



West Coast Rock-based Fisher Safety Project 2018



Preface and Acknowledgements

This report is an evaluation of the 2018 West Coast Rock-based Fishers Project developed by the Auckland Council, Surf Life Saving Northern Region (SLSNR), and Drowning Prevention Auckland (DPA). It reports on the 13th year of the Project during which time many people have been involved in supporting and promoting water safety to prevent drowning. As in previous years, many people have given their time and energy both in a work and volunteer capacity to promote safety among our west coast rock-based fishing community.

We would like to thank the Iwi of Te Kawerau a Maki, and the Lusk and Woodward families for again allowing Angel Rings to be installed on their land and allowing us access to maintain them.

The project would not have been possible without the enthusiasm and skills of Adam Wooler, Sam Turbott, Ben Julian and Clare Cotter of Surf Life Saving Northern Region; and James Lea, Alan Chow, Clayton Wikaira and Harry Aonga from Drowning Prevention Auckland. Stuart Leighton, Auckland Council park ranger should yet again be recognised for his outstanding commitment and leadership of the project in the field.

Finally, a very special vote of thanks to the lifeguard, Sam Turbott and his contribution as the public fishing safety advisor, data gatherer and front line proponent of the Project making his contribution a success of this collaboration especially significant.

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<http://www.watersafe.org.nz/family-communities/research-and-information/rock-fishing/>

Executive Summary

1. Background

This is the thirteenth year of the *West Coast Rock-based Fisher Safety Project*, a collaborative intervention by the Auckland Council, WaterSafe Auckland Inc. (WAI), and Surf Life Saving Northern Region (SLSNR). This report provides information on the impact of the intervention aimed at reducing rock-based fishing fatalities and promoting a safety culture among this high-risk group of aquatic recreationalists. This Report is divided into two parts, the first part reporting on the annual survey of fishers' knowledge, attitudes, and behaviours, and the second part on the operational work of the rock fisher advisor

2. Purpose

The purposes of this thirteenth year of the project were threefold:

- 1) To continue the on-site rock fishing safety education promotion initiated in 2006,
- 2) To determine the effect of the project on Auckland's west coast fishers' safety practices and beliefs in the 2017-18 season,
- 3) To make recommendations for future rock fishing safety promotion based on the information obtained in the survey conducted during the 2018-19 season.

3. Methods

A cross sectional study of fishers at high risk locations on Auckland's west coast was undertaken at the end of the summer safety campaign in 2018. A total sample of 129 fishers voluntarily completed the electronic survey. The survey sought information on participation in previous surveys, awareness of the current fishing safety promotion, awareness of west coast angel rings as public rescue equipment (PRE), and perceptions of fishing dangers and their capacity to manage associated risk when fishing from rocks on Auckland's west coast.

4. Key Findings

4.1 Participant demographics:

- The sample was predominantly male (males 98%) and most (57%) were aged 45 years or older.
- Proportionally more Asian peoples (73%) and Pasifika peoples (11%) completed the survey, proportionally less European (28%) and Maori (4%) New Zealanders took part.
- Two thirds (68%) had lived in New Zealand for more than 10 years, 15% were of recent residency (<4 years).

- For one fifth (20%) of the fishers, it was their first visit to the site where surveyed, although familiarity with the site continued to increase over previous years with one third (34%) having visited the site >20 times.
- The reason most fishers gave for fishing on the day of interview was fun and enjoyment (72%), 6% reported the reason was to be with friends, 9% said it was to feed the family or have a day out from work/home (13%).

4.2 Awareness of the West Coast Rock-based Fisher Safety Project

- One quarter of fishers (26%) reported that they were aware of previous west coast fisher safety projects (2017, 25%).
- Of these, most fishers (52%) thought that the campaign had been successful, one quarter (24%) thought it highly successful, and 6% felt it had been slightly successful and 18% did not know
- 39% were aware of the current 2018 Project (2017, 45%).
- Of these, almost half (46%) identified the fishing advisors (22%) and newspapers (24%) as their source of information. Other sources included radio (10%), TV (6%), magazines (6%), retail outlets (4%) and other sources (such as lifeguards and internet, 28%).

4.3. Public Rescue equipment (PREs) – angel rings, throw bags etc

- Most fishers (79%) had seen the on-site angel rings (2017, 62%).
- One half (51%) of fishers had read the instructions on how to use the angel rings (2017, 45%).
- Most fishers (75%) thought that they could use the angel rings in an emergency (2017, 76%).

4.4. Perceptions of Drowning Risk

- Most fishers (63%) agreed that getting swept off rocks was likely to result in their drowning (2017, 75% agreed).
- Most fishers (57%) agreed that drowning was a constant threat when fishing from rocks on the west coast of Auckland (2017, 57% agreed).
- One half (53%) thought that other fishers were at greater risk than themselves; 51% considered that they were strong swimmers compared with others (2017, 30% and 43% respectively).
- Most fishers (84%) agreed that wearing a lifejacket made rock-based fishing safer (2017, 87% agreed).
- Most (88%) avoided fishing in bad weather (2017, 89% agreed).
- Most (87%) thought that turning their backs to the sea was very dangerous (2017, 90% agreed).

- 61% of fishers thought that their swimming proficiency would get them out of trouble (2017, 38% agreed).
- More fishers (65%) thought that their local knowledge of the site would keep them out of trouble (2017, 54% agreed).
- More fishers (78%) thought that their experience of the sea would keep them safe when fishing from rocks (2017, 62% agreed).

4.5. Water Safety Behaviours of Fishers

- One fifth (21%) reported *often/always* wearing a life-jacket/buoyancy aid (2017, 24%).
- Fewer fishers (30%) reported *never* wearing any life jacket/buoyancy aid (2017, 37%), more did *sometimes* (2018, 48%: 2017, 41%)
- Most fishers (87%) reported *never* consuming alcohol when fishing (2017, 84%)
- More (56%) reported *sometimes/often* wearing gumboots/waders, fewer (24%) reported *sometimes/often* going down rocks to retrieve snagged lines (2017, 51% and 41% respectively).

4.6 Self-reported Changes in Fishers' Knowledge, Attitudes and Behaviours

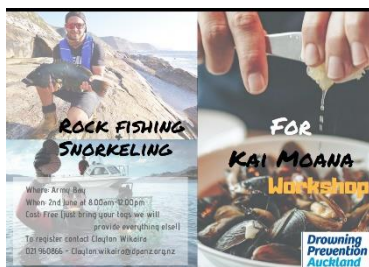
- Most fishers (82%) considered that their safety knowledge had improved in the past year (2017, 79% agreed).
- Most fishers (84%) considered that their safety attitudes had improved (2017, 88% agreed).
- Most fishers (87%) of the fishers thought that their safety behaviour when fishing had improved (2017, 91% agreed).
- Many fishers thought that the safety behaviour of their mates (60%) or other fishers (48%) had improved (2017, 63% and 50% respectively agreed).

TAKE AWAY POINTS

- **Drowning fatalities have reduced to less than 1 per annum since the inception of the fisher safety project**
- **Fishing populations continues to be transient, culturally and linguistically diverse**
- **Changes in attitudes and behaviours about lifejacket use are a cause for concern**
- **Other risky behaviours (such as wearing gumboots, retrieving lines) are still proving resistant to change**

Drowning Prevention Auckland – Rock-based Fishing Project 2018 Education Outputs

- **Deliver four practical workshops to – one Pacific group, one Asian group, one Maori group and one combined.**



Birkenhead College held at Cornwallis Wharf – June 2018 = 20 participants

Kai gathering workshop held at Army Bay, Whangaparaoa – June 2018 = 20 participants

Asian rock fishing workshop held at Westhaven Marina – January 2018 = 50 participants

Kai Moana and Rock Fishing Flyer –
Army Bay, June 2018

- **Deliver three seminars to one Asian group, one Maori group and one combined.**

Pacific Water Safety seminar in collaboration with Sport Waitakere - October 2017 = 50 participants

Asian Rock Fishing Seminar - January 2018 = 100 participants

Pacific Rock Fishing Seminar – March 2018 = 30 participants



Asian Rock Fishing Seminar
January 2018

- **Continued support of existing retail outlets**



Rock Fishing Corflute
at Dunez Café
Muriwai

- **Retail Outlets**

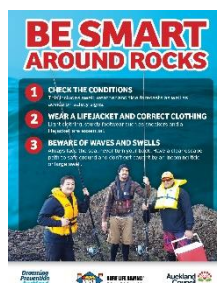
Muriwai Dunez Café – Had the Rock Fishing Corflute from March to May 2018

- **Collaborate further with SLSNR. Secure funding together from Auckland Council.**

Auckland Council fully funded the programme for 2017-18

- **Assist with the induction training for the rock fishing advisors from SLSNR.**
Drowning Prevention Auckland provided support and training for the rock fishing project to the rock fishing advisors in December 2017

- **Provide education to land based fishermen.**
30+ presentations to groups with a component of land-based fishing/rock fishing education to over 600+ participants
- **Survey land-based fisher knowledge, attitudes and behaviours.**
150+ evaluations have been collected by rock fishing advisors during the 2017-2018 rock fishing season
- **Development of a new rock fishing resources.**
New sandwich board, multi tool key ring and rock fishing resource updated and completed



New Rock Fishing Sandwich Board

MULTI-FUNCTION KEYRING

Printed Colour: Full Colour + Loose Engraved

Printed Colour: Blue

Printed Colour: Silver



New Multi Tool Key Ring

Report compiled by – Harry Aonga

RECOMMENDATIONS

Based on the findings, it is recommended that:

1. Auckland Council:

- Retain the services of the safety advisor for a 2018/19 summer campaign
- Continue to provide regional leadership and support future fishing safety promotion, including the installation of angel rings and safety signage at high risk sites.
- Increase provision of public rescue equipment (PRE) in the form of angel rings and throw ropes at 3 popular but remote locations:
 - 1) *on the south side of Ninepin Rock at Whatipu,*
 - 2) *east side of Paratutae Island, Whatipu, and*
 - 3) *Raeakiaki Point, Bethells Beach*(refer Rock Fisher Advisor detailed comment in Part 2 Operational Report, page xii-xiii).

2. Drowning Prevention Auckland, Surf Life Saving Northern Region and other safety organizations:

- Increase promotion of lifejacket use given the negative trends in both attitudes and self-reported behaviours reported here and in the previous 2 years
- Commit resources and personnel to the ongoing work collaboratively with all partners to promote best practice for West Coast fishing safety education beyond 2016-17 via:
 - *Continued used of an SLSNR RWC partnered with an Advisor to transport and support them along the coast*
 - *Using a purpose fitted drone for a land-based Advisor to increase their efficiency and safety on the job*
 - *Review and Update the Survey to have a more educational and to the point approach*
 - *Continued use of a Tracking Device and Report Form*
 - *Coastal Awareness Course training for both Rock Fishing Advisors and RWC Rock Fishing Operator*
 - *Increase support to fishermen who want to improve their safety by providing better access to an ideal PFD for West Coast Rock Fishing, possibly through sponsorship and subsidies Suggested employment for 2018-19 season:*
 - *1 x Rock Fishing Advisor with 1x RWC Operator on RWC (Saturday-Sunday x 8 Hours per day x 9 Weeks)*
 - *1 x Rock Fishing Advisor equipped with Drone (Monday-Friday x 8 Hours per day x 9 Weeks)*

(Refer Rock Fisher Advisor detailed comment in Part 2 Operational Report, page xiv)).

3. Recreational fishers, fishing organizations, lifejacket retailers and manufacturers, fishing outlets:

- Adopt and endorse the fishing safety messages promoted by the 2018 West Coast Rock-based Fisher Safety Project.
- Encourage others in the rock fishing community to adopt safe practices - **especially the wearing of lifejackets when fishing at Auckland's high-risk west coast locations.**
- Support the work of frontline fishing advisors and lifeguards in their efforts to make rock fishing a safe and happy experience.
- Advocate for the promotion of rock fishing safety with community groups especially those that are identified high-risk including new migrants, Pasifika and Asian peoples.



Public rescue equipment in the form of angel rings, throw ropes and safety information are now available at 17 west coast locations

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PART 1: FISHER SURVEY REPORT

1. Background

In 2006, a rock-based fisher safety campaign was launched in the Auckland region of New Zealand to combat the spate of surf-related drowning incidents associated with fishing from rocky foreshores. The Auckland Regional Council (ARC), WaterSafe Auckland Inc. (WAI), and Surf Life Saving Northern Region (SLSNR) initiated a fishing safety campaign entitled the *West Coast Fishing Safety Project* in the summer of 2006. The campaign established a fishing safety education programme that would help fishers identify and manage the risks associated with rock-based fishing on Auckland's rugged west coast. A survey of fishers was conducted to better understand fisher demographics, their knowledge of fishing safety knowledge, as well as gain information on their belief and behaviours.

The 2006 survey revealed new and alarming statistics about risky behaviours that predisposed many fishers to harm in the highly dangerous locations in which they fished. Many had limited safety skills and an overly optimistic view of their survival skills in a high-risk fishing environment (Moran, 2008). In terms of survival ability, one third ($n = 81$; 32%) of fishers estimated that they could not swim 25 m. Most fishers reported limited/no ability to perform CPR ($n = 155$; 62%). Many took unnecessary risks when fishing from rocks. For example, almost one half ($n = 120$; 48%) had gone to the water's edge to retrieve a snagged line and one fifth ($n = 50$; 20%) admitted having consumed alcohol while fishing from rocks. Most fishers agreed that always wearing a life jacket made fishing a lot safer ($n = 177$; 71%), yet almost three quarters ($n = 180$; 72%) admitted that they never wore a life jacket.

Fishing safety messages that address the twin dangers of overestimation of ability and underestimation of risk, especially at high-risk fishing locations, were recommended (Moran, 2008). The survey also revealed that the fishing population was culturally and linguistically diverse, was of recent residency, and were not frequent visitors to the sites where surveyed (Moran, 2006). The implications of this diversity, the transience of the population, and the remoteness of the site of activity were recognized barriers to be overcome in subsequent safety promotion.

