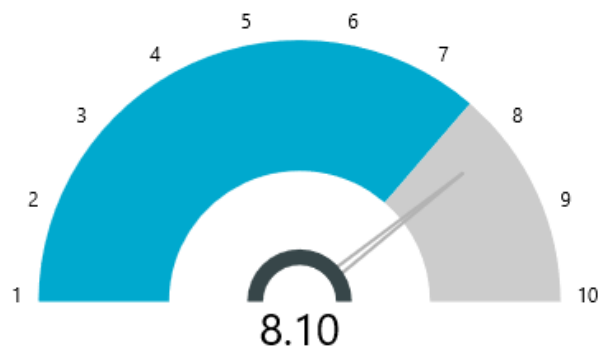


Figure 251. Responses to the survey question, “I would like to do more to help protect the Reef” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

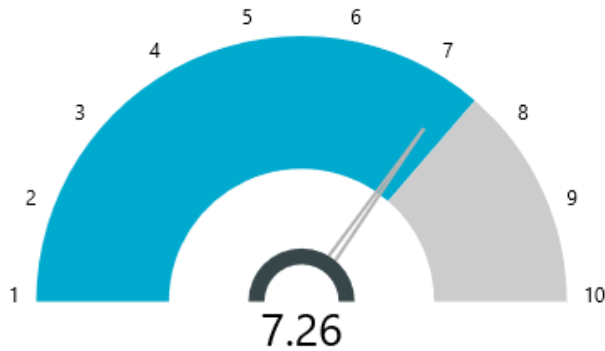


Figure 252. Responses to the survey question, “I would like to do more to improve water quality in my waterways” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

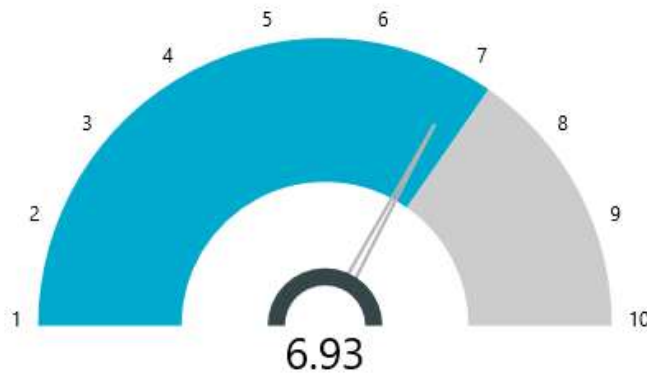


Figure 253. Responses to the survey question, “I would like to learn more about the condition of the Reef” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

1.2 Capacity and education (ACS2)

They suggested that their capacity was high, where 67.1% suggested that they, “feel like [they] [could] contribute to Reef management”. Over 88% felt that they had, “the necessary knowledge and skills to reduce any impact that [they] have on the Reef”, and only 15.3% of commercial fishers felt that they did, “not have the time or opportunity required to reduce any impact that [they] might have on the Reef”. Similarly, 28.7% felt that they, “cannot make a personal difference in improving the health of the Reef” (Figures 259-262).

Commercial fisher’ knowledge or education around the current predicament of the Great Barrier Reef was variable. For example, 67% were, “not worried about climate change impacts on the Reef”, where only 27% thought that climate change was an immediate threat requiring urgent attention” (Figure 263). Some 48.4% of commercial fishers had a university or TAFE education (beyond high school).

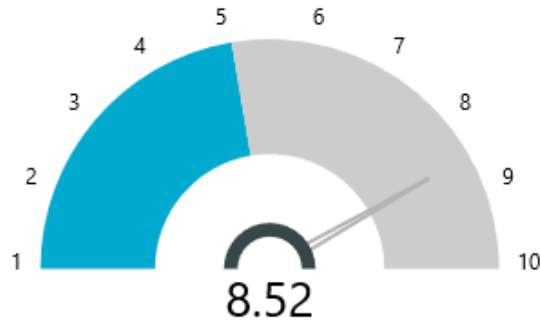


Figure 254. Responses to the survey question, "I have the necessary knowledge and skills to reduce any impact that I might have on the Reef" (n=88). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

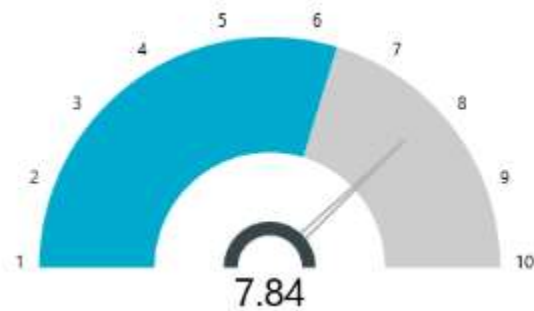


Figure 255. Responses to the survey question, "I do have the time or opportunity required to reduce any impact that I might have on the Reef" (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

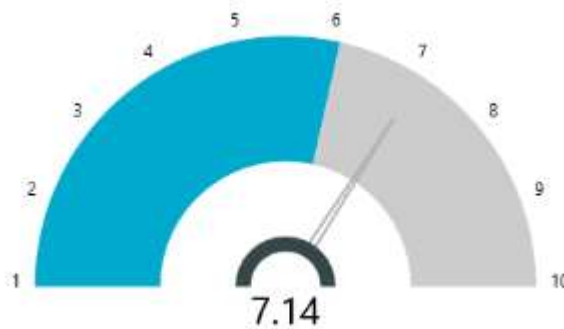


Figure 256. Responses to the survey question, "I feel I can contribute to Reef management" (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

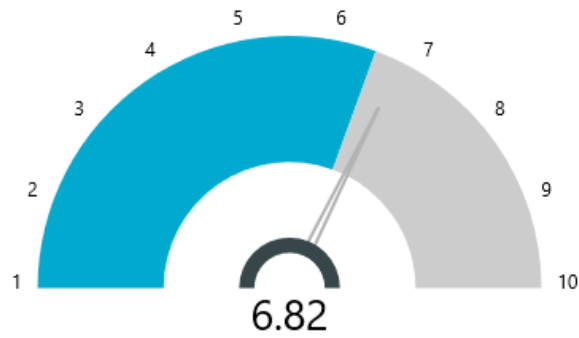


Figure 257. Responses to the survey question, “I can make a personal difference in improving the health of the Reef” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

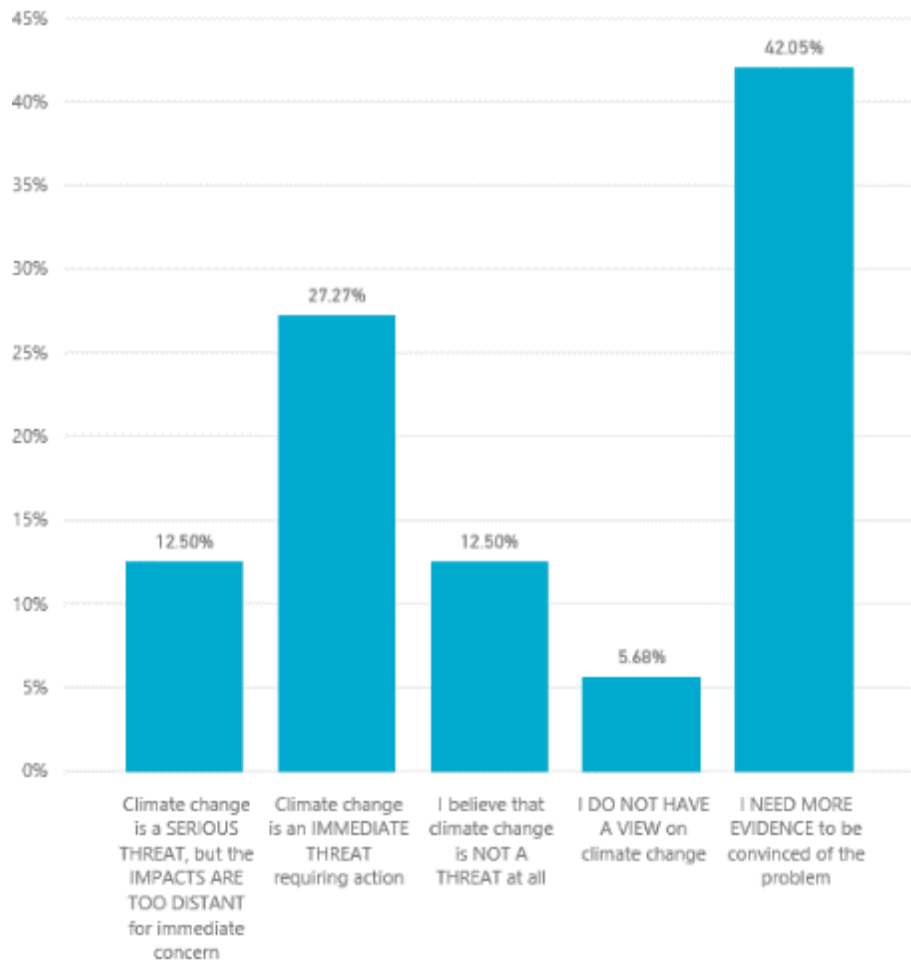


Figure 258. Responses to the survey question, “Which of the following statements best describes your beliefs about climate change?” (n=88).

1.3 Stewardship (ACS3)

Stewardship levels were relatively high within the region. Some 91.2% of commercial fishers, “make every effort to use energy efficiently in [their] home and workplace”, and 68.2%, “re-use or recycle most goods and waste”. Only 11% of commercial fishers, “rarely consider the environmental impact of the production process for goods and services that I purchase”, (whilst 89% frequently consider such impacts), and only 16%, “don’t usually make any extra effort to reduce the waste that I generate”. Only 10.2% felt that, “it is not [their] responsibility to protect the Reef”. SELTMP 2017 also found that 70.2%, “feel a social expectation to reduce any impact that [they] might have on the Reef” (Figures 264-265).

We found that only 8.8% of commercial fishers use an emissions calculator to plan their business operations, and 3.3% of businesses use carbon offsets to counter emissions. Only 6.6% of businesses used alternative fuels such as biodiesel or ethanol. However 30.8% of businesses use green energy such as solar panels, and 80.2% of commercial fishers participate in industry best practices via a code of practice or MOU. Some 30.8% of fishers reported that they participate in GBRMPA’s Reef Guardian Fisher program, and 63.7% contribute to a scientific monitoring program.

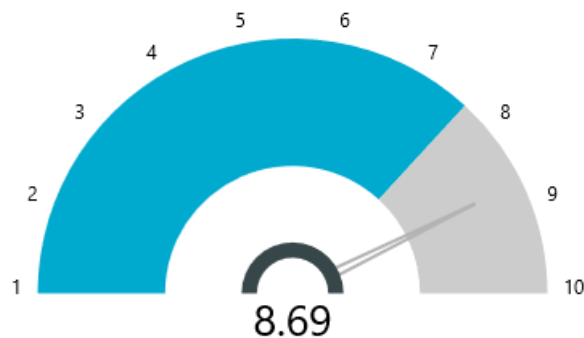


Figure 259. Responses to the survey question, “It is my responsibility to protect the Reef” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

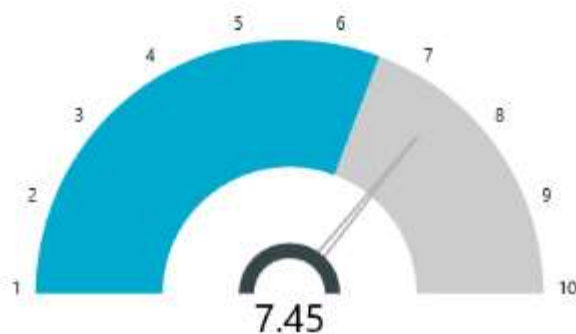


Figure 260. Responses to the survey question, “I feel a social expectation to reduce any impact that I might have on the Reef” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

D2. Community vitality

2.1 Relationship with the Reef (CV4)

Levels of community vitality were high within the commercial fishing industry in terms of community health, wellbeing, and satisfaction. Commercial fishers were asked for the first words that came to mind when they thought of the Great Barrier Reef and they suggested (i), beautiful (15%) (ii) coral 13.9% and (iii) fish (7.1%) (Figure 266).



Figure 261. Responses to the survey question, “What are the first words that come to mind when you think of the Reef?” (n=90).

2.2 Community health (CV3)

In terms of health, 64.8% of commercial fishers stated that they, “value the Reef because it makes [them] feel better physically and/or mentally, “. Only 3.3% of commercial fishers reported that they, “would not be personally affected if the health of the Reef declined”, and 37.9% suggested that, “thinking about coral bleaching makes [them] feel depressed” (Figures 267-269).

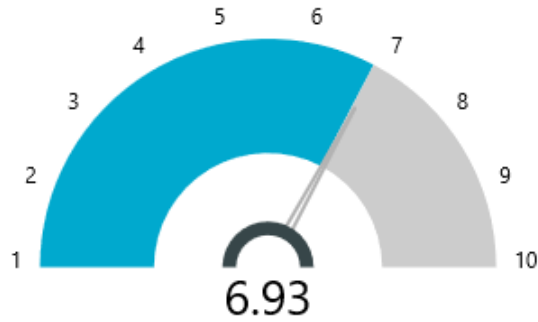


Figure 262. Responses to the survey question, "I value the Reef because it makes me feel better physically and/or mentally" (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

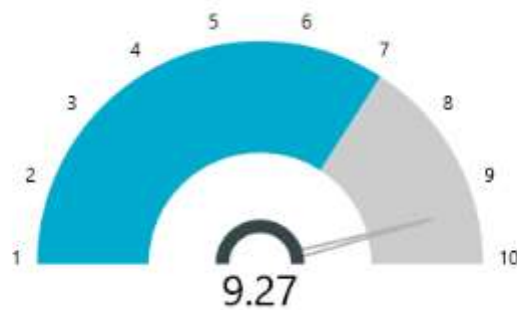


Figure 263. Responses to the survey question, "I would be personally affected if the health of the Reef declined" (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

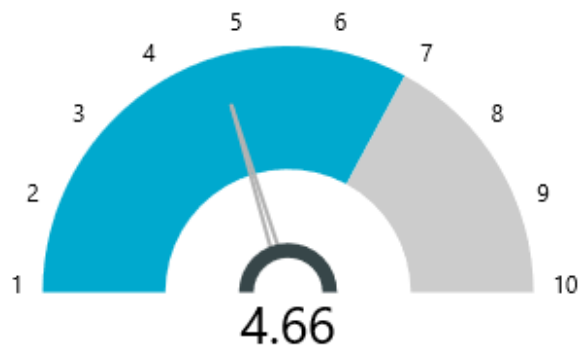


Figure 264. Responses to the survey question, "Thinking about coral bleaching makes me feel depressed" (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

2.3 Community satisfaction (CV4)

In terms of satisfaction, commercial fishers were mostly satisfied with environmental condition given that 77.9% stated that, “the coral reefs in [their] region are in good condition”, and that 27.5% of commercial fishers thought, “the freshwater areas (e.g. rivers, creeks) in [their] region are not in good condition”. Some 79.2% thought that the, “mangroves in [their] region are in good health”, and 79.8% thought that the, “estuarine and marine fish in [their] region are in good condition”. They were most worried about rubbish on beaches, where 61.4% stated, “there is too much rubbish (plastics and bottles) on the beaches in [their] region”. Some 41.3% were, “worried about the status of freshwater fish in [their] region”. Only 60.2% of commercial fishers said that they, “like the colour clarity of water along the beaches in [their] region (Figures 270-277).

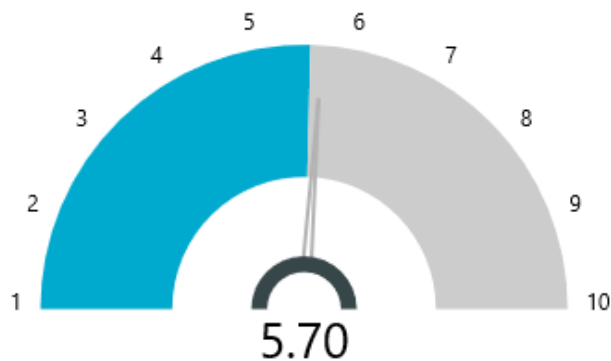


Figure 265. Responses to the survey question, “The freshwater areas in my region are in good condition” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

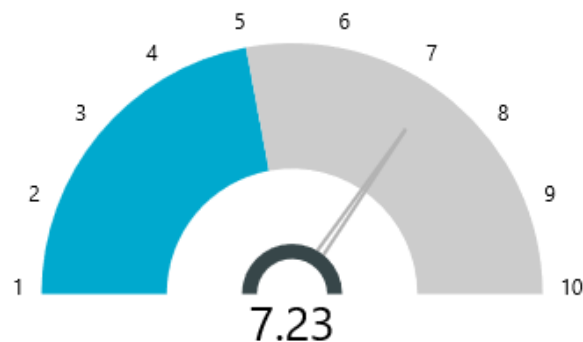


Figure 266. Responses to the survey question, “The coral reefs in my region are in good health” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

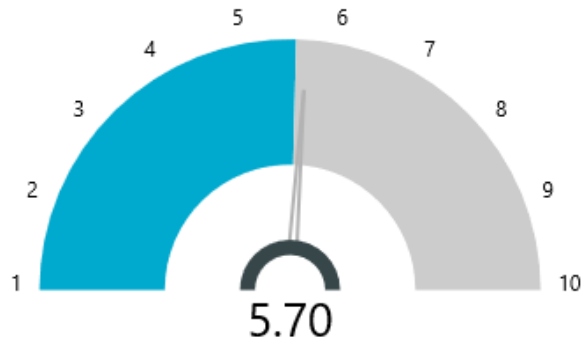


Figure 267. Responses to the survey question, “The freshwater areas (e.g. creeks, rivers) in my region are not in good condition” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

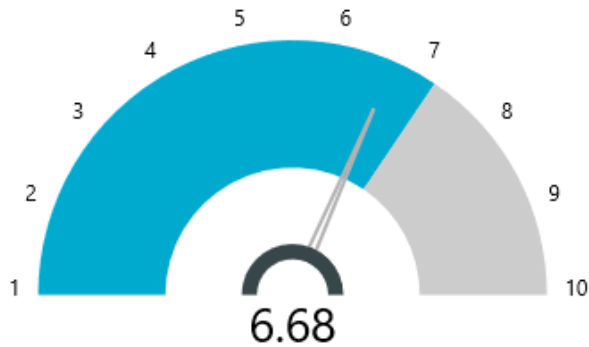


Figure 268. Responses to the survey question, “There is too much rubbish (plastics and bottles) on the beaches in my region” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

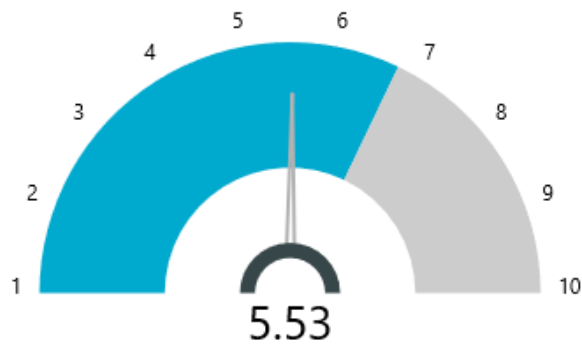


Figure 269. Responses to the survey question, “I am worried about the status of freshwater fish in my region” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

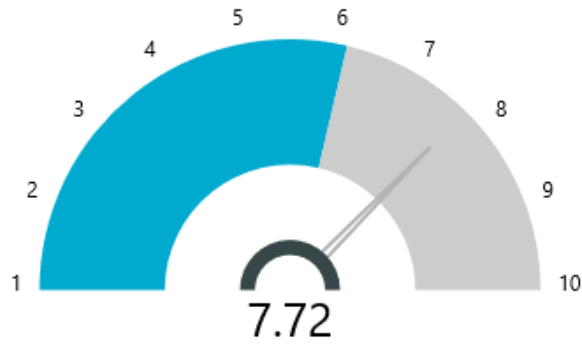


Figure 270. Responses to the survey question, “The mangroves in my region are in good health” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

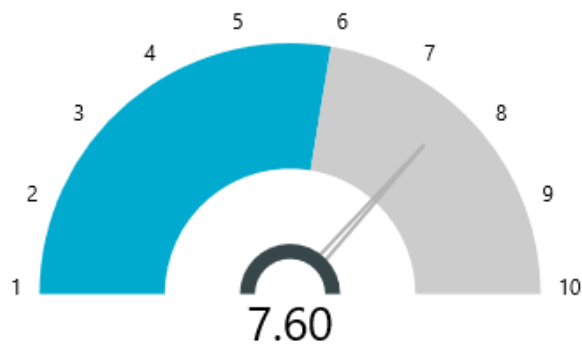


Figure 271. Responses to the survey question, “Estuarine and marine fish in my region are in good condition” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

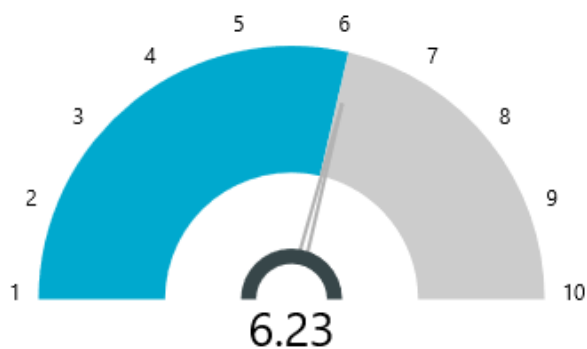


Figure 272. Responses to the survey question, “I like the colour clarity of water along the beaches in my region” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

2.4 Wellbeing (CV4)

In terms of wellbeing, 82.0% stated that, “the Reef contributes to [their] quality of life and wellbeing” and 72.4% stated that they, “feel optimistic about the future of the Reef”. Some 63.3% stated that, “I couldn’t think of being anything other than a fisher”, and 89% said that, “the fishing industry to me is not just a job, it’s my lifestyle”. Around 98.9% of commercial fishers stated that they, “love that [they] live beside the Reef, and 67.0% were, “worried about climate change impacts on the Reef (Figures 278-282). Some 86.8% of commercial fishers were married or had a partner.

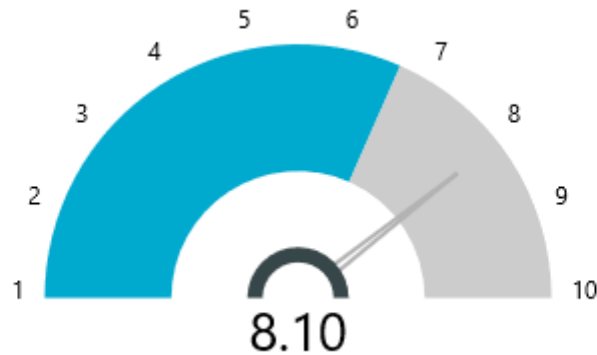


Figure 273. Responses to the survey question, “The Reef contributes to my quality of life and wellbeing” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

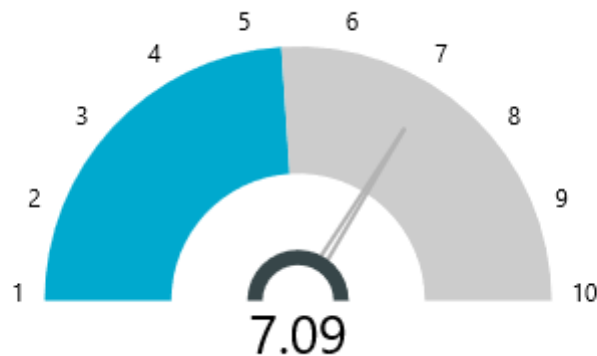


Figure 274. Responses to the survey question, “I feel optimistic about the future of the Reef” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

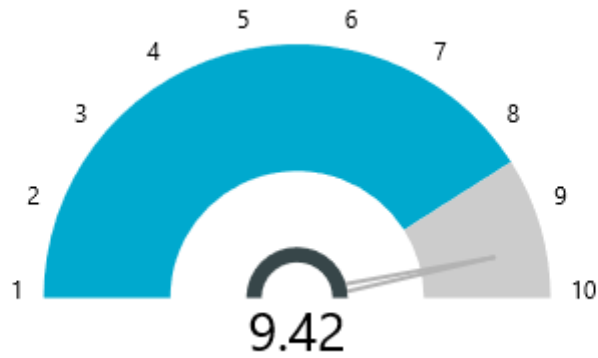


Figure 275. Responses to the survey question, "I love that I live beside the Reef" (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

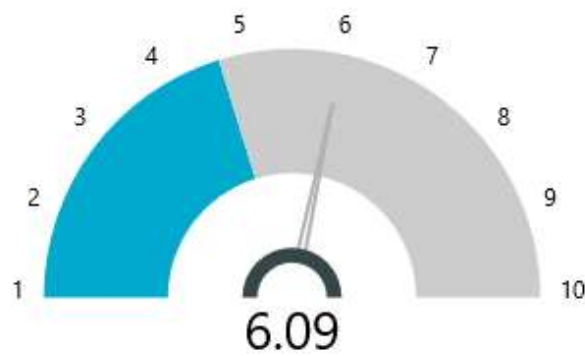


Figure 276. Responses to the survey question, "I feel that future generations have been adequately considered in the management of the Reef" (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

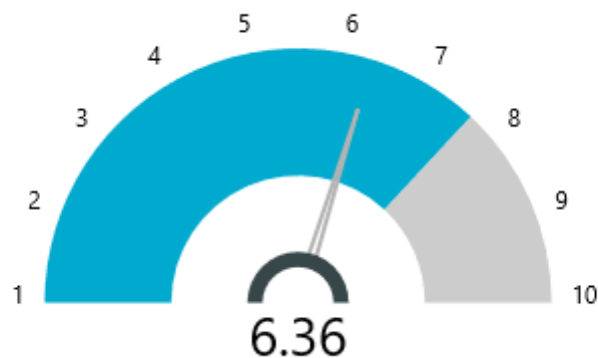


Figure 277. Responses to the survey question, "I am worried about climate change impacts on the Reef" (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

2.5 Resource Use (ACS3)

The Reef is a key resource for commercial fishers. Most fishers had lived within the region for 20 years (Figure 284). A map of the home ports of fishers from this study is presented in Figure 283. Some 61.5% of fishers use multiple ports. Fishers (62.7%) tend to roam more than 100km from their home port, where 17.6% fish close to their home port (50-100km), and another 17.6% tend to fish very local to their home port (less than 50km away). Most of the fishers in this study operated in the line fishery (Spanish mackerel and reef species) (Tables 20-21).

