



National Environmental
Research Program

TROPICAL ECOSYSTEMS *hub*

Interim Report

The Social and Economic Long Term Monitoring Program (SELTMP) 2013

Commercial Fishing in the Great Barrier Reef - a case study



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Matt Curnock, Jeremy Goldberg, Margaret Gooch, Petina Pert,
Lea Scherl, Renae Tobin and Ally Lankester



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Rainforest
RESEARCH CENTRE

The Social and Economic Long Term Monitoring Program (SELTMP) 2013 Commercial Fishing in the Great Barrier Reef – a case study

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SELTMP 2013: COMMERCIAL FISHING CASE STUDY

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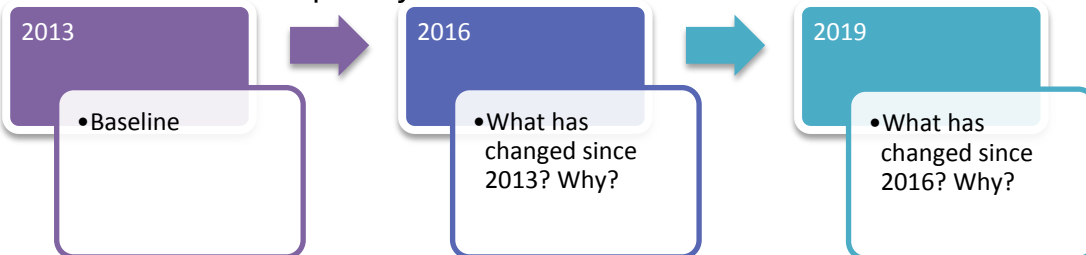
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This report focuses on a case study that was carried out with a small group of commercial fishers living in the Great Barrier Reef (GBR). The purpose of the case study and this report is to complement the secondary data and primary survey data on commercial fishers collected in 2013 as part of the SELTMP. An overall summary of commercial fishing in the GBR and analysis of the information collected from secondary sources and a survey with 210 fishers are presented in Tobin et al. (in press). This report focuses on the in-depth interviews and qualitative data collected in the case study with commercial fishers.

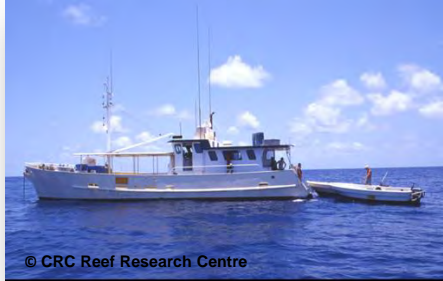
A case study approach was incorporated in the SELTMP as a complementary monitoring tool to the survey. Case studies focus on the collection of qualitative data and, as such, are a useful tool for complementing and adding richness to largely quantitative data generated from surveys. Commercial fishers were selected as the first group to monitor with both survey-based and case study-based monitoring approaches, with the idea of extending this to other key groups in the GBR in subsequent years.



Similarly to the 2013 survey with commercial fishers, the 2013 case study provides a baseline from which to monitor and capture changes in commercial fishers' relationship to the Reef. Re-interviewing these fishers at regular intervals (for example, every 3 years) using the same set of open-ended questions, in conjunction with the survey, can provide management and industry qualitative information to support and adapt decision-making processes (i.e. policy and planning) and management.



SELTMP 2013: COMMERCIAL FISHING CASE STUDY



Case study methods

Sampling

14 commercial fishers and 2 of their partners participated in the in-depth interviews. A purposive and snowball sampling methodology was used to identify interview participants. This was done to ensure that fishers from diverse fisheries and size of operation were interviewed. As such the results from the case study data are not representative of all commercial fishers in the Great Barrier Reef but, rather, are reflective of the small group of fishers interviewed.

The 14 commercial fishers who participated in the case study included both small and large operators who had in-shore and off-shore licenses that included net, pot (crab), line, trawl and harvest. The number of years they had been fishermen ranged from 3 years to over 35 years. Their home base was Innisfail, Cardwell, Townsville, Ayr and Bowen.

Data collection methods: in-depth interviews

The interviews we carried out in August 2013 at a location of their choosing. Most interviews were conducted in their homes; some in their place of work. The interviews were guided by a set of pre-defined open-ended questions (see page 6) that were conducted in an informal and flexible manner. The purpose was to give fishers the opportunity to share their knowledge and opinions in as much depth as they wished. As part of the interviews, two pile-sorting activities were carried out (see page 6).

The length of the interviews ranged from 50 minutes to 3 hours with the majority of interviews being, on average, 1 hour and 15 minutes long.