The Auckland-based project is unique in that the fishing safety education programme is conducted on-site at high-risk fishing locations with supplementary promotion of safety messages via relevant media outlets of television and radio, newspapers and magazines as well

as through retail outlets and community organizations. Static displays of fishing safety, written material and verbal advice from the trained field officers were the educational tools used for on-site promotion of fishing safety. The findings of the initial study were reported back to the participating organizations who decided that the project would be continued for an additional two years (Moran, 2006). At the end of the 3-year period in 2008, the project was extended for another two years and the information obtained from annual surveys conducted from 2006-2010 provided the data for a paper published in 2011 entitled *Rock-based fishers safety promotion: Five years on* (Moran, 2011).

More than a decade of sustained commitment by the collaborating organisations based on an annual survey of rock-based fishers has meant that the Project has been able to grow organically in response to observed and reported knowledge, attitudes, and behaviours (K-A-B). Initial emphasis on finding out what fishers knew, thought and did about safety has been able to shift safety messages in a reflexive way to influencing behaviours most likely to our fishers at risk of drowning. Some messages (such as the wearing of lifejackets) have been persistent, dominant, worthy of perseverance, and ultimately resulting in life saving behaviour changes. Other messages (such as not going down the rocks to retrieve a snagged line) have appeared more resistant to change (see 2017 published paper entitled *Rock-based fishers safety promotion: A decade on* (Moran, 2017).

This 2018 Report provides a timely overview of the current safety practices and beliefs of and a timely opportunity to see whether the years of safety promotion have been effective. The 2018 Report is different from previous reports in that the operational aspects of the Project are reported in detail (see Part 2) from the perspective of the Rock Fishing Advisor and Surf Life Saving Northern. It explores the extensive use of Rescue Water Craft (RWC) in data collection, the possible use UAVs (drones) and GPS tracking in future contact with fishers in remote sites hitherto not accessible to data gathering.

2. Purpose and Outcomes of the Project

2.1 Purpose

The purposes of this thirteenth year of the project were:

- 1) To continue the on-site rock fishing safety education promotion initiated in 2006,
- 2) To determine the effect of the project on Auckland's west coast fishers' safety practices and beliefs.
- 3) To explore new ways of accessing remote sites and fishers at these sites via the use of a Rescue Water Craft (RWC)

4

To make recommendations for future rock fishing safety promotion based on the information obtained in the survey conducted during the 2017-18 season.

2.2 Outcomes

The specific outcomes of this Report are:

1. Ascertain the effect of on-site rock fishing safety promotion during the summer months of 2017-18,
2. Survey fishers to find out whether they had taken part in the previous surveys and, if so, what effect that safety campaign had had on their current understanding and practice of water safety when fishing from rocks,
3. Survey fisher's opinions on the value of safety signage and angel ring flotation devices currently located at high risk west coast fishing locations,
4. Compare and contrast:
 - a. fishers' perception of drowning risk,
 - b. their safety behaviour and
 - c. self-reported changes in knowledge, attitudes and behaviours, and
5. Make recommendations and suggest future strategies that enhance fishers' understanding and practice of safety when fishing from rocks on Auckland's west coast.

3. Methods

Overview

As has been the case in the past three years, the method of data collection in 2018, in keeping with changes in technology has changed. Prior to 2015, all data was collected via self-complete written questionnaires initially in English language only and from 2007 in English, Mandarin, and Korean to reflect the preferred language of many participants. From 2014, electronic tablets were used with e-copy of the questionnaire in the English language only. This has facilitated the onsite completion of the survey at more remote locations (See Part 2 Operational Report – locations visited).

3.1 Procedures

As in previous years, participants in the survey were all those who were either fishing from the chosen sites or in transit to and from the site. Rock fishing was again defined as not only fishing with rod and reel (angling) but also included those who used other devices such as baskets or hand lines as well as those gathering shellfish from the rocks. Potential participants were approached, the purpose of the Project explained and a request to voluntarily participate in an anonymous survey was made to all adult fishers over 16 years of age.

As was the case in the previous season, the data gathering took place using a Survey Gizmo e-questionnaire and I-pads, first trialled in 2014. The 2017-18 data was gathered both electronic surveys via a tablet and hard copy of the surveys (in English, Cantonese, and Korean) to assist those with English as a second language who may have been compromised in their ability to respond to the survey.

Pre-season training, run in partnership with Drowning Prevention Auckland and Surf Life Saving Northern, was conducted to familiarise everyone engaged in the project with the terrain and fisher safety priorities. It provided a perspective of the difference that lifejackets can make as well as increasing skills around rocks. A coast tour was also a useful experience allowing for a quick familiarisation with the project area and environment before the surveys actually began. Continuation of this pre-season training for future years is therefore highly recommended.

The data gathering took place during December 2016 and March 2017 and included several peak holiday weekdays and weekends. The sample did not include fishers who used the sites at times outside 'peak' hours (such as night fishing) or fishers who frequented other

high-risk west coast locations. The sites chosen included high risk west coast fishing sites at Muriwai (including Maori Bay), Piha, Karekare (including Whites Beach, Anawhata), Bethells (including O'Neill Beach and Te Henga), and Whatipu (including Huia, Nine Pin Rock and Paratutae) (See Table 1).

Table 1. Survey sites, Dec 17th 2017 - April 25th, 2018

Fishing location where interviewed	<i>n</i>	%
Muriwai (including Maori Bay)	28	22%
Bethells beach (including O'Neill Beach, Te Henga)	29	23%
Piha Beach (North and South, Whites Beach, Anawhata)	25	19%
Whatipu (including Ninepin, Huia, Paratutae)	32	25%
Karekare	8	6%
Other/Not specified	7	5%
Total	129	100%

SLSNR employed Sam Turbott as the Rock Fishing Safety Advisor. Sam spent 85 days out on Auckland's West Coast, engaging with rock-based fishers on 458 occasions, although some were often the same person. Of those contacted, 132 rock fisher safety surveys were submitted (200 in 2017/18). Data gathering took place in nine different beaches and 21 popular rock fishing locations.

The 2017-2018 season saw the use of a Rescue Water Craft (RWC) and Operator, based at Piha, to transport and support the Advisor to the fishing locations. The RWC was used a total of 21 days, helping contact 73 rock-based fishers and greatly increasing programme coverage. The RWC was highly effective at increasing efficiency by reducing the normal hour-long drive between beaches to ten minutes and allowing for safer access to the specific fishing spots. It was also comforting for the Advisor knowing additional support was there if something was to go wrong. It caught the attention of rock fishers who seemed to be more

approachable to an Advisor getting off an RWC that had come from further along the coast. The RWC proved its value during busy days, when there were a lot of rock fishers out. However, it was a lot of effort for less return on quieter fishing day. Due to conditions and in the interest of safety the RWC was not able to operate on a number of days where the surf was too big. Overall the RWC was highly effective tool and continuation of its use within the project is recommended, especially during concentrated during busy periods, such as weekends and holidays during fine weather.

NOTE:

For further information of data collection via RWC, please refer to Part 2 of the Report on Operational Procedures, pages vii-ix.

3.2 Measures

The structured survey (see Appendix 1) was anonymous, designed to be completed on site, and take a maximum of 10 minutes to complete. The questionnaire contained 14 questions, 11 of which had been included in the five previous surveys since 2009. Five questions sought socio-demographic information on gender, length of residency, age, ethnicity, and their previous rock fishing activity.

A question (introduced in 2014) that sought information on what was the primary reason for the fishers fishing on the day they were surveyed. The question included five possible responses: 1) *For fun and enjoyment*, 2) *To feed the family*, 3) *To be with my mates*, and 4) *To have a day out from home/work*. The reason for the inclusion of this question was to determine the accuracy of the claim that many fishers were engaged in fishing primarily for sustenance purposes in a low wage economy.

Two questions on at-risk fishing behaviours and perceptions of drowning risk from the earlier surveys were again included so as to compare fishing safety behaviours and attitudes. The question on behaviours asked fishers to self-report on six behaviours (for example, *when rock fishing, do you wear a lifejacket/buoyancy aid*) using four response categories *never*, *sometimes*, *often* and *always*. The question on attitudes consisted of 12 statements and required fishers to state whether they *strongly agreed*, *agreed*, were *unsure*, *disagreed*, or *strongly disagreed* with the statement. A five-part question asked fishers to estimate whether their knowledge, attitudes and behaviours (as well as that of fishing mates and other fishers)

had improved in the intervening year by using three response categories - *agree, disagree* or *don't know*.

As was the case in previous surveys from 2009, questions were included that sought information on public rescue equipment that had been installed at high risk sites in the previous years. The first question asked whether fishers had seen the angel rings in high risk locations. The second questions asked fishers to report whether they had read the instructions accompanying each angel ring/throw bag. The third question asked if the fisher thought they could use the equipment in an emergency situation.

3.3 Data analysis

Data from the completed questionnaires were entered into Microsoft Excel 2010 for statistical analysis using SPSS Version 24.0 in Windows. Descriptive statistics such as means and proportions were used to describe the baseline characteristics of the population. Frequency tables were generated for all questions and, unless otherwise stated, percentages are expressed in terms of the number of respondents to each survey question within groups. Only data collected using the same electronic tablet method was used for comparative purposes (2017 v 2018 data). Of the surveys recorded ($N = 132$), 3 cases contained incomplete data and were removed for the final analysis leaving a total of 129 participants in the final sample.

4. KEY FINDINGS

The results of the 2018 survey are presented in six sections:

4.1 Demographics of Fishers

4.2 Awareness of West Coast Rock-based Fishing Safety Project

4.3 The Installation and Usage of Angel rings

4.4 Fisher Perceptions of Drowning Risk

4.5 Water Safety Behaviours of Fishers

4.6 Changes in Fishers' Knowledge, Attitudes and Behaviours



Illustration 1. The extent of the problem - Flat Rock Muriwai

4.1 DEMOGRAPHICS OF FISHERS

Demographically, the participants ($N = 129$) in the 2018 survey reflected a similar mix as reported in previous surveys. Fishers were predominantly male (98% male; 2% female) but, unlike previous findings, most were aged 45 years or older (60%; $n = 77$) (see Table 2). Proportionally more Asian peoples (57%; $n = 73$) took part in the survey, whereas proportionally less European (22%; $n = 28$) and Maori (5%; $n = 6$) New Zealanders took part.

Table 2. Demographic Characteristics of Fishers, 2018

Demographic Characteristic		<i>n</i>	Valid %	Total
Gender	Male	126	97.8%	129 (100%)
	Female	3	2.4%	
Ethnicity	European	28	21.7%	129 (100%)
	Maori	6	4.6%	
	Pasifika	11	8.5%	
	Asian	73	56.6%	
	Other	11	8.5%	
Age group	15-19 years	1	0.8%	129 (100%)
	20-29 years	20	15.5%	
	30-44 years	31	24.0%	
	45-64 years	59	45.7%	
	65+ years	18	13.9%	
Length of residency	< 1 year	7	5.4%	129 (100%)
	1-4 years	12	9.3%	
	5-9 years	22	17.1%	
	>10 years	68	52.7%	
	All my life	20	15.5%	

In terms of length of residency, one third of participants (32%; $n = 41$) had lived in New Zealand less than 10 years, and 16% were of recent residency (<5 years). More than half (53%; $n = 68$) had lived in New Zealand for more than 10 years and 15% had lived in New Zealand all their lives. In comparison with the fishers' length of residency reported in the previous year, slightly fewer fishers reported residency of less than 5 years (2017, 18%; 2018, 16%) and more reported residency greater than 10 years (2017, 58%; 2018, 68%).

Table 3 shows that those who self-identified as of Asian origin ($n = 73$) were predominantly Chinese/Taiwanese (45%; $n = 33$), Korean (41%; $n = 30$), Indian, (3%; $n = 2$) and other Asian ethnicities (11%; $n = 8$). The variation among Asian ethnicities suggests that

promoting fisher safety through written language may require multiple translation so user of visual messaging is highly recommended.

Table 3. Self-identified Ethnicity of Asian Fishers, 2018

Asian Ethnicity	<i>n</i>	%
Chinese/Taiwanese	33	45.2%
Korean	30	41.1%
Indian	2	2.7%
Other Asian (Filipino, Afghani, Vietnamese, Thai)	8	11.0%
Total	73	100%

Fishers were asked to describe how often they had fished at the location where they completed the questionnaire (see survey question 8, Appendix 1). Table 4 shows that one fifth (20%, $n = 26$) reported that this was their first visit to the site and one quarter (27%, $n = 35$) had visited the site up to 5 times. Cumulatively, almost two thirds of fishers (63%, $n = 81$) reported that they had visited the site less than 10 times. One third of fishers (34%, $n = 44$) had visited the site more than twenty times.

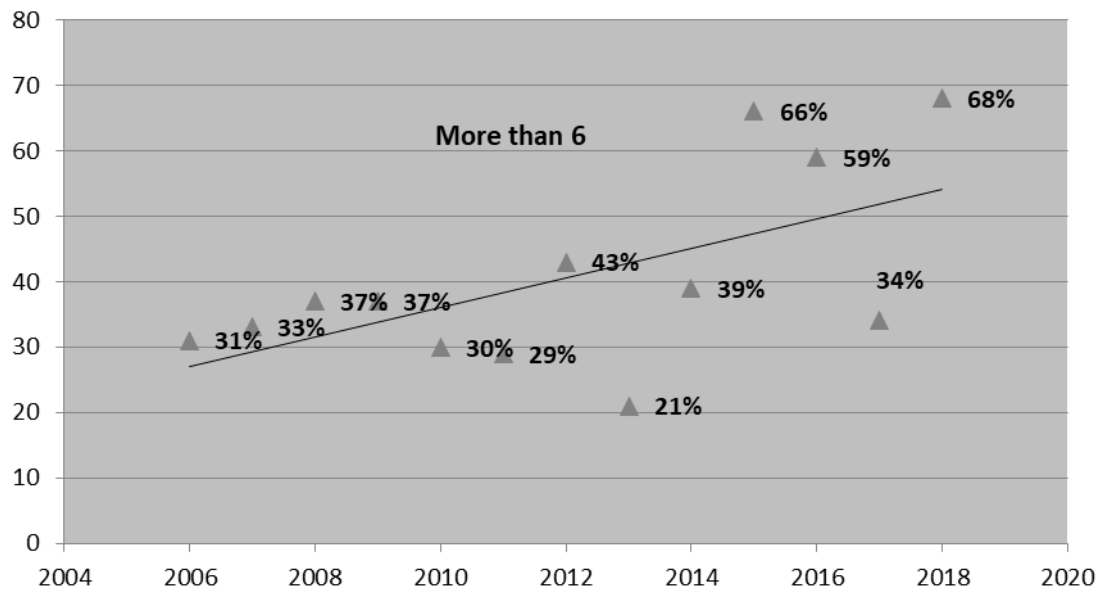
In comparison with the previous year, more fishers were likely to be regular visitors to the site where interviewed. Fewer fishers reported having fished the site less than 5 times (2017, 57%; 2018, 47%) and more fishers reported having fished at the location more than 20 times (2017, 19%; 2018, 34%).