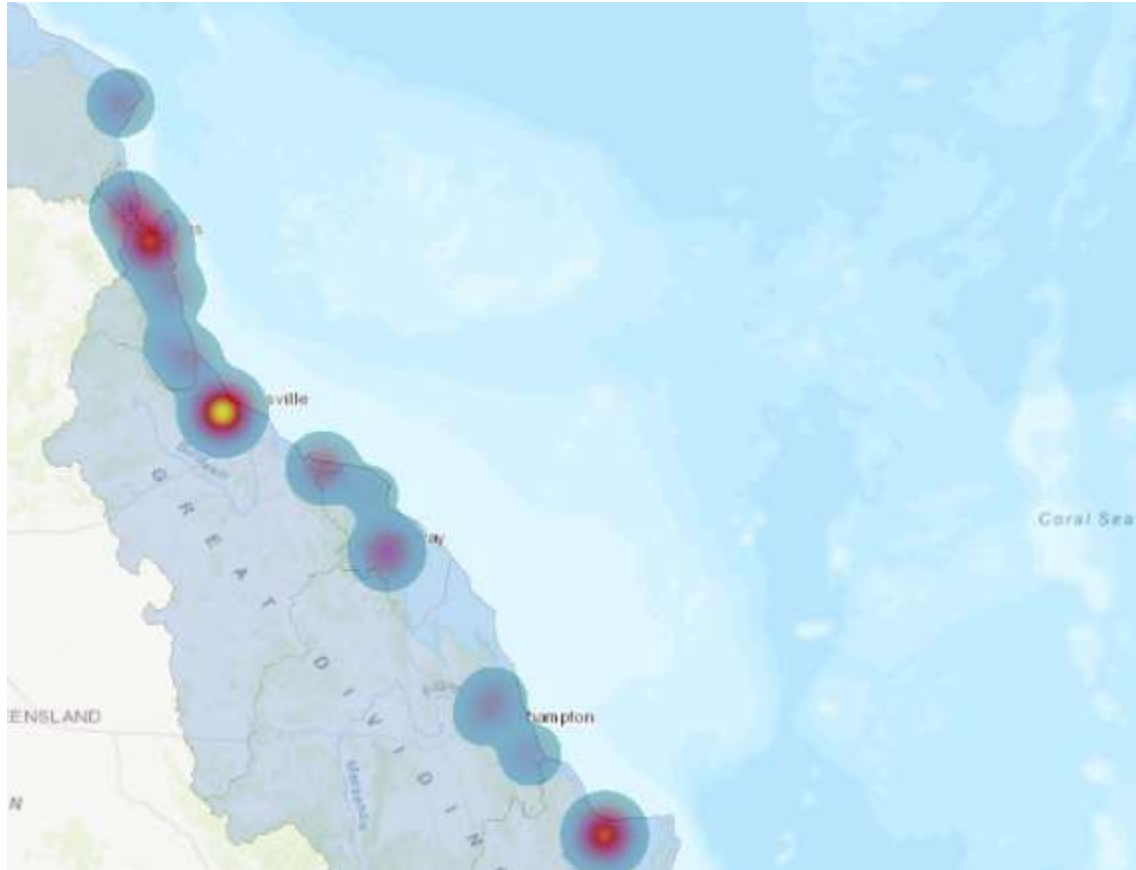


Figure 278. Location of commercial fishers' home ports. Yellow represents highest density of fishers, and blue represents the lowest.

Table 19. Responses to the survey question, "Which fisheries do you operate in?"

	Frequency	Percentage
Crab - mud, sand	10	11.0
Harvest - coral collection, aquarium fish, sea cucumber, rock lobster (crayfish)	9	9.9
Line - Spanish mackerel, reef line	42	46.2
Net - inshore net, offshore net, shark	10	11.0
Trawl - prawn, bugs, scallop, squid	19	20.9
Total	91	100.0

Table 20. Responses to the survey question, "Where is your home port (where you operate from, not necessarily where you live)"

	Frequency	Percentage
Bowen	5	5.5
Bundaberg	16	17.6
Cairns	14	15.4
Cape Flattery	3	3.3
Gladstone	2	2.2
Hamilton Island	1	1.1
Innisfail	2	2.2
Lucinda	3	3.3
Mackay	7	7.7
Mourilyan	1	1.1
Port Douglas	8	8.8
Port Hinchinbrook	1	1.1
Rockhampton	1	1.1
Townsville	12	13.2
Yeppoon	3	3.3
Yorkeys Knob	1	1.1
Total	91	100.0

D3. Culture and Heritage

3.1 Values of commercial fishers

The contemporary cultural and heritage value of the Great Barrier Reef was high for local commercial fishers. The Great Barrier Reef was valued for very many reasons. For example, 97.8%, "value the Reef for the fresh seafood it provides", and 96.7%, "value the Reef because it supports a variety of life, such as fish and corals". Even though the Reef is an important economic resource for fishers, where 85.6% valued it because, "the Reef is a great asset for the economy of the region" we observed that more fishers appreciated the aesthetic values of the Reef, given that 90.0% reported that the, "the aesthetic beauty of the Reef is outstanding". Some 81.4% of commercial fishers reported that they, "value the Reef because it exists, even if [they] don't benefit from it". We also found that 75.8% of commercial fishers felt, "proud that the Reef is a World Heritage Area", and that 68.5% felt that, "the Reef is part of [their] identity". Some 75.3%, "value the Reef because we can learn about the environment through scientific discoveries", and 73.9% of commercial fishers said that they, "value the Reef because it attracts people from all over the world". Some 67.8% said that they, "value the Reef because it provides a place where people can continue to pass down wisdom, traditions and a way of life", where 60.9% of commercial fishers valued the Reef because, "it is an important part of my culture". Some 50.6% reported that it, "inspires [them] in artistic or thoughtful ways, 50% reported that they, "value the Reef because it is spiritually important to [them]". Only 38.6% said, they, "value the Reef because of its rich traditional owner heritage" (Figures 284-297).

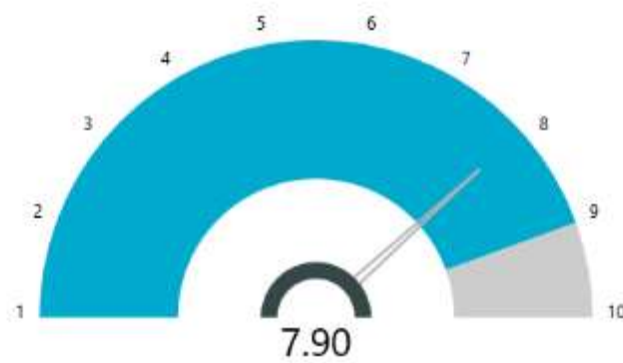


Figure 279. Responses to the survey question, "I feel proud that the Reef is a World Heritage Area" (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

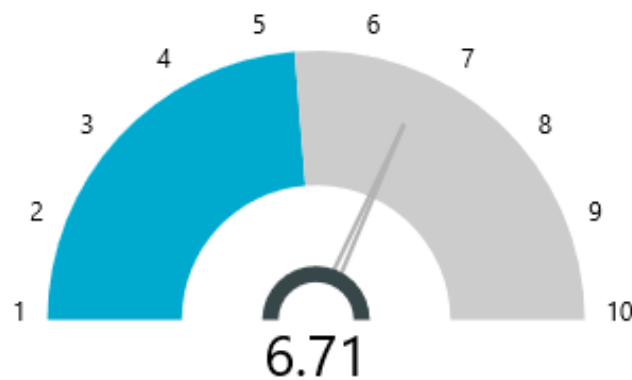


Figure 280. Responses to the survey question, "The Reef is an important part of my culture" (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

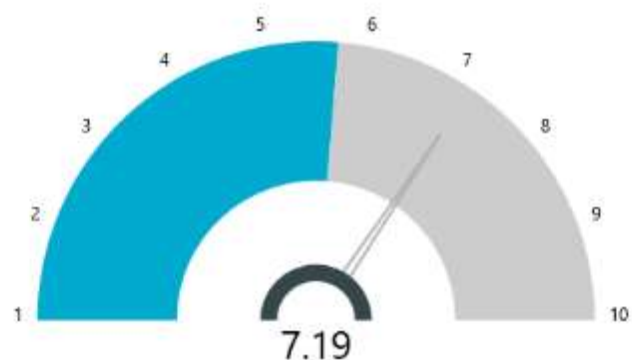


Figure 281. Responses to the survey question, "The Reef is part of my identity" (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

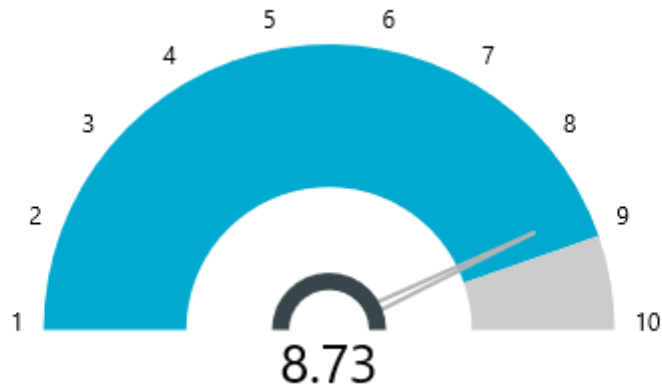


Figure 282. Responses to the survey question, “The Reef is a great asset for the economy of the region” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

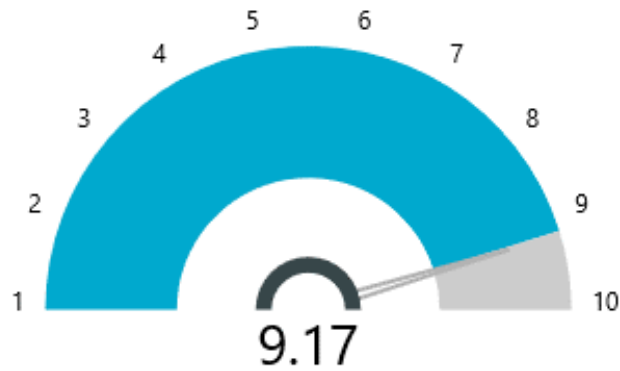


Figure 283. Responses to the survey question, “I value the Reef because it supports a variety of life such as fish and corals” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

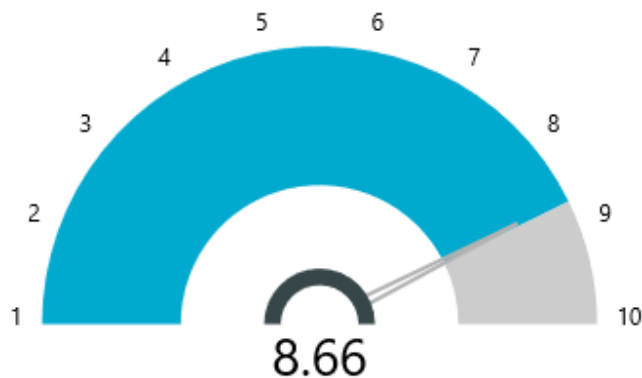


Figure 284. Responses to the survey question, “The aesthetic beauty of the Reef is outstanding” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

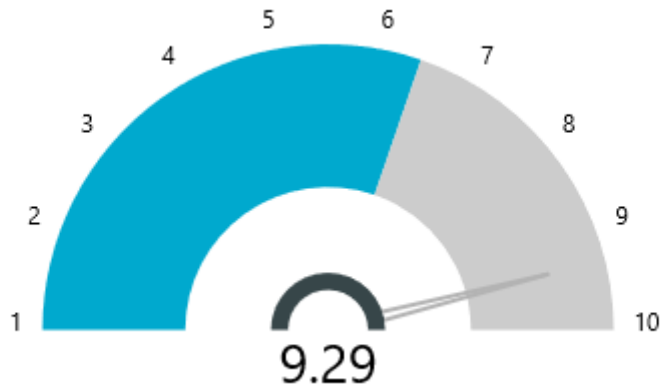


Figure 285. Responses to the survey question, “I value the Reef for the fresh seafood it provides” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

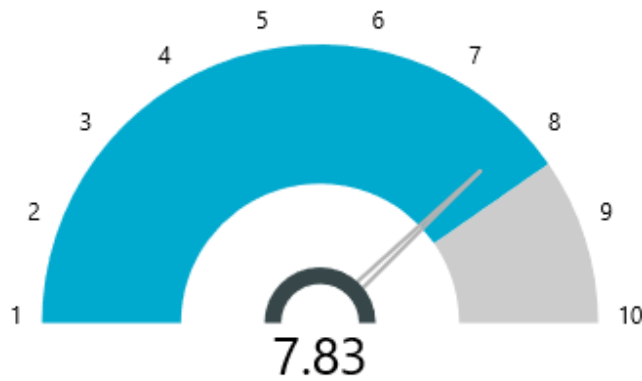


Figure 286. Responses to the survey question, “I value the Reef because it attracts people from all over the world” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

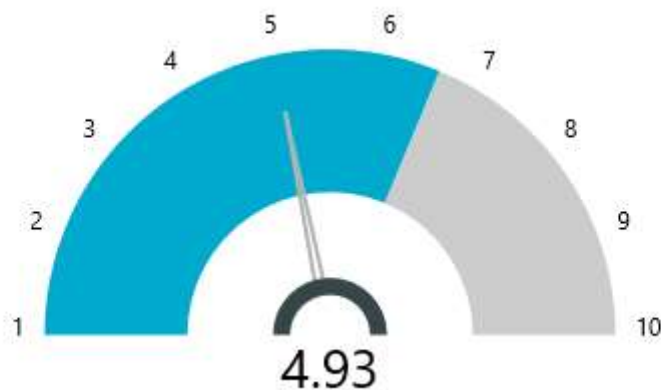


Figure 287. Responses to the survey question, “I value the Reef because of its rich traditional owner heritage” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

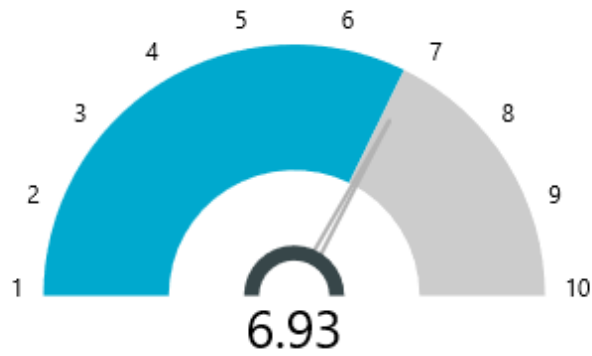


Figure 288. Responses to the survey question, “I value the Reef because it provides a place where people can continue to pass down wisdom, traditions and way of life” (n=9). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree.

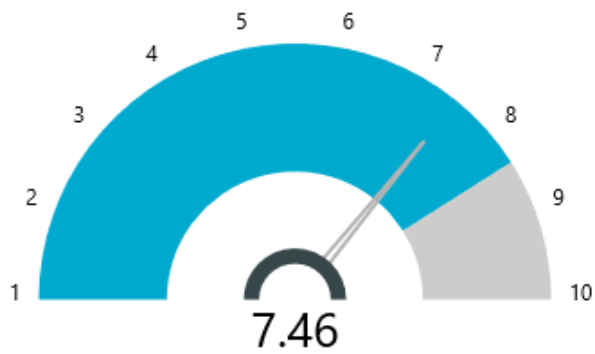


Figure 289. Responses to the survey question, “I value the Reef because we can learn about the environment through scientific discoveries” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

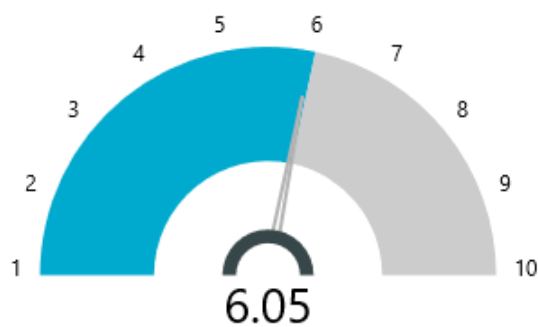


Figure 290. Responses to the survey question, “I value the Reef because it inspires me in artistic or thoughtful ways” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

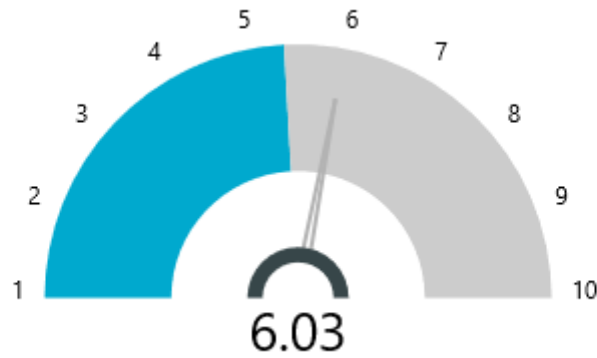


Figure 291. Responses to the survey question, “I value the Reef because it is spiritually important to me” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

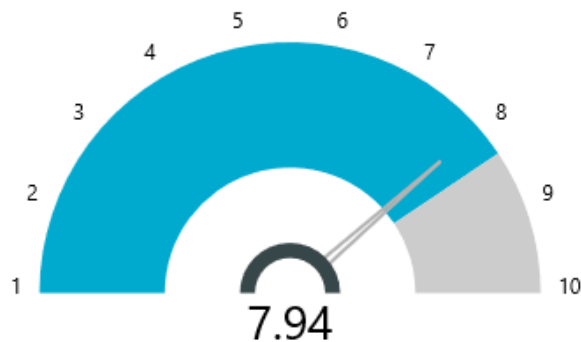


Figure 292. Responses to the survey question, “I value the Reef because it exists, even if I don’t benefit from it” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

D4. Economic value

4.1 Economic viability (EV1-5)

Only 50.6% of commercial fishers said that they were, “optimistic about the future of [their] business in the Reef”. And 46.2% suggested that their, “business [had] not performed this year as well as last year.” We also found that 59.3% of commercial fishers in this study had insurance for their business assets. Many fishers (35%) had an entire business revenue of over \$500,000 during the previous 12 months (Table 22).

Results suggest that 61.5% of fishers use multiple ports. Most fishers (64%) travelled ‘quite some distance’ from their home port (> 100km), whilst 17.6% of fishers travelled closer to their home port (50-100km), and another 17.6% travelled less than 50km from their home port.

Table 21. Responses to the survey question, “Could you please indicate (approximately) your business turnover (entire revenue) for the past 12 months, in broad categories?”

Business turnover for previous 12 months	Frequency	Percentage
< \$20,000	2	2.2
\$20,000 to \$60,000	8	8.8
\$60,001 to \$100,000	15	16.5
\$100,001 to \$200,000	13	14.3
\$200,001 to \$300,000	7	7.7
\$300,001 to \$500,000	7	7.7
> \$500,000	32	35.2
Total	91	100.0

D5. Governance

SELTMP 2017 data provides insight into the perceptions of management of the Great Barrier Reef, as well as the levels of connectivity within and between key sectors as well as information sources.

5.1 Confidence and support in management (G3)

Results suggest that only 38.8% of commercial fishers thought that, “enough is being done to effectively manage the Reef”, and 52.8% of commercial fishers felt, “confident that the Reef is well managed”. Even fewer fishers (26.5%) said that they, “feel confident that the freshwater areas in [their] region are well managed”. However, 40.7% suggested that they, “support the current rules and regulations that affect access and use of the Reef”, and that 42.9% stated that they, “support the current rules and regulations that affect access and use of freshwater areas (rivers and creeks) in [their] region.” Overall, we found that 61.8% of commercial fishers saw themselves as progressive rather than traditional (Figures 298-300).

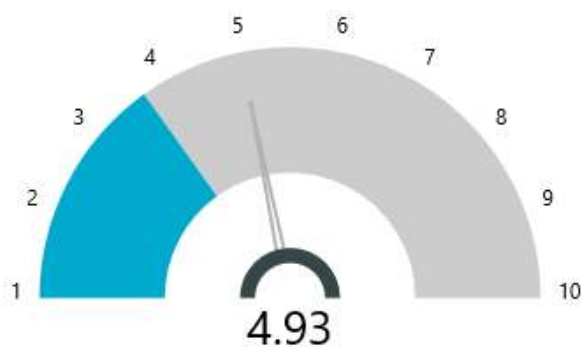


Figure 293. Responses to the survey question, “I think enough is being done to effectively manage the Reef” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

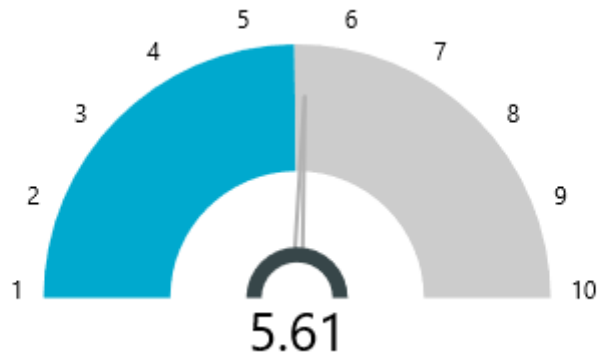


Figure 294. Responses to the survey question, “I am confident that the Reef is well managed” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

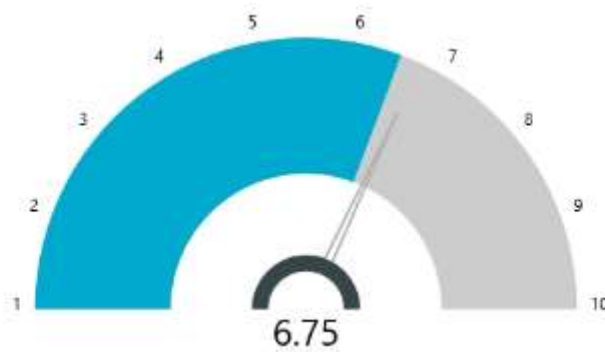


Figure 295. Responses to the survey question, “In general, would you consider yourself to be more tradition or progressive” (n=1934). Responses are provided on a 10 point scale, where 1=very traditional and 10 = very progressive.

5.2 Equity Issues (EV4)

Results from SELTMP 2017 found that 34.4% of commercial fishers felt that they, “do not have fair access to the Reef compared to other user groups, “. We also found that around half of the fisher population in this study (49.5%) felt, “that future generations have been adequately considered in the management of the Reef” (Figures 301-302).

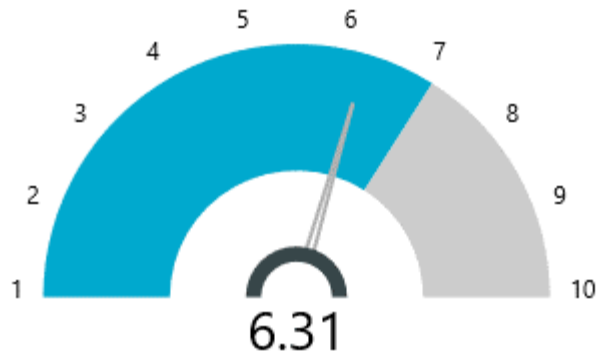


Figure 296. Responses to the survey question, “I do have fair access to the Reef compared to other user groups” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

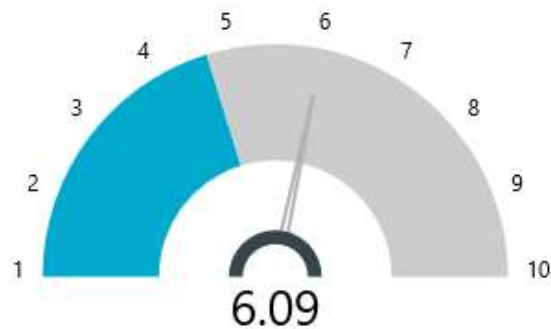


Figure 297. Responses to the survey question, “future generations have been adequately considered in the management of the Reef” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

5.3 Trust in networks (G4)

Overall, SELMTP 2017 found that commercial fishers were less trusting of typical sources of information about environmental issues than other stakeholders. We found low to moderate levels of trust in government and Reef management, where fishers tended to trust family/friends, scientists and industry bodies more. Specifically, we found that 67.8% trusted friends, family and work colleagues, 45.3% of local commercial fishers trusted scientists for information about the Reef, 43.7% trusted industry groups, 39.1% of local commercial fishers trusted GBRMPA, and 31.9% trusted Fisheries Queensland, whilst 17.0% trusted the Australian government and 15.9% trusted state government for information about the Reef. SELTMP 2017 also found that 12.8% trusted Australian NGOs, 8% trusted international NGOs, 4.8% trusted lobby groups such as Get Up, 3.5% trusted news media journalists, and 3.5% trusted social media commentators and bloggers (Figures 303-312).



Figure 298. Responses to the survey question, “how much do you trust the information you receive about the Reef from the Australian Government?” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

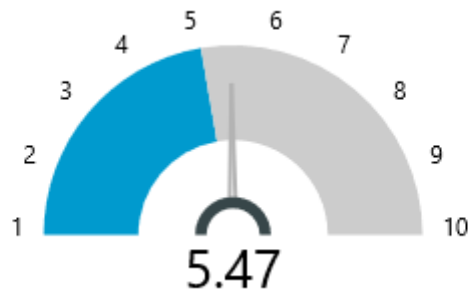


Figure 299. Responses to the survey question, “how much do you trust the information you receive about the Reef from Industry Groups?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

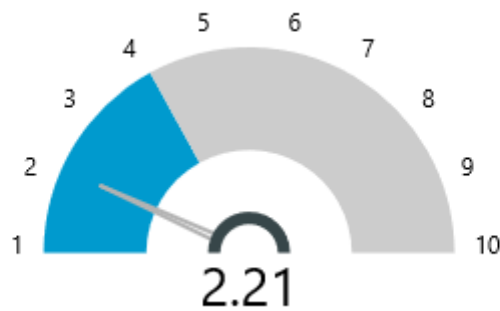


Figure 300. Responses to the survey question, “how much do you trust the information you receive about the Reef from Lobby Groups?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators)

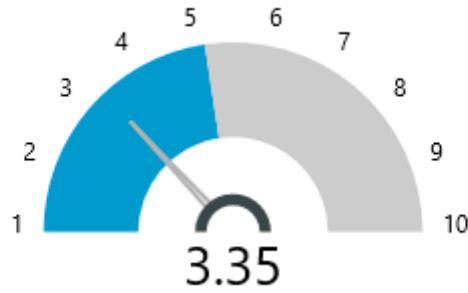


Figure 301. Responses to the survey question, “how much do you trust the information you receive about the Reef from Queensland government?” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

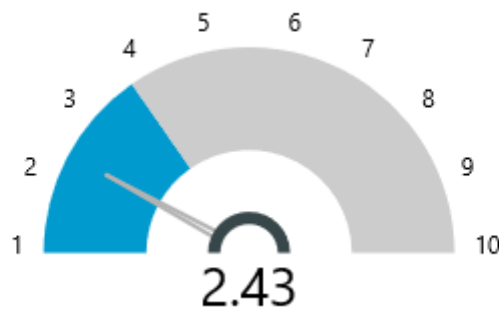


Figure 302. Responses to the survey question, “how much do you trust the information you receive about the Reef from social media commentators, bloggers?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

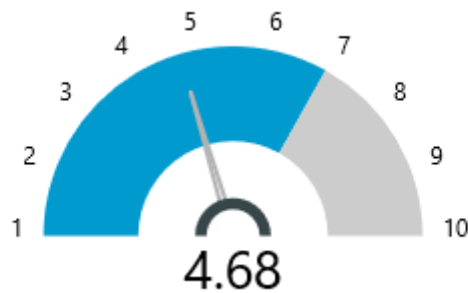


Figure 303. Responses to the survey question, “how much do you trust the information you receive about the Reef from GBRMPA?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

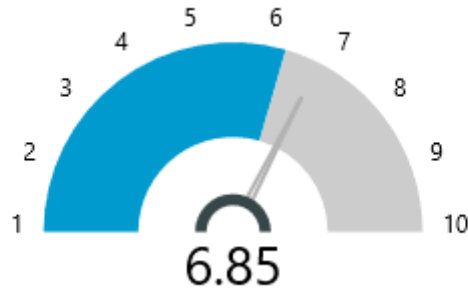


Figure 304. Responses to the survey question, “how much do you trust the information you receive about the Reef from friends, family etc.?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

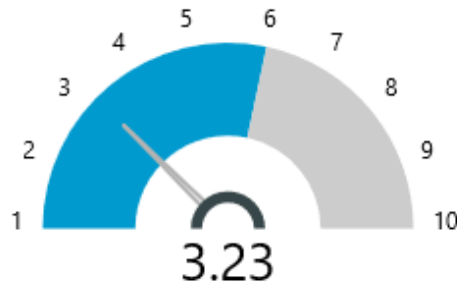


Figure 305. Responses to the survey question, “how much do you trust the information you receive about the Reef from Australian based NGOs?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

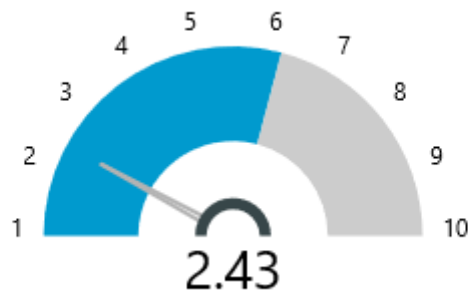


Figure 306. Responses to the survey question, “how much do you trust the information you receive about the Reef from International conservation NGOs?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

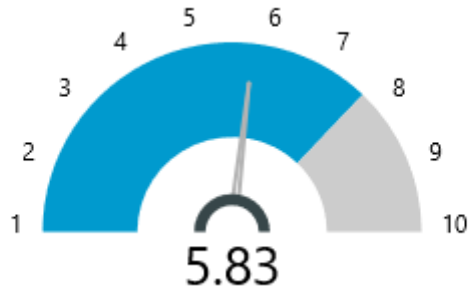


Figure 307. Responses to the survey question, “How much do you trust the information you receive about the Reef from scientists?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

5.4 Sources of information (G4)

SELTMP 2017 found that the most important sources of information about the Reef for commercial fishers were word of mouth (52.9%), local radio (38.6%), national/regional radio (37.5%), free to air television (36.4%), local newspaper (23.9%), magazines (21.6%), digital streaming services (17.2%), state/regional newspapers (15.9%), news media websites (14.8%), pay tv (14.9%), YouTube (13.8%). Online discussion forums (10.3%), Facebook (15.1%), twitter (3.4%), Instagram (2.3%), snapchat (1.1%) (Figure 313-328).