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Data collection methods: The use of the SELTMP framework for describing the Reef relationship

The case study design and questions drew upon the SELTMP framework:

THE SELTMP FRAMEWORK

A) How people use and depend on the GBR

Use of the Environment: Where, When, How, How Much

Activities (what, how, how much)

Spatial and temporal patterns of use (where and when)

Social Relationship with the Environment: Who and Why

Cultural, spiritual and intellectual inspiration and experiences (place, identity, aesthetics, satisfaction)

Economic Relationship with the Environment (What is the relationship like?):

Employment, value and investment

B) Human and Community Well-being

C) Indirect Drivers of Change

Employability

Environmental stewardship

Information and Networks

Sector-specific drivers

D) Direct Drivers of Change

SELTMP 2013: COMMERCIAL FISHING CASE STUDY

Data collection methods: in-depth interviews using open-ended questions and pile-sorting activities

A. USE AND DEPEND ON THE GBR Social relationship with the GBR: cultural, spiritual....inspiration & experiences Economic relationship with the GBR	C. INDIRECT DRIVERS OF CHANGE	B. HUMAN AND COMMUNITY WELLBEING
<p>PILE-SORTING ACTIVITIES:</p> <p>These are a list of words/short phrases that commercial fishers used to describe the GBR (from SELTMP 2013 survey).</p> <ol style="list-style-type: none"> 1. Please sort the cards into piles according to which items you think belong together. 2. Please group the cards into 3 piles according to how important the items/issues are (most , somewhat, least important) <p>OPEN-ENDED QUESTIONS:</p> <ol style="list-style-type: none"> 3. If you were asked to share a photo, image, a thing, a place, or a word that best captures what the Reef means to you, what would it be and why? 4. What does it mean to be a fisher? 		
<p>OPEN-ENDED QUESTIONS:</p> <ol style="list-style-type: none"> 5. If the Reef was <u>irreversibly damaged</u>, how would you feel about that? How would that impact you/your family? your business? the fishing industry? 6. If you had to imagine your life and business in <u>5 years' time</u>, what would it look like? How will the fishing industry change in this time? 	<p>7. What have been the most significant changes that the commercial fishing industry in the GBR has undergone since WWII? And how have those changes affected you/our family? Your business? The industry?</p>	

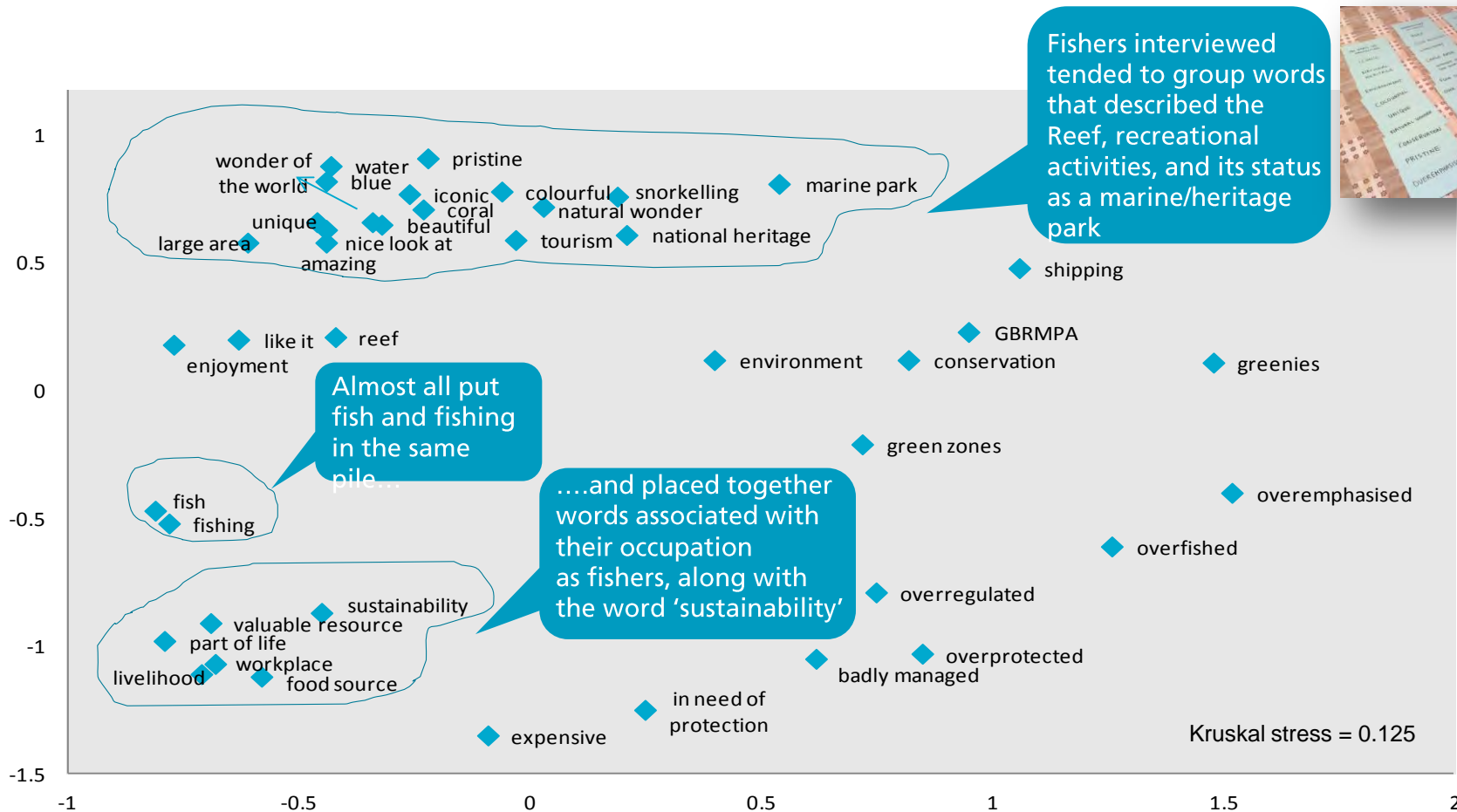
Data analysis methods: content analysis and consensus analysis

All interviews were recorded and transcribed verbatim. Approximately 700 pages of qualitative data were produced. The data from the open-ended questions was coded according to major themes using the qualitative data analysis software N-Vivo (QSR 2012). The data from the pile-sorting activities were analysed using Anthropac (Borgatti 1996). This report presents preliminary analyses of questions 1-4 and 7 (questions in blue above). As content analysis involves a level of interpretation , the results will be returned to fishers for feedback and validation.