Table 4. Frequency at Site where Interviewed, Other Places Fished, and Reasons for Fishing, 2018

How often have you fished at this site?	n/%		Cumulative %
First time at site	26	20.2	20.2%
2-5 times	35	27.1	47.3%
6-10 times	20	15.5	62.8%
11-20 times	4	3.1	65.9%
>20 times	44	34.1	100.0%
Where else have you fished?			
Other Auckland west coast sites	41		
Northland	8		
Auckland Harbours (inc. Manukau, Waitemata)	6		
Inner Hauraki Gulf (inc. Whangaparoa, Maraetai etc)	8		
Outer Hauraki Gulf (inc. Coromandel, Great Barrier)	2		
Other New Zealand sites	3		
Other not specified (including boats)			
What is the main reason for fishing today?			
Fun and enjoyment	93	72.1%	72.1%
Feed the family	11	8.5%	80.6%
Be with mates	8	6.2%	86.8%
Have a day off from work/home	17	13.1%	100.0%

Figure 1 reports the percentage of fishers in each year from 2006-2018 that have visited the site where interviewed more than six times. The trend line suggests that the frequency of site visits is increasing although some years (e.g. 2017, 34%, 2013, 21%) buck this trend. This may reflect idiosyncratic data collection as suggested in the 2017 Report with the possibility that a high level of collection at one site may have biased the survey findings (Moran, 2017, November).

Figure 1. Percentage of fishers who had visited the site more than 6 times, 2006-2018



The net effect of increased visits to the sites over the years might suggest increased familiarity with the high-risk environment. Given this, it is disappointing to see that fishers in these remote places are not especially safety conscious with regard to their use of flotation aids and continued pursuit of risky behaviours (such as climbing down rocks to retrieve snagged lines).



Illustration 2. Remote spot but lifejacket on and lifeguard with rescue tube on hand

4.2 AWARENESS OF WEST COAST ROCK-BASED FISHING SAFETY PROJECT

One quarter (24%, $n = 47$) of fishers surveyed in 2018 reported that they had taken part in previous west coast rock-based fishing safety surveys a similar proportion to that reported the previous year (2017, 24%). While reflecting the transient nature of the Auckland west coast rock-based fisher from year to year, reasons for a lack of awareness of the project are hard to determine. The increased number of sites surveyed and the use of e-surveys may account for the low awareness, and lack of fisher motivation to comply with surveyor requests to take part as they become more familiar with the surveys existence each year is another factor to consider.

Table 5 shows that, of the 33 fishers who had taken part in the previous surveys, most (76%; $n = 25$) considered that the campaign had been *highly successful/successful* compared with those who either considered it *slightly successful/not successful* (24%; $n = 8$).

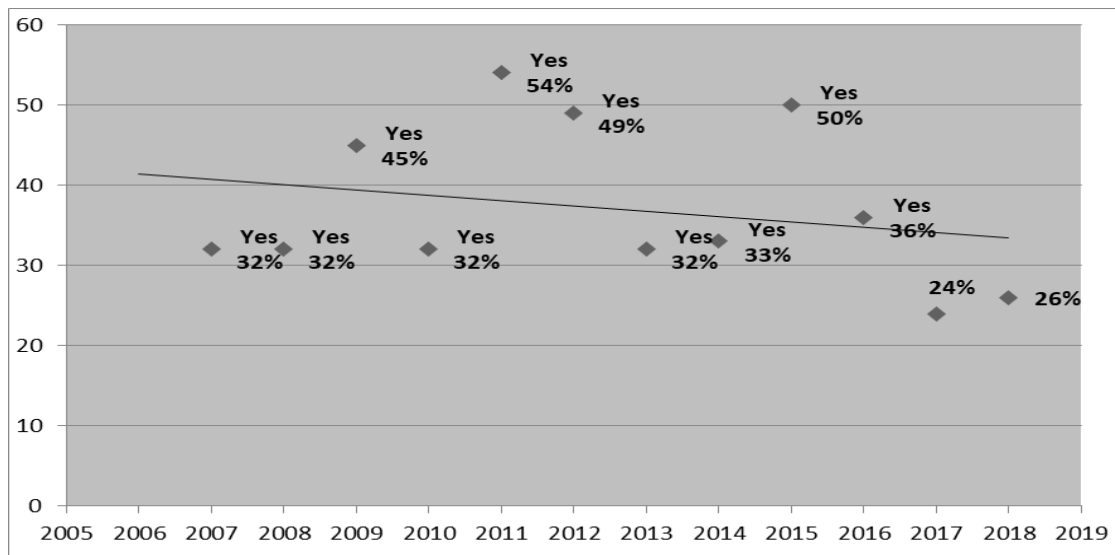
Table 5. Participation in, and estimation of success of, the previous projects

Did you take part in the previous rock fishing projects?	<i>n</i>	%
Yes	33	25.6%
No	96	74.4%
Total	129	100.0%
If Yes, how successful do you think it was?		
Highly successful	8	24.2%
Successful	17	51.5%
Slightly successful	2	6.1%
Don't know	6	18.2%
Total	33	100.0%

Figure 2 shows the percentage of fishers who had taken part in previous projects for each year from 2007-2018. The trend line suggests that this number is decreasing with a high of 54% recall of taking part in the survey in 2011 to a low in 2018 with only 26% participating. This may be explained by the extension of the survey sites visited in recent years to include

more remote sites (accessible by sea via the use of a Rescue Water Craft) where safety advisory work would not have been possible due to site remoteness and safety factors.

Figure 2. Percentage of fishers who had taken part in previous projects, 2007-2018



More than one third (39%, $n = 50$) of fishers surveyed in 2018 reported that they were aware of the current safety promotion. Table 6 shows that when those who were aware of the 2018 project were asked how they had found out about the project, newspapers (24%), fishing safety advisors (22%, $n = 40$) and other sources (28%) were identified as the most frequent source of information. In previous years the fishing safety advisors were regularly identified as the main source of safety advice (e.g. 2017, 44%; 2016, 67%). The reduction in 2018 may be a reflection on the surveying of more remote sites or reduced opportunity to offer advice with one advisor only employed. Further consideration of ways of offering onsite safety advice is recommended. The reported lack of reach through traditional channels such as television, magazines, and retail outlets (fishing stores and gas stations), as indicated by the lesser recall of participants in 2018 (6%, 6%, and 4% respectively) suggest renewed efforts safety promotion via these previously well used channels.

Table 6. Are you aware of, and how did you find out about the current (2018) project?

Are you aware of the current (2018) project?	<i>n</i>	%
Yes	50	38.8%
No	79	61.2%
Total	129	100.0%
If Yes, how did you find out about the current project?		
Fishing safety advisors	11	22.0%
Radio	5	10.0%
Television	3	6.0%
Newspapers	12	24.0%
Magazines	3	6.0%
Retail outlets (fishing stores, gas stations)	2	4.0%
Other sources (e.g. lifeguards, internet)	14	28.0%
Total	50	100.0%

As has been stated in previous reports, the ongoing transience nature of the rock-based fisher population from year to year means that each successive year new fishers require educating about the dangers of rock fishing. This difficulty is exacerbated by: the remote location in which the activity takes place; the variability of the first language of an ethnically diverse group, and the informal nature of the pursuit (no club structures etc.).

4.3 PUBLIC RESCUE EQUIPMENT (angel rings, throw bags etc.)

Table 7 shows that of the 102 fishers (80% of sample) who responded to the question relating to the angel rings (public rescue equipment) had seen angel rings at the Auckland west coast fishing sites, a greater proportion than in the previous year (2017, 62%).

Table 7. Awareness of the angel rings, 2018

Have you seen the angel rings?	<i>n</i>	%
Yes	102	79.7%
No	27	20.9%
Have you read the angel ring instructions?		
Yes	66	51.2%
No	63	48.8%
Do you think you could use one in an emergency?		
Yes	97	75.2%
No	32	24.8%

When asked if they had read the associated signage and instructions on how to use the rescue equipment in an emergency, 51% ($n = 66$) of fishers reported that they had read the instructions (2017, 45%). Even though many fishers (49%, $n = 63$) reported not having read the instructions, most (75%; $n = 97$) thought that they could use the angel rings in an emergency (2017, 76%).

One quarter (24%, $n = 32$) reported that they did not think they could use an angel ring in an emergency (2017, 24%). Given the isolation of most of the fishing locations on the west coast of Auckland, this is a major source of concern since bystander assistance is likely to be critical in the time before lifeguards and/or other emergency services are able to expedite a rescue response.

Note: For further information of location of angel rings and recommended additions to their number, please refer to Part 2 - Operational Report, pages *xi-xii*

4.4 FISHER PERCEPTIONS OF DROWNING RISK

Fishers were asked to respond to a series of 12 statements relating to their perception of the risk of drowning associated with fishing from rocks (see survey question 12, Appendix 1). The question consisted of a 5-point scale that included the categories *strongly agree*, *agree*, *unsure*, *disagree* and *strongly disagree*. For ease of interpretation, the *strongly agree/agree* and *disagree/strongly disagree* responses were aggregated.

Table 8. Fishers' Perceptions of Risk of Drowning, 2018

Do you think that-	Strongly agree/ Agree		Unsure		Strongly disagree/ Disagree	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
1. Getting swept off the rocks is likely to result in my drowning	81	63%	21	16%	27	21%
2. Rock fishing is no more risky than other water activities	80	62%	20	16%	29	22%
3. Drowning is a constant threat to my life when rock fishing	73	57%	22	17%	34	26%
4. I am not concerned about the risks of rock fishing	33	26%	20	16%	76	58%
5. Others rock fishers are at greater risk of drowning than me	69	53%	37	29%	23	18%
6. I am a strong swimmer compared with most other people	65	51%	21	16%	43	33%
7. I avoid fishing in bad conditions to reduce drowning risk	114	88%	5	4%	10	8%
8. Always wearing a life jacket makes fishing a lot safer	108	84%	12	9%	9	7%
9. Turning my back to the waves when rock fishing is very dangerous	112	87%	8	6%	9	7%
10. My local knowledge of this site means I'm unlikely to get caught out	84	65%	21	16%	24	19%
11. My experience of the sea will keep me safe when rock fishing	101	78%	11	9%	17	13%
12. My swimming ability means I can get myself out of trouble	78	61%	25	19%	26	20%

Statements 1-3 (Question 12) in Table 8 relate to fishers' perceptions of **the severity of the risk of drowning** when fishing from rocks (see Appendix 1 – survey questionnaire). In 2018,

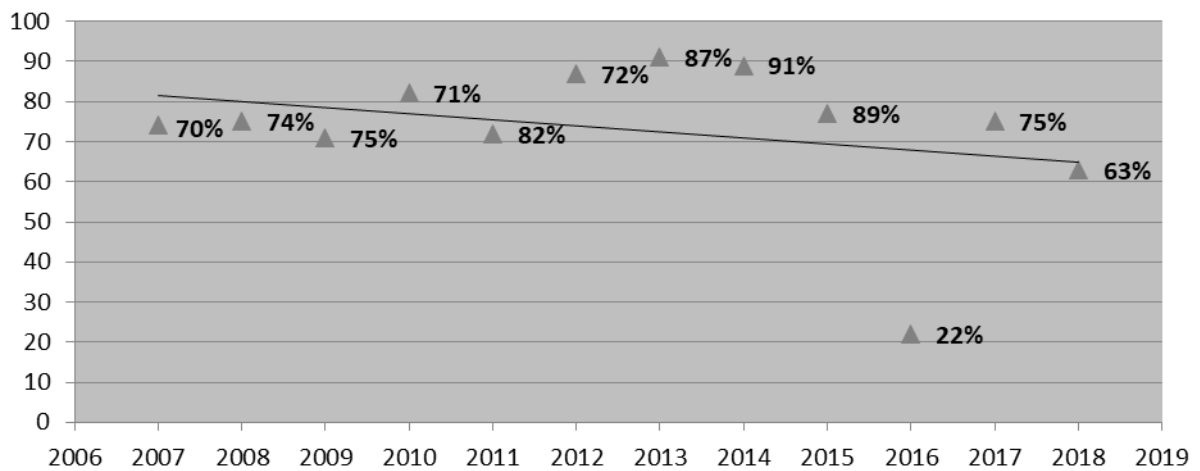
almost two thirds of fishers (63%) agreed that getting swept off rocks was likely to result in drowning, and more than one half (57%) considered drowning a constant risk when fishing from rocks, yet almost two thirds (62%) agreed that fishing from rocks was no more risky than other water activities. Unlike the previous year (see Table 9), it appears that some 2018 fishers have a lower perception severity of the risk of drowning as a result of being swept off the rocks associated with fishing from rocks off Auckland's west coast (disagree - 2017 8%; 2018 21%).

Table 9. Comparison of fisher beliefs in the severity of the risk of drowning, 2017 and 2018

Do you think that-		Strongly agree/ Agree	Unsure	Strongly disagree/ Disagree
1. Getting swept off the rocks is likely to result in my drowning	2018	63%	16%	21%
	2017	75%	17%	8%
2. Rock fishing is no more risky than other water activities	2018	62%	16%	22%
	2017	44%	22%	34%
3. Drowning is a constant threat to my life when rock fishing	2018	57%	17%	26%
	2017	57%	18%	26%

Figure 3 shows the change in opinions on the severity of the risk of drowning related to getting swept off the rocks from 2006 to 2018. In 2016 only one fifth of fishers (22%) agreed that getting swept off the rocks was likely to result in drowning (compared with 77% of fishers in the previous year (2015) and 63% in the current year (2018)). The trend line suggests that, prior to the current survey, fishers had become more aware of the risk of drowning at high risk rock-based fishing sites over the decade from 2006 -2015. The 2018 result reinforces the previous heightened sensitivity towards drowning risk over the previous 12 years that the project has been running.