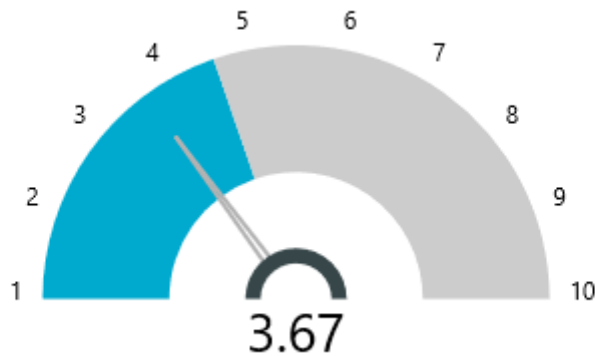


Figure 308. Responses to the survey question, “How much do you rely on local newspapers for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

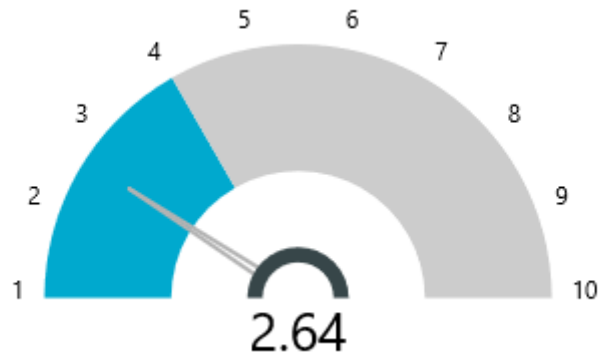


Figure 309. Responses to the survey question, “How much do you rely on digital streaming services for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

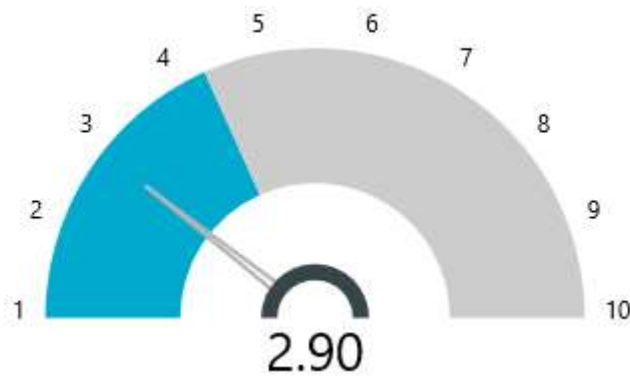


Figure 310. Responses to the survey question, “How much do you rely Facebook for new about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

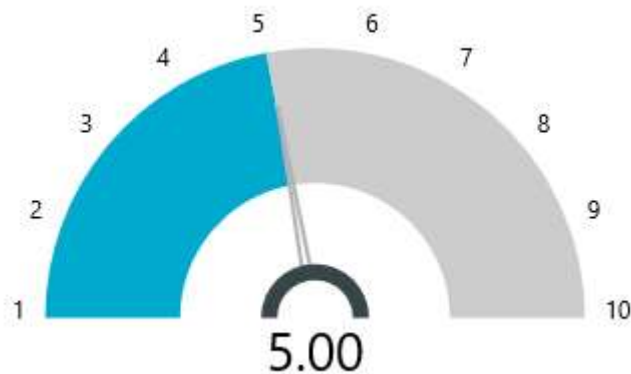


Figure 311. Responses to the survey question, “How much do you rely on free to air television for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

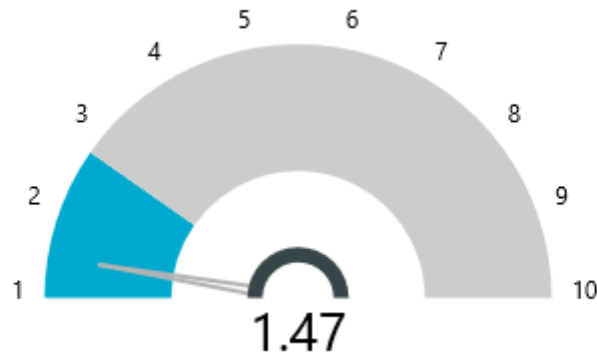


Figure 312. Responses to the survey question, “How much do you rely on Instagram for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

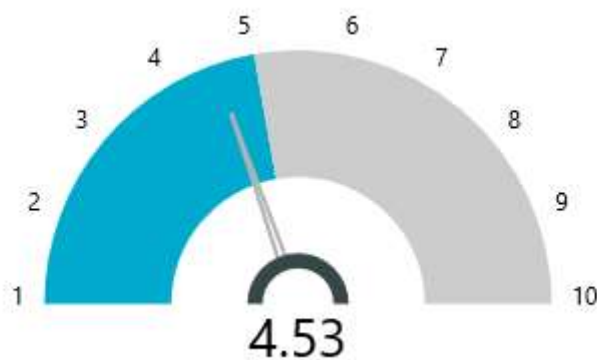


Figure 313. Responses to the survey question, “How much do you rely on local radio for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

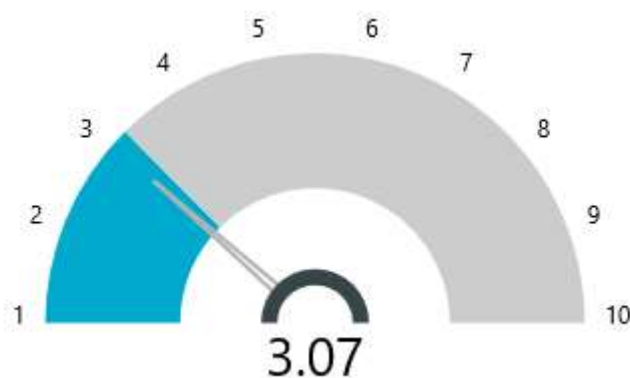


Figure 314. Responses to the survey question, “How much do you rely on magazines for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

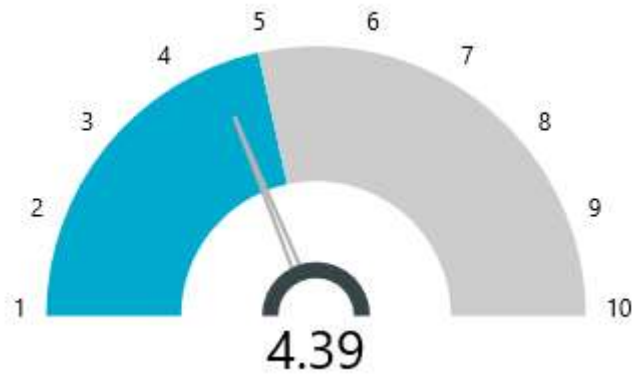


Figure 315. Responses to the survey question, “How much do you rely on national radio for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

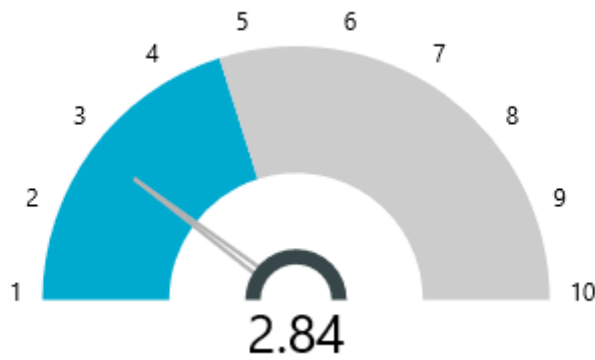


Figure 316. Responses to the survey question, “How much do you rely on news media websites for news about your region and the world?” (n=94). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

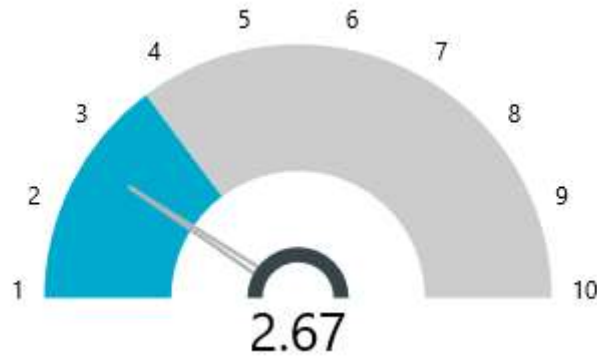


Figure 317. Responses to the survey question, “How much do you rely on other discussion forums for news about your region and the world?” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

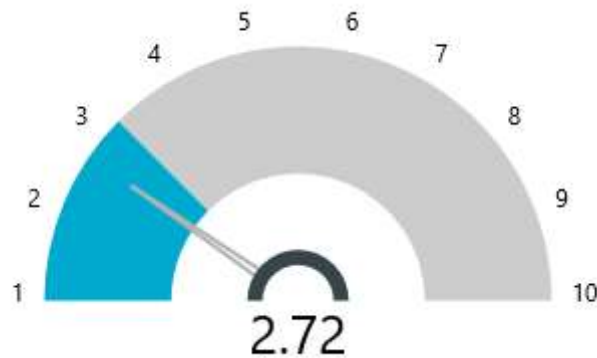


Figure 318. Responses to the survey question, “How much do you rely on pay TV for news about your region and the world?” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

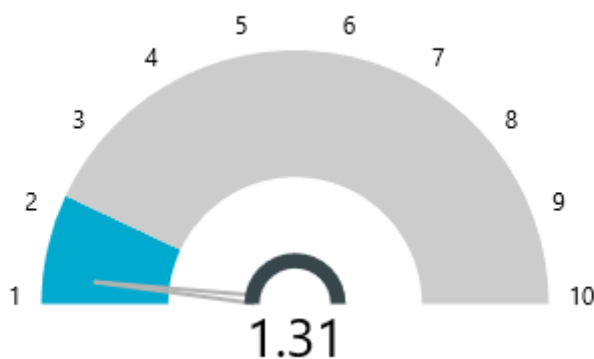


Figure 319. Responses to the survey question, “How much do you rely on snapchat for news about your region and the world?” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

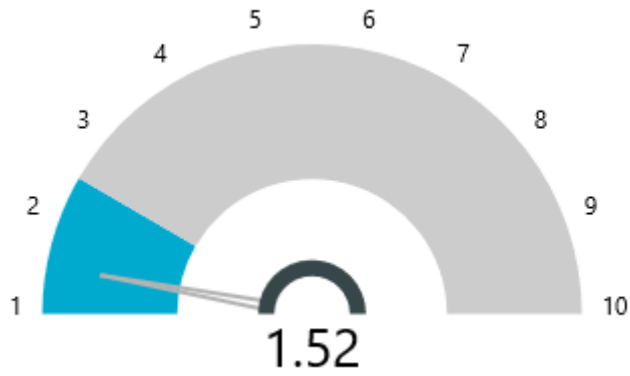


Figure 320. Responses to the survey question, “How much do you rely on twitter for news about your region and the world?” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

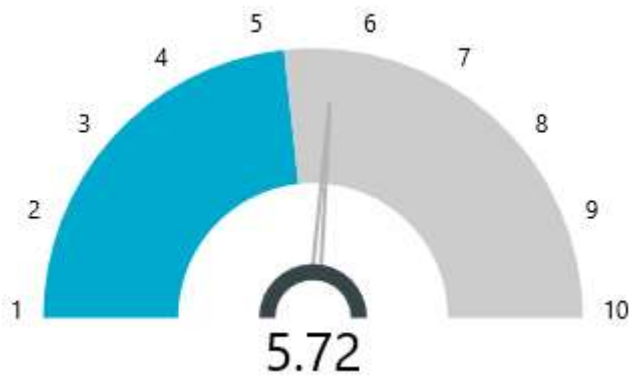


Figure 321. Responses to the survey question, “How much do you rely on word of mouth for news about your region and the world?” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

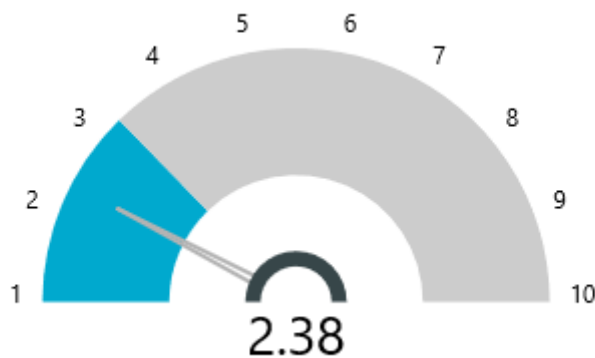


Figure 322. Responses to the survey question, “How much do you rely on YouTube for news about your region and the world?” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

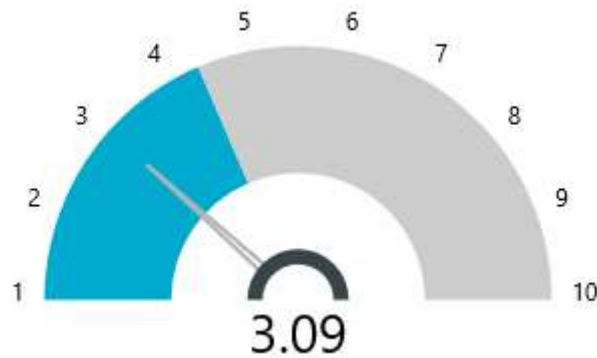


Figure 323. Responses to the survey question, “How much do you rely on state newspapers for news about your region and the world?” (n=91). Responses are provided on a 10 point scale, where 1=very strongly disagree and 10 = very strongly agree. The blue shading represents the mean for the total SELTMP survey (tourism operators, tourists, commercial fishers and tourism operators).

E. National Residents

Using an external service provider, *Pollinate*, we surveyed 1,028 national residents for this study. Only a subset of SELTMP questions were included in the National Survey due to space and budgetary restrictions. The sample was representative of the general Australian public in terms of gender, age, life stage, location, employment status, education and income (Figure 329).

Results suggest that the relationship that Australians have with the Reef is still mostly positive as the first words that come to mind are fish, beautiful and coral, however, dying has also emerged as a ‘first word’ (Figure 330). Since project inception in 2013, results suggest that while the reef’s natural beauty was the primary association for Australians in the past, perceptions of the reef have shifted, where words such as dying, deterioration, endangered, bleaching have increased significantly (Table 24).

Australians see that climate change, littering and agricultural run-off are the biggest threats to the Reef (Figure 331). Since 2013, almost all perceived threats have increased in mentions, particularly littering and crown of thorns starfish. The perceived threat of cyclones and tropical storms has almost doubled since March 2016 (Figure 332).

Results also suggest that Reef visitation has decreased, but the intent to visit has increased across the last 18 months, particularly among younger people (Figure 333).

The Great Barrier Reef is still considered Australia’s most inspiring landmark, where 30% of Australians rated the Reef as the most inspiring landmark in the country. However, people are finding the Reef less inspiring over time, but this decline is consistent across all landmarks. Australians remain proud of the Reef and feel a sense of responsibility to protect it, but they are not optimistic about its future. There is also movement away from individual responsibility around the Reef to the perception that it is the collective responsibility of the nation (citizens and management bodies) to protect the Reef (Figures 334-336).

Results suggest that government (state and federal) have low trust with the Australian public (<20%). The most trusted organisation to report on environmental issues is the CSIRO (53%). CSIRO has been the most trusted organisation in reporting environmental issue over the past seven years (Figures 338-339).

All numbers shown are percentages



Figure 324. Demographics of the National survey population. The sample is representative of the general Australian population. Image taken from Pollinate 2017.



Figure 325. Responses to the question, "What are the first words that come to mind when you think of the Great Barrier Reef". Image taken from Pollinate 2017.

Table 22. Responses (%) since 2013 to the question, “Please list the first words that come to mind when you think of the Reef”. Data taken from Pollinate 2017.

	Mar'13	Sep'13	Sep'14	Mar'16	Mar'17
Beautiful / beauty / pristine	26	25	25	25	22
Coral / reef	23	21	17	22	20
Fish / marine life	25	22	18	19	18
Dying / deterioration (-)	4	4	4	5	12
Water / ocean	16	12	14	12	12
Amazing / majestic / inspiring	12	12	10	10	11
Endangered / under threat (-)	8	8	11	7	10
Natural	10	11	8	10	7
Colourful	9	7	5	7	6
World wonder / Heritage site / Well known	5	5	4	7	6
Good / great	2	3	4	3	5
Bleaching (-)	2	1	1	3	5
Big	4	3	4	3	4
Unique / special	6	6	5	4	4
Tourism	4	3	2	4	3
Should be protected/ more protected (-)	2	3	2	3	3
Snorkelling/diving	3	1	3	4	3
Australian / Queensland	3	2	3	3	3
Tropical / paradise / beach	0	1	1	2	2
Calm / relaxing / peaceful	1	1	1	2	2
Global warming / rising sea temp (-)	0	0	0	0	1
Pollution (-)	1	1	1	1	1
Fragile / vulnerable (-)	2	2	1	2	1
Crown of Thorns Starfish (-)	1	1	1	1	1
Want to visit / great place to visit	0	0	0	0	1
Interesting	0	0	0	0	0
Unimpressed / overrated (-)	0	0	0	0	0
Dredging/coal port (-)	0	0	1	0	0
NET (-) Negative mentions	17	18	19	20	27

■ Don't know ■ Not at all threatening - 1 ■ 2 ■ 3 ■ 4 ■ 5 ■ 6 ■ 7 ■ 8 ■ 9 ■ Extremely threatening - 10

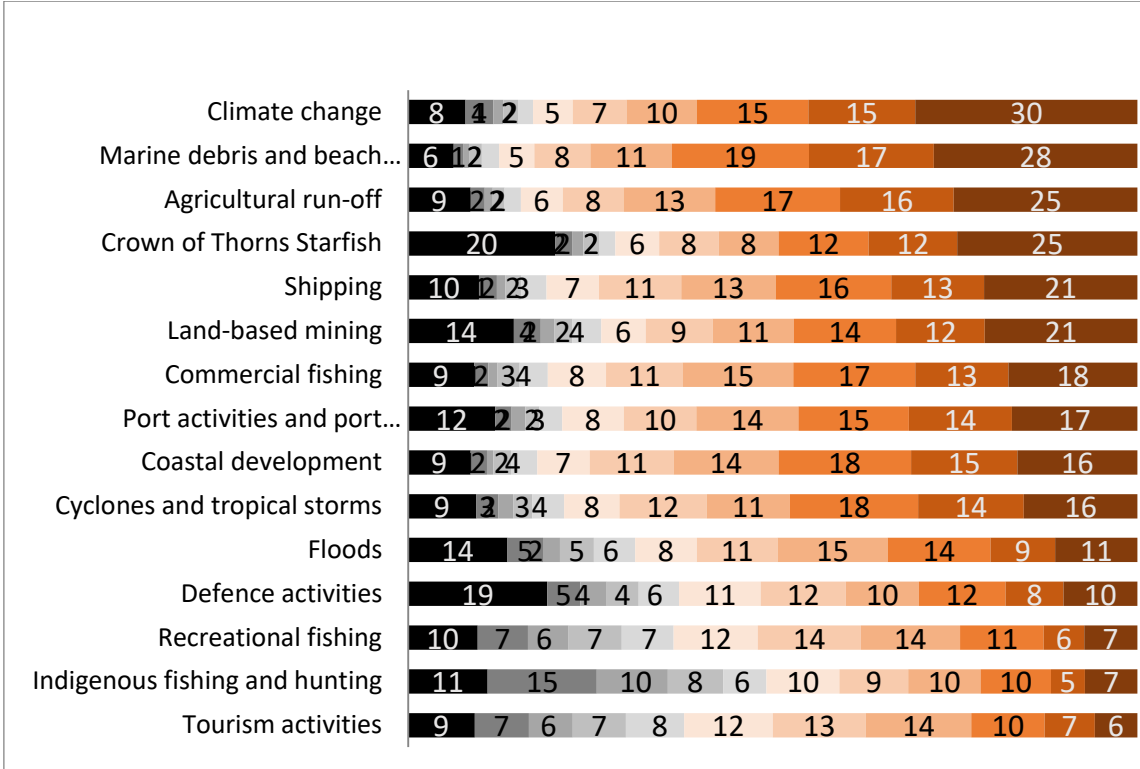


Figure 326. Responses to the question, "how threatening do you find each of the following to the Reef?" Image taken from Pollinate 2017.

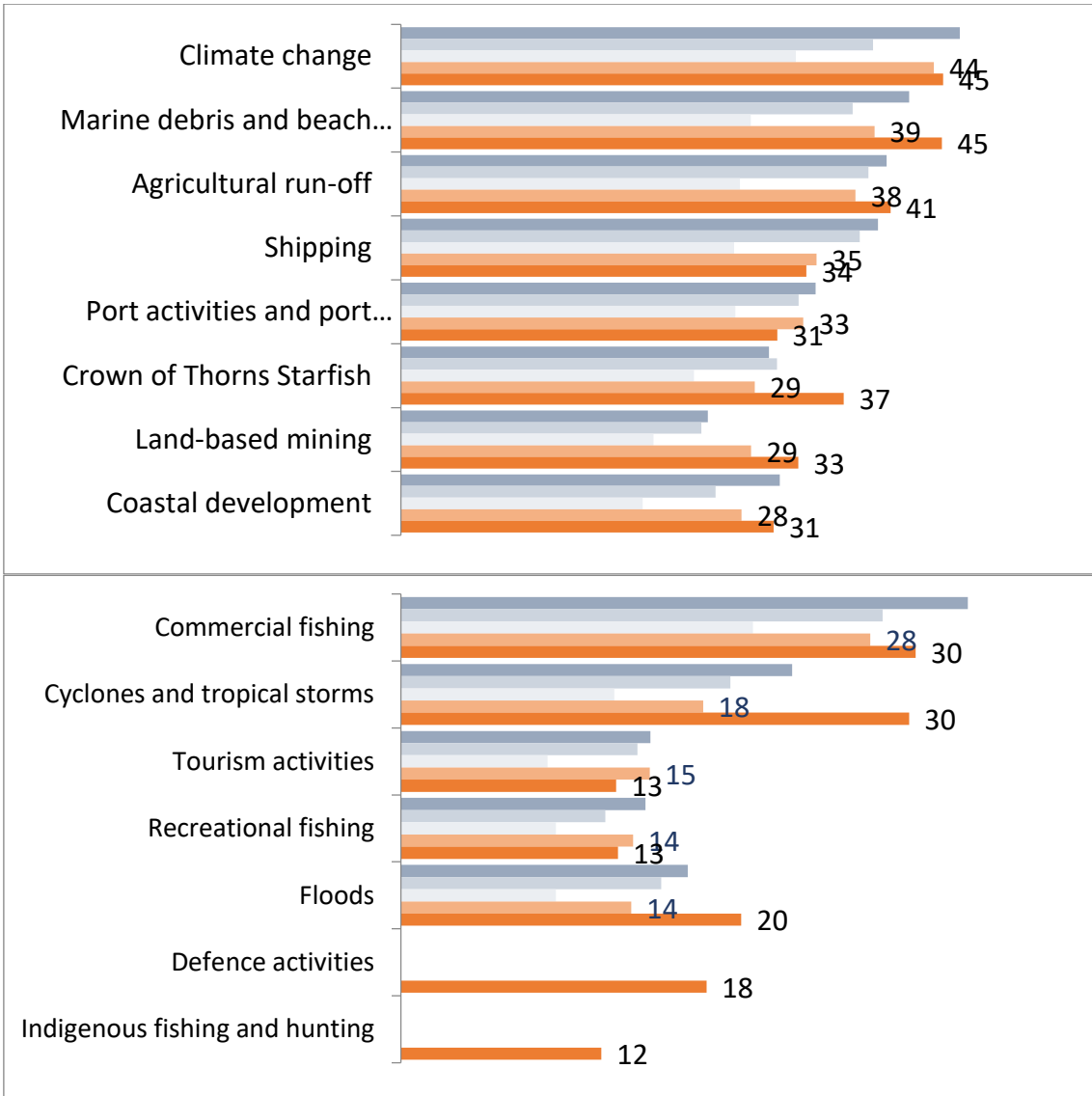


Figure 327. Responses since 2013 to the question, “how threatening do you find each of the following to the Reef”. Image taken from Pollinate 2017 (Grey = 2013 to Orange=2017)

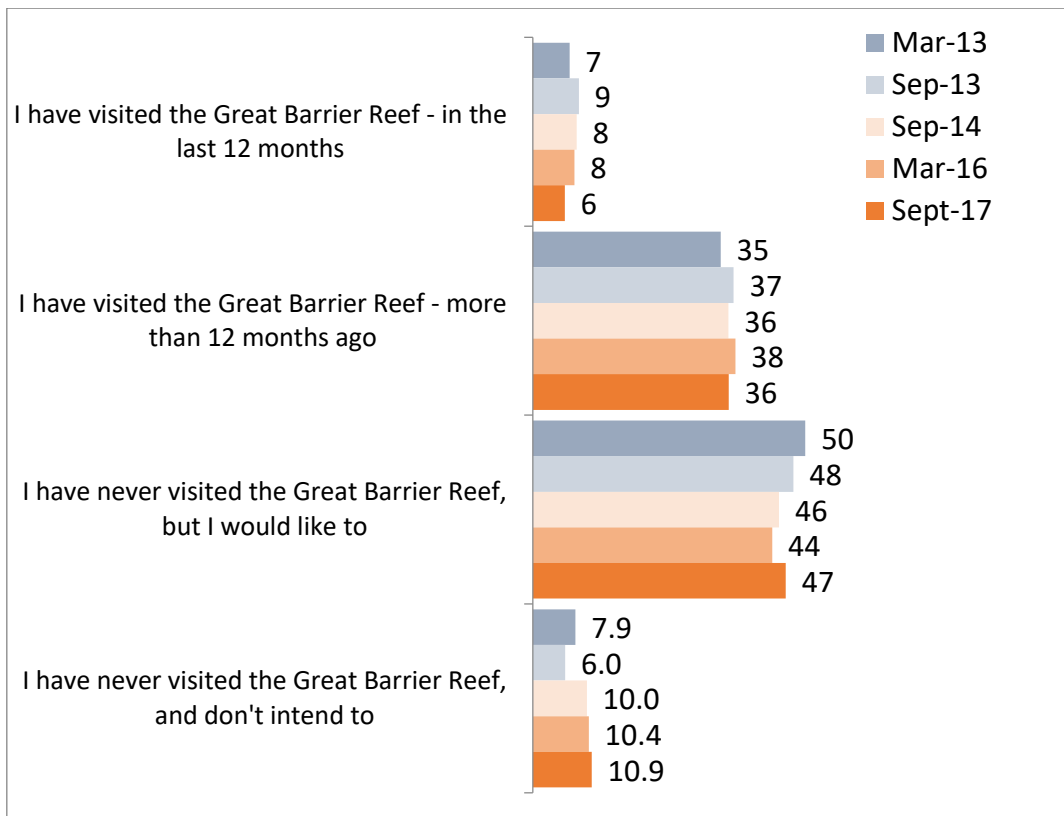


Figure 328. Historical visitation and intent to visit the Reef. Image taken from Pollinate 2017 Image taken from Pollinate 2017.