SELTMP 2013: COMMERCIAL FISHING CASE STUDY

Preliminary results: social & economic relationship with the Reef

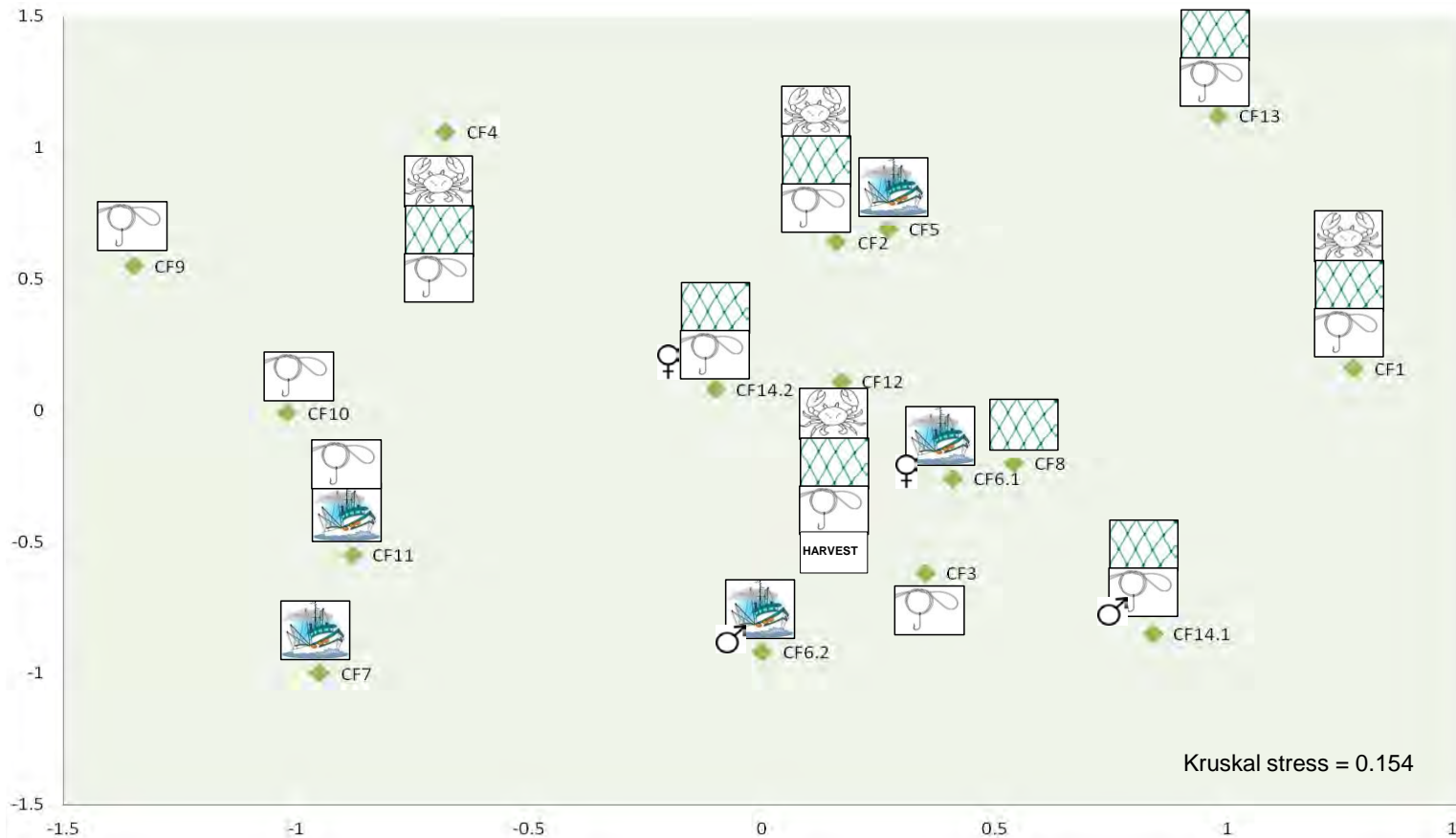
Q1. Please sort the cards into piles according to which items you think belong together








SELTMP 2013: COMMERCIAL FISHING CASE STUDY

Preliminary results: social & economic relationship with the Reef

Q1. Please sort the cards into piles according to which items you think belong together



Overall, fishers interviewed had quite different perspectives on how the words belonged together

-  = net license
-  = pot/crab license
-  = line license
-  = trawl license
-  = harvest licence