Figure 3. Fishers who agreed that getting swept off rocks is likely to result in drowning, 2006-2018 (Measure - Severity of risk)



The second measure of fishers' perception of the appraisal of drowning risk – personal **vulnerability to the risk** was determined from statements 4-6 in Question12 and reported in Table 10.

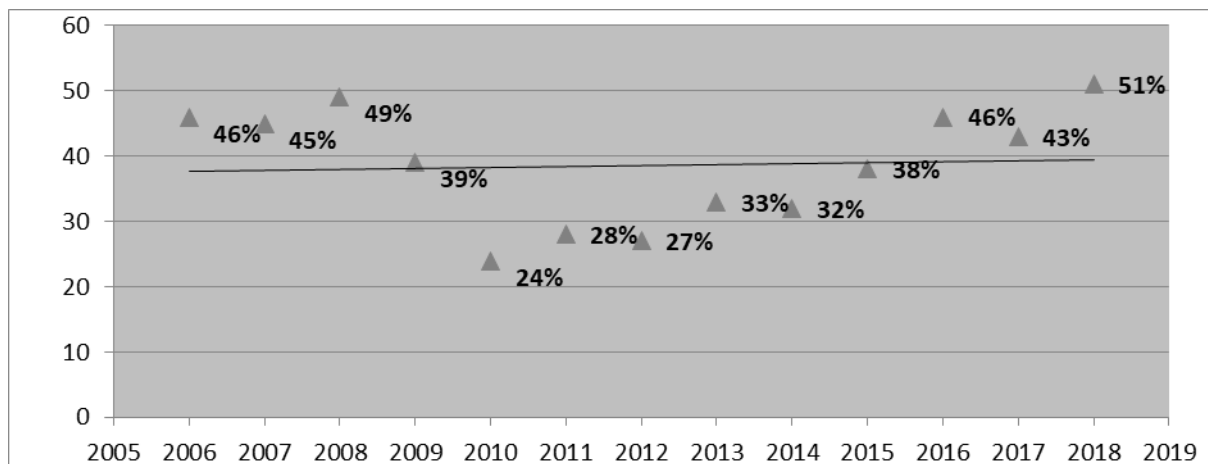
Table 10. Comparison of fisher beliefs in vulnerability to the risk of drowning, 2017 and 2018

Do you think that-		Strongly agree/ Agree	Unsure	Strongly disagree/ Disagree
4. I am not concerned about the risks of rock fishing	2018	26%	16%	58%
	2017	26%	11%	63%
5. Others rock fishers are at greater risk of drowning than me	2018	53%	29%	18%
	2017	30%	45%	25%
6. I am a strong swimmer compared with most other people	2018	51%	16%	33%
	2017	43%	22%	36%

Most fishers (58%) disagreed that they were not concerned about the risk of drowning (2017, 63%), but one half (53%) thought that other fishers were more vulnerable to the risk of drowning than themselves (2017, 30%). As was the case in previous years, many fishers (51%) considered that they were strong swimmers compared with other people (2017, 43%). One third of fishers in 2018 thought they were poor swimmers in comparison with others in the

previous year (2017, 36%) but the trend line shown in Figure 2 suggests that many fishers maintain their belief in their own capacity to cope, a potentially lethal overestimation of their ability to cope with the rigours of unintentional immersion.

Figure 4. Fishers who agreed that they are strong swimmers compared with others, 2006-2018 (Measure – Vulnerability to risk)



Responses to statements 7-9 (Question 12) related to fisher perceptions of the **efficacy of preventive action** in reducing drowning risk when fishing from rocks (see Appendix 1 – survey questionnaire). Most fishers taking part in the 2018 survey responded positively to all three statements of the efficacy of preventive actions to reduce drowning risk (Table 11). As in previous years, most fishers in 2018 avoided fishing in bad weather (88%), avoided turning their back to the waves (87%), and agreed that wearing a lifejacket when fishing from rocks made it a lot safer (84%).

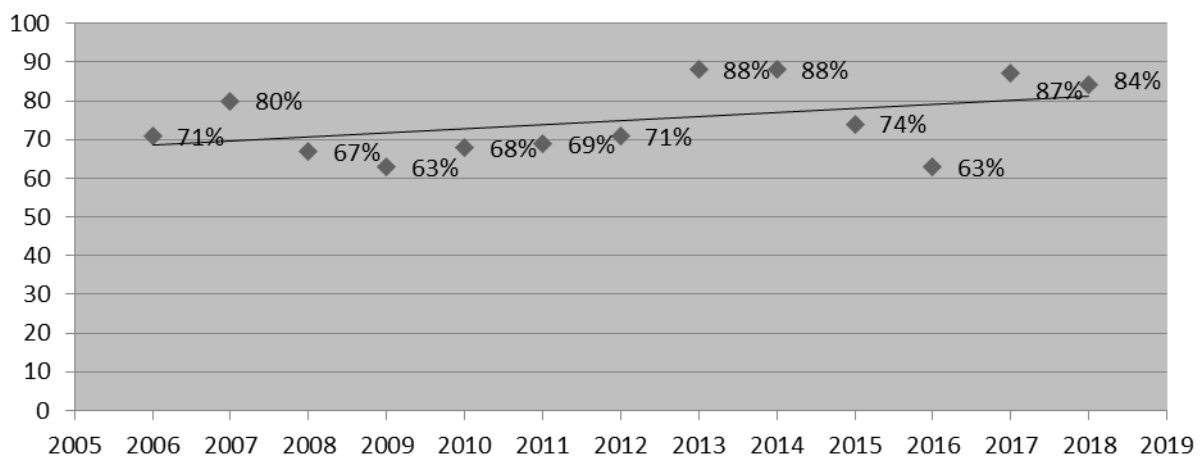
When comparing the current 2018 findings with that of the previous year, Table 11 shows that most fishers agreed that they avoided fishing in bad conditions (2017, 89%; 2018, 88%), that wearing a life jacket made fishing a lot safer (2017, 87%; 2018, 84%) and that turning your back to the sea when fishing from rocks was very dangerous (2017, 90%; 2018, 87%).

Table 11. Comparison of fisher beliefs in efficacy of preventive actions, 2017 and 2018

Do you think that-		Strongly agree/ Agree	Unsure	Strongly disagree/ Disagree
7. I avoid fishing in bad conditions to reduce drowning risk	2018	88%	4%	8%
	2017	89%	5%	6%
8. Always wearing a lifejacket makes fishing a lot safer	2018	84%	9%	7%
	2017	87%	8%	6%
9. Turning my back to the waves when fishing is very dangerous	2018	87%	6%	7%
	2017	90%	7%	3%

Figure 5 shows the trend line of fishers who agree that lifejacket use is a good preventative action from 2006 to 2018. While it is encouraging that the perception of lifejacket use being a valuable preventive action is again high, the self-reported use of lifejackets presented in the following section of fishing behaviours is not consistent with this belief. As was suggested last year, it would appear that some fishers are still not “practising what they preach” in this respect and continued advocacy of this critical factor is recommended.

Figure 5. Fishers who agreed that wearing a lifejacket makes fishing from rocks a lot safer, 2006-2018 (Measure – Efficacy of preventive action)



Responses to statements 10-12 (Question 12) related to fisher perceptions of the **self-efficacy of their preventive behaviours** in reducing drowning risk when fishing from rocks (see Appendix 8.1 – survey questionnaire). It describes their confidence in their capacity to counter

their risk of drowning. In previous surveys, fishers have been confident of their ability to keep themselves safe - their self-efficacy. The current survey results suggest that most participants in 2018 also considered themselves capable of looking after themselves with most believing that their experience of the sea (78%) and their local knowledge (65%) will keep them safe. However, fewer fishers (61%) thought that their swimming ability would get them out of trouble.

Table 12 shows a comparison of fishers' beliefs from the 2018 and 2017 surveys about their ability to cope with the risk associated with fishing from rocks on Auckland's west coast. All three statements regarding their personal experience of the sea, their local knowledge of the site, and their confidence in their swimming competence suggest that participants in the 2018 survey were more confident in their competency than the 2017 cohort. Particularly noticeable is the change in beliefs about the protective capacity of their swimming ability, with half the proportion confident of their swimming ability (2017, 38%; 2018, 61%) and fewer participants in the current survey either unsure or not confident of their swimming ability compared to the previous year (2017, 62%; 2018, 39%).

Table 12. Comparison of fisher self-efficacy to cope with risk, 2017 and 2018

Do you think that-		Strongly agree/ Agree	Unsure	Strongly disagree/ Disagree
10. My experience of the sea will keep me safe when fishing	2018	78%	9%	13%
	2017	54%	22%	24%
11. My local knowledge of this site means I'm unlikely to get caught out	2018	65%	16%	19%
	2017	62%	20%	18%
12. My swimming ability means I can get myself out of trouble	2018	61%	19%	20%
	2017	38%	28%	34%

The trend lines over the 13 years of the Project for these components of self-efficacy show little change in perceptions. Figure 6 shows the trend line for responses related to the protective capacity of their local knowledge suggests that, in the prior years of the Project, belief in the protective power of their local knowledge has been consistently strong irrespective of the consistently low frequency of visits to the site. As was stated in recent Reports (Moran, 2015, 2016, 2017), while frequency of visits to sites has increased slightly over

the years, it is unlikely that the protective power of such knowledge, real or imagined, will do much to minimise risk in the hazardous locations fisher use on the west coast. The same optimism in the self-efficacy of their knowledge of the sea was evident in the trend line shown in Figure 7.

Figure 6. Trend line of the percentage of fishers who believe in the protective value of their local knowledge, 2006-2018

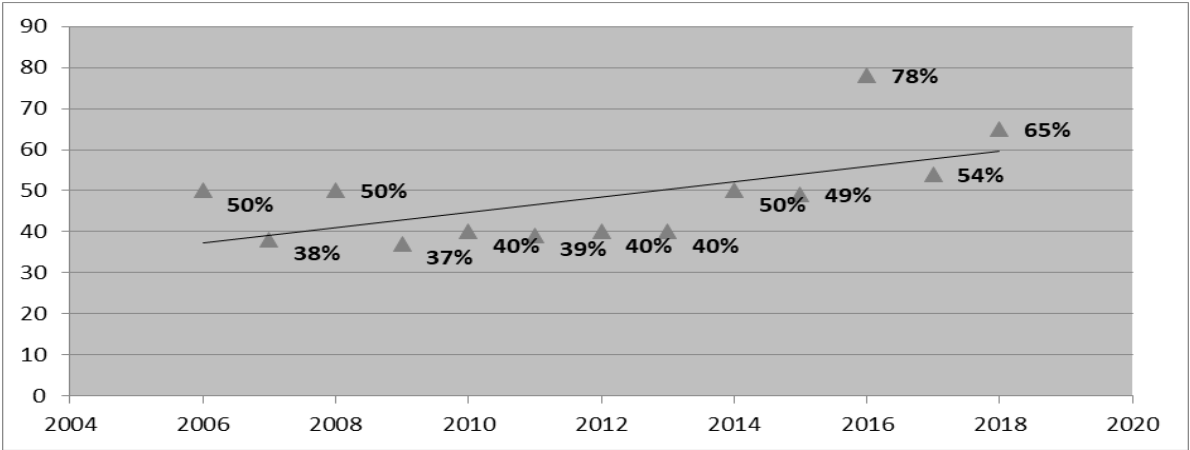
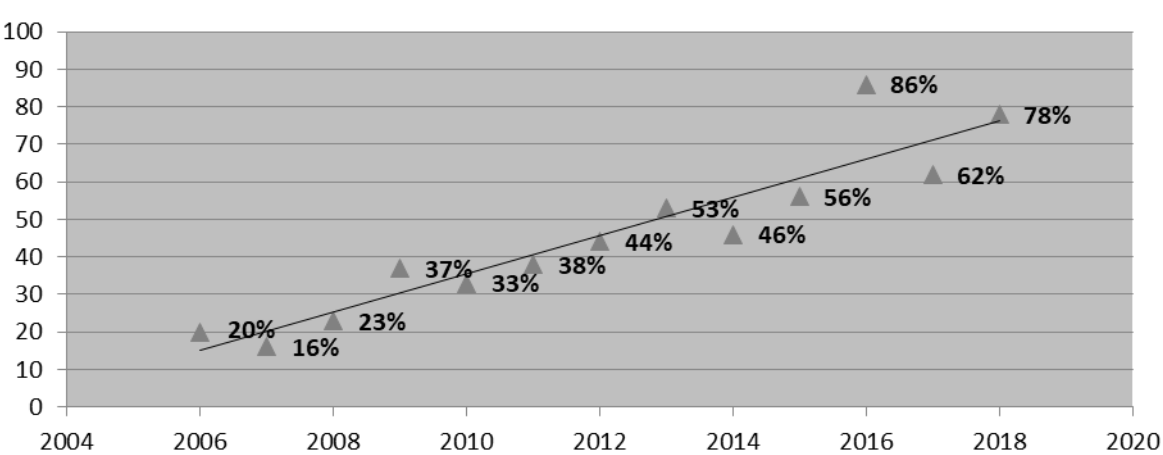


Figure 7. Trend line of the percentage of fishers who believe in the protective value of their knowledge of the sea, 2006-2018



4.5 WATER SAFETY BEHAVIOURS OF FISHERS

Fishers were asked to report their previous water safety behaviours (see survey question 12, Appendix 1) using a four-point frequency scale including *never*, *sometimes*, *often* and *always* in order to describe whether they had performed at-risk behaviours when fishing from rocks. As in previous surveys, the latter two responses were aggregated and are reported in the tables and text as *often/always* (see Table 13).