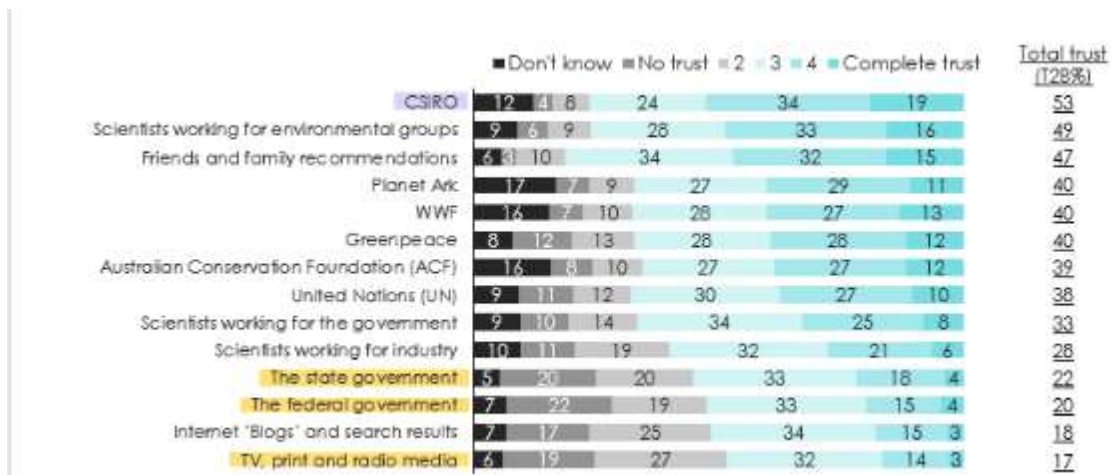


Figure 329. Responses to the question, "how much do you trust each of the following organisations for information about the environment"? Image taken from Pollinate 2017.

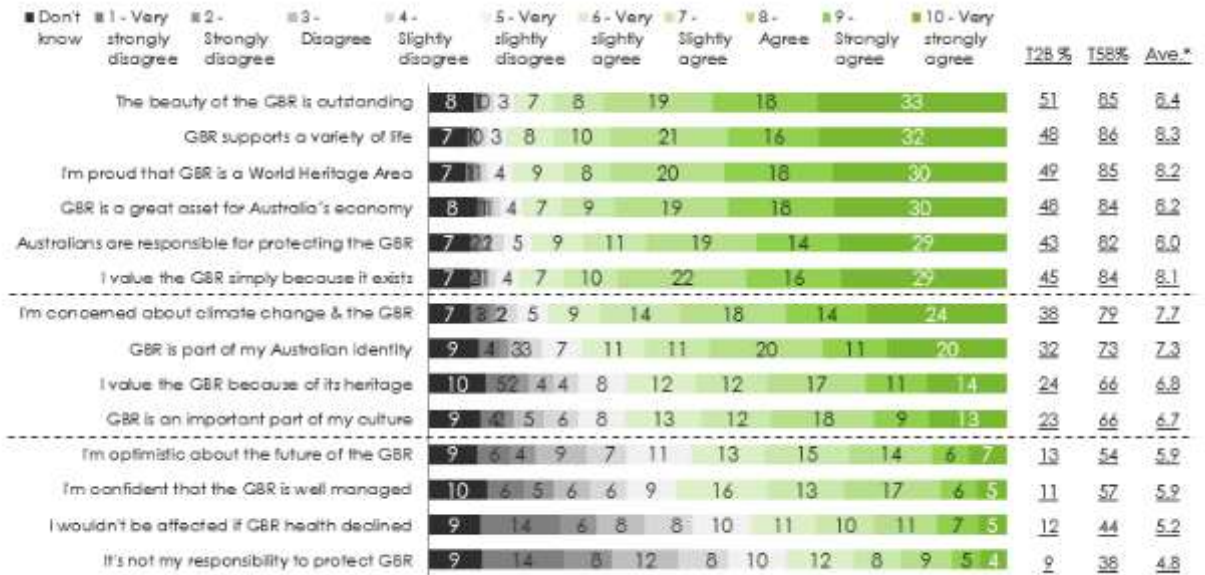


Figure 330. Responses to the question, “how much do you agree or disagree with each of the following on the 10 point scale below, where 1=very strongly disagree, and 10=very strongly agree”. Image taken from Pollinate 2017.

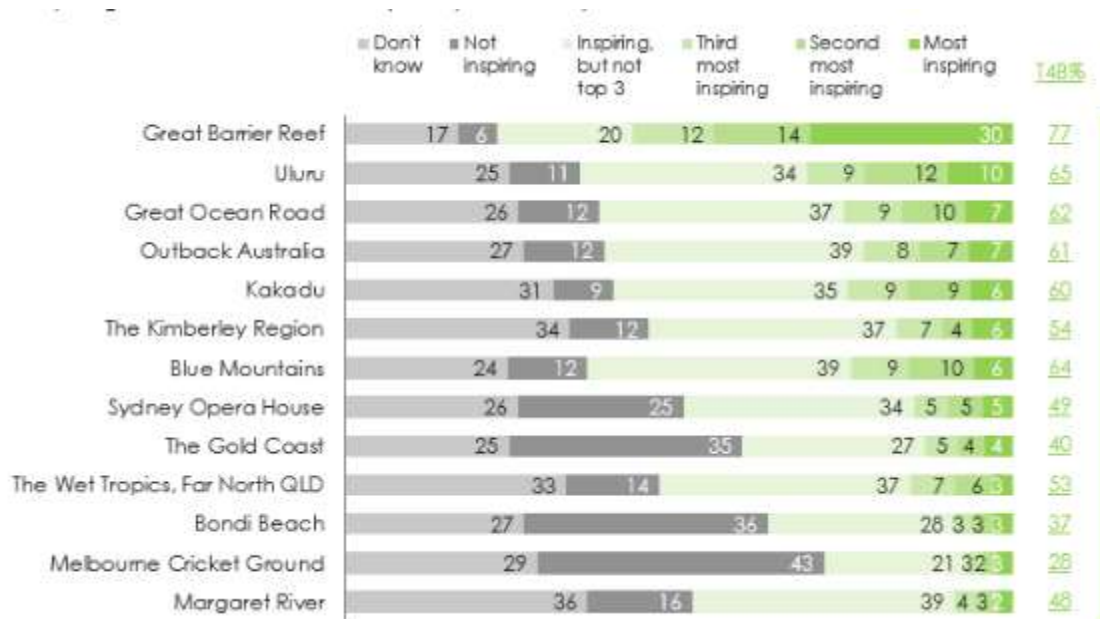


Figure 331. Responses across time to the question, “how inspiring do you find each of the following iconic Australian landmarks?”. Image taken from Pollinate 2017.

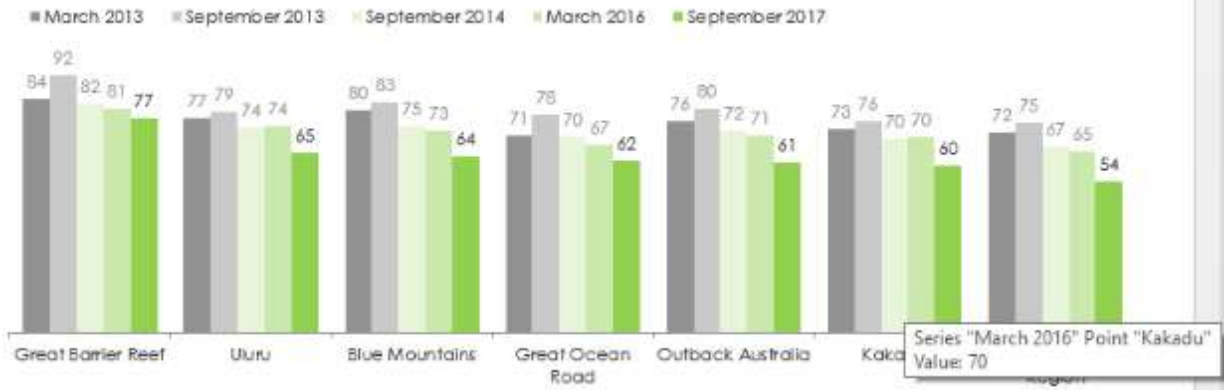


Figure 332. Historical responses across time to the question, “how inspiring do you find each of the following iconic Australian landmarks?” Image taken from Pollinate 2017.

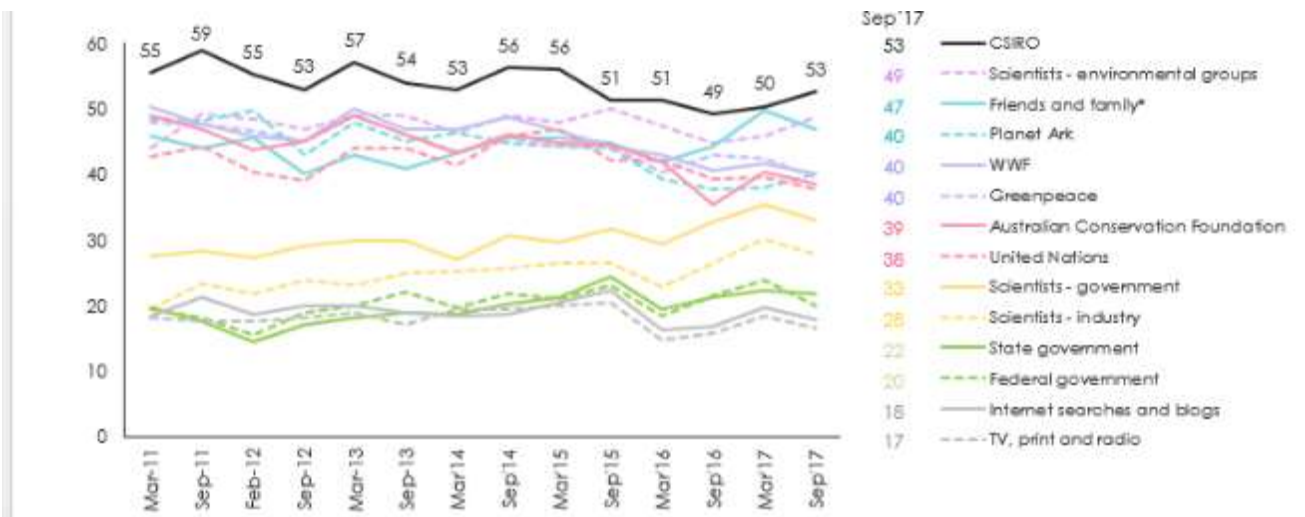


Figure 333. Historical responses across time to the question, “how much do you trust each of the following organisations for information about the environment?” Image taken from Pollinate 2017.

DISCUSSION

As noted in the introduction, this report presents a comprehensive summary snapshot of SELTMP 2017 data including basic frequencies and mean rating scores from scaled response questions. In-depth analyses of relationships between variables and changes over time are presented and discussed in a separate series of sectoral reports for each of the major groups surveyed.

Ongoing monitoring of the human dimension of the Great Barrier Reef, including those indicators presented in this report, provides important contextual information about the changing state of different communities' use and relationship with the Reef. Such data can inform and assist Reef managers in multiple ways, including in their assessment of management effectiveness, in their spatial planning for different activities and user types within in the Marine Park (e.g. Plans of Management), and in their development of engagement strategies that aim to improve Reef stewardship among different community and industry groups. The ability to utilise up-to-date information, and our understanding of cause-and-effect relationships within the social-ecological system, will continue to improve as longitudinal human dimensions monitoring data are accumulated.

Recommendations for long-term human dimensions monitoring

Long-term monitoring offers reef managers, industries and communities the opportunity to understand the current status of marine park users, industries and communities, including those potentially impacting on the ecological components of the system. Long-term monitoring offers the opportunity to assess the future of each industry and community in the face of climate change impacts and other drivers of change such as environmental degradation, regulatory change, cultural change and short-term impacts. It provides the potential to evaluate the effectiveness of management interventions and to assess equity dimensions within the region. However, the success of such a programme can only occur with well-translated cutting-edge social and economic sciences that directly feeds into current management processes. The science must be excellent, collaborative and must itself adapt as learnings from the monitoring datasets are developed. Long-term monitoring offers the best research approach available for refining theory and methods for conceptualizing and assessing how people are prepared for change and adapt.

For these reasons, we propose that SELTMP data collections occur biennially (every two years), with every second year representing an opportunity to develop capacity to maximise the value of the data, within both the science and management communities. To date, several science papers have been written (Table 29), and these will be able to be cited by OUTLOOK 2019. It is anticipated that several additional science papers will emerge from the SELTMP 2017 data. If crises or other event occurs within a capacity-building period, it is possible to undergo an additional data collection period or modify an additional data collection point at specific sites only, or through more intense data collection such as through focus groups, or through adding in extra and more targeted questions. It is still unclear how frequently social indicators should be monitored, as very little evidence exists in the literature to suggest how robust indicators are through time.

We also propose that sample sizes in future need to be similar to those collected in 2013. Data within the SELTMP are collected at the individual scale along the entire length of the Reef. The individual scale is important for understanding behaviour, attitudes, aspirations, values, use, dependency and resilience. The individual scale is critical for whole-of-systems understanding, and for adaptive management. In order for representative statements to be made at higher

scales (communities, regions and industries), sample sizes need to be sufficiently large. In 2013, baseline survey data were collected from 210 commercial-fishers, 119 tourism operators, 3181 local residents, 2877 tourists, and 2002 national residents (8,387 in total). In 2017, the second data point, sample sizes were smaller. Statistical power within each industry group depends on the proportion of industry members sampled. However, it is still not clear how many tourism operators and commercial fishers actually operate within the Reef region. Furthermore, it appears that many commercial fishers are no longer using landlines, and have more or less fully converted to mobile phones. The database used to access commercial fishers is based on landlines, and it is proposed that new effort is invested into working with the QDAF to access commercial fisher mobile numbers. It is also proposed to work with tourism industry leaders more closely to ascertain the total number of tourism operators within the region.

With time, the true value of longitudinal data will become apparent. It is anticipated that a list of significant differences between SELTMP 2013 and SELTMP 2017 will be produced by 1 July 2018. It is also anticipated that the SELTMP team will closely work with the RIMReP and OUTLOOK teams to maximise the value of the SELTMP data to the GBRMPA.

REFERENCES

- Bryman, A. (2012). *Social Research Methods* (4th Ed.). Oxford University Press, Oxford.
- Diaz, S., U. Pascual, M. Stenseke, B. Martin-Lopez, R. T. Watson, Z. Molnar, R. Hill, K. M. A. Chan, I. A. Baste, K. A. Brauman, S. Polasky, A. Church, M. Lonsdale, A. Larigauderie, P. W. Leadley, A. P. E. van Oudenhoven, F. van der Plaats, M. Schroter, S. Lavorel, Y. Aumeeruddy-Thomas, E. Bukvareva, K. Davies, S. Demissew, G. Erpul, P. Failler, C. A. Guerra, C. L. Hewitt, H. Keune, S. Lindley, and Y. Shirayama. 2018. Assessing nature's contributions to people. *Science* 359:270-272.
- Gooch, M., Marshall, N., Dale, A., & Vella, K. (2018). NESP Project 3.2.2 Final Report: Trialling an Assessment and Monitoring Program for the Human Dimensions of the Reef 2050 Integrated Monitoring and Reporting Program Report to the National Environmental Science Programme. Reef and Rainforest Research Centre Limited, Cairns (97pp).
- Gooch, M.; Curnock, M.; Dale, A.; Gibson, J.; Hill, R.; Marshall, N.; Molloy, F.; & Vella, K. (2017): Assessment and Promotion of the Great Barrier Reef's Human Dimensions Through Collaboration, Coastal Management, DOI: 10.1080/08920753.2017.1373455 <http://dx.doi.org/10.1080/08920753.2017.1373455>
- Gooch, M., Marshall, N., Dale, A. & Vella, K. (2018). Trialling an Assessment and Monitoring Program for the Human Dimensions of the Reef 2050 Integrated Monitoring and Reporting Program. Report to the National Environmental Science Programme. Reef and Rainforest Research Centre Limited, Cairns (97pp).
- Marshall, N. A., E. Bohensky, M. Curnock, J. Goldberg, M. Gooch, B. Nicotra, P. Pert, L. M. Scherl, S. Stone-Jovicich, and R. C. Tobin. 2016. Advances in monitoring the human dimension of natural resource systems: an example from the Great Barrier Reef. *Environmental Research Letters* 11.
- Millennium Ecosystem Assessment (2005). *Ecosystems and Human Well-being: A Framework for Assessment*. Available at: <https://www.millenniumassessment.org/en/Framework.html>
- Pollinate 2017. The Pulse September 2017 for CSIRO-The Great Barrier Reef pp73.

Williams, G., Curnock, M. Marshall, N. (2017). RIMReP CSIRO Work Order 002. Part B. Secondary Data Collection. Interim Report 28 February 2018.

Vella, K., N. Sipe, A. Dale, and B. Taylor. 2015. Not Learning from the Past: Adaptive Governance Challenges for Australian Natural Resource Management. *Geographical Research* 53:379-392.

Appendix One: Resident Survey

Researcher use: _____ Date: _____ Location: _____
--

What are the first words that come to mind when you think of the Great Barrier Reef?

Please list as many words as you like: _____

Section A. In this section, we would like to know how you use the Great Barrier Reef. *When we refer to, “the Great Barrier Reef”, this includes all land and water from the beaches on the coast, the bays and creeks, the islands, the shoals and seafloor, the open waters, and of course the coral reefs.*

Have you ever visited the Great Barrier Reef? (including all land and water from the beaches on the coast, the bays and creeks, the islands, the shoals and seafloor, the open waters, and of course the coral reefs)

Please tick one box: Yes No – if no, please go to Q.9.

In the previous 12 months, how many days did you visit the Great Barrier Reef for recreation?

(Please tick one box):

- 0 days (if 0, please go to Q.4)
 1-2 days (once or twice a year)
- 3-6 days (every few months)
 7-12 days (approximately monthly)
- 13-24 days (approximately fortnightly)
 25-52 days (approximately weekly)
- 53-100 days (several times a week)
 more than 100 days (> 3 times a week)

Thinking about all of your visits to the Great Barrier Reef in the last 12 months, what proportion of your time was spent at each of the following GBR environments

GBR Environment	Not at all	Not very often (1-25% of my GBR visits)	Less than half of my GBR visits (26-50%)	More than half of my visits (51-75%)	Most of my GBR time

Beaches on the coast					
Creeks and estuaries					
Islands and cays					
Inshore reefs					
Mid shelf and outer reefs					
Open water					
Shipwrecks					

When visiting the Great Barrier Reef, how far do you normally travel from your home? (tick one box only)

- <10km
 10km to <50km
 50km to <100km
 100km or greater

When visiting the Great Barrier Reef in the last 12 months, how often did you travel by...

TRAVEL Mode	Never	Not very often (1-25%)	Less than half (26-50%)	More than half I (51-75%)	Most of my GBR travel
Own boat					
Friend/family boat					
Commercial vessel					
Aircraft					
Ferry to island					
Other powered watercraft (e.g. jetski)					
Other non-powered watercraft (e.g. kayak)					
By vehicle or by foot to mainland beach only					

Thinking about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef:

Statement: (GBR = Great Barrier Reef)	NOT important at all	Very Strongly IMPORTANT
---	-----------------------------	--------------------------------

	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Line fishing	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Spearfishing	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Net/trap fishing	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Snorkelling	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Scuba diving	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Motorised watersports (e.g. jetski)	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Non-motorised watersports (e.g. kayak, paddleboard, kite surf)	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Photography	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Flights (e.g. helicopter, airplane)	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Motor boating	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Sailing	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Sightseeing / exploration	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Collecting (e.g. shells)	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Sunbathing / relaxing	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Wildlife watching	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Traditional or cultural practices	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Viewing coral and reef habitats	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Viewing coastal habitats (e.g. mangroves, estuaries)	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10

Thinking about the entire Great Barrier Reef area, would you be able to identify your favourite place? What is the name of this favourite place?

Section B. In the following section we would like to know a bit more about your relationship with the Great Barrier Reef region.

Please read through the following statements, and then rate your level of agreement or disagreement with each statement, by circling a number on the 10-point scale below.

Statement: (GBR = Great Barrier Reef)	Very Strongly DISAGREE	Very Strongly AGREE
	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel proud that the GBR is a World Heritage Area ..	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The GBR is a great asset for the economy of this region	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The GBR is part of my identity	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The GBR contributes to my quality of life and well-being	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The aesthetic beauty of the GBR is outstanding	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I do not have fair access to the GBR compared to other user groups	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it supports a variety of life, such as fish and corals	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel confident that the GBR is well managed	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it supports a desirable and active way of life	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because we can learn about the environment through scientific discoveries	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel confident that the freshwater areas in my region are well managed	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it attracts people from all over the world	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR for the fresh seafood it provides	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel optimistic about the future of the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10

I support the current rules and regulations that affect access and use of the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
---	-----------------------------	------------------------------

In general, would you consider yourself to be more traditional or progressive? Please rate yourself on the scale below:

1	2	3	4	5	6	7	8	9	10
Traditional									Progressive

What do you think are the three (3) most serious threats to the Great Barrier Reef?

Again, please read through the following statements, and then rate your level of agreement or disagreement with each statement, by circling a number on the 10-point scale below.

(where 1 = Very Strongly Disagree, and 10 = Very Strongly Agree)



Statement: (GBR = Great Barrier Reef)	Very Strongly DISAGREE	Very Strongly AGREE
I would like to do more to help protect the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I would like to do more to improve water quality in my waterways (including rivers, creeks)	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I would not be personally affected if the health of the GBR declined	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I would like to learn more about the condition of the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Thinking about coral bleaching makes me feel depressed	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it is spiritually important to me	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I cannot make a personal difference in improving the health of the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel like I can contribute to GBR management	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
It is not my responsibility to protect the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel a social expectation to reduce any impact that I might have on the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I think enough is being done to effectively manage the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I have the necessary knowledge and skills to reduce any impact that I might have on the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I do not have the time or opportunity required to reduce any impact that I might have on the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I am not worried about climate change impacts on the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I love that I live beside the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it inspires me in artistic or thoughtful ways	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel that future generations have been adequately considered in the management of the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it makes me feel better physically and/or mentally	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR simply because it exists, even if I don't use or benefit from it.	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because of its rich Traditional Owner Heritage	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it provides a place where people can continue to pass down wisdom, traditions and a way of life.	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it is an important part of my culture.	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I support the current rules and regulations that affect access and use of freshwater areas (rivers and creeks) in my region	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10

There is too much rubbish (plastics and bottles) on the beaches in my region	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I am worried about the status of freshwater fish in my region	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The coral reefs in my region are in good condition	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I like the colour/clarity of water along the beaches in my region	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The mangroves in my region are in good health	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The estuarine and marine fish in my region are in good condition	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The freshwater areas (e.g. rivers, creeks) in my region are not in good condition	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10

Which of the following statements best describes your beliefs about climate change? (Please tick one box)

- Climate change is an immediate threat requiring action.
- Climate change is a serious threat, but the impacts are too distant for immediate concern.
- I need more evidence to be convinced of the problem
- I believe that climate change is not a threat at all
- I do not have a view on climate change

In this section, we'd like to understand how you think about and manage your impact on the environment. Please read through the following statements, and then rate your level of agreement or disagreement with each statement, by circling a number on the 10-point scale

Statement: (GBR = Great Barrier Reef)	Very Strongly DISAGREE	Very Strongly AGREE
	1 --- 2 --- 3 --- 4 --- 5 - 	- 6 --- 7 --- 8 --- 9 --- 10 
I make every effort to use energy efficiently in my home and workplace	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I rarely consider the environmental impact of the production process for goods and services that I purchase	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I don't usually make any extra effort to reduce the waste I generate	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I re-use or recycle most goods and waste	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10

Section C. In this section we would like to know a little more about you.

a. Are you part of a GBR based club or community group such as a spear-fishing club in your region?

Please tick one box: Yes No

b. If yes: Name _____

a. Are you part of an environmental community based group?

Please tick one box: Yes No

b. If yes: What is it _____

In what year were you born? 19_____

What is your current home postcode? _____

For how many years have you lived in the Great Barrier Reef region?
_____ (years)

a. Do you identify as an Aboriginal Australian? No Yes

b. or a Torres Strait islander? No Yes

Are you a, "Fly-In-Fly-Out" worker? No Yes

From what industry do you obtain your main household income?

Could you please indicate (approximately) the total pre-tax income for your household?

\$1 to \$20,000 \$60,001 to \$100,000
\$200,001 to \$300,000

\$20,001 to \$60,000 \$100,001 to \$200,000
more than \$300,000

What is your gender? (please tick one): Female Male Other

On a scale of 1-10, how much do you trust the information you receive about the GBR from the following groups?	Do not Trust trust at all strongly	Very
The Australian Government.....	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
The Queensland Government.....	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Friends, and family, and/or work colleagues.....	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
The Great Barrier Reef Marine Park Authority (GBRMPA)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Scientists from research institutions (e.g. CSIRO, Universities)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Industry groups (e.g. representing tourism, fisheries)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Australian-based conservation NGOs (including NRM groups,.....)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
International conservation NGOs (e.g. Greenpeace, WWF)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
News media journalists	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Social media commentators / bloggers	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Lobby groups (e.g. Get Up!)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	

On a scale of 1-10, how much do you rely on each of the following for news about your region and the world?	Do not rely on this source at all completely	Rely on this source
Local newspaper(s)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
State/Regional newspaper(s)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	

Magazine(s)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Free-to-air television	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Pay TV	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Digital streaming services	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Local radio	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
National/regional radio	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Online discussion forums	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Facebook	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Twitter	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Instagram	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Snapchat	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Youtube	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
News media websites	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Word of mouth	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10

Thank you for your support for this research!

Appendix Two: Tourist Survey

Researcher use: _____ Date: _____
Location: _____
ID if entered: _____

What are the first words that come to mind when you think of the Great Barrier Reef?

Please list as many words as you like:

Section A. In this section, we would like to know how you use the Great Barrier Reef. *When we refer to, "the Great Barrier Reef", this includes all land and water from the beaches on the coast, the bays and creeks, the islands, the shoals and seafloor, the open waters, and of course the coral reefs.*

Have you visited the Great Barrier Reef during this current visit to the region?

(including all land and water from the beaches on the coast, the bays and creeks, the islands, the shoals and seafloor, the open waters, and of course the coral reefs)

Please tick one box: Yes No – if no, please go to Q.9

Considering your most recent trip to the Great Barrier Reef:

Where did you visit? (Please tell us the name of this place):

Did you pay to go on an organised tour on this trip? Yes No

Was this trip to a mainland beach? Yes No

Have you been on any trips BEYOND the beach in the past 12 months? (E.g. to an island and/or coral reef) Yes No (please go to Q4)

Where was your most recent trip beyond the beach? (Please tell us the name of this place):

How did you get there (e.g. ferry, commercial tour, own boat)? _____

Where was your point of departure (i.e. which township/city on the mainland)?

4. How long was this trip to the Great Barrier Reef? (i.e. If you answered NO to Q3e, this is about your most recent trip to the beach. BUT, if you had a trip beyond the beach, please refer to that)

- ½ day or less
 Full day
 Overnight
 2 to 3 nights
 4 nights or more

How many other people went with you in your group? (Please tick one box)

- 0 (travelled alone)
 1 other person
 2 to 5 others
 6 to 10
 more than 10

How would you rate your overall satisfaction with this experience of the Great Barrier Reef?

(Please circle one number)

Extremely
Extremely

Dissatisfied 1 - - - - 2 - - - - 3 - - - - 4 - - - - 5 - - - - 6 - - - - 7 - - - - 8 - - - - 9 - - - - 10
Satisfied

How would you rate the overall condition of this site within the Great Barrier Reef?