Preliminary results: social & economic relationship with the Reef

MOST IMPORTANT
 PERSISTENT OVERVIEW/ LIVED EXPERIENCE
 WORKPLACE/
 OVER
 FOOD SOURCE

CONCRETE MATERIALS
 LIKE IT
 EXOTICISM
 PART OF ANOTHER
 TOURISM
 ROMANCING/ART AND TRE

LOCALITY
 COUNTRIFIED GREEN/ GREEN CLAIM
 ETHICAL/ SUSTAINABLE
 OVERCOMING



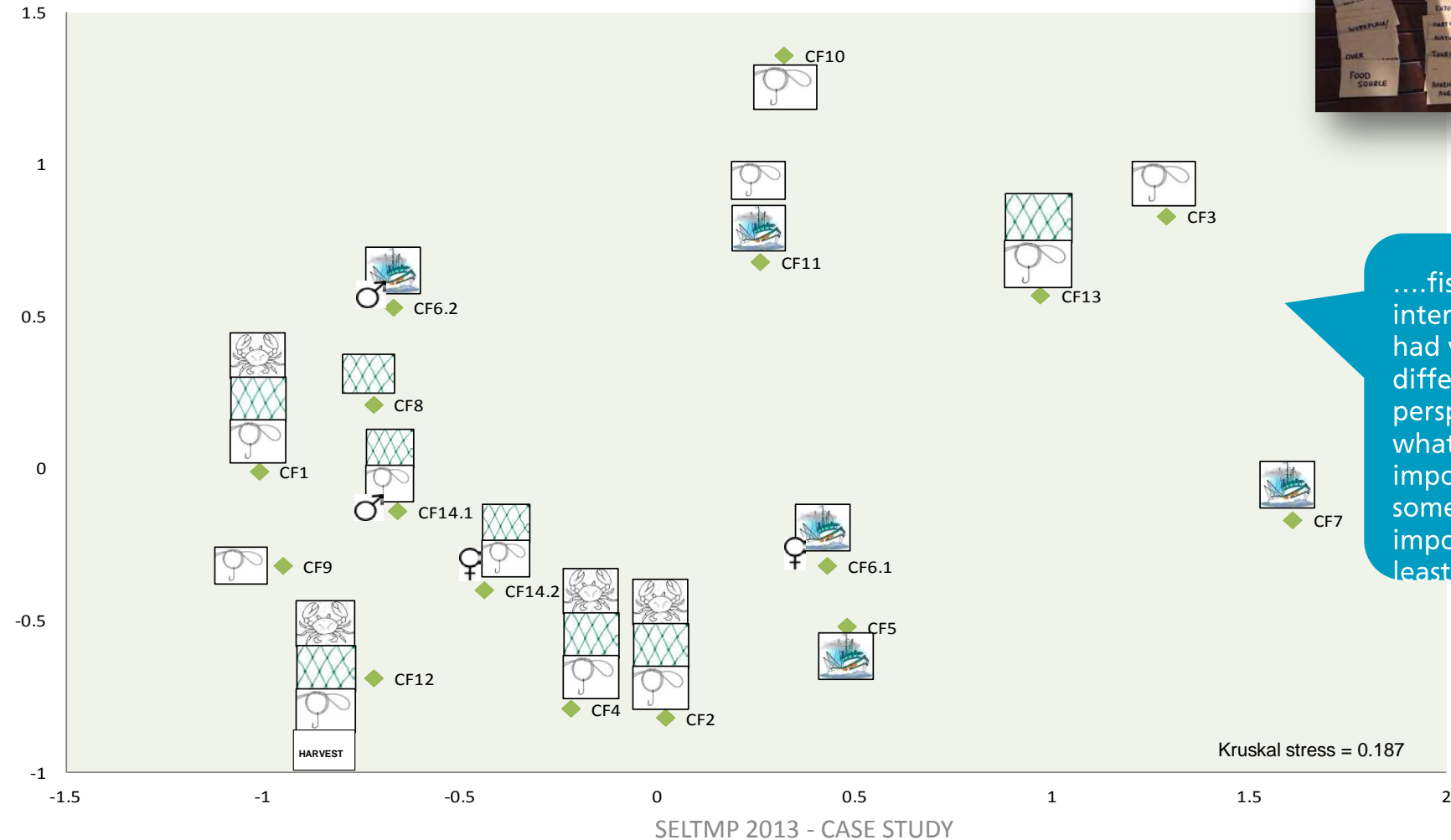
SELTMP 2013: COMMERCIAL FISHING CASE STUDY

Preliminary results: social & economic relationship with the Reef

Q2. Please group the cards into 3 piles according to how important the issues are (most important, somewhat important, least important)



....fishers interviewed had very different perspectives on what was most important, somewhat important, and least important



SELTMP 2013: COMMERCIAL FISHING CASE STUDY

Preliminary results: social & economic relationship with the Reef

Q3. If you were asked to share a photo, image, a thing, a place, or a word that best captures what the Reef means to you, what would it be and why?

A WORD

FREEDOM

I went into this job and was flying away...and for me to then get on a plane and start flying away on a Sunday night and come home on a Thursday night, and living in a motel, was a huge change. And after a while [my wife and daughter] decided “why don’t we live in Brisbane.” So we went down there and we shifted down there for 18 months. My daughter was eight or nine at the time, and she said to me, “When are we going to go back to freedom.” And that was those words that I keep thinking, and that’s what made my decision to go back fishing.

LIFESTYLE AND A HOMECOMING

To me it’s a lifestyle. I’m me own boss, you know what I mean? ...When I’m crabbing and the tide - like, you’ve got to push yourself to get out of bed at 4 o’clock in the morning, you know, when it’s raining? And sometimes in the winter time it rains and you just lay there thinking....And you come home and abuse yourself for going because you caught nothing. ...But it is a lifestyle and, yeah, ‘cause probably it’d be like a homecoming, you know, no-one wants to put up with us, you know what I mean?