Table 13. Fishers' Self-reported Water Safety Behaviours, 2017-18

When rock fishing, do you -		Never		Sometimes		Often/Always	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
1.	Wear a lifejacket or other flotation device	39	30%	62	48%	27	21%
2.	Check weather/water conditions first	6	5%	10	8%	112	88%
3.	Drink alcohol when you are fishing	111	87%	10	8%	7	5%
4.	Wear gumboots or waders	56	44%	41	32%	31	24%
5.	Turn your back to the sea when fishing	72	56%	50	39%	6	5%
6.	Take a cell phone in case of emergencies	8	6%	9	7%	111	87%
7.	Go down rocks to retrieve snagged line	81	63%	34	27%	13	10%

Table 13 shows both negative and positive safety behaviours among the 2018 cohort of rock-based fishers. On the positive side, almost all fishers *often/always* checking the weather and water conditions before going fishing (88%), taking a cell phone in case of emergencies (87%) and *never* drinking alcohol when fishing (87%). A majority of fishers also reported *never* going down the rocks to retrieve a snagged line (63%) and never turning their backs to the sea when fishing (56%). On the negative side, many fishers *never* wore a lifejacket (30%), and *often/always* wore gumboots or waders (24%).

Figure 8 indicates critically important behaviour change with regards to lifejacket use since the inception of the project with a peak in lifejacket use (50%) occurring in 2011. The positive

change in the trend line since 2006 is encouraging and supports anecdotal evidence of greater use of lifejackets by fishers. However, in the three most recent annual surveys (2016 -2018), less than one quarter of fishers report *often/always* wearing a lifejacket when fishing from rocks is a continuing cause for concern (2016, 24%; 2017, 24%; 2018, 21%).

As indicated by the trend line in Figure 8, the positive change in behaviour related to the use of life jackets/flotation devices has consistently improved, but the most recent survey again suggests some negative shift in behaviour. Previous reports suggested that the reasons for this downward change may be a consequence of changed data collection procedures (e.g. a focus on fewer sites, more remote sites). However, a third year of low self-reported use of lifejackets suggests that lifejacket advocacy should be heightened.

Figure 8. Fishers who report *often/always* wearing a lifejacket, 2006-2018

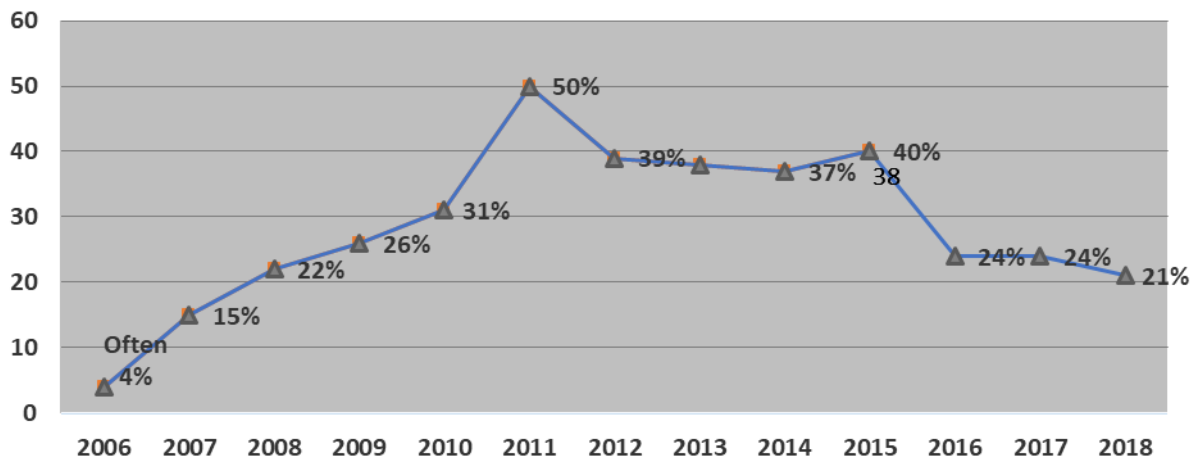
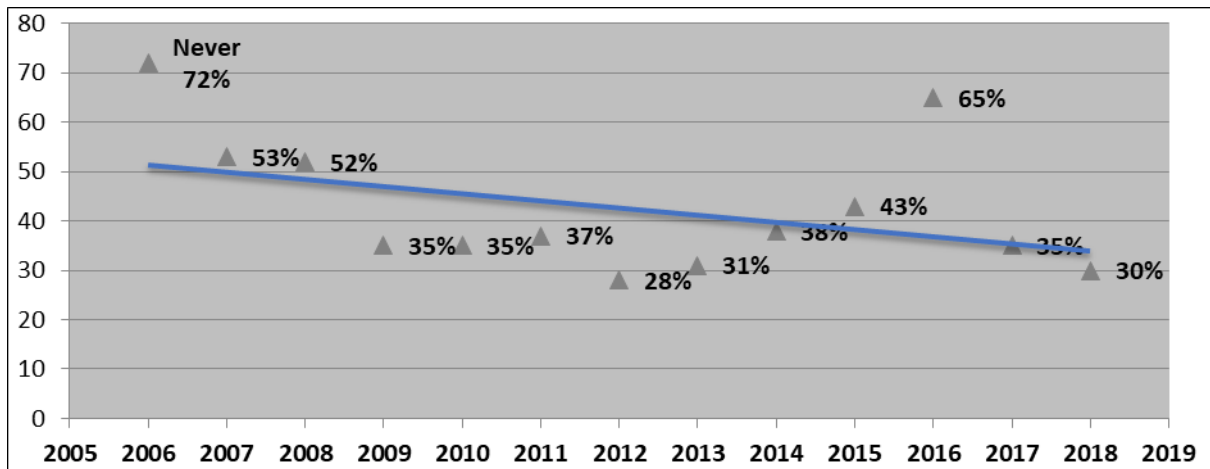


Figure 9 shows a persistent minority of fishers (range 72%-28%) who *never* wear lifejackets. While it is encouraging to note a continuation of the downward trend in 2017, it is still a cause for concern that more than one third of fishers report *never* wearing a lifejacket (2018, 30%, 2017, 35%). The 2018 return indicates that a greater proportion of fishers are *sometimes* wearing a lifejacket (2018, 48%; 2017, 41%; 2016, 11%).

Figure 9. Fishers who report *never* wearing a lifejacket, 2006-2018



The 2018 rock fisher safety advisor makes some important observations from an operational perspective report (see Part 2 - Operational Report, page viii) on lifejacket promotion and are worth repeating here:

- *“Of the 458 rock fishing contacts only 75 contacts resulted in the fishermen having a life jacket. When asked why rock fishermen weren’t wearing lifejackets, cost and comfort were the prime reasons (given)*
- *Muriwai was the most likely location to find fishermen in lifejackets*
- *Of the 458 contacted fishermen only 73 accepted the safety pamphlet*
- *Muriwai and Piha were the most likely locations for rock fishers to take safety pamphlets*
- *Rock Fishers that were frequently contacted by an Advisor were more likely to start wearing helmets and lifejackets”*

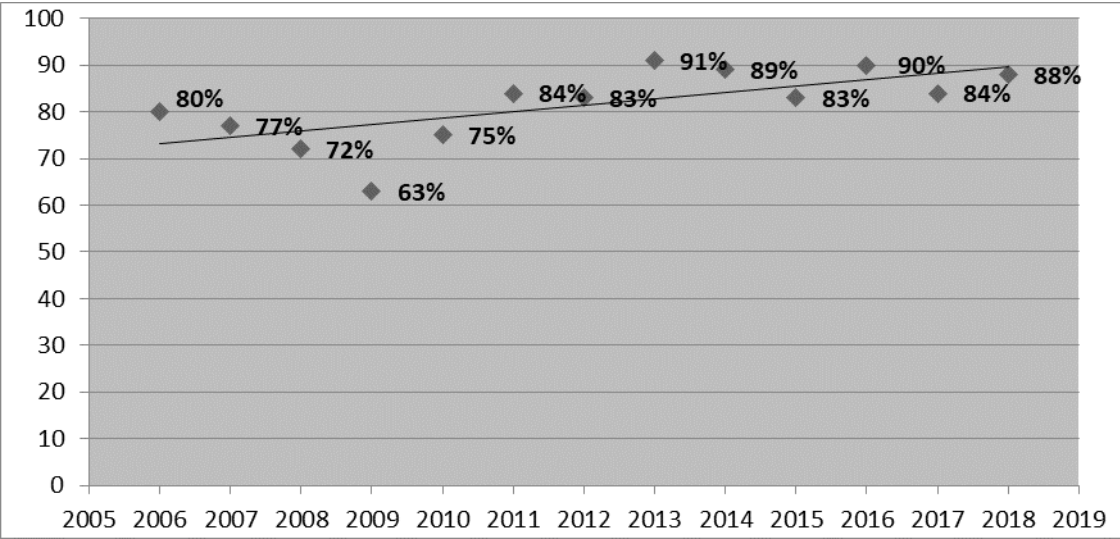
On the basis of these observations the Advisor (lifeguard Sam Turbott) concluded:

“Putting in place a law to wear a lifejacket when rock fishing in this area would be hard to enforce, most likely ignored and would destroy any relationship between us and them. In terms of encouraging the use of lifejackets I think the best solution would be to support them in the access of getting a suitable lifejacket which they would want to wear. The ideal lifejacket I have found are models like the Hutch Wilco Inflatable type, due to their light weight, comfort and size. I think that helping the funding and access to this lifejacket or similar type would see a great increase in number of lifejackets worn on Auckland’s West Coast.”

Table 13 shows that almost all fishers (88%) reported *often/always* checking the weather beforehand, and, of these most (78%) reported *always* checking conditions. Figure 10

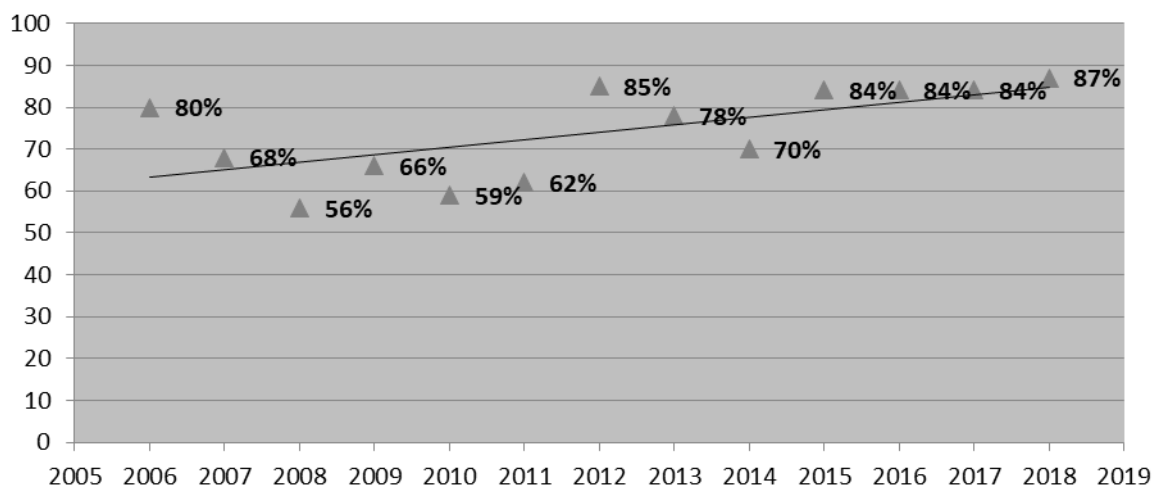
shows a consistent pattern of compliance with this important safety behaviour from 2006-2018 when most fishers also reported *often/always* checking the weather beforehand. From 2006 -2018, approximately three-quarters of fishers (range 72-91%) *always/often* checked the weather beforehand and a small proportion (range 2-12%) consistently *never* checked the weather. The continued positive trend in this behaviour is encouraging and reflects an improved safety culture among fishers (see Advisor comment above regarding weather compliance).

Figure 10. Fishers who report *often/always* checking the weather beforehand, 2006-2018



In 2018, most fishers (88%) reported that they *never* mixed alcohol and fishing, but a proportion (13%) of fishers did *sometimes/often* consume alcohol when fishing in 2018, a similar proportion to that recorded in the previous year (2017, 12% *sometimes*, 4% *often/always*). Figure 11 shows that most fishers recognised the inherent danger of mixing alcohol consumption with high risk rock-based fishing and abstained from alcohol use when fishing. Since little change in the frequency of alcohol consumption has been reported over the years), continued promotion of the no alcohol use in rock fishing safety promotion is recommended.

Figure 11. Fishers who report *never* drinking alcohol when fishing, 2006-2018



The fourth risky practice related to the wearing of waders or gumboots. Table 13 shows that almost one half of fishers (44%) reported that they *never* wore gumboots or waders, but almost one third (32%) did *sometimes*, and one quarter (24%) *often/always* wore gumboots or waders. As in previous years, it may still be prudent to combine messaging about protective clothing with lifejacket use. While Figure 12 shows some sign of positive behavioural change over the decade of intervention, continued emphasis on the need for safe clothing/footwear is recommended.