(Please circle one number)

Extremely
Excellent

Poor condition 1 - - - - 2 - - - - 3 - - - - 4 - - - - 5 - - - - 6 - - - - 7 - - - - 8 - - - - 9 - - - -
10 condition

Activities during this visit to the Great Barrier Reef (GBR) region:

From the following list, please indicate which activities you have done during this visit to the Great Barrier Reef region, and then rate the quality of each experience (on a scale of 1-10 where 1 = very low quality and 10 = very high quality)

Activity:	Tick ONLY if done during this visit	Very Low Very High QUALITY QUALITY 1 - - - 2 - - - 3 - - - 4 - - - 5 - - - 6 - - - 7 - - - 8 - - - 9 - - - 10
Snorkelling	<input type="checkbox"/>	1 - - - 2 - - - 3 - - - 4 - - - 5 - - - 6 - - - 7 - - - 8 - - - 9 - - - 10

SCUBA diving	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Fishing, crabbing or spear-fishing	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Swimming	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Sailing	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Motorised boating	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Non-motorised watersports (e.g. Kayaking, kite surfing, paddle boarding)	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Motorised watersports (e.g. jet-skiing, waterskiing, parasailing)	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Sightseeing / exploration	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Photography	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Viewing coral and reef habitats	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Viewing coastal habitats (e.g. mangroves, estuaries)	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Visiting islands / sand cays	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Visiting beaches on the mainland	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Wildlife watching	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Camping / hiking	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Flights (e.g. helicopter / seaplane)	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Eating seafood from the GBR	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Socialising and interacting with friends / family	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Showing the Reef to visitors	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Studying / learning about biology, ecology or history	<input type="checkbox"/>	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10

Section B. In the following section we would like to know a bit more about your relationship with the Great Barrier Reef region and perceptions of the Great Barrier Reef.

Please read through the following statements, and then rate your level of agreement or disagreement with each statement, by circling a number on the 10-point scale below.

(where 1 = Very Strongly Disagree, and 10 = Very Strongly Agree)

Statement: (GBR = Great Barrier Reef)	Very Strongly DISAGREE	Very Strongly AGREE
	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel proud that the GBR is a World Heritage Area ..	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The GBR is a great asset for the economy of this region	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The GBR is part of my identity	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The GBR contributes to my quality of life and well-being	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The aesthetic beauty of the GBR is outstanding	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it supports a variety of life, such as fish and corals	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it supports a desirable and active way of life	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because we can learn about the environment through scientific discoveries	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10

I value the GBR because it attracts people from all over the world	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR for the fresh seafood it provides	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel optimistic about the future of the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10

In general, would you consider yourself to be more traditional or progressive?

Please rate yourself on the scale below:

1	2	3	4	5	6	7	8	9	10
Traditional									Progressive

What do you think are the three (3) most serious threats to the Great Barrier Reef?

Again, please read through the following statements, and then rate your level of agreement or disagreement with each statement, by circling a number on the 10-point scale below.

(where 1 = Very Strongly Disagree, and 10 = Very Strongly Agree)

Statement: (GBR = Great Barrier Reef)	Very Strongly DISAGREE	Very Strongly AGREE
I would like to do more to help protect the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I would not be personally affected if the health of the GBR declined	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I would like to learn more about the condition of the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Thinking about coral bleaching makes me feel depressed	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it is spiritually important to me	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I cannot make a personal difference in improving the health of the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
It is not my responsibility to protect the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel a social expectation to reduce any impact that I might have on the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I think enough is being done to effectively manage the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I have the necessary knowledge and skills to reduce any impact that I might have on the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I do not have the time or opportunity required to reduce any impact that I might have on the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I am not worried about climate change impacts on the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I love that I have visited the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it inspires me in artistic or thoughtful ways	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it makes me feel better physically and/or mentally	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR simply because it exists, even if I don't use or benefit from it.	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10

I value the GBR because of its rich Traditional Owner Heritage	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it provides a place where people can continue to pass down wisdom, traditions and a way of life.	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it is an important part of my culture.	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
There is too much rubbish (plastics and bottles) on the beaches	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The coral reefs that I have seen are in good condition	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I like the colour/clarity of water along the beaches	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10

Which of the following statements best describes your beliefs about climate change? (Please tick one box)

- Climate change is an immediate threat requiring action.
- Climate change is a serious threat, but the impacts are too distant for immediate concern.
- I need more evidence to be convinced of the problem
- I believe that climate change is not a threat at all
- I do not have a view on climate change

In this section, we'd like to understand how you think about and manage your impact on the environment. Please read through the following statements, and then rate your level of agreement or disagreement with each statement, by circling a number on the 10-point scale

Statement: (GBR = Great Barrier Reef)	Very Strongly DISAGREE	Very Strongly AGREE
	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I make every effort to use energy efficiently in my home and workplace	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I rarely consider the environmental impact of the production process for goods and services that I purchase	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I don't usually make any extra effort to reduce the waste I generate	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I re-use or recycle most goods and waste	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10

Section C. In this section we would like to know a little more about you.

Where do you normally live? (please give postcode if within Australia)

For how many days will you be in the Great Barrier Reef region (including the coastal towns) during this visit? _____ (days)

What was the main reason you travelled to the Great Barrier Reef region? _____

Are you a backpacker? Yes No

Is this your first visit to the Great Barrier Reef region? No Yes

In what year were you born? _____

What is your gender? (please tick one box): Female Male Other

Do you identify as an Aboriginal Australian? No Yes

or a Torres Strait islander? No Yes

On a scale of 1-10, how much do you trust the information you receive about the GBR from the following groups?	Do not Trust trust at all strongly	Very
The Australian Government.....	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
The Queensland Government.....	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Friends, and family, and/or work colleagues.....	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
The Great Barrier Reef Marine Park Authority (GBRMPA)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Scientists from research institutions (e.g. CSIRO, Universities)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Industry groups (e.g. representing tourism, fisheries)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Australian-based conservation NGOs (including NRM groups).....	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
International conservation NGOs (e.g. Greenpeace, WWF)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
News media journalists	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Social media commentators / bloggers	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Lobby groups (e.g. Get Up!)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	

On a scale of 1-10, how much do you rely on each of the following for news about your region and the world?	Do not rely on this source at all completely	Rely on this source
Local newspaper(s)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
State/Regional newspaper(s)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Magazine(s)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Free-to-air television	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Pay TV	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Digital streaming services	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Local radio	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
National/regional radio	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Online discussion forums	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Facebook	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Twitter	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Instagram	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Snapchat	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Youtube	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
News media websites	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Word of mouth	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	

Thank you for your support for this research!

THANK YOU FOR YOUR HELP WITH THIS RESEARCH!

Appendix Three: Tourism Operator Survey

Researcher initials: _____	Date: _____
Respondent Name: _____	
Phone No.: _____	

What are the first words that come to mind when you think of the Great Barrier Reef?

Please list as many words as you like:

What is your role in your company? Owner & Mgr Manager
 Other:

How long have you been involved in the GBR tourism industry? _____
_____ years

How long has your current business been operating? (*Total number of years*)

What are the primary types of tourism activity that your company offers?

(Please choose as many as relevant)

Island resort Ferry Aircraft / heli tours/charter Bareboat
CHARTER

Reef Day trips: SCUBA ONLY Reef Day trips: SNORKEL ONLY Reef
Day trips: MULTIPLE activities

Reef/Island Day trips: CRUISE Live-aboard: Dive / Snorkel Live-
aboard: Cruise ship

Reef/offshore: CHARTER FISHING Reef/offshore: Multi-purpose CHARTER

Inshore/River day trips: CRUISE Inshore/River trips: CHARTER FISHING

Water sport (activity or hire) Other equipment rental
Guided/specialist tour

- Other specialist services Other: please list below:

Which tourism activity contributes MOST to the total income for your business?

(Please choose **one only**)

- Island resort Ferry Aircraft / heli tours/charter Bareboat
CHARTER
- Reef Day trips: SCUBA ONLY Reef Day trips: SNORKEL ONLY Reef
Day trips: MULTIPLE activities
- Reef/Island Day trips: CRUISE Live-aboard: Dive / Snorkel Live-
aboard: Cruise ship
- Reef/offshore: CHARTER FISHING Reef/offshore: Multi-purpose CHARTER
- Inshore/River day trips: CRUISE Inshore/River trips: CHARTER FISHING
- Water sport (activity or hire) Other equipment rental
Guided/specialist tour
- Other specialist services Other: please list below:

About how many days in the previous 12 months were you operating in the GBR? _____

Where is your home port? _____

Do you use multiple ports? Yes No

I would like to read out a list of statements to you about the Great Barrier Reef. Please rate your level of agreement or disagreement with each statement on a scale of 1-10-point where 1 = Very Strongly Disagree, and 10 = Very Strongly Agree

Statement: (GBR = Great Barrier Reef)	Very Strongly DISAGREE	Very Strongly AGREE
---	-----------------------------------	--------------------------------

I feel proud that the GBR is a World Heritage Area ..	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The GBR is a great asset for the economy of this region	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The GBR is part of my identity	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The GBR contributes to my quality of life and well-being	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The aesthetic beauty of the GBR is outstanding	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I do not have fair access to the GBR compared to other user groups	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it supports a variety of life, such as fish and corals	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel confident that the GBR is well managed	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it supports a desirable and active way of life	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because we can learn about the environment through scientific discoveries	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it attracts people from all over the world	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR for the fresh seafood it provides	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel optimistic about the future of the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I support the current rules and regulations that affect access and use of the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I couldn't think of being anything other than a tourism operator	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The tourism industry to me is not just a job – it is my lifestyle	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I am optimistic about the future of my business in the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
My business has not performed this year as well as last year	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10

In general, would you consider yourself to be more traditional or progressive?

Please rate yourself on the scale below:

1	2	3	4	5	6	7	8	9	10
Traditional									Progressive

What do you think are the three (3) most serious threats to the Great Barrier Reef?

Again, please rate your level of agreement or disagreement with each of the following statements on the same 1-10-point scale. (where 1 = Very Strongly Disagree, and 10 = Very Strongly Agree)

Statement: (GBR = Great Barrier Reef)	Very Strongly DISAGREE	Very Strongly AGREE
I would like to do more to help protect the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I would like to do more to improve water quality in my waterways (including rivers, creeks)	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I would not be personally affected if the health of the GBR declined	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10

I would like to learn more about the condition of the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Thinking about coral bleaching makes me feel depressed	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it is spiritually important to me	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I cannot make a personal difference in improving the health of the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel like I can contribute to GBR management	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
It is not my responsibility to protect the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel a social expectation to reduce any impact that I might have on the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I think enough is being done to effectively manage the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I have the necessary knowledge and skills to reduce any impact that I might have on the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I do not have the time or opportunity required to reduce any impact that I might have on the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I am not worried about climate change impacts on the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I love that I live beside the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it inspires me in artistic or thoughtful ways	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel that future generations have been adequately considered in the management of the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it makes me feel better physically and/or mentally	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR simply because it exists,	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because of its rich Traditional Owner Heritage	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it provides a place where people can continue to pass down wisdom, traditions and a way of life.	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it is an important part of my culture.	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I support the current rules and regulations that affect access and use of freshwater areas (rivers and creeks) in my region	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
There is too much rubbish (e.g. plastics) on the beaches in my region	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The coral reefs in my region are in good condition	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I like the colour/clarity of water along the beaches in my region	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The mangroves in my region are in good health	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The estuarine and marine fish in my region are in good condition	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The freshwater areas (e.g. rivers, creeks) in my region are not in good condition	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10

Which of the following statements best describes your beliefs about climate change? (*one box*)

- Climate change is an immediate threat requiring action.
- Climate change is a serious threat, but the impacts are too distant for immediate concern.
- I need more evidence to be convinced of the problem
- I believe that climate change is not a threat at all
- I do not have a view on climate change

Section C. In this section we would like to know a little more about you.

In what year were you born? 19_____

What is your current home postcode? _____

For how many years have you lived in the Great Barrier Reef region?_____ (years)

Gender? (*don't ask if possible*): Female Male

Are you currently married or have a partner? Yes No

Do you have university or TAFE education (beyond high school)? Yes No

What proportion of your household income came from tourism in the last financial year? _____ (%)

How many employees (full-time equivalents) did your operation employ over the previous 12 **months**?

Do you have insurance for your business assets? Yes No

Could you please indicate (*approximately*) your business turnover (entire revenue) for the past 12 months, in broad categories?

- < \$20,000
- \$20,001 to \$100,000
- \$100,001 to \$500,000

- \$500,001 to \$1m Between \$1m and \$5m more than \$5m

In this section, we'd like to understand how you think about and manage your impact on the environment. As before...

Statement: (GBR = Great Barrier Reef)	Very Strongly DISAGREE	Very Strongly AGREE
	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I make every effort to use energy efficiently in my business	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I rarely consider the environmental impact of the production process for goods and services that my business uses	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I don't usually make any extra effort to reduce the waste my business generates	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
My business re-uses or recycles most goods and waste	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10

Does your operation (YES/NO)

- have fuel efficient engines Yes NO
- use an emissions calculator to plan your business operations Yes NO
- use Carbon offsets to counter emissions Yes NO
- have green energy, such as solar panels, for your vessel Yes NO
- use alternative fuels such as biodiesel and ethanol Yes NO
- participate in best practices via a code of practice, or MOU Yes NO
- participate in GBRMPA's Eye on the Reef program Yes NO
- contribute to Crown of Thorns Starfish control Yes NO
- Employ formally trained guides providing interpretation about the Reef
- Yes NO

On a scale of 1-10, how much do you trust the information you receive about the GBR from the following groups?	Do not Trust trust at all strongly	Very
The Australian Government.....	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
The Queensland Government.....	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Friends, and family, and/or work colleagues.....	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
The Great Barrier Reef Marine Park Authority (GBRMPA)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Scientists from research institutions (e.g. CSIRO, Universities)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Industry groups (e.g. representing tourism, fisheries)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Australian-based conservation NGOs (including NRM groups.....)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	

International conservation NGOs (e.g. Greenpeace, WWF)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
News media journalists	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Social media commentators / bloggers	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Lobby groups (e.g. Get Up!)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10

On a scale of 1-10, how much do you rely on each of the following for news about your region and the world?	Do not rely on this source at all completely	Rely this source
Local newspaper(s)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
State/Regional newspaper(s)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Magazine(s)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Free-to-air television	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Pay TV	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Digital streaming services	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Local radio	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
National/regional radio	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Online discussion forums	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Facebook	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Twitter	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Instagram	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Snapchat	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Youtube	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
News media websites	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	
Word of mouth	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10	

Thank you for your support for this research!

Appendix Four: Commercial Fisher Survey 2017

Hello! My name is _____

You may remember receiving a note from CSIRO about the Social and Economic Long Term Monitoring Programme currently underway in the Great Barrier Reef?
(expand?)

....Do you (or your licence(s)), operate in the GBR region (i.e. on Qld's east coast from Cape York south the Bundaberg, including inshore and offshore areas)? (*only continue if yes*).

Lets start...

What are the first words that come to mind when you think of the Great Barrier Reef?

Please list as many words as you like:

Are you a: **licence owner – operator**

 licence owner but non-operator; OR

operator using someone else's licence? (*circle one*)

Other _____

How long have you been in the commercial fishing industry? _____ yrs

About how many days in the previous 12 months were you operating in the GBR?
_____ days

Where is your home port (where you operate from, not necessarily where you live)?
(*drop down list of major towns/ports – Cooktown down to Bundaberg please*)

How far, on average, do you travel from your home port? *That is: do you typically fish very close to your home port or do you tend to roam across the region?*

very local to home port (i.e. <50km)

close to my home port (50-100km)

I roam quite some distance from my home port (>100km)

Do you use multiple ports? Y/N

Which fisheries do you operate in? (: trawl – prawn, bugs, scallop, squid, **Crab** – mud, sand, **Harvest** - coral collection, aquarium fish, sea cucumber, rocklobster (crayfish), **Line** - Spanish mackerel, reef line; **Net** - inshore net, offshore net, shark ; other, Can select >1) _____

Which fishery contributes the most to your income? (drop down same: one only)_

I would like to read out a list of statements about the Great Barrier Reef. Could you please rate your level of agreement or disagreement with each statement on a 10-point scale where 1 = Very Strongly Disagree, and 10 = Very Strongly Agree)

Statement: (GBR = Great Barrier Reef)	Very Strongly <u>DISAGREE</u>	Very Strongly <u>AGREE</u>
I feel proud that the GBR is a World Heritage Area ..	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The GBR is a great asset for the economy of this region	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The GBR is part of my identity	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The GBR contributes to my quality of life and well-being	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The aesthetic beauty of the GBR is outstanding	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I do not have fair access to the GBR compared to other user groups	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it supports a variety of life, such as fish and corals	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel confident that the GBR is well managed	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it supports a desirable and active way of life	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because we can learn about the environment through scientific discoveries	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel confident that the freshwater areas in my region are well managed	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it attracts people from all over the world	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR for the fresh seafood it provides	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel optimistic about the future of the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I support the current rules and regulations that affect access and use of the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I couldn't think of being anything other than a commercial fisher	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The fishing industry to me is not just a job – it is my lifestyle	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I am optimistic about the future of my business in the GBR	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10
My business has not performed this year as well as last year	1 --- 2 --- 3 --- 4 --- 5 -	- 6 --- 7 --- 8 --- 9 --- 10

In general, would you consider yourself to be more traditional or progressive?

Please rate yourself on the scale below:

1	2	3	4	5	6	7	8	9	10
Traditional									Progressive

What do you think are the three (3) most serious threats to the Great Barrier Reef?

Again, please rate your level of agreement or disagreement with each statement on a 10 point scale. How strongly do you agree/disagree with each of the following....

Statement: (GBR = Great Barrier Reef)	Very Strongly <u>DISAGREE</u>	Very Strongly <u>AGREE</u>
I would like to do more to help protect the GBR	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I would like to do more to improve water quality in my waterways (including rivers, creeks)	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I would not be personally affected if the health of the GBR declined	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I would like to learn more about the condition of the GBR	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
Thinking about coral bleaching makes me feel depressed	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it is spiritually important to me	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I cannot make a personal difference in improving the health of the GBR	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel like I can contribute to GBR management	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
It is not my responsibility to protect the GBR	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel a social expectation to reduce any impact that I might have on the GBR	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I think enough is being done to effectively manage the GBR	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I have the necessary knowledge and skills to reduce any impact that I might have on the GBR	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I do not have the time or opportunity required to reduce any impact that I might have on the GBR	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I am not worried about climate change impacts on the GBR	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10

I love that I live beside the GBR	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it inspires me in artistic or thoughtful ways	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I feel that future generations have been adequately considered in the management of the GBR	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it makes me feel better physically and/or mentally	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR simply because it exists	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because of its rich Traditional Owner Heritage	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it provides a place where people can continue to pass down wisdom, traditions and a way of life.	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I value the GBR because it is an important part of my culture.	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I support the current rules and regulations that affect access and use of freshwater areas (rivers and creeks) in my region	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
There is too much rubbish (e.g. plastics) on the beaches in my region	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I am worried about the status of freshwater fish in my region	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The coral reefs in my region are in good condition	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
I like the colour/clarity of water along the beaches in my region	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The mangroves in my region are in good health	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The estuarine and marine fish in my region are in good condition	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10
The freshwater areas (e.g. rivers, creeks) in my region are not in good condition	1 --- 2 --- 3 --- 4 -- - 5 -	- 6 --- 7 --- 8 --- 9 --- 10

Which of the following statements best describes your beliefs about climate change? (Please tick one box)

- Climate change is an immediate threat requiring action.
- Climate change is a serious threat, but the impacts are too distant for immediate concern.
- I need more evidence to be convinced of the problem
- I believe that climate change is not a threat at all
- I do not have a view on climate change

Section C. In this section we would like to know a little more about you.

In what year were you born? 19_____

What is your current home postcode? _____

For how many years have you lived in the Great Barrier Reef region? (i.e. all coastal areas between Cape York and Bundaberg)_____ (years)

Are you currently married or have a partner? Yes No

Do you have university or TAFE education (beyond high school)? Yes No

What proportion of your household income came from commercial fishing in the last financial year? _____ (%)

How many employees (full-time equivalents) did your operation employ over the previous 12 months?

Do you have insurance for your business assets? Yes No

Could you please indicate (approximately) your business turnover (entire revenue) for the past 12 months, in broad categories?

Do you mind telling me your business turnover (entire revenue), for the past 12 months, in broad categories? (read out)

< \$20 000

\$100 000 to \$200 000

\$20 000 to \$60 000

\$200 000 to \$300 000

\$60 000 to \$100 000

\$300 000 to \$500 000

> \$500 000

What is your gender? (try not to ask): Female Male Other

In this section, we'd like to understand how you think about and manage your impact on the environment. Please tell me how strongly you agree or disagreement with each statement using the 10-point scale

I make every effort to use energy efficiently in my business	1 - - - 2 - - - 3 - - - 4 - - - 5 -	- 6 - - - 7 - - - 8 - - - 9 - - - 10
I rarely consider the environmental impact of the production process for goods and services that my business uses	1 - - - 2 - - - 3 - - - 4 - - - 5 -	- 6 - - - 7 - - - 8 - - - 9 - - - 10
I don't usually make any extra effort to reduce the waste that my business generates	1 - - - 2 - - - 3 - - - 4 - - - 5 -	- 6 - - - 7 - - - 8 - - - 9 - - - 10
My business re-uses or recycles most goods and waste	1 - - - 2 - - - 3 - - - 4 - - - 5 -	- 6 - - - 7 - - - 8 - - - 9 - - - 10

Does your business (YES/NO)

- have fuel efficient engines Yes No
- use an emissions calculator to plan your business operations Yes No
- use Carbon offsets to counter emissions Yes No
- have green energy, such as solar panels, for your vessel Yes No
- use alternative fuels such as biodiesel and ethanol Yes No
- participate in industry best practices via a code of practice Yes No
- participate in GBRMPA's Reef guardian fisher program Yes No
- Contribute to any scientific monitoring programs Yes No

On a scale of 1-10, how much do you trust the information you receive about the GBR from the following groups?	Do not Trust trust at all Very strongly
The Australian Government.....	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
The Queensland Government.....	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Friends, and family, and/or work colleagues.....	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
The Great Barrier Reef Marine Park Authority (GBRMPA)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Fisheries Queensland	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Scientists from research institutions (e.g. CSIRO, Universities)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Industry groups (e.g. representing tourism, fisheries)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Australian-based conservation NGOs (including NRM groups,.....)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
International conservation NGOs (e.g. Greenpeace, WWF)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
News media journalists	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Social media commentators / bloggers	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Lobby groups (e.g. Get Up!)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10

On a scale of 1-10, how much do you rely on each of the following for news about your region and the world?	Do not rely on this source at all Rely on this source completely
Local newspaper(s)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
State/Regional newspaper(s)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Magazine(s)	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Free-to-air television	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Pay TV	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Digital streaming services	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Local radio	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
National/regional radio	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Online discussion forums	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Facebook	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Twitter	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Instagram	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Snapchat	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Youtube	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
News media websites	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10
Word of mouth	1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8 --- 9 --- 10

Thank you for your support for this research!

Appendix Five: National Survey 2017

ASK ALL

GBR1	Below is a list of places in Australia that people have said are inspiring. Please rank the following in terms of how inspiring they are to you. RANDOMISE ORDER OF DESTINATIONS						
SR PER ROW		Most inspiring	Second most inspiring	Third most inspiring	Inspiring, but not in my top 3	Not inspiring	Don't know
	Uluru	1	2	3	4	5	99
	Bondi Beach	1	2	3	4	5	99
	The Wet Tropics, Far North QLD	1	2	3	4	5	99
	Sydney Opera House	1	2	3	4	5	99
	Melbourne Cricket Ground	1	2	3	4	5	99
	The Kimberley Region	1	2	3	4	5	99
	Great Barrier Reef	1	2	3	4	5	99
	Outback Australia	1	2	3	4	5	99
	Blue Mountains	1	2	3	4	5	99
	Great Ocean Road	1	2	3	4	5	99
	Margaret River	1	2	3	4	5	99
	The Gold Coast	1	2	3	4	5	99
	Kakadu	1	2	3	4	5	99

ASK ALL

GBR2	Please list the first words that come to mind when you think of the Great Barrier Reef. You can add as many words as you like.
OE	

ASK ALL

GBR5	Using the scale below, from 1-10, where 1 = "Not at all threatening" and 10 = "Extremely threatening", please indicate how threatening you think each of the following is to the Great Barrier Reef. If you don't know, please tick "Don't know". RANDOMISE ORDER OF STATEMENTS											
SR PER ROW		1 – Not at all threatening	2	3	4	5	6	7	8	9	10 – Extremely threatening	Don't know
	Land-based mining	1	2	3	4	5	6	7	8	9	10	99
	Cyclones and tropical storms	1	2	3	4	5	6	7	8	9	10	99
	Floods	1	2	3	4	5	6	7	8	9	10	99
	Coastal development (i.e. increased buildings and people living along the coastline)	1	2	3	4	5	6	7	8	9	10	99
	Tourism activities (e.g. SCUBA diving, snorkelling, etc.)	1	2	3	4	5	6	7	8	9	10	99
	Crown of Thorns Starfish	1	2	3	4	5	6	7	8	9	10	99
	Port activities and port expansions	1	2	3	4	5	6	7	8	9	10	99
	Marine debris and beach littering (e.g. rubbish,	1	2	3	4	5	6	7	8	9	10	99

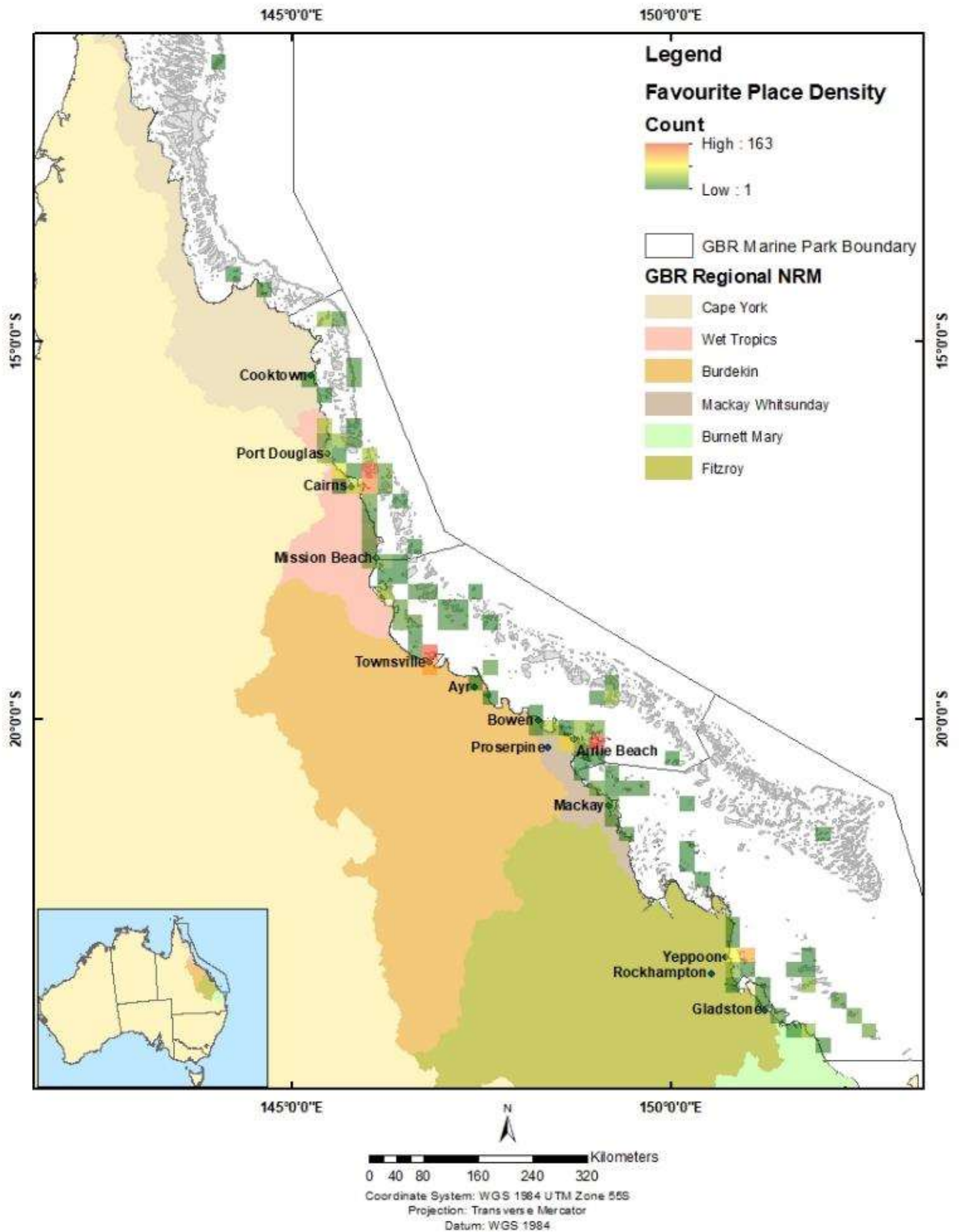
	discarded fishing gear, etc.)											
	Commercial fishing	1	2	3	4	5	6	7	8	9	10	99
	Recreational fishing	1	2	3	4	5	6	7	8	9	10	99
	Climate change (i.e. leading to increased ocean temperatures, coral bleaching etc.)	1	2	3	4	5	6	7	8	9	10	99
	Shipping (i.e. very large cargo container type ships)	1	2	3	4	5	6	7	8	9	10	99
	Agricultural run-off (i.e. pesticides and fertilisers)	1	2	3	4	5	6	7	8	9	10	99
	Fishing and hunting by Indigenous Traditional Owners											
	Defence activities											