WORKPLACE

It’s a good workplace. It’s a hard workplace as I say, but it’s a pretty good workplace.

SELTMP 2013: COMMERCIAL FISHING CASE STUDY

Preliminary results: social & economic relationship with the Reef

Q3. If you were asked to share a photo, image, a thing, a place, or a word that best captures what the Reef means to you, what would it be and why?

A WORD	
AMAZING	<i>Amazing. That's what it is. <u>What it can produce and what it does produce is amazing.</u> Dolphins, turtles. Jellyfish. It is just phenomenal. It's special.</i>
UNIQUE	<i><u>Unique is probably the best thing that's springs to mind because of the diverse aspects it gives you or that are available.</u> Like we're also very avid spearos here in the family - spear fishing...so in that respect I not only use my grounds for making a living, but we can go out there and we also have recreational days. Like last week we were out filming Chalky the White Whale...So yeah, so that was pretty cool...Yeah, it's an income to me but there's also those sort of things...go out and swim all day, watching the whales. I'm just as much of a kid going out there and seeing a couple of humpbacks jumping around with the calf as catching a hundred mackerel for the day. It all happened on the same day and I'd put the whales [first]. <u>Yeah, mackerel maybe made me \$500 for the day, but those whales are pretty cool with the little one jumping around and carrying on.</u> So that's where the word unique.</i>
SATISFACTION	<i>If I [had to] think for a word, it would be <u>satisfaction.</u> I've fished lots of places, like down off Cape Moreton. It's rough, huge seas, and here it's just relatively calm. It gets pretty dirty out there too, but it's just a beautiful place. So diverse. I've got whales swimming around me and I see it all the time.</i>

SELTMP 2013: COMMERCIAL FISHING CASE STUDY

Preliminary results: social & economic relationship with the Reef

Q3. If you were asked to share a photo, image, a thing, a place, or a word that best captures what the Reef means to you, what would it be and why?