Figure 12. Fishers who report *never* wearing gumboots when fishing, 2006-2018

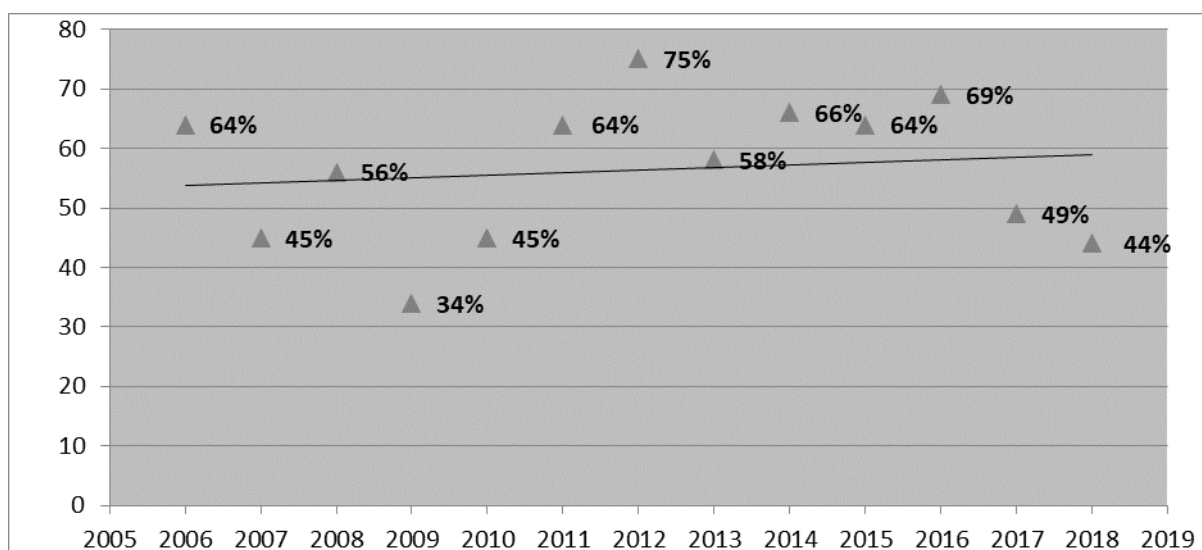
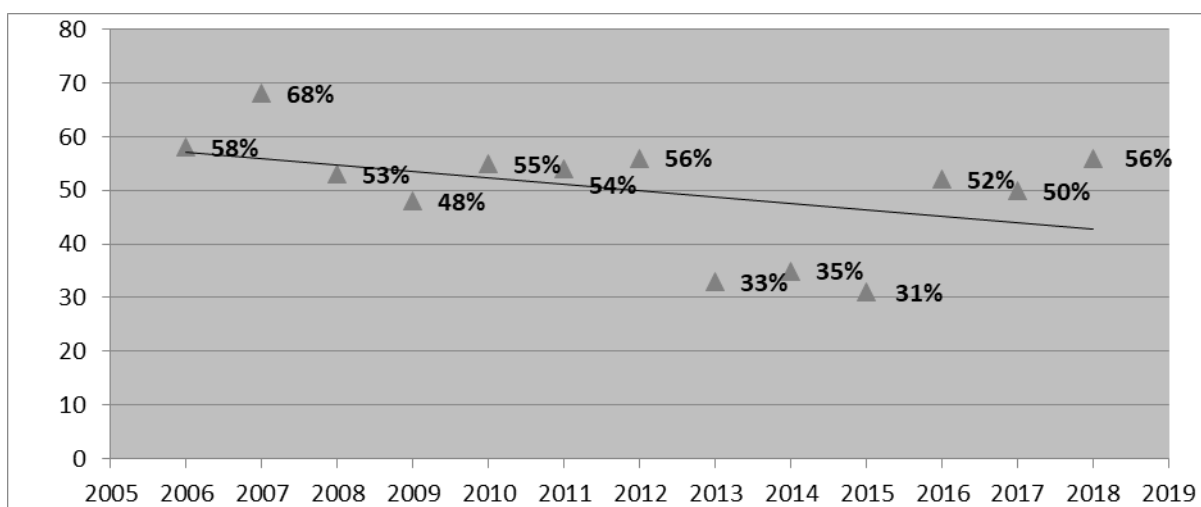


Table 13 shows that, in 2018, the dangerous practice of turning your back to the sea was reported by fewer fishers than in the previous survey (2017, 52%) with 39% fishers *sometimes* and 5% *often/always* turning their backs to the sea at some time when fishing from rocks. The trend line shown in Figure 13 indicates that this risky behaviour has trended downward during the 13 years of the Project. A breakdown of responses over previous years shows a gradual positive shift in behaviour although it would appear to still be a widespread practice and thus should be the focus of future safety messaging.

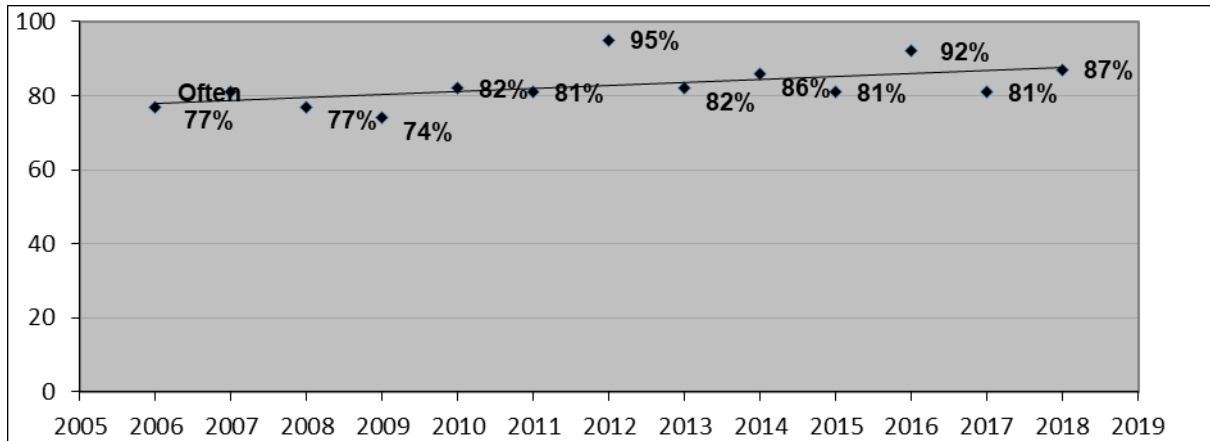
Figure 13. Fishers who report *never* turning their backs to the sea when fishing, 2006-2018



Fishers were asked whether they carried a cell phone for emergency use. Table 13 shows that, in 2018, most fishers (87%) (2017, 81%) reported that they *often/always* carried a cell phone, with 7% reporting that they *sometimes* did and 6% that they *never* did. This continued widespread carriage of cell phones by fishers is encouraging and suggests that emergency services may be better able to respond to incidents in these traditionally remote locations.

Figure 14 shows that most fishers have consistently reported carrying cell phones when fishing off Auckland's west coast from 2006-2018. More than three quarters of fishers surveyed from 2006-2017 carried a mobile phone, particularly valuable given the isolated location of many of the sites. The trend line indicates that the practice continues to increase (range 74%-95%).

Figure 14. Fishers who report *Often/Always* carrying a cell phone when fishing, 2006-2018



The final self-reported behaviour related to the dangerous practice of going down the rocks to the waters edge to retrieve a snagged line. Table 13 shows that, in 2018, almost two thirds (63%) of fishers reported that they *never* went down the rocks to free a snagged line, but more than one third (37%) reported that they did *sometimes* (27%) or *often* (10%). While similar responses to the previous year (2017, *never* 59%, *sometimes* 29%, *often* 12%), it is still a cause for concern that more than one third (37%) of fishers sometime engage in this highly dangerous practice.

Figure 15 shows the trend in this behaviour over the 12 years of the project. It has not improved greatly over the 13 years of the Project. Observations of fisher practices suggests that few fishers cut their lines in response to snagging on surface or underwater rocks. Continued promotion of line cutting as the safest way to fish from rocks is recommended.

Figure 15. Fishers who report *never* going down the rocks when fishing, 2006-2018

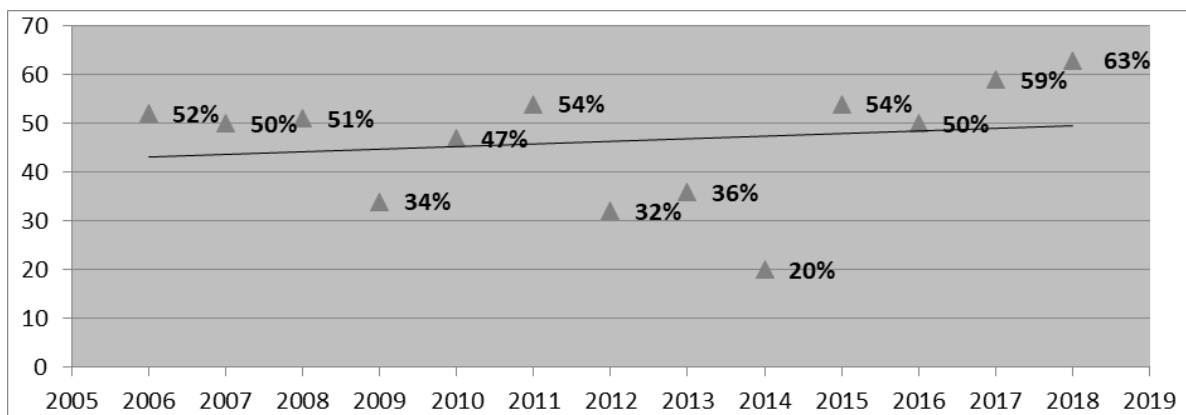
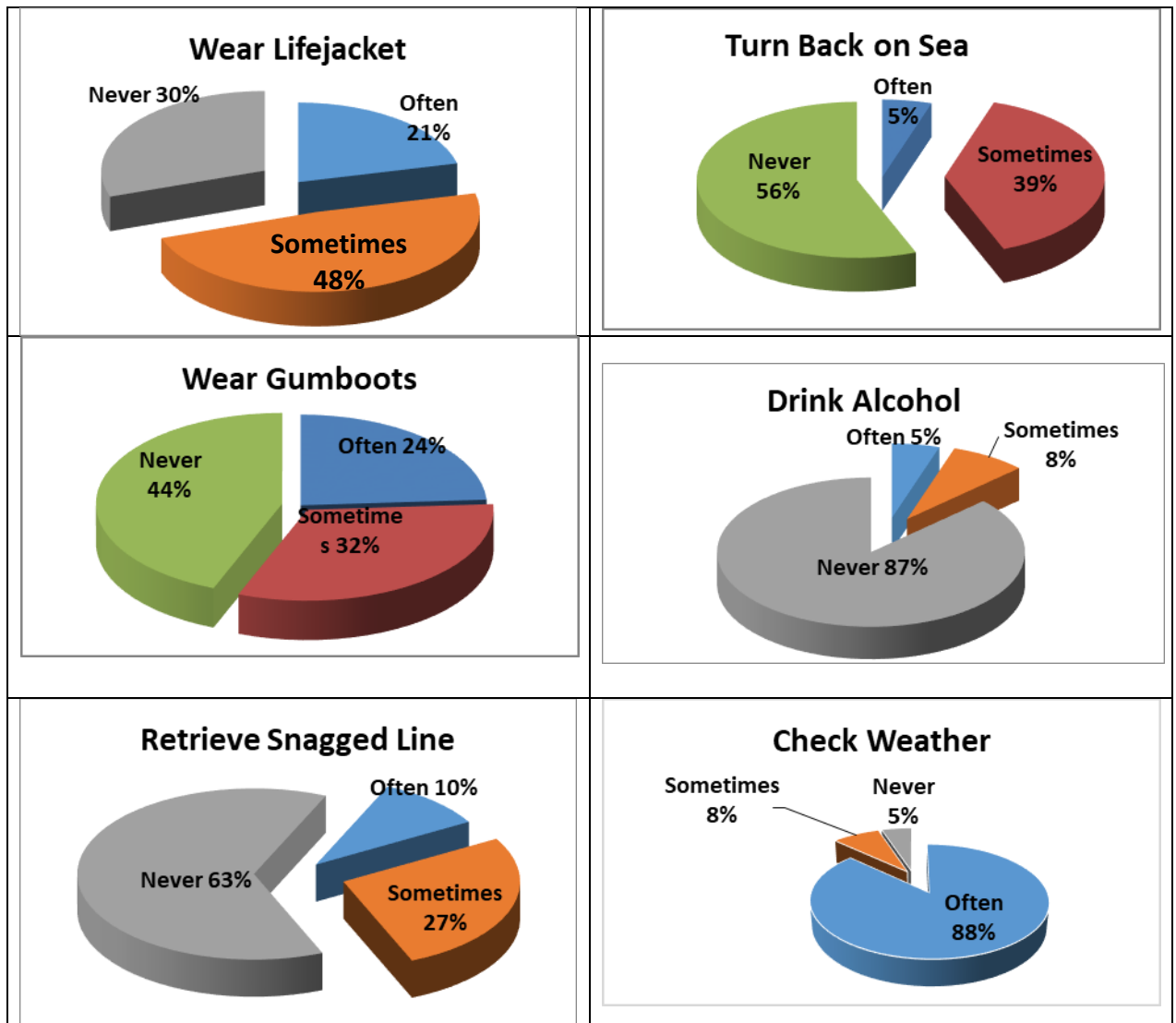


Table 14. Summary of Safety Behaviours, 2018



4.6 CHANGES IN FISHERS' KNOWLEDGE, ATTITUDES, AND BEHAVIOURS

Fishers were asked to assess whether their fishing safety knowledge, attitudes, and behaviour and that of their mates and other fishers had improved (see Question 13, Appendix 1). Table 15 shows that most fishers (82%) considered that their safety knowledge had improved in recent years, a small proportion (3%) thought that it had not improved and 15% didn't know whether it had improved. Most fishers (84%) thought that their attitudes towards fisher safety had improved and most (87%) thought that their safety behaviours had improved.

Table 15. Comparison of Self-Reported Changes in Fishers' Safety Knowledge, Attitudes and Behaviours, 2017 and 2018

Do you think that -	Year	Agree		Disagree		Don't know		Total	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Your rock fishing safety knowledge has improved?	2018	105	82.0	4	3.1	19	14.8	128	100.0
	2017	157	78.9	6	3.0	36	18.1	199	100.0
Your rock fishing safety attitude has improved?	2018	108	84.4	5	3.9	15	11.7	128	100.0
	2017	174	87.9	3	1.5	21	10.6	198	100.0
Your rock fishing safety behaviour has improved?	2018	111	86.7	5	3.9	12	9.4	128	100.0
	2017	162	91.0	7	3.5	31	15.5	200	100.0
Your mates' rock fishing behaviour has improved?	2018	78	60.9	7	5.5	43	33.6	128	100.0
	2017	125	62.5	22	11.0	53	26.5	200	100.0
Other rock fishers' behaviour has improved?	2018	61	47.7	15	11.7	52	40.6	128	100.0
	2017	99	49.5	23	11.5	78	39.0	200	100.0

Comparative figures for the previous year suggest that fishers' perception of their knowledge attitudes and behaviours (KAB) had changed to some extent with: slightly more thinking their knowledge had improved (2018, 82%; 2017, 79%), a slightly fewer believing their

attitudes towards safety had improved (2018, 84% 2017, 88%; 2016, 84%) and that their safety behaviour had improved (2018, 87%; 2017, 91%).