ASK ALL

GBR6	Please indicate how strongly you agree or disagree with each of the following, on the 10-point scale below, where 1=very strongly disagree and 10=very strongly agree											
	RANDOMISE ORDER OF STATEMENTS											
SR PER ROW		1 - very strongly disagree	2 - strongly disagree	3 - disagree	4 - slightly disagree	5 - very slightly disagree	6 - very slightly agree	7 - slightly agree	8 - agree	9 - strongly agree	10 - very strongly agree	Don't know
	I feel optimistic about the future of the Great Barrier Reef	1	2	3	4	5	6	7	8	9	10	99
	I would not be personally affected if the health of the Great Barrier Reef declined	1	2	3	4	5	6	7	8	9	10	99
	The Great Barrier Reef is part of my Australian identity	1	2	3	4	5	6	7	8	9	10	99

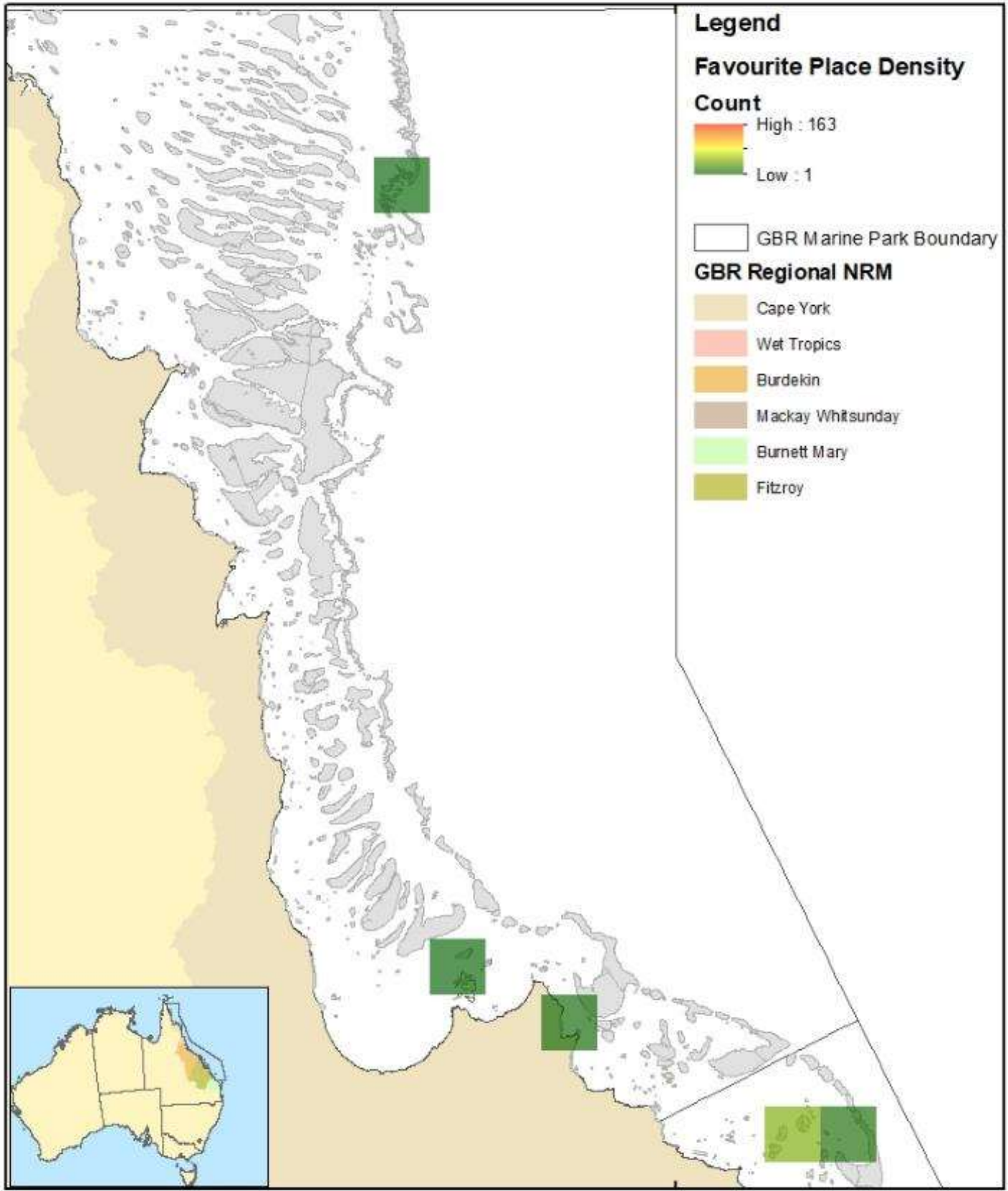
I am concerned about the impacts of climate change on the Great Barrier Reef	1	2	3	4	5	6	7	8	9	10	99
It is not my responsibility to protect the Great Barrier Reef	1	2	3	4	5	6	7	8	9	10	99
I feel proud that the Great Barrier Reef is a World Heritage Area	1	2	3	4	5	6	7	8	9	10	99
It is the responsibly of all Australians to protect the Great Barrier Reef	1	2	3	4	5	6	7	8	9	10	99
I feel confident that the Great Barrier Reef is well managed	1	2	3	4	5	6	7	8	9	10	99
I value the GBR simply because it exists, even if I don't use or benefit from it.	1	2	3	4	5	6	7	8	9	10	99
I value the GBR because it is an important part of my culture.	1	2	3	4	5	6	7	8	9	10	99
I value the GBR because it supports a variety of life, such as fish and corals	1	2	3	4	5	6	7	8	9	10	99
The aesthetic beauty of the GBR is outstanding	1	2	3	4	5	6	7	8	9	10	99
The GBR is a great asset for Australia's economy	1	2	3	4	5	6	7	8	9	10	99
I value the GBR because of its rich Traditional Owner heritage	1	2	3	4	5	6	7	8	9	10	99

Appendix Six: Maps 2017



Appendix 6a. Residents response to the question "Think about the Great Barrier Reef area, would you be able to identify your favourite place" across the Great Barrier Reef and catchment area.

145°0'0"E



Legend

Favourite Place Density

Count

High : 163

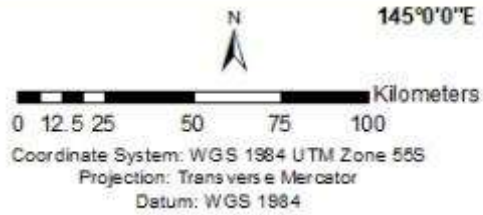
Low : 1

GBR Marine Park Boundary

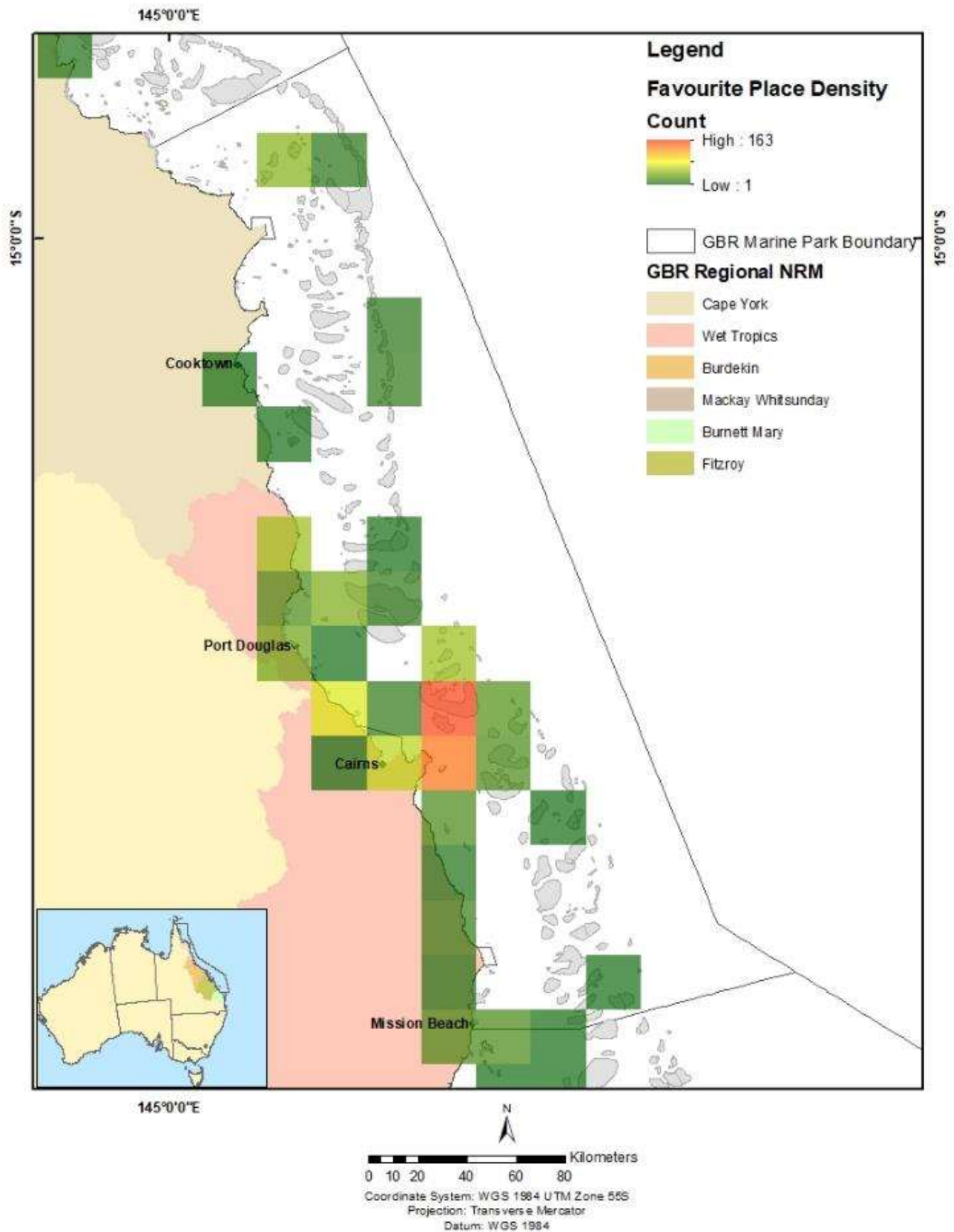
GBR Regional NRM

- Cape York
- Wet Tropics
- Burdekin
- Mackay Whitsunday
- Burnett Mary
- Fitzroy

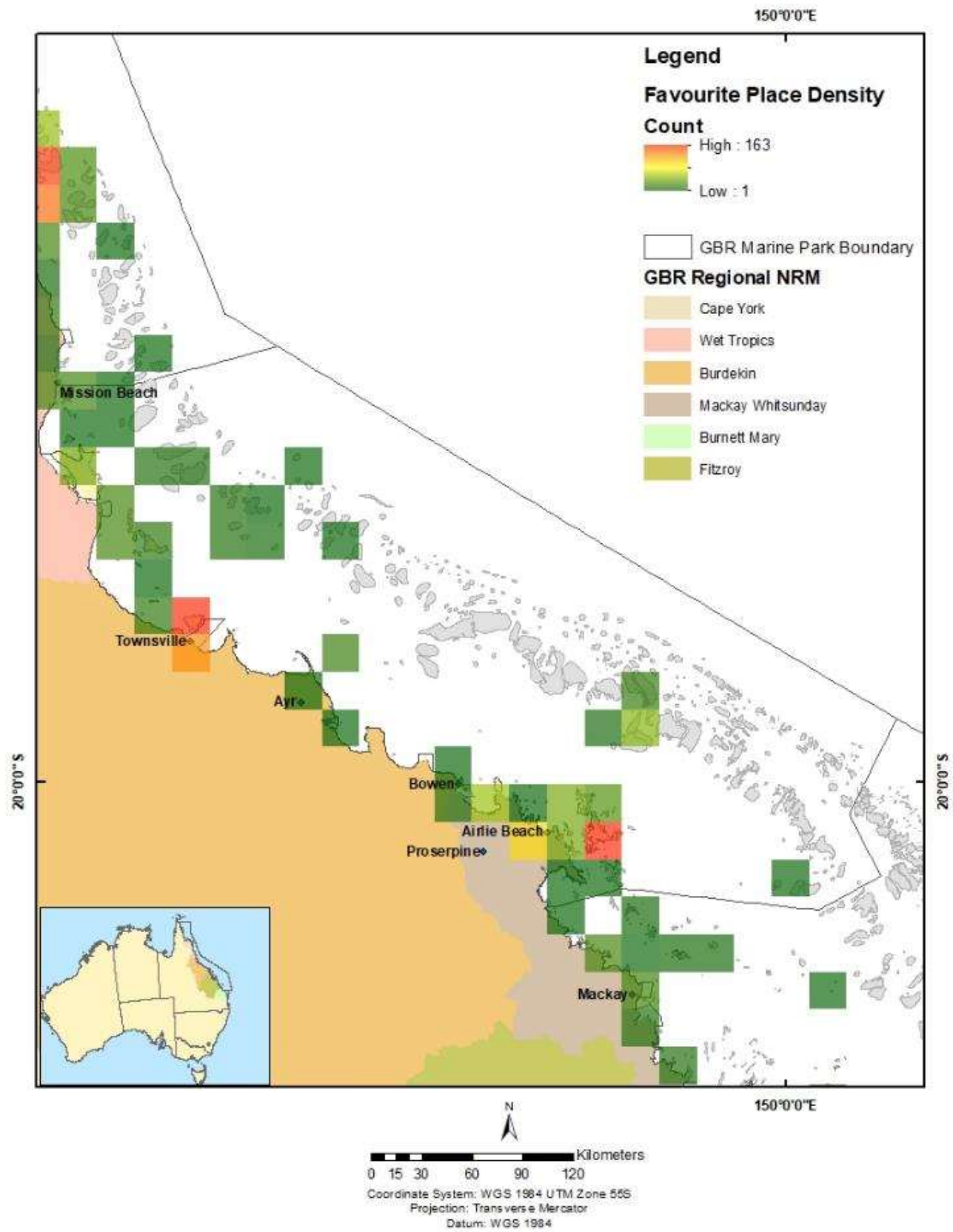
145°0'0"E



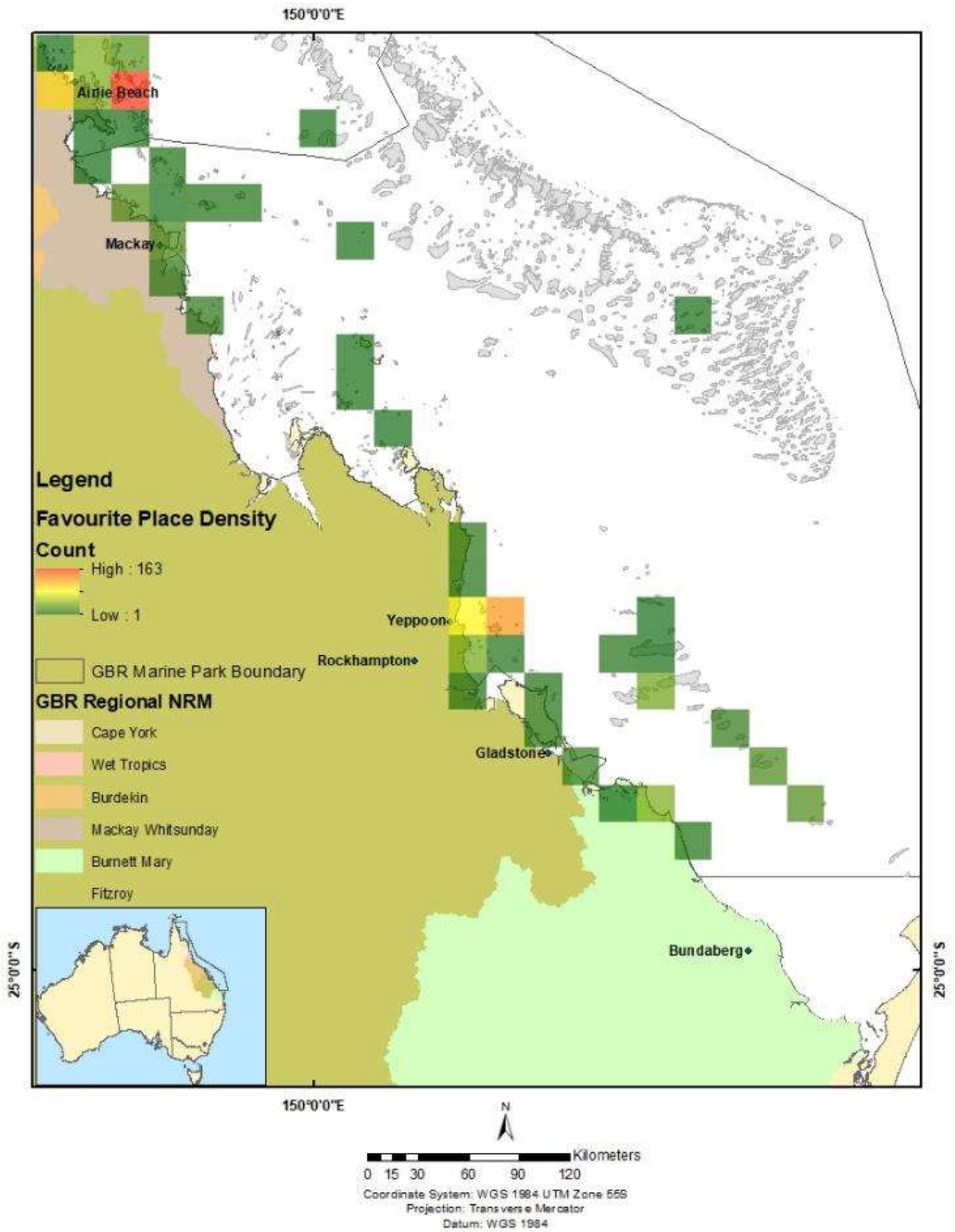
Appendix 6b. Residents response to the question "Think about the Great Barrier Reef area, would you be able to identify your favourite place". Map shows the important places to residents in the Great Barrier Reef Marine Park Far Northern Management Area.



Appendix 6c. Residents response to the question "Think about the Great Barrier Reef area, would you be able to identify your favourite place". Map shows the important places to residents in the Great Barrier Reef Marine Park Cairns / Cooktown Management Area.

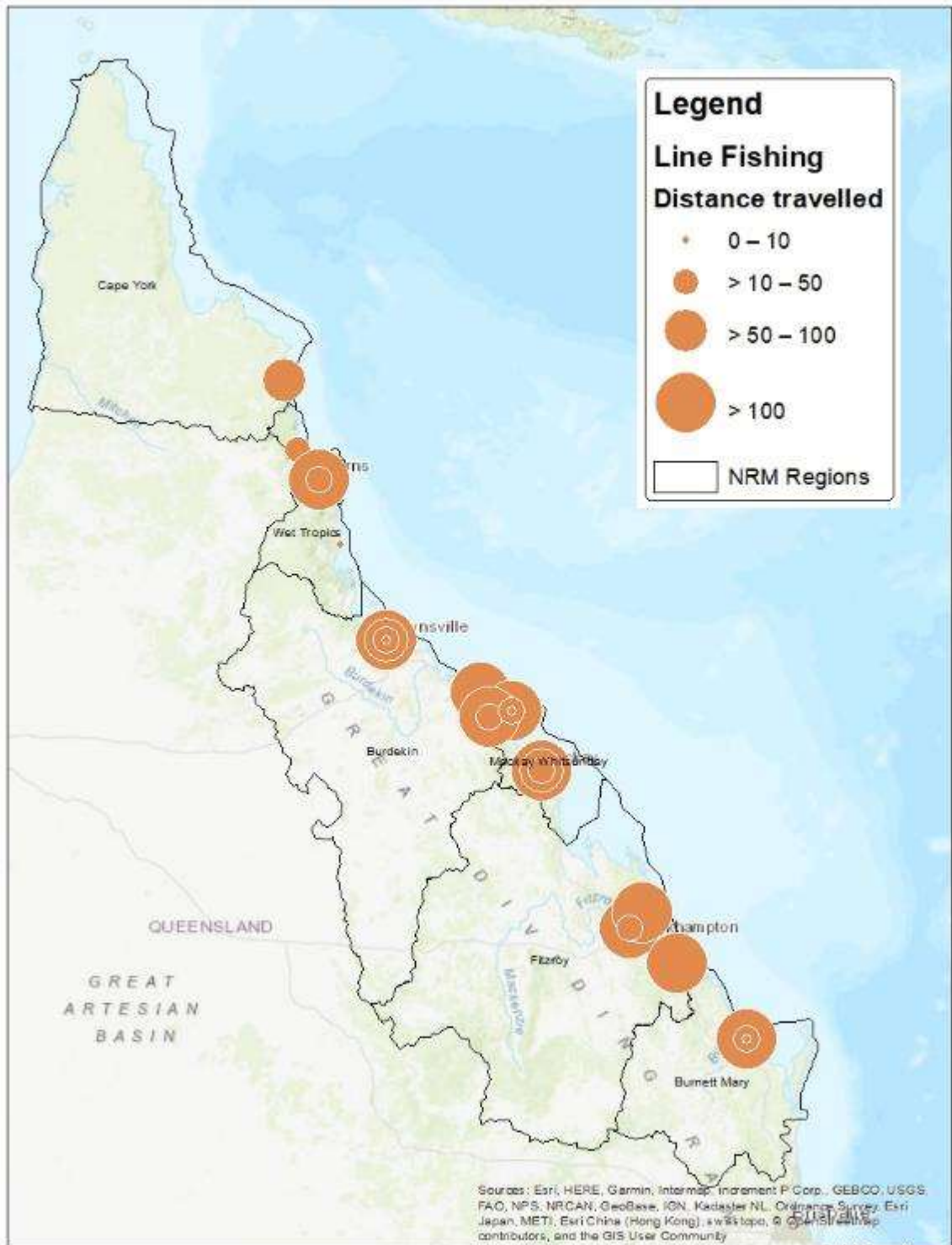


Appendix 6d. Residents response to the question "Think about the Great Barrier Reef area, would you be able to identify your favourite place". Map shows the important places to residents in the Great Barrier Reef Marine Park Townsville / Whitsundays Management Area.

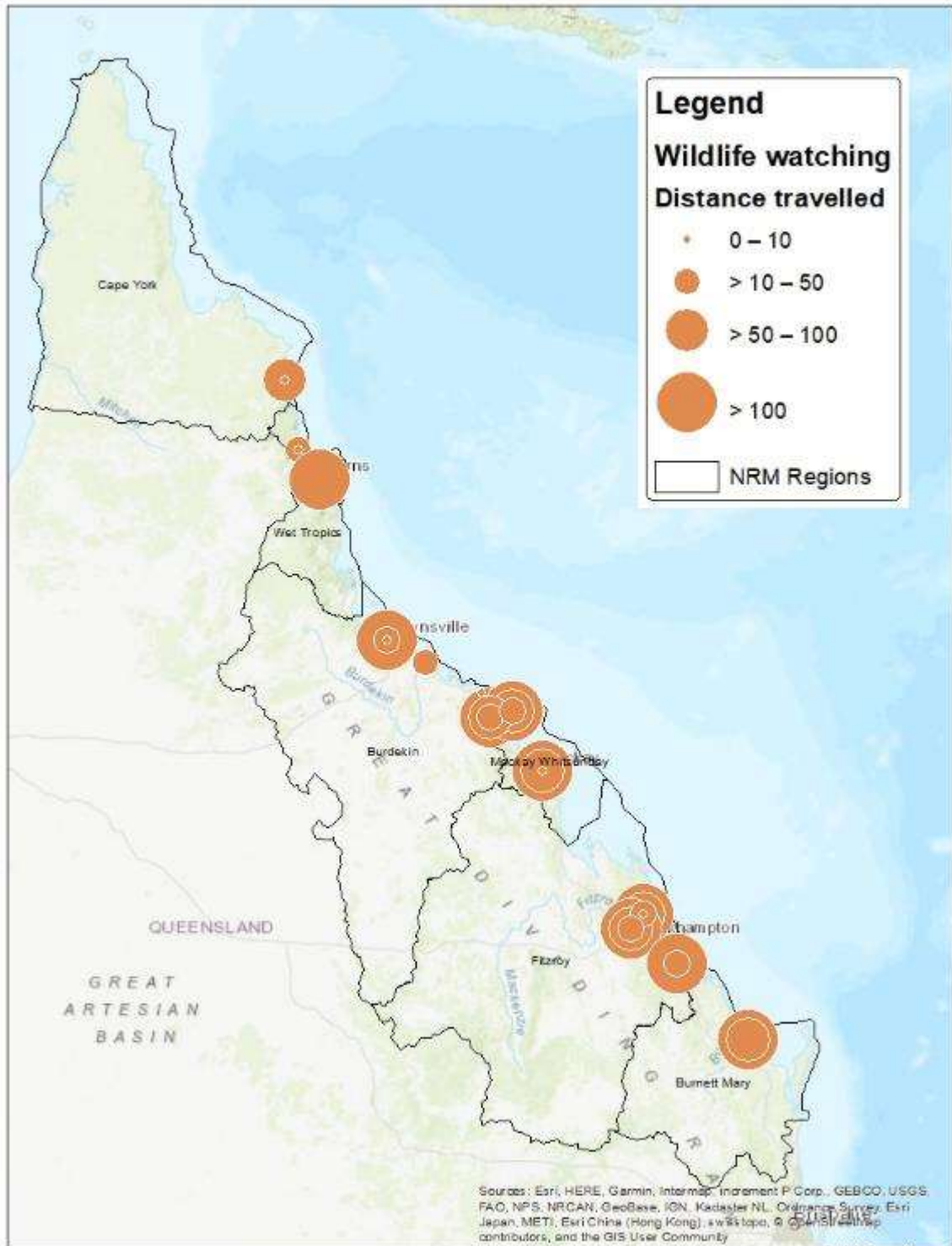


Appendix 6e. Residents response to the question “Think about the Great Barrier Reef area, would you be able to identify your favourite place”. Map shows the important places to residents in the Great Barrier Reef Marine Park Mackay / Capricorn Management Area.