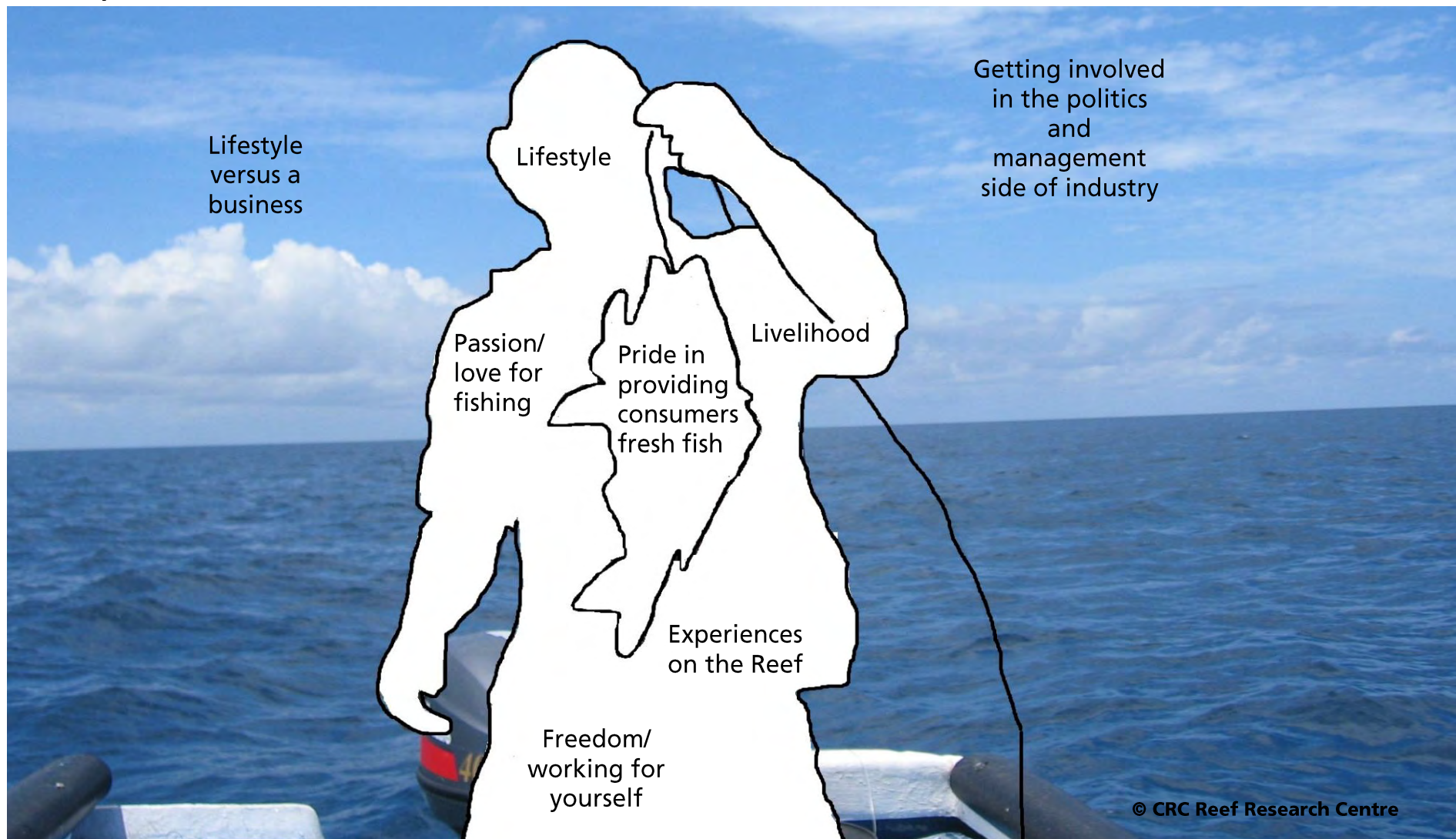
AN IMAGE, AN EXPERIENCE

On a dingy, dark purple waters, whales swimming past	<i>Trolling for Spanish mackerel beside the reef...so picture a dingy, you can see all the beautiful florescent colours of the reef in the background. <u>The water is dark purple...you got 20, 30 metres of visibility or more. And then you got the whales swimming past you, jumping and going stupid.</u> I mean, that, to me, is just the picture.</i>
Turtles coming off the beach, birds eating them	<i>I tell you what probably sums it up better was that night at North-West Island when all the <u>turtles were coming off the beach.</u> That night they hatched, the water was just black with turtles about that big and [I] actually grabbed the basket and just scooped it up over the side of the boat and was hanging onto them. I mean it's stuff like that, you see.... but like the flipside of all of that was there were all the birds around as well, eating them. Yeah, we had to turn all the lights off - because the birds were all there.</i>
Sunrise, a seagull and a boat... peacefulness	<i>Talking about a photo they took: Yeah, there's just one seagull, sort of flying through the shot as I took it and sunrise coming up and it's a flat calm day and there's one boat right over in the distance. You can't see any discerning features but you can see that there's a boat in the distance...<u>Just the peacefulness of it. You're away from the hustle and bustle and I mean for that short snippet every morning that you watch the sun come up and it's a flat calm day and it's a nice day you can shut down for that ever so short period.</u></i>

SELTMP 2013: COMMERCIAL FISHING CASE STUDY

Preliminary results: social & economic relationship with the Reef

Q4. What does it mean to be a fisher?



SELTMP 2013: COMMERCIAL FISHING CASE STUDY

Preliminary results: social & economic relationship with the Reef

Q4. What does it mean to be a fisher?

For most, being a fisher is much more than just an occupation...

It's a lifestyle to me. It's a good living and yeah, it's freedom. Don't have to worry about being at work at 7 am and watching the watch or the clock every five minutes. I did five years in a sugar mill when I left school so I know what it's like to work on land, yeah. It didn't really turn me on.

It means everything. Fishing is my life. It has been forever, really.

I was always discouraged to be a fisherman from my family because of [my grandfather] seeing everything taken away and the heartache, I mean, so I was always encouraged not to be a fisherman. Luckily at that age – I was about 13 or 14 when that happened – so I didn't really understand it all. Then I thought, no, I had to be a fisherman, that's where my heart lay.

It still is lifestyle, even though I've pushed it more to a business, but it still is a lifestyle and working for yourself

[Being a fisher] is such a passion that I don't even regard it as [a job]... I do take it as a very serious job, but I actually love it so much that when the alarm goes off at 2 o'clock in the morning or 1 o'clock in the morning to go fishing, instead of dragging myself up out of bed like, oh, crap, I got to go to work, I bounce up. Like it's just, whoo, I'm just wired to go to work. I just love it that much, so it's a really strong passion of mine.

SELTMP 2013: COMMERCIAL FISHING CASE STUDY

Preliminary results: social & economic relationship with the Reef

Q4. What does it mean to be a fisher?

...it is also linked to a sense of pride

I used to sell to a shop on Boundary Street, and in that shop you used to get the opportunity to interact with customers... and to be able to talk to customers about the history behind that fish in the window, or that mud crab that I caught this morning, that you are now going to take home and cook. And you are asking – you are not only interested in how I caught it, but my advice on handling it and preparing it and how to cook it.

Service people [e.g. fish shop owners] don't know anything about the history of fish, and you just need that identity behind – you need a storyline.

I take pride in what I do for a job. I supply a food source to the community.

[Behind each fish caught there is a] long generation of fishing family... mum, dad, two kids on a boat. It is a beautiful story, and it puts an identity behind [a fish shop owner's] product.

You feel a really big sense of pride when you can learn to read the environment and to be able to know where to go at what time... And, also, when you're unloading at the fish shop the public is coming up and you're educating them and you're showing them the fish you catch and they're saying wow, that's so fresh, that's beautiful fish, caught last night... They just want to eat a beautiful piece of fish and it just makes you feel so nice, so good, when you can see smiles on the public's faces who appreciate what you're doing, not just looking at you as a dingo, so that's just what I love about fishing.

SELTMP 2013: COMMERCIAL FISHING CASE STUDY

Preliminary results: social & economic relationship with the Reef

Q4. What does it mean to be a fisher?