To determine whether participants in the survey had seen an overall improvement in safety behaviour among the fishing community, fishers were asked to indicate whether they thought the safety behaviour of friends or other rock fishers had improved. Table 15 shows that almost two thirds of fishers (61%) thought that the safety behaviour of their mates had improved (2017, 63%), some (6%) thought their mates fishing behaviour had not improved (2015, 11%) but one third (34%) did not know (2017, 26%). When asked about other rock-based fishers, almost one half of fishers (48%) in the 2018 survey thought they had observed better safety behaviours of other fisher's response about safety behaviour was reported in regard to other fishers, slightly less than that reported in the previous year (2017, 50%), but more reported that they did not know (2018, 41%; 2017, 39%).



Illustration 3. Precarious enquiry - Flat Rock, Muriwai

5. CONCLUSIONS

On the basis of the above findings, several key points are worthy of concluding emphasis. They include:

- The rock-based fisher population on Auckland's west coast continues to be a transient, ever-changing population with culturally and linguistically diverse demography. In 2018, more fishers were older than 45 years of age and more had lived in New Zealand for 10 years+ compared to previous surveys. This may have implications on the adoption of more risk averse behaviours characteristic of an older population.
- While some evidence suggests that the fishers are more familiar with the location at which they fish (greater frequency of visits), some self-reported risky behaviours (such as going down the rocks to retrieve a snagged line and the use of inappropriate footwear) still prevail.
- Most significantly, the continued self-reporting of lower lifejacket use is a cause for concern and with fewer fishers reporting *often/always* wearing a lifejacket on the west coast, further safety promotion is warranted. This is the third year that lifejacket use has been below the peak level reached in 2011. Whether the poor lifejacket behaviour represents a negative shift in the mind set of fishers requires corroboration by observational study and continued monitoring.
- The more comprehensive coverage of remote sites for data gathering may have influenced reported lifejacket use. The Rock Safety Advisor noted that he observed more lifejacket compliance in the most popular site at Muriwai and that fishers were more likely to accept safety information at Muriwai and Piha. It is a great concern that lifejacket use appears less frequent in sites where their use is likely to be most critical - remote sites with poor accessibility, which means rescue response times are compromised and self-survival time in the event of immersion is at a premium.

6. RECOMMENDATIONS

On the basis of the findings, it is recommended that:

1. Auckland Council:

- Retain the services of the safety advisor for a 2018/19 summer campaign
- Continue to provide regional leadership and support future fishing safety promotion, including the installation of angel rings and safety signage at high risk sites.
- Increase provision of public rescue equipment (PRE) in the form of angel rings and throw ropes at 3 popular but remote locations:
 - 1) *on the south side of Ninepin Rock at Whatipu,*
 - 2) *east side of Paratutae Island, Whatipu, and*
 - 3) *Raeakiaki Point, Bethells Beach*(refer Rock Fisher Advisor detailed comment in Part 2 Operational Report, page xii-xiii).

2. Drowning Prevention Auckland, Surf Life Saving Northern Region and other safety organizations:

- Increase promotion of lifejacket use given the negative trends in both attitudes and self-reported behaviours reported here and in the previous 2 years
- Commit resources and personnel to the ongoing work collaboratively with all partners to promote best practice for West Coast fishing safety education beyond 2016-17 via:
 - *Continued use of an SLSNR RWC partnered with an Advisor to transport and support them along the coast*
 - *Using a purpose fitted drone for a land-based Advisor to increase their efficiency and safety on the job*
 - *Review and Update the Survey to have a more educational and to the point approach*
 - *Continued use of a Tracking Device and Report Form*
 - *Coastal Awareness Course training for both Rock Fishing Advisors and RWC Rock Fishing Operator*
 - *Increase support to fishermen who want to improve their safety by providing better access to an ideal PFD for West Coast Rock Fishing, possibly through sponsorship and subsidies Suggested employment for 2018-19 season:*
 - *1 x Rock Fishing Advisor with 1x RWC Operator on RWC (Saturday-Sunday x 8 Hours per day x 9 Weeks)*
 - *1 x Rock Fishing Advisor equipped with Drone (Monday-Friday x 8 Hours per day x 9 Weeks)*(Refer Rock Fisher Advisor detailed comment in Part 2 Operational Report, page xiv)).

3. Recreational fishers, fishing organizations, lifejacket retailers and manufacturers, fishing outlets:

- Adopt and endorse the fishing safety messages promoted by the 2018 West Coast Rock-based Fisher Safety Project.

- Encourage others in the rock fishing community to adopt safe practices - **especially the wearing of lifejackets when fishing at Auckland's high-risk west coast locations.**
 - Support the work of frontline fishing advisors and lifeguards in their efforts to make rock fishing a safe and happy experience.
 - Advocate for the promotion of rock fishing safety with community groups especially those that are identified high-risk including new migrants, Pasifika and Asian peoples.
-

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8. Appendix

8.1 Appendix 1 - The survey questionnaire

Rock-Fishing in Auckland: 2018

Date: _____ Time: _____ Location: _____

1. a) Did you take part in the Auckland west coast rock-fishing project in the past?

☐ Yes ☐ No

If Yes, do you think the project is:

- ☐ Highly successful
☐ Successful
☐ Slightly successful
☐ Not successful
☐ Don't know

6. How would you best describe yourself?

- ☐ European New Zealander
☐ Māori
☐ Pasifika
☐ Chinese / Taiwanese
☐ Korean
☐ Indian
☐ Other (e.g. African, French, Spanish etc.)

2. Are you aware of the current rock fishing safety promotion in Auckland?

☐ Yes ☐ No

If Yes, how do you know about it?

- ☐ Radio
☐ Television
☐ Rock fishing advisors
☐ Newspapers
☐ Magazines
☐ Retail outlets (eg fishing shops, gas stations)
☐ Other _____

3. Are you?

☐ Male ☐ Female

4. How old are you?

- ☐ 15-19 years
☐ 20-29 years
☐ 30-44 years
☐ 45-64 years
☐ 65+years

5. Where else have you fished in the last year?

7. How long have you lived in New Zealand?

- ☐ Less than 1 year
☐ Between 1-4 years
☐ Between 5-9 years
☐ More than 10 years
☐ All my life

8. How often have you fished at this location?

- ☐ This my first time
☐ Between 2-5 times
☐ Between 6-10 times
☐ Between 11-20 times
☐ More than 20 times

9. Tick ONE of the list below that best describes your reason for fishing today:

- ☐ For fun and enjoyment
☐ To feed the family
☐ To be with my mates
☐ To have a day out from home / work

10. Can you suggest other dangerous sites without angel rings on the west coast

11. 1 - Have you seen angel rings on the West Coast?

☐ Yes ☐ No

- 2 – Have you read instructions on how to use them?

☐ Yes ☐ No

- 3 – Do you think you could use one in an emergency?

☐ Yes ☐ No

4 – Do you have any suggestions on how to make them more effective? _____

12. Do you think that-	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
1 - Getting swept off the rocks while fishing is likely to result in my drowning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 - Rock fishing is no more risky than other water activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 –Drowning is a constant threat to my life when rock fishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 - I am not concerned about the risks of rock fishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 - Other fishers are at greater risk of drowning than me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 - I am a strong swimmer compared with most other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 – I avoid fishing in bad conditions to reduce the risk of drowning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 - Always wearing a lifejacket makes rock fishing a lot safer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 - Turning my back to the waves when rock-fishing is very dangerous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 - My local knowledge of this site means I'm unlikely to get caught out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11 - My experience of the sea will keep me safe when rock fishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 - My swimming ability means I can get myself out of trouble	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. When rock fishing, do you -	Never	Sometimes	Often	Always
1 Wear a lifejacket/buoyancy aid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Check weather forecast beforehand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Drink alcohol when fishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Wear gumboots or waders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Turn your back on the sea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Take a cell phone in case of emergencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Go down the rocks to retrieve snagged line	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. As a result of the rock fishing project, do you believe that:	Agree	Disagree	Don't know
1 My knowledge of rock fishing safety has improved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 My practice of rock fishing safety has improved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 My attitudes towards rock fishing safety have improved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 My rock fishing mates seem more safety conscious	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Other rock fishers around me seem more safety conscious	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PART 2:



The 2018 West Coast Rock-based Fishers Project

OPERATIONAL REPORT

This report has been constructed with the intention of informing members and stakeholders about the Surf Lifesaving Northern Region involvement in the rock fishing safety project over the 2017/2018 summer season.

For more in depth information or statistics please contact;

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The Season in Brief

This season SLSNR employed Sam Turbott as the Rock Fishing Safety Advisor. Sam spent 85 days out on Auckland's West Coast, engaging with Rock Fishers on 458 occasions, although some were often the same person. Of those contacted, 132 completed a safety survey (200 in 2017/18). The project area covered nine different beaches and 21 key Rock Fishing locations. Overall the aim to have a presence amongst those who fish off the rocks on Auckland's West Coast was achieved. The population of rock fishers is a diverse with a wide range of cultural ethnicities, but a very male dominated water activity. It was found that many would listen and be interested in advice except a few who simply didn't want to hear it or were fishing for food so had little time. Many knew a decent proportion of the advice given, they just didn't act on it due to cost or lack of appreciation of how badly things could go wrong. The rock fishers who were the safest were those who had experienced or seen fatalities or dangerous events occurring on the rocks.

Pre-season Training

The pre-season training, run in partnership with Drowning Prevention Auckland was very beneficial. It provided a perspective of the difference that lifejackets can make as well as increasing skills around rocks. The coast tour was also a useful experience allowing for a quick familiarisation with the project area and environment before the surveys actually began. Continuation of this pre-season training for future years is therefore highly recommended.

RWC

This season saw the use of a Rescue Water Craft (RWC) and Operator, based at Piha, to transport and support the Advisor to the fishing locations. The RWC was used a total of 21 days, helping contact 73 Rock fishers and greatly increasing program coverage.

The RWC was highly effective at increasing efficiency by reducing the normal hour-long drive between beaches to ten minutes and allowing for safer access to the specific fishing spots. It was also comforting for the Advisor knowing additional support was there if something was to go wrong. It caught the attention of rock fishers who seemed to be more approachable to an Advisor getting off an RWC that had come from further along the coast.

The RWC proved its value during busy days, when there were a lot of rock fishers out. However, it was a lot of effort for less return on quieter fishing day. Due to conditions and in the interest of safety the RWC was not able to operate on a number of days where the surf was too big. Overall the RWC was a highly effective tool and continuation of its use within the project is recommended, especially during concentrated during busy periods, such as weekends and holidays during fine weather.

RWC being operated in the surf, Bethells



Tracking system

A GPS tracker was loaned by 'TrackPlus', which worked well, providing real time tracking and an alert system back to the Coastguard Ops room in case the Advisor was in difficulty. This additional safety feature was something new for the 2017/18 season and proved to be a success in ensuring safety. Advisors commented about the extra assurance having the TrackPlus unit provided. The device had a long-lasting battery and accurate tracking, although most of the additional features were not used. As well as the safety benefit, a tracking system is ideal as it removes the need to constantly check in by radio.

UAV Trial

The use of UAV's (Drones) is on the increase, especially for lifesaving organisations. A trial was therefore undertaken in partnership with X-Craft, a local UAV company to see where drones could be used as part of the project to improve worker safety and cut down wasted time reaching places where rock fishers were not fishing that day but could not be seen from the coastal path. A UAV was therefore fitted with an infrared camera and flown from the coastal path out to popular fishing spots to see if it could spot rock fishers using the thermal imaging technology. The trial was the only time that the media seemed interested in the project and some useful media coverage was generated. See [here](#) for an example.

The trial demonstrated that having an advisor with a drone was beneficial to the program in terms of increasing safety and efficiency. Feedback from the Advisor is that it may be more efficient than having an additional RWC, although both the use of an RWC and UAV are limited by adverse weather. In order to fully implement a UAV into the rock fishing project in future there is a requirement to;

1. Give basic training of the proposed pilot, including piloting skills, hardware and software knowledge
2. Carry out a survey of the intended locations of operations, in various weather conditions, with UAS to determine areas of high turbulence that will affect flight path design
3. Establishing appropriate flight plans for each location and flight testing those paths.
4. Select and test an appropriate aircraft that will be required to;
 - Be operated by a person with limited piloting skills.
 - Be easy to carry and store. The system needs to fit into a back pack so that the SLSNR Rock
 - Fishing advisor can transport it on an RWC or carry it to a remote launch location.
 - Operate over water, sand and in various wind conditions.
 - Have a level of collision avoidance capability and be able to return to its launch point autonomously should control links be compromised.
 - Have both optical and Infrared thermal imaging