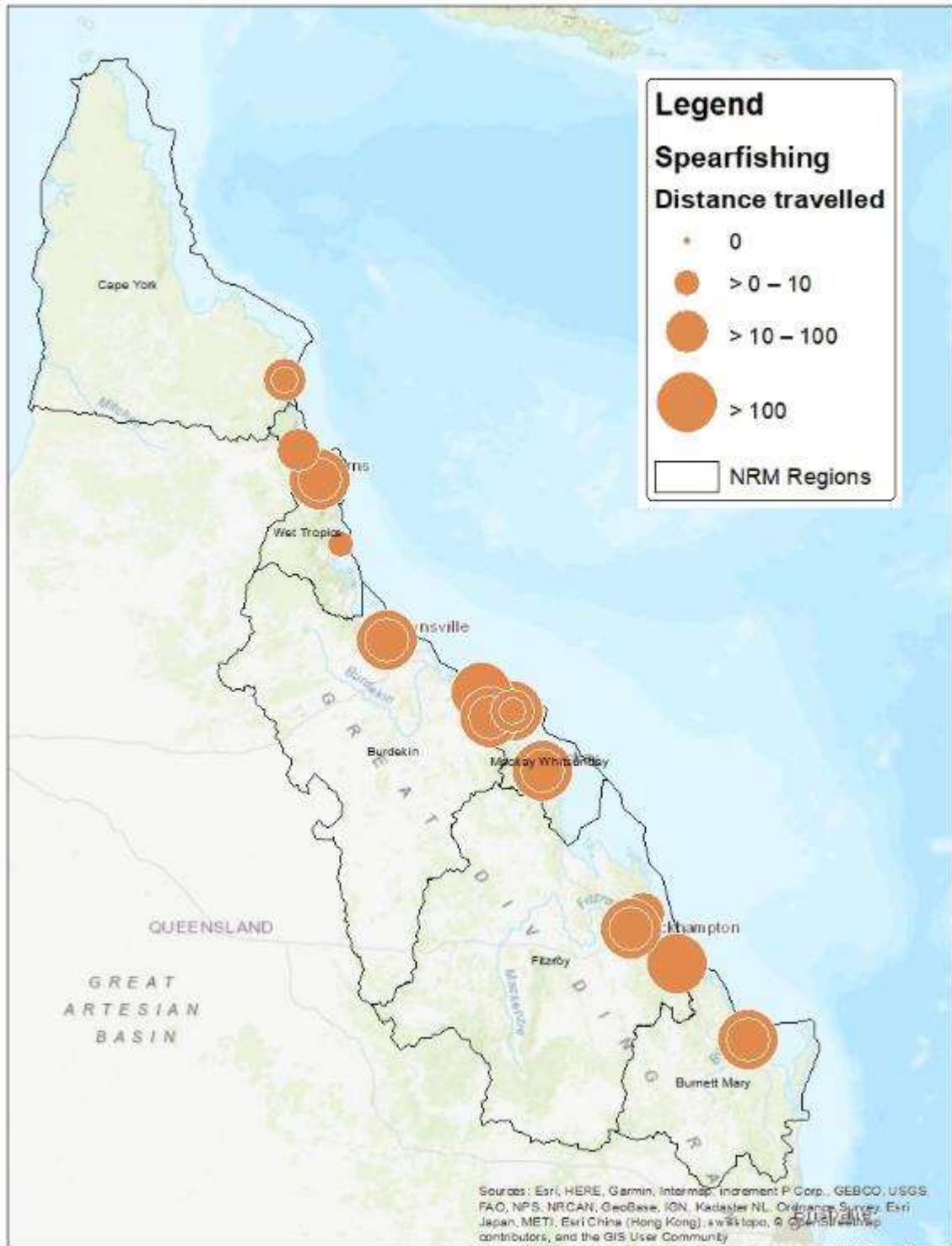
RESOURCE USER MAPS



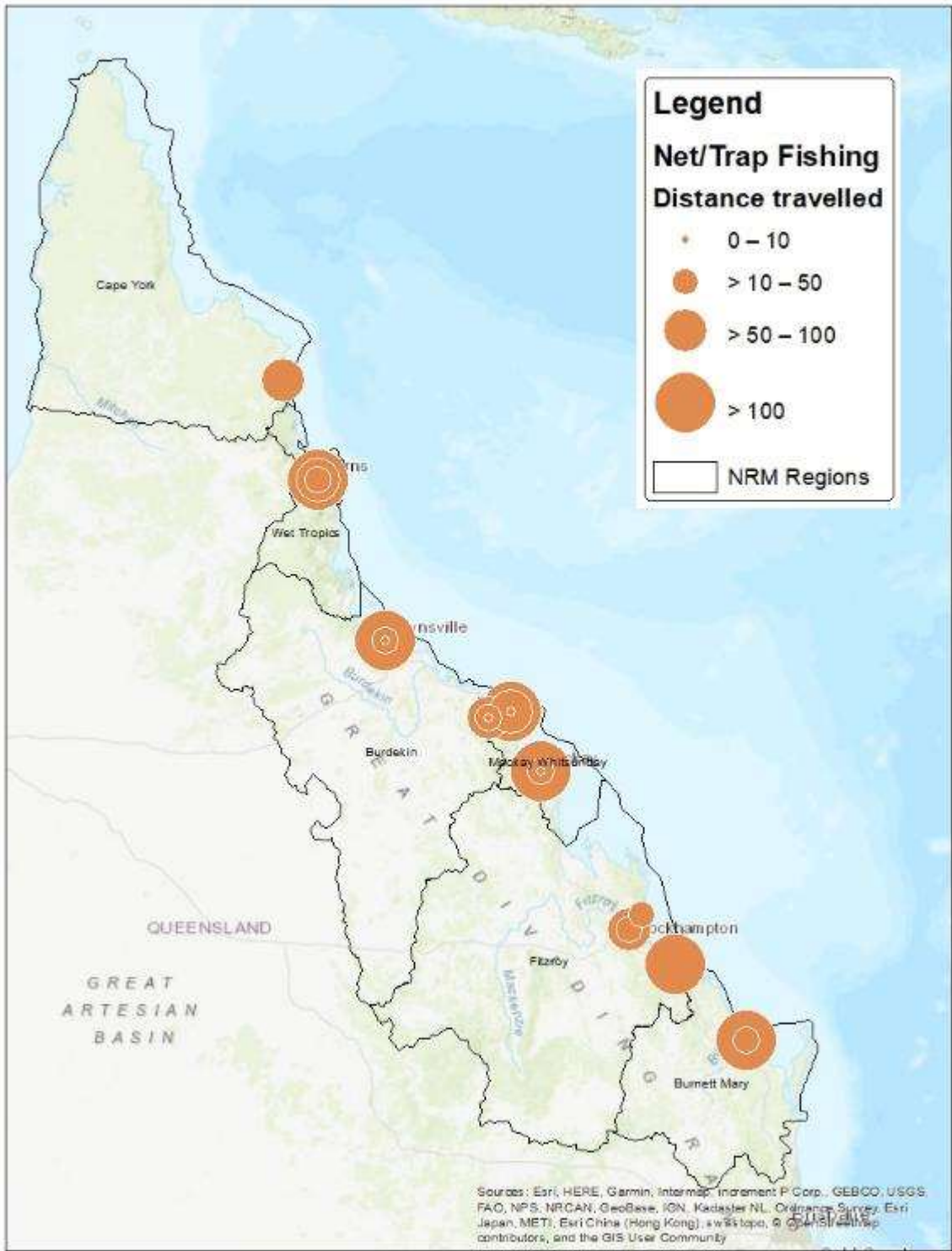
Appendix 6f. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?”. Map represents responses to the importance of line fishing (n=559).



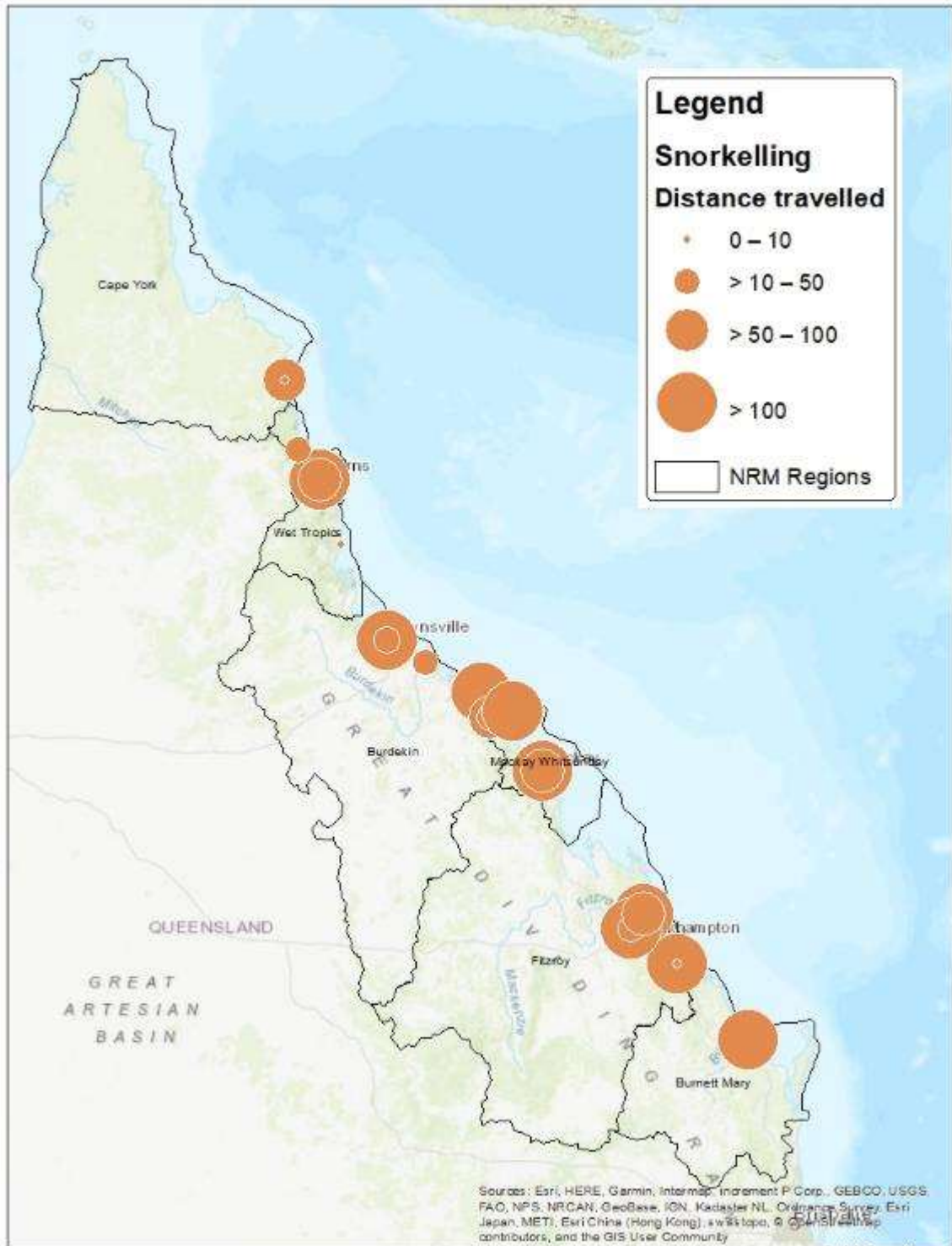
Appendix 6g. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of wildlife watching (n=1234).



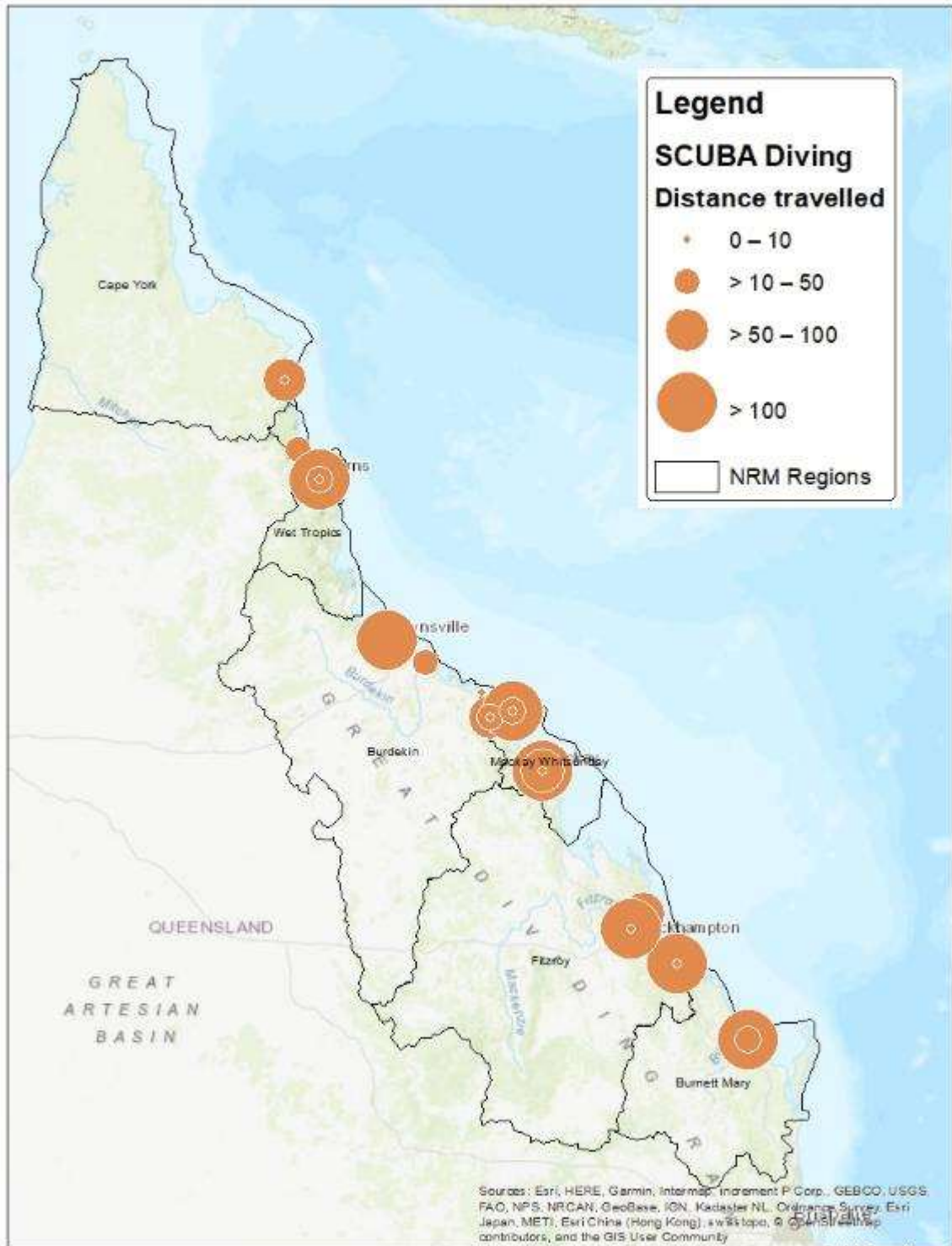
Appendix 6h. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of spear fishing (n=230).



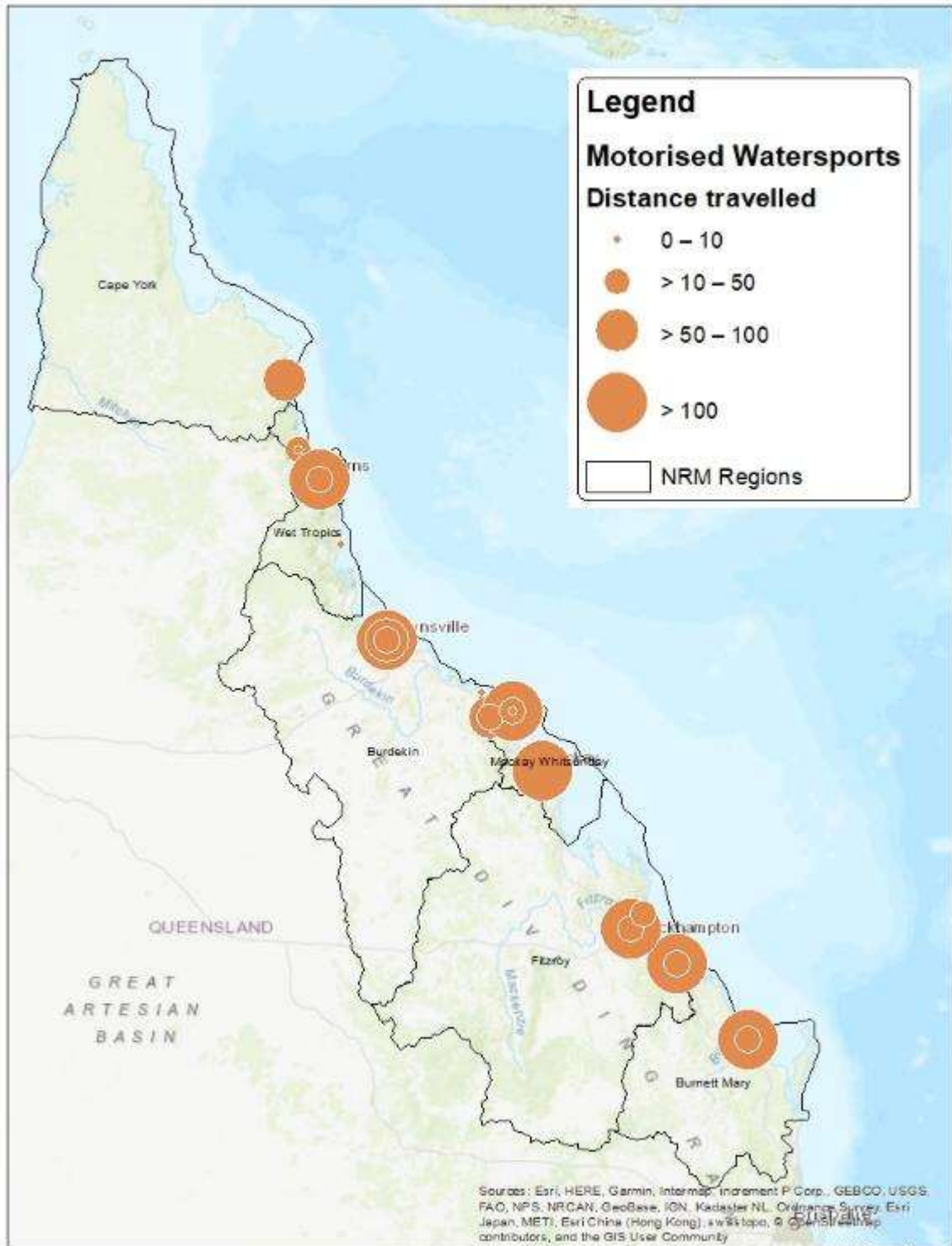
Appendix 6i. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of net/trap fishing (n=159).



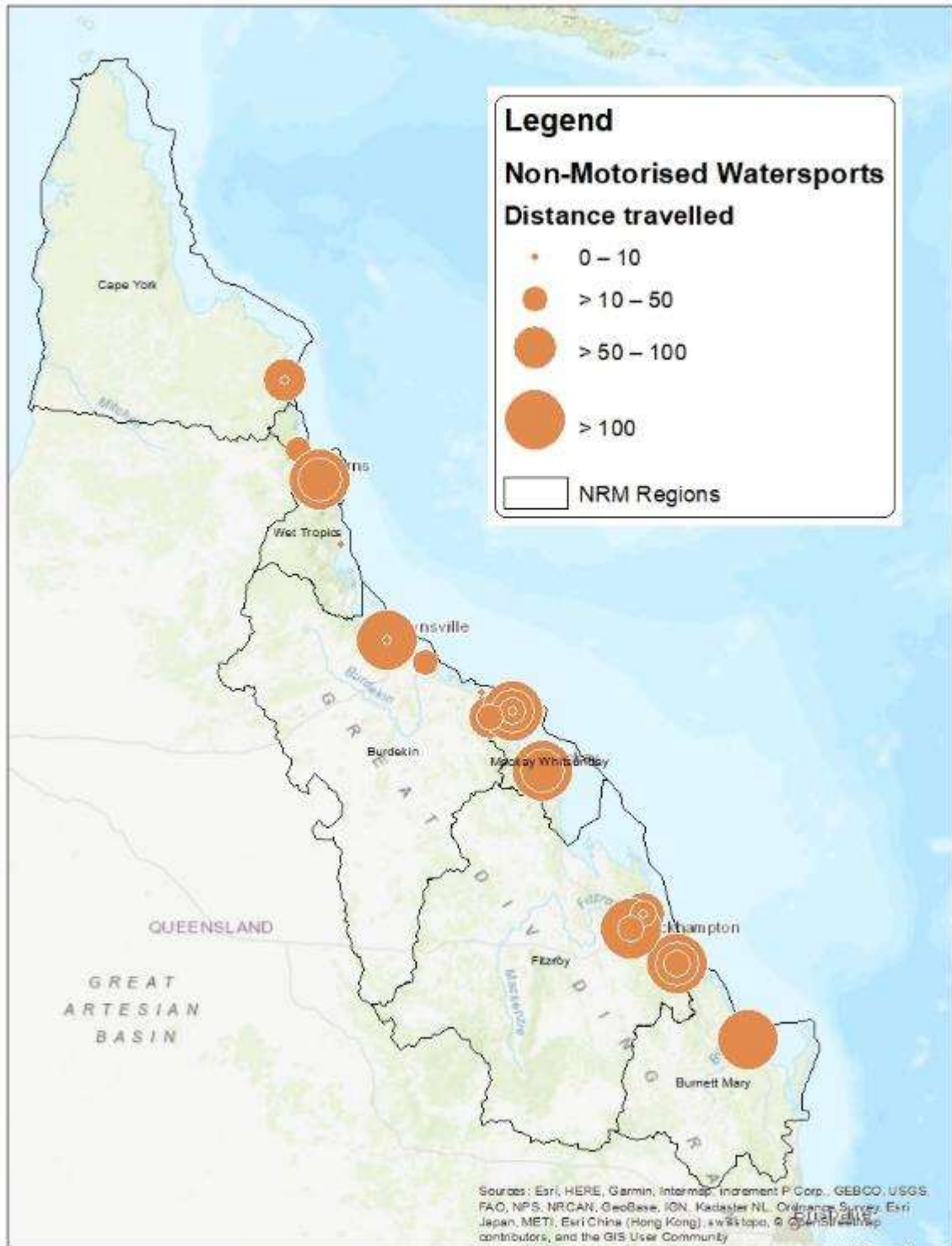
Appendix 6j. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of snorkelling (n=1116).



Appendix 6k. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of SCUBA diving (n=777).



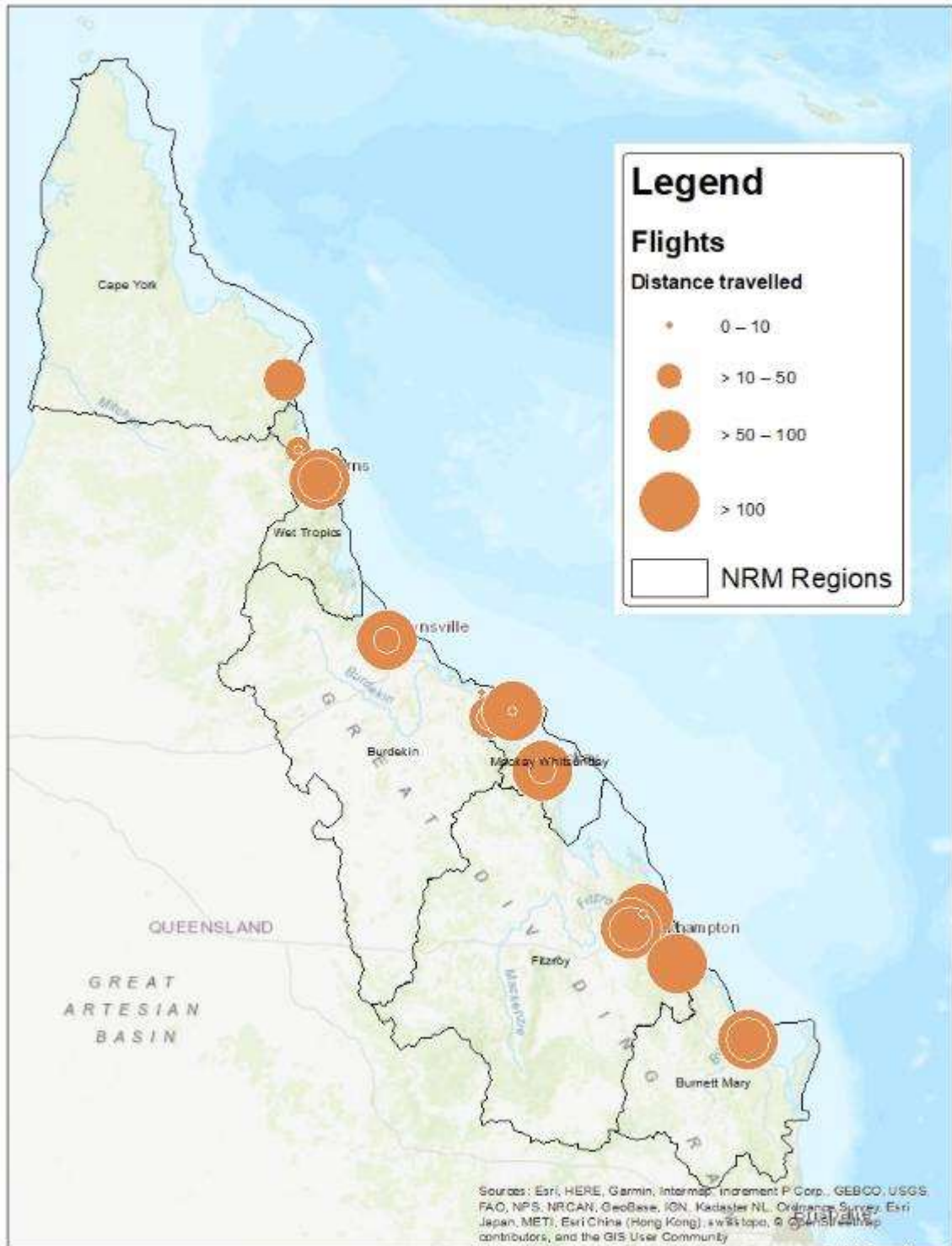
Appendix 6I. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of motorised watersports (n=379).



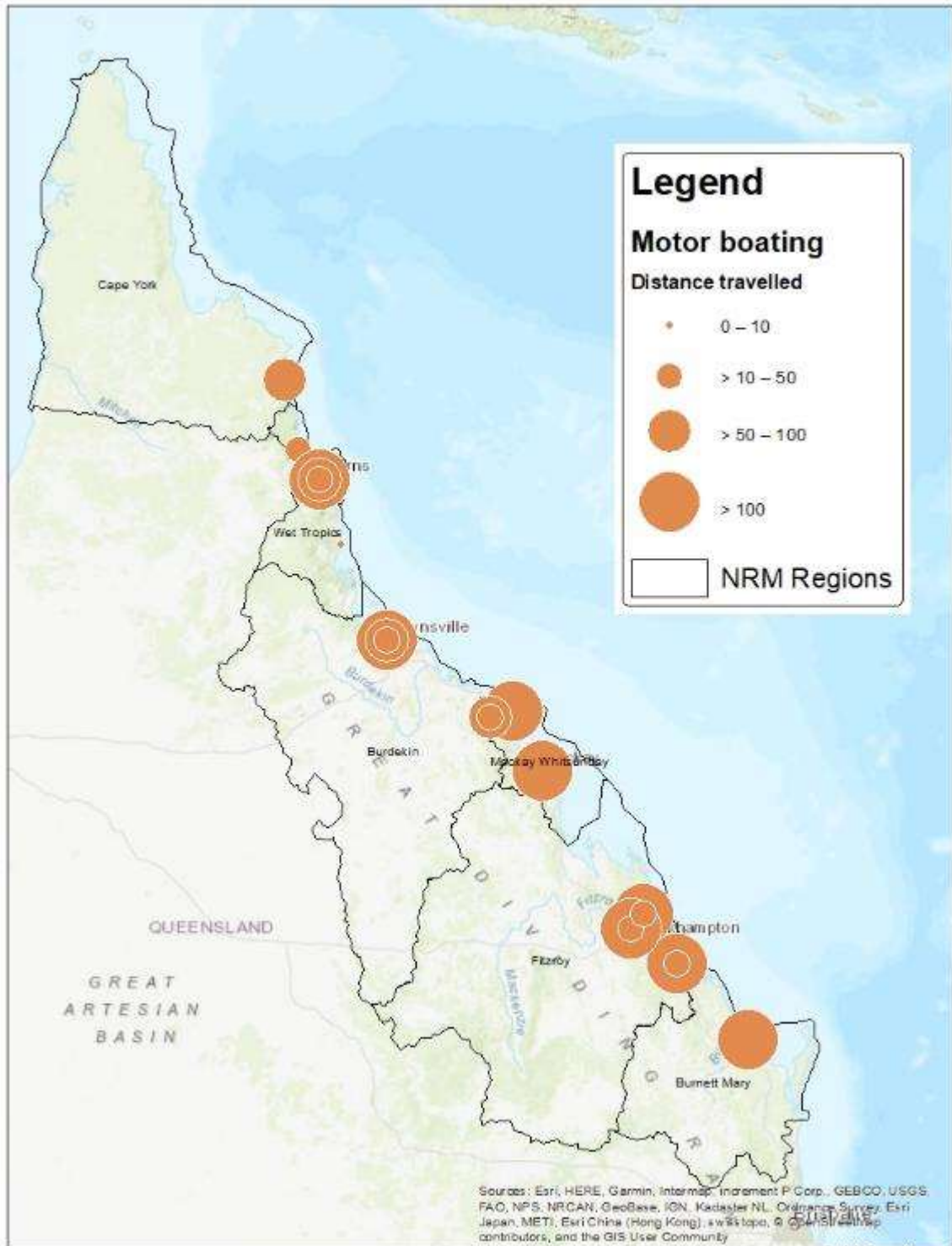
Appendix 6m. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of non-motorised watersports (n=802).