Being a fisher is closely tied to experiences on the Reef

The other day we were out...and a massive big mother whale came alongside us with her little calf, and the little calf was having a play while the mother was down on the bottom having a sleep, and it was just – he's – he was coming right up to the boat looking at us and they're not scared of us 'cause we're not harpooning them anymore, so they realise that we're not a threat. And he was showing off to us as – like a puppy dog and the mum. The mum was down on the bottom. [I] said I'm going to have 40 minute spell, you play around up here...And then when she come up they both swam south back to – heading back down Antarctica. So it was just things like that. We're really lucky to be able to see that...that's just some of the reasons why I love it.

SELTMP 2013: COMMERCIAL FISHING CASE STUDY

Preliminary results: social & economic relationship with the Reef

Q4. What does it mean to be a fisher?

It is a livelihood...

What does it mean for me? It's just me livelihood. I suppose I've done it all my life... Yeah, it's something you chose to do so that's what you do. ... It's my livelihood and my living.



...and, for some, identity is linked to “standing up” for the fishing industry

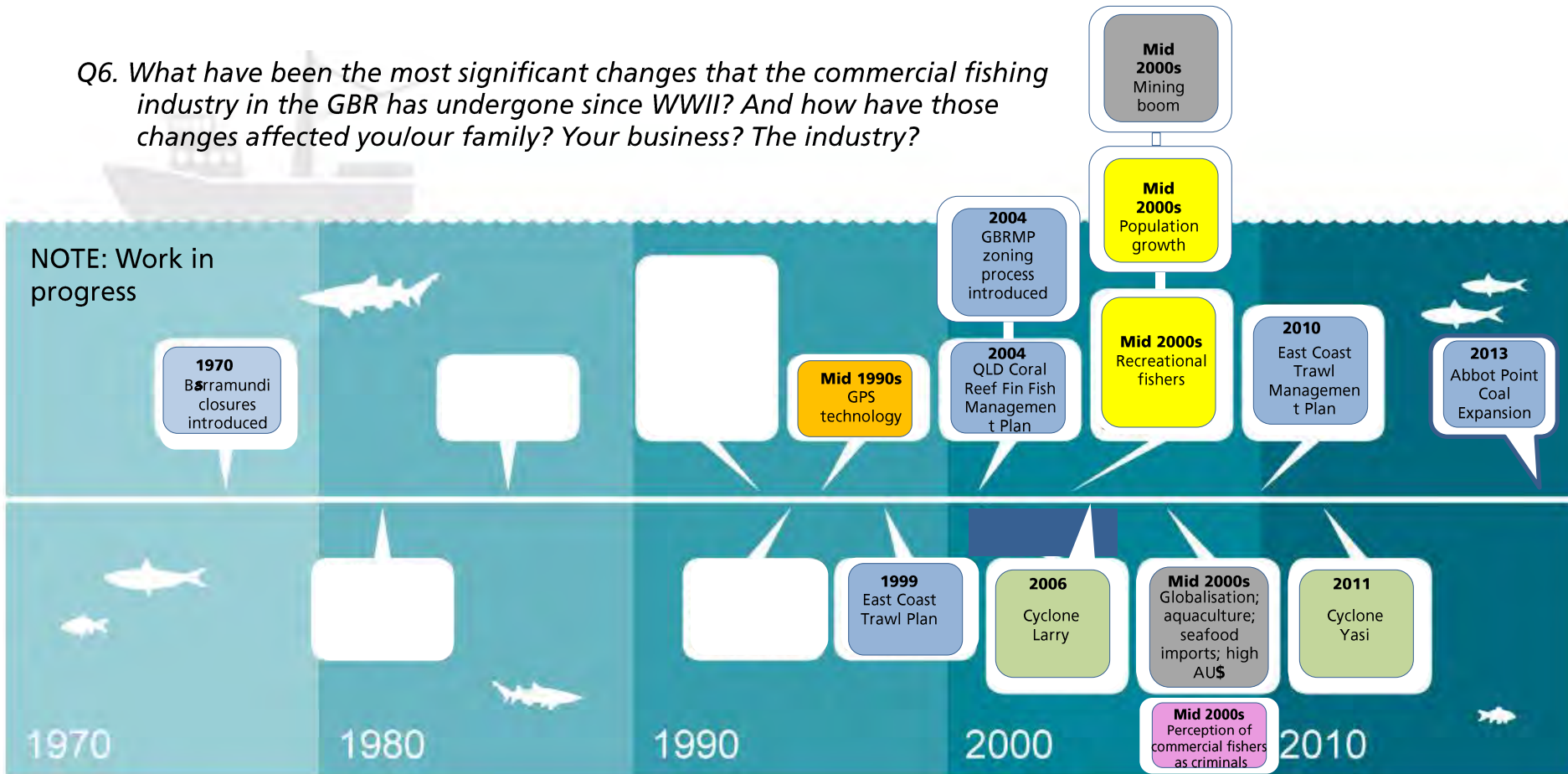
I also have over the last 20 years stood up for the fishing industry, went to meetings and bettered myself. Yeah, did leadership courses and all that sort of thing, to protect our rights to access to the resource, I guess.



SELTMP 2013: COMMERCIAL FISHING CASE STUDY

Preliminary results: indirect drivers of change and wellbeing

Q6. What have been the most significant changes that the commercial fishing industry in the GBR has undergone since WWII? And how have those changes affected you/our family? Your business? The industry?



- = politics and management
- = science and technology
- = economic drivers
- = communication and media
- = demographic drivers
- = biophysical drivers
- = social and cultural

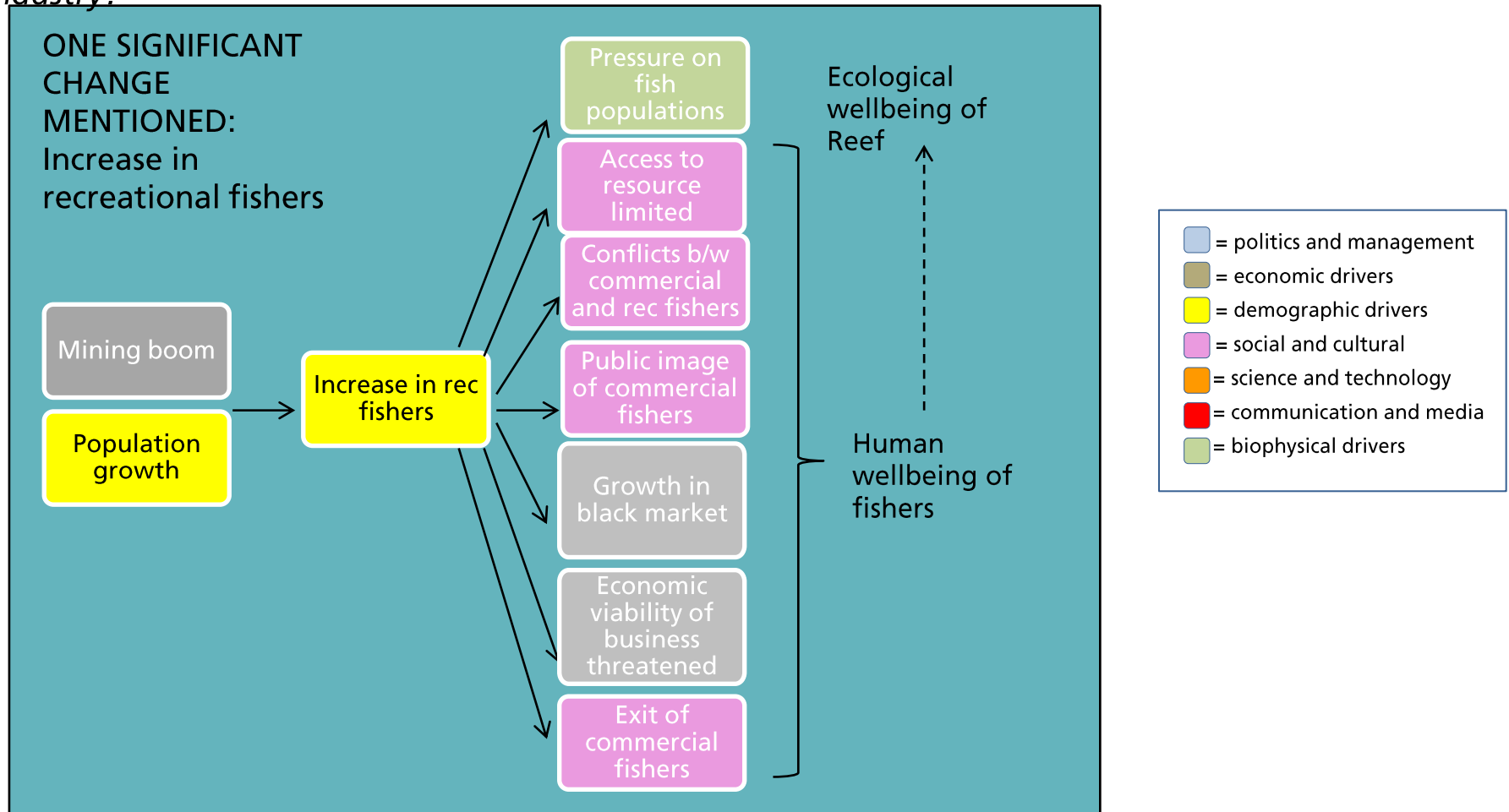
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Preliminary results: indirect drivers of change and wellbeing

Q6. What have been the most significant changes that the commercial fishing industry in the GBR has undergone since WWII? And how have those changes affected you/our family? Your business? The industry?



SELTMP 2013: COMMERCIAL FISHING CASE STUDY

Summary of preliminary results

Social and economic relationship with the Reef

- Fishers interviewed have somewhat different perspectives about the Reef and what is important...
- ...but also shared some common views on what defines the Reef for them
- Their sense of identity, whilst diverse among the fishers interviewed, is closely intertwined with what they experience, do and get (economic and non-economic benefits) from the Reef

Indirect drivers of change and wellbeing

- Fishers interviewed discussed a wide range of drivers of change how they impacted them personally, their business, their family and their relationship with members of their community, and the fishing industry as a whole
- Among the drivers they identified as having the greatest impact were
 - **Politics/management:** e.g. zoning, fisheries management plans, port development
 - **Social and cultural:** negative public image of commercial fishers; internally diverse and “fragmented” community of fishers
 - **Media and communication:** negative media coverage of commercial fishers
 - **Demographic:** mining boom, population growth, increase in rec fishers, lack of younger generation of commercial fishers
 - **Economic:** globalisation, aquaculture and importation of seafood, increase in price of fuel and cost of living, strong Australian \$
 - **Biophysical:** cyclones

SELTMP 2013: COMMERCIAL FISHING CASE STUDY

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