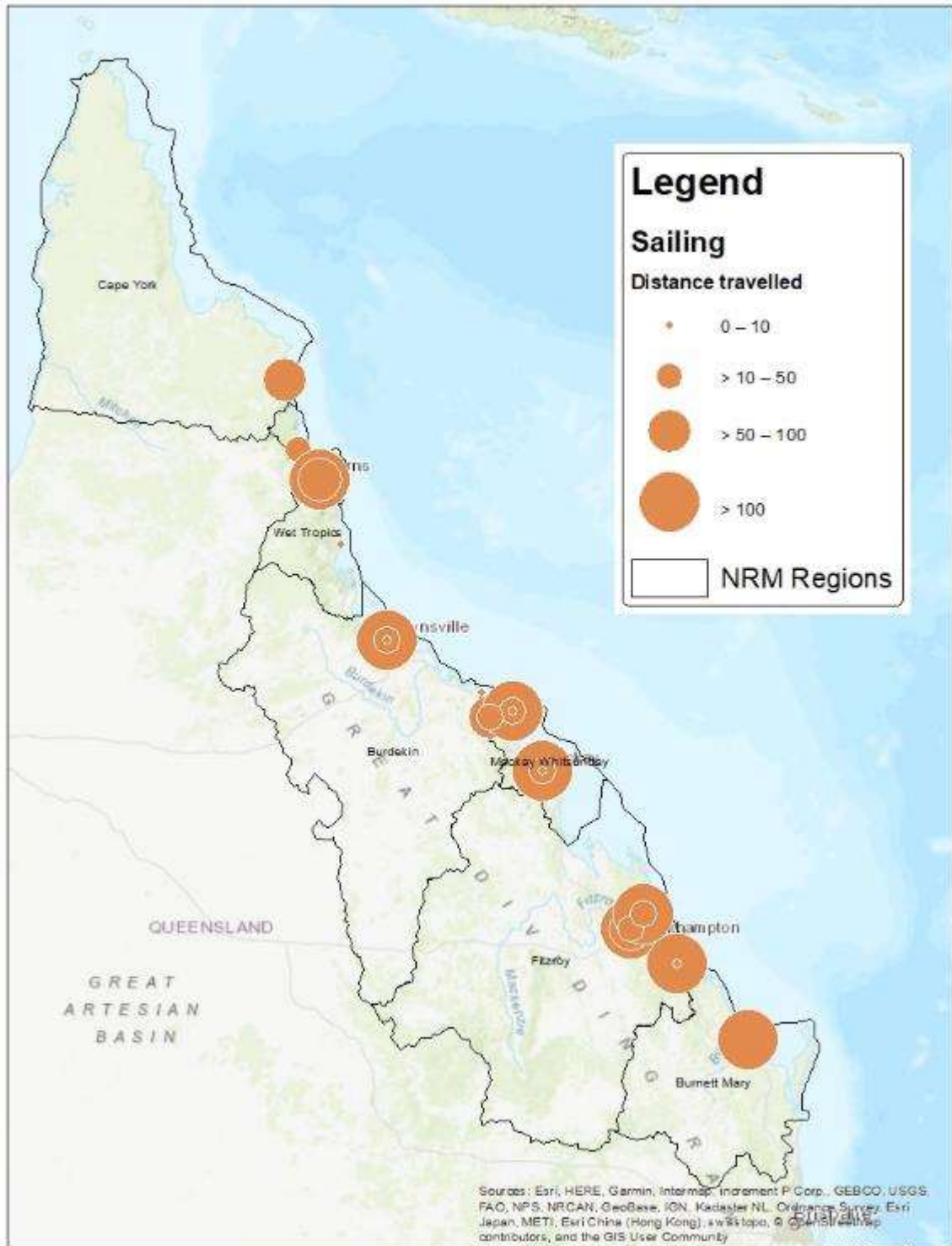
Appendix 6n. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of photography (n=1083).



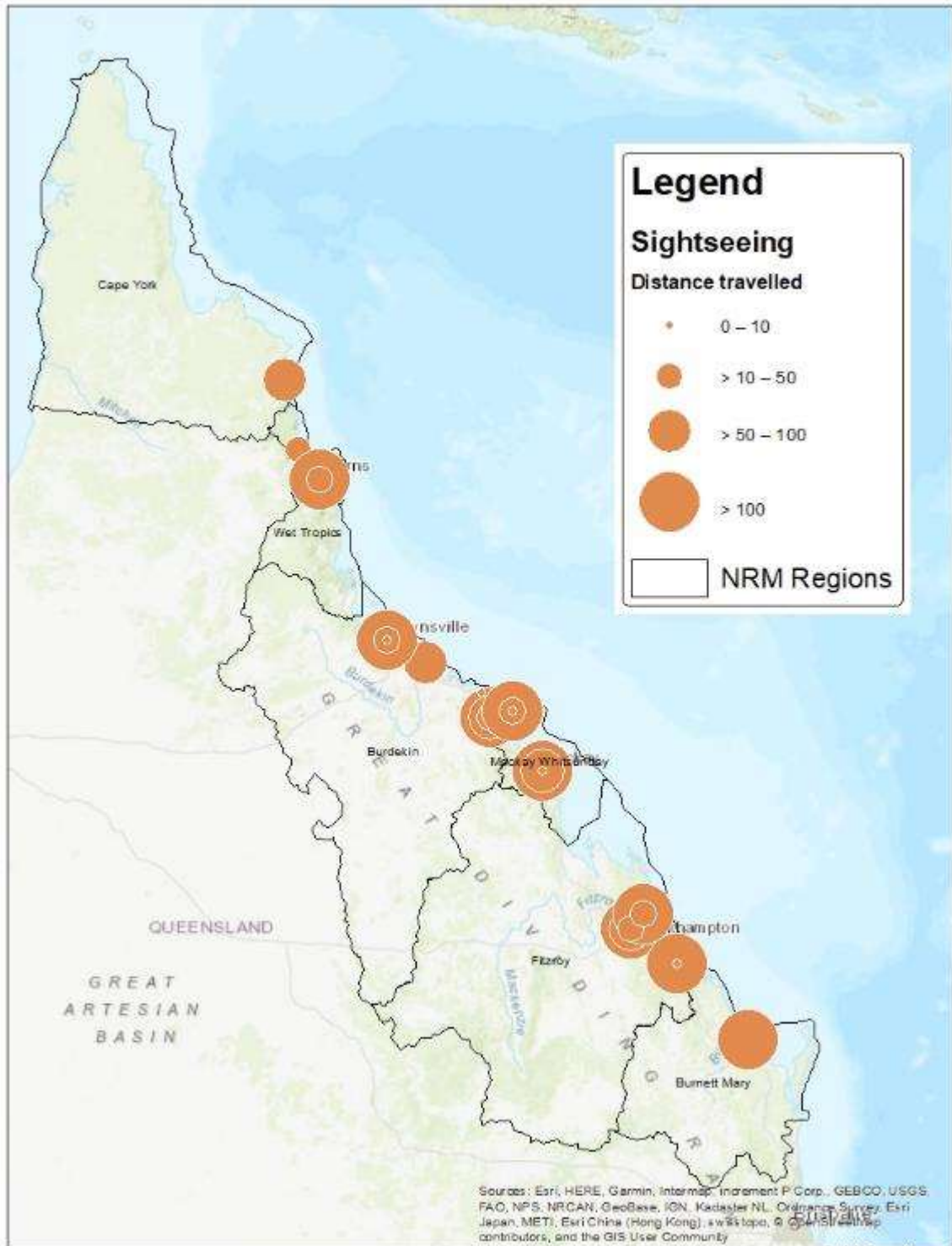
Appendix 6o. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of flights (n=407).



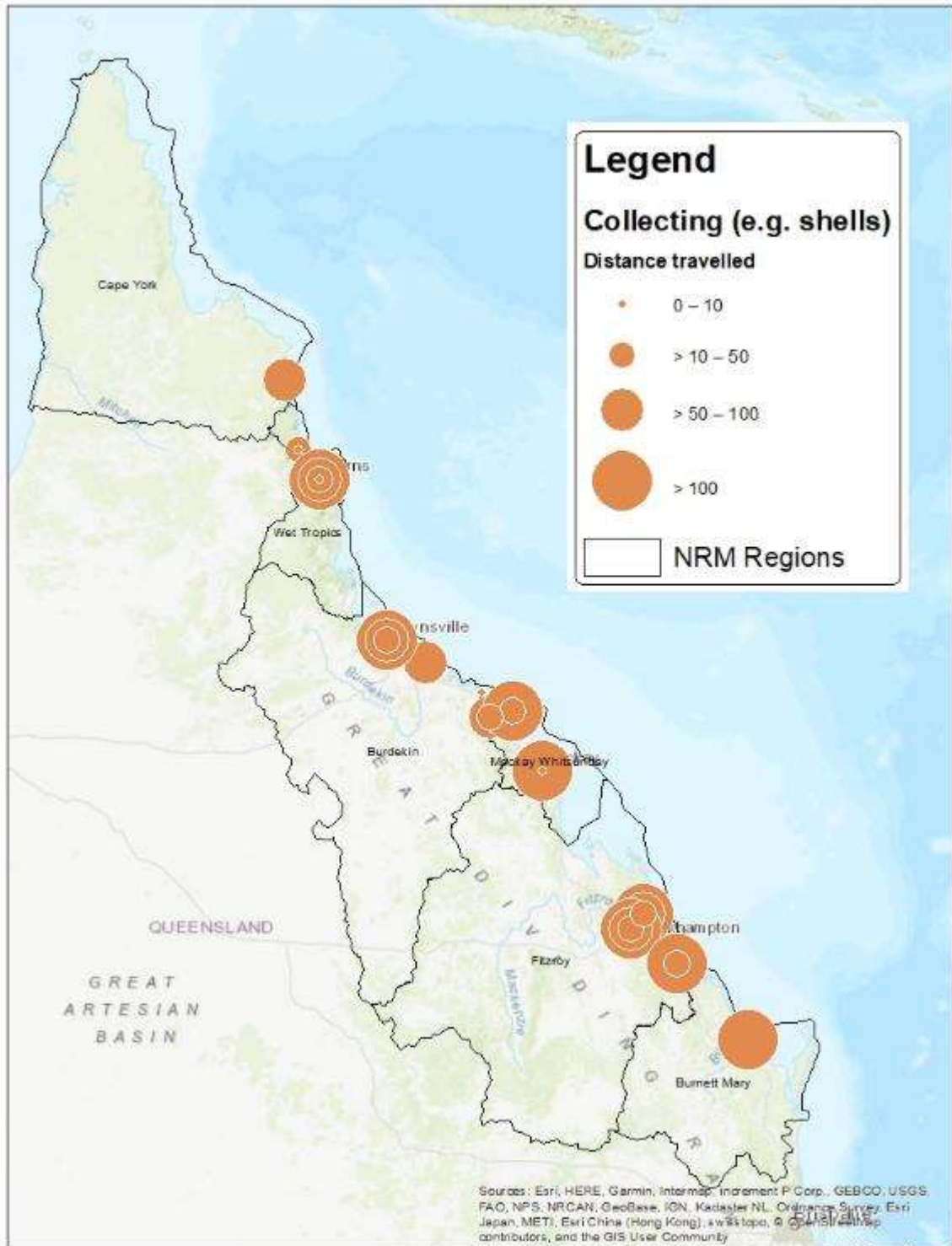
Appendix 6p. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of motor boating (n=552).



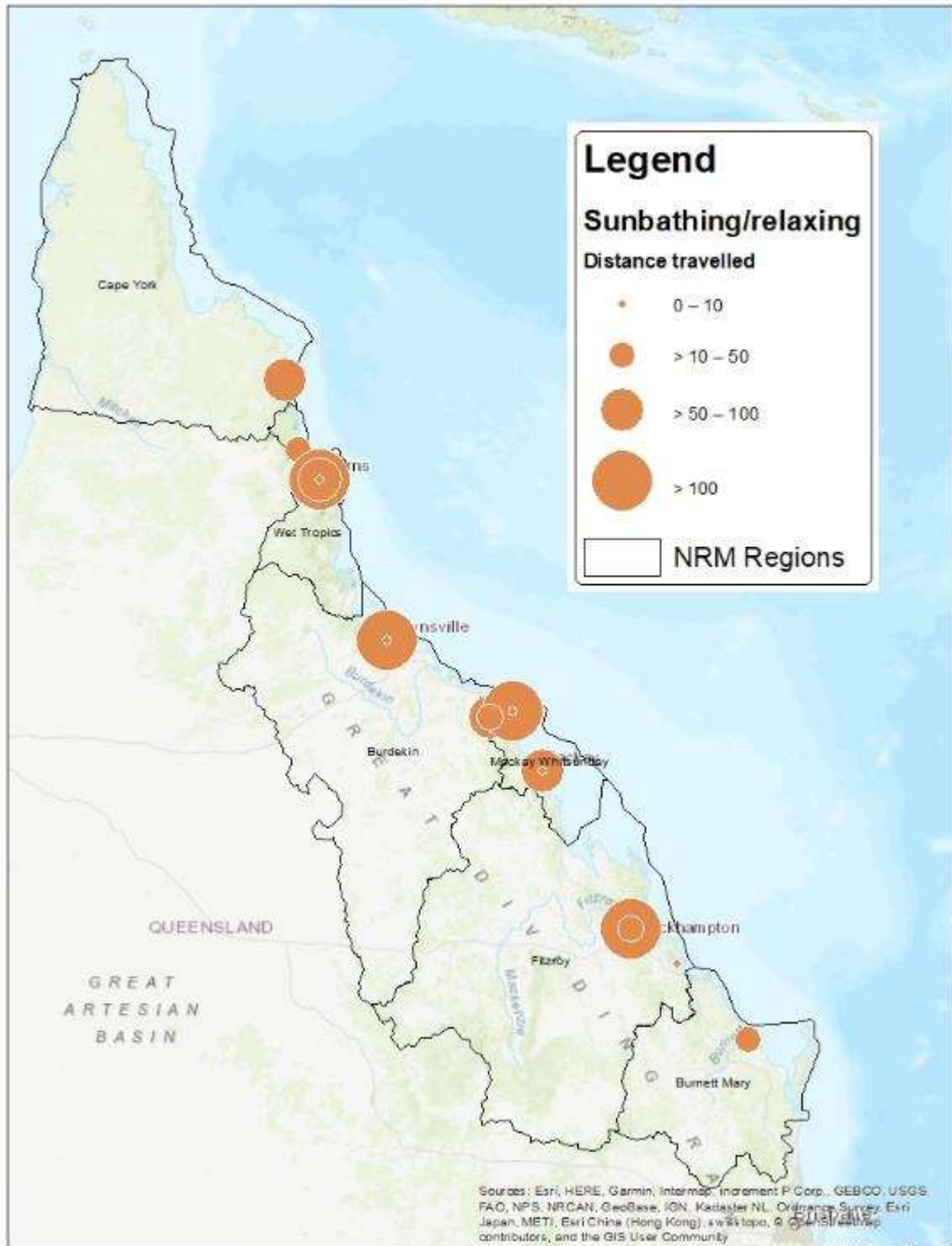
Appendix 6q. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of sailing (n=702).



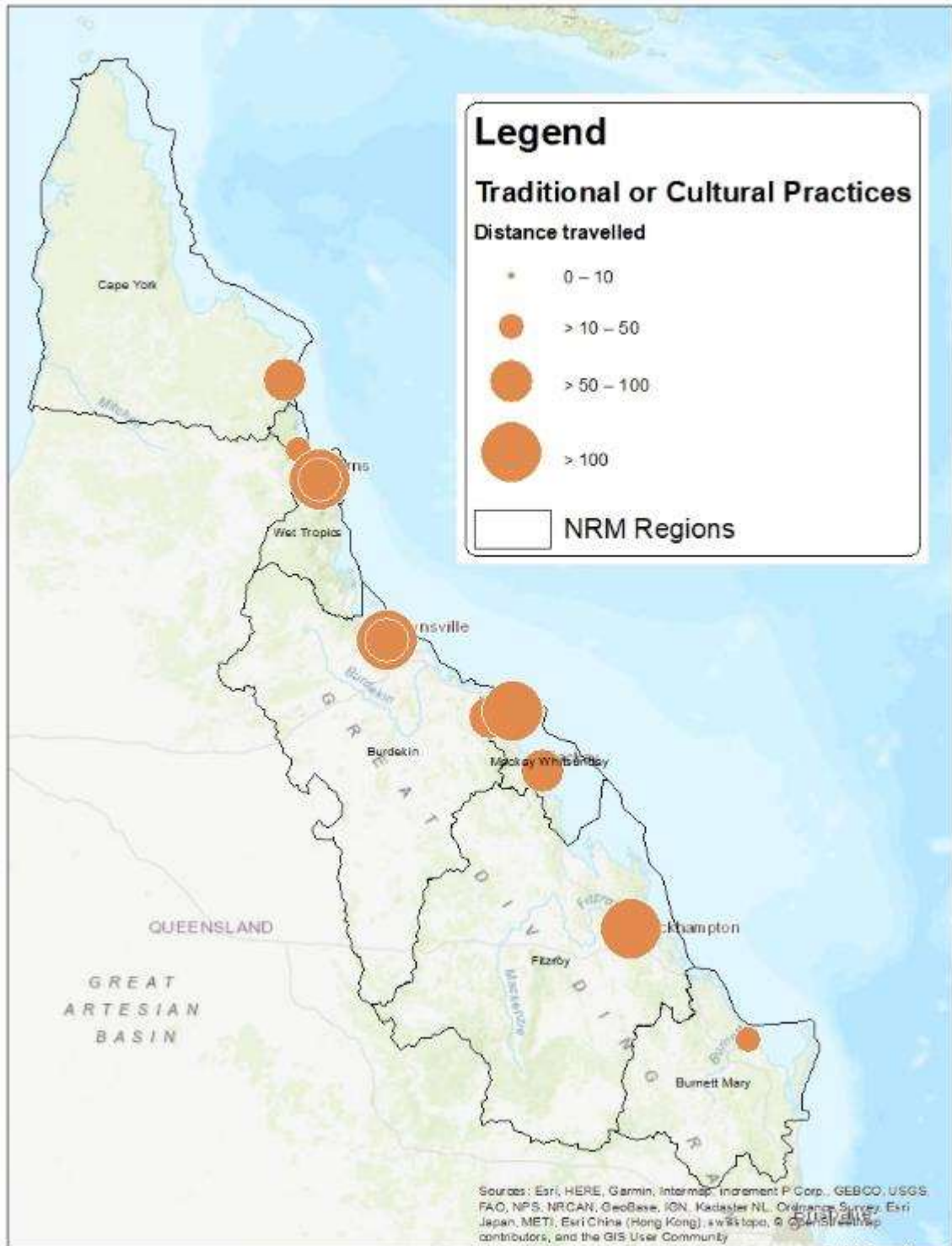
Appendix 6r. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of sightseeing (n=1324).



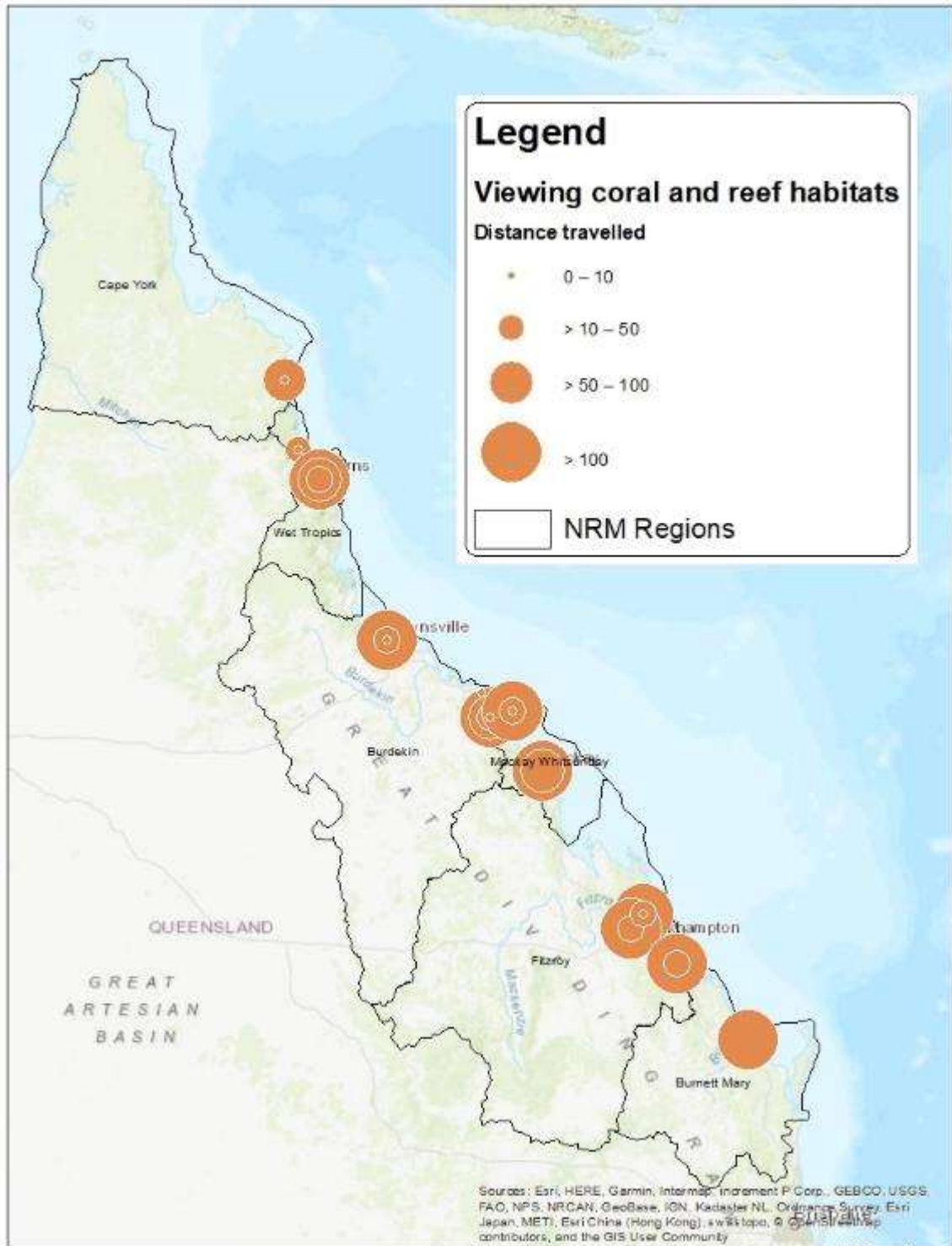
Appendix 6s. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of collecting (e.g. shells) (n=595).



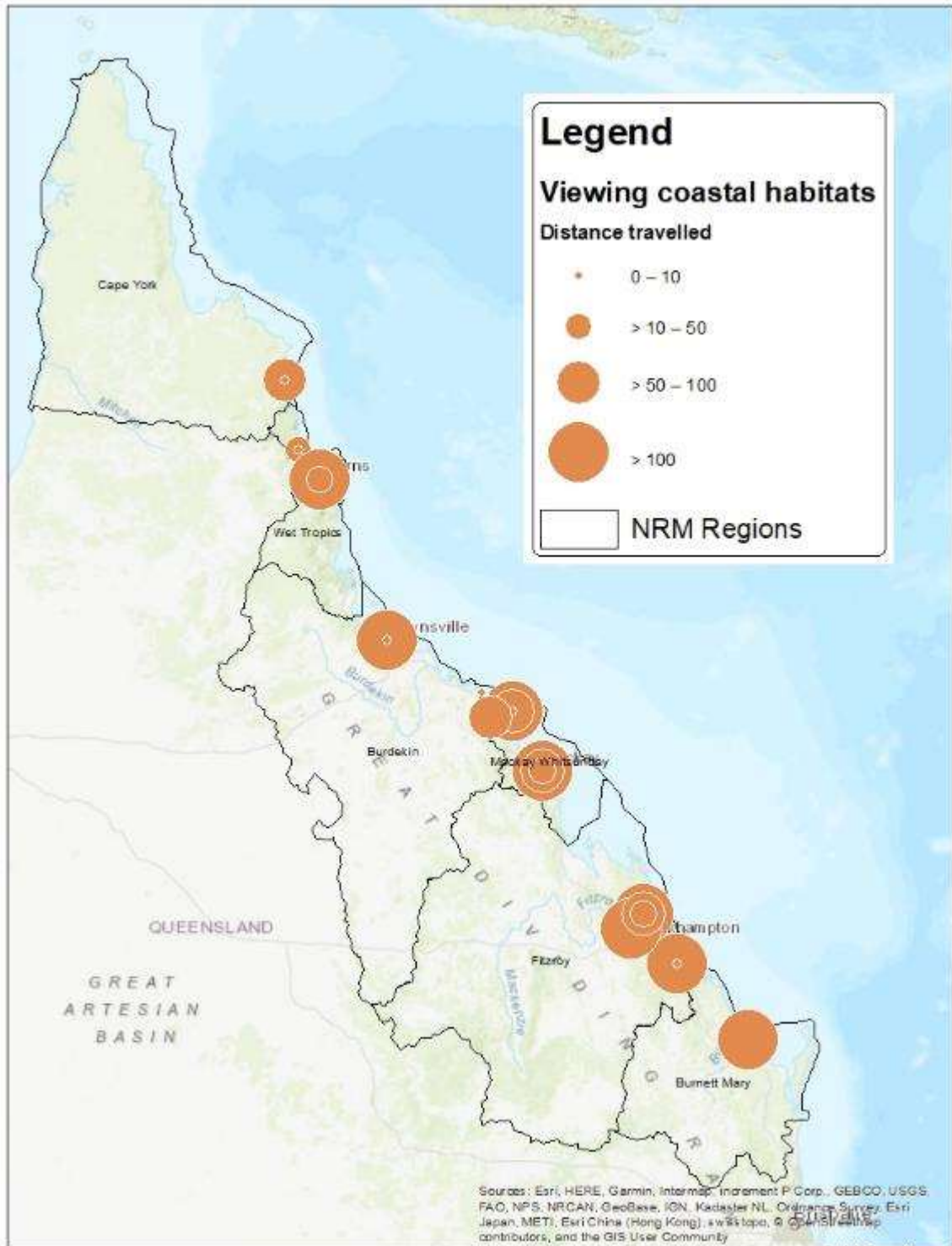
Appendix 6t. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of sunbathing/relaxing (n=1193).



Appendix 6u. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of traditional or cultural practices (n=674).



Appendix 6v. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of viewing coral and reef habitats (n=1157).



Appendix 6w. Residents response to the questions “Think about all your Great Barrier Reef visits in the past 12 months, please rate the importance of the following activities to your use and enjoyment of the Great Barrier Reef” and “when visiting the Reef, how far do you normally travel from your home?” Map represents responses to the importance of coastal habitats (n=1074).