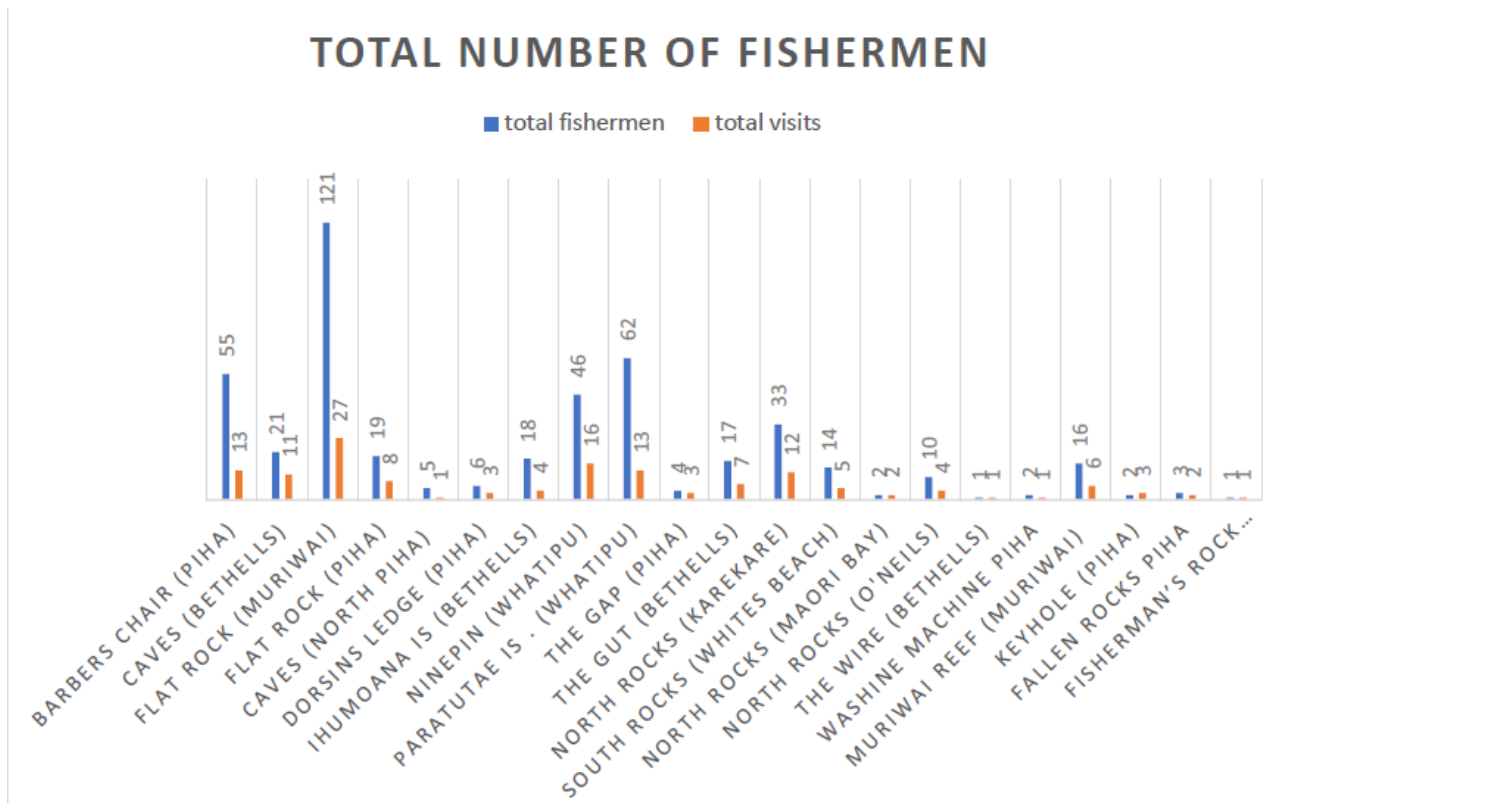


Locations visited

Location	Total fishermen	Total visits	Average Fishermen per visit.
Barber's Chair (Piha)	55	13	4.23
Caves (Bethells)	21	11	1.9
Flat Rock (Muriwai)	121	27	4.48
Flat Rock (Piha)	19	8	2.37
Caves (North Piha)	5	1	5
Dorsins Ledge (Piha)	6	3	2
Ihumoana Is (Bethells)	18	4	4.5
Ninepin (Whatipu)	46	16	2.8
Paratutae Is . (Whatipu)	62	13	4.7
The Gap (Piha)	4	3	1.3
The Gut (Bethells)	17	7	2.42
North Rocks (Karekare)	33	12	2.75
South Rocks (Whites Beach)	14	5	2.8
North Rocks (Maori Bay)	2	2	1
North Rocks (O'Neils)	10	4	2.5
The Wire (Bethells)	1	1	1
Washing machine Piha	2	1	2
Muriwai Reef (Muriwai)	16	6	2.66
Keyhole (Piha)	2	3	0.66
Fallen Rocks Piha	3	2	1.5
Fisherman's Rock (Anawhata)	1	1	1

Locations that are easier to reach recorded the highest numbers of Rock Fishers

- The most visited location by the Advisor was Muriwai’s flat rock, which was the most popular with Rock Fishers
- Dangerous locations such as Piha’s ‘keyhole’ and ‘the wire’ recorded the lowest numbers of rock fishers.



Environmental conditions

Some observations and statistics are presented covering the various environmental conditions and the impact on the project and Rock Fishers.

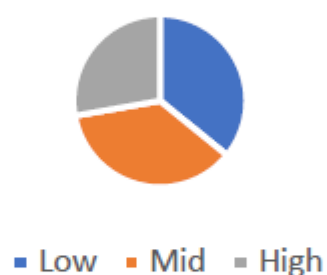
Weather

- In the interest of safety, in very poor weather our Advisor did not conduct any surveys so there are no statistics for these weather conditions
- Of the weather condition that the advisors did get out (clear, scattered cloud, overcast, scattered showers) there was no statistical evidence to suggest that any of these weather conditions had an effect on the decision to go out and fish.
- Swell conditions also had no obvious deterrent to rock fisher’s decisions to fish with 38% of all contacted fishermen fishing in 6ft+ swell.

Tide and times

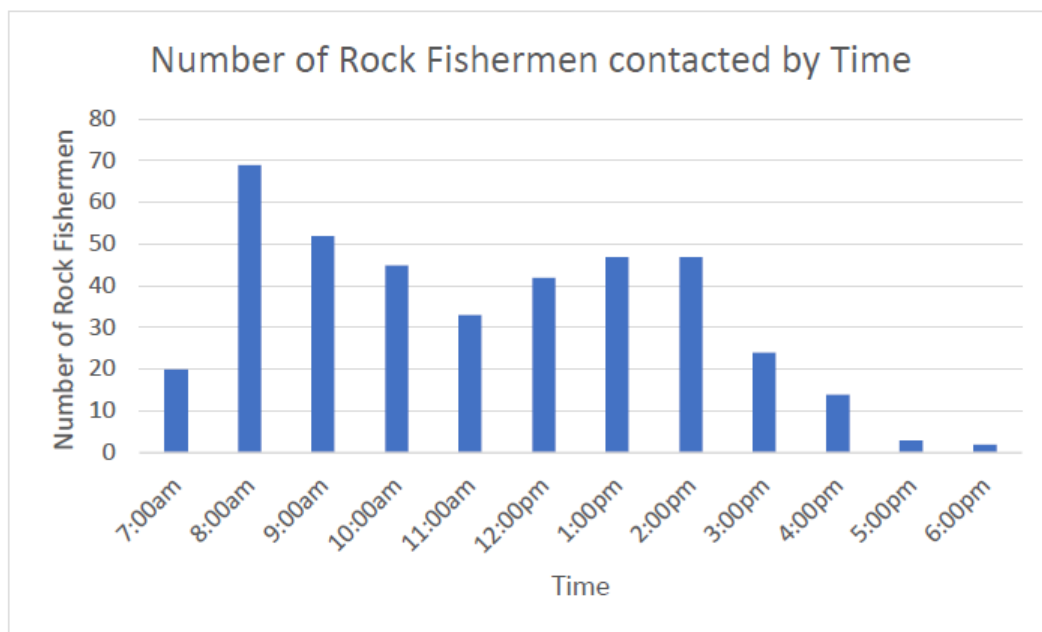
Tide	Percentage of total fishermen contacted.
Low	35.86%
Mid	36.36%
High	27.78%

Percentage of total fishermen contacted by tide



Times	Number of Rock fishermen
7:00am	20
8:00am	69
9:00am	52
10:00am	45
11:00am	33
12:00pm	42
1:00pm	47
2:00pm	47

3:00pm	24
4:00pm	14
5:00pm	3
6:00pm	2



- The Advisor found the least amount of Rock Fishers at high tide
- There is no statistical difference between low and mid tide
- The morning proved to be the most popular time for to fish
- However, Rock Fisher numbers are fairly consistent throughout the day with only the evening showing a significant change in numbers.
 - Rock fishing advisors started their shift at 7am and would finish between 3-4 most days.
 - Note: not all fishermen are shown here as not all contacts were time stamped.



Rock Fishers caught out by rogue wave (Flat Rock, Muriwai)

Angel rings

Whilst visiting Rock Fishers, the Advisors constantly checked the condition of Angel Rings (public rescue equipment) conducting a survey of their condition. If any were missing they were replaced. A number of requests by rock fishers were made for additional angel rings to be put in place, most notably in the Whatipu area which sees one of the largest number of fishermen but only has one angel ring in the vicinity and is also the furthest away from a rescue response of all locations reached in this program.

Existing Angel Ring Locations & Status

Location	Date Checked	Ring	Throw Rope	Secure	Needs Attention	Problem
Ninepin (Whatipu)	27/4/18	Yes	No	Yes	Yes	Needs Throw Rope
North Rocks (Karekare)	2/5/18	Yes	Yes	Yes	No	
Flat Rock (Piha)	2/5/18	Yes	Yes	No	Yes	Needs new securing rope and sticker
Dorsins Ledge (Piha)	2/5/18	Yes	Yes	Yes	No	
Barbers Chair (Piha)	2/5/18	Yes	Yes	Yes	No	
North Rocks (United)	2/5/18	Yes	Yes	Yes	No	
South Rocks (Whites)	24/4/18	Yes	Yes	Yes	No	
North Rocks (Whites)	24/4/18	Yes	Yes	Yes	No	
Paikea Bay (Whites)	24/4/18	Yes	Yes	Yes	No	
Keyhole Rock (Anawhata)	24/4/18	Yes	Yes	Yes	No	
North Rocks (Anawhata)	24/4/18	Yes	Yes	Yes	No	
The Gut (Bethells)	2/5/18	Yes	Yes	Yes	No	
Caves (O'Neils)	2/5/18	Yes	Yes	Yes	No	
Kauwahaia Is (O'Neils)	2/5/18	Yes	Yes	Yes	No	
Flat Rock Point (Muriwai)	2/5/18	Yes	Yes	Yes	No	
Flat Rock Stairs (Muriwai)	2/5/18	Yes	Yes	Yes	No	
Blowhole (Piha)	2/5/18	Yes	Yes	Yes	No	

Recommended Locations for Additional Angel Rings (From Highest Priority);

1. South Side of the Ninepin Is at Whatipu

The Ninepin does already have an angel ring on the north side. This is ideal if anyone gets into trouble accessing the Ninepin when the tide is in. However, it is too far away to be of any use to anyone that is actually fishing on the south side. After talking to fishermen, they all said that if someone got in trouble while fishing they wouldn't even bother about getting the ring as its too far away. The south side currents are incredibly strong so every second counts in how quickly they can get a floatation device or rope. An angel ring with an attached throw rope would be essential. The site is one of the most popular fishing spots on Auckland's west coast and is known for some night fishing expeditions.

2. East Side of Paratutae Is. at Whatipu

This is the second most popular spot for fishing on Auckland's West Coast due to it being sheltered from broken waves and the prevailing wind. However, due to it being just within the Manukau Harbour mouth it experiences gyres, strong currents and rip tides as well as surging waves. Due to the high population of fishermen in this spot an angel ring could very well come in handy.

3. Raeakiaki Point Bethells Beach

This point is a relatively common fishing spot which is subject to tidal access. Being at the far south end of Bethells Beach, an area with poor reception, response times can be long especially if there is no patrol. An angel ring would greatly benefit anyone washed into the sea, keeping them afloat till help arrives.



Rock Fisher getting caught out at Paratutae Island by a high tide and large swells. The location has no angel ring

Lifejackets & safety information

- Of the 458 rock fishing contacts only 75 contacts resulted in the fishermen having a life jacket. When asked why rock fishermen weren't wearing lifejackets, cost and comfort were the prime reasons
- Muriwai was the most likely location to find fishermen in lifejackets
- Of the 458 contacted fishermen only 73 accepted the safety pamphlet
- Muriwai and Piha were the most likely locations for Rock Fishers to take safety pamphlets
- Rock Fishers that were frequently contacted by an Advisor were more likely to start wearing helmets and lifejackets



'Regular' Rock Fishers - Barbers Chair, Piha all wearing lifejackets by the end of the season

Concluding observations

The following are personal observations from the Advisor....

“The current culture of fishermen is that many are aware of checking forecasts before leaving home. However, this is just one step for safety and many are ignoring bringing the correct equipment such as suitable clothes and a buoyancy device. This is partly due to the fishing on the west coast being the ‘wild west’ of fishing in the North Island which is why it’s important to approach the group correctly about the use of lifejackets. Putting in place a law to wear a lifejacket when rock fishing in this area would be hard to enforce, most likely ignored and would destroy any relationship between us and them. In terms of encouraging the use of lifejackets I think the best solution would be to support them in the access of getting a suitable lifejacket which they would want to wear. The ideal lifejacket I have found are models like the HutchWilco Inflatable type, due to their light weight, comfort and size. I think that helping the funding and access to this lifejacket or similar type would see a great increase in number of lifejackets worn on Auckland’s West Coast. Using the pamphlets was successful in teaching the use of angel rings as it had multiple translated languages, was simple and imagery thick. The additional use of an all-weather sticker was also well taken as many would stick it on their tackle box to remind them of the 3 essential safety guidelines when rock fishing. Also, many rock fishermen felt the current survey asks the same question multiple times just with different wording”.

Sam Turbott
Rock fisher Safety Advisor
Surf Life Saving Northern (SLSN)

Future Plans & Proposals

The new SLSNR Strategic Plan specifically identifies the need to “Target community water safety education funding primarily towards at risk demographics”. The Rock Fishing project satisfies this strategic aim and SLSNR’s continued involvement with Drowning Prevention Auckland is assured. The following is proposed for the 2018/19 season;

- Specifically educate the rock fishers on the dangers involved with fishing on the rocks near surging waters
- Provide better support to Rock Fishers who want to improve their safety
- Survey the population involved with rock fishing to identify:
 - WHAT percentage of drownings are of rock fishers
 - WHERE they are fishing
 - WHO is fishing
 - HOW MANY are fishing
- Continued use of an SLSNR RWC partnered with an Advisor to transport and support them along the coast
- Using a purpose fitted drone for a land-based Advisor to increase their efficiency and safety on the job
- Review and Update the Survey to have a more educational and to the point approach
- Continued use of a Tracking Device and Report Form
- Coastal Awareness Course training for both Rock Fishing Advisors and RWC Rock Fishing Operator
- Increase support to fishermen who want to improve their safety by providing better access to an ideal PFD for West Coast Rock Fishing, possibly through sponsorship and subsidies.
- Employ:
 - 1 x Rock Fishing Advisor with 1x RWC Operator on RWC (Saturday-Sunday x 8 Hours per day x 9 Weeks)
 - 1 x Rock Fishing Advisor equipped with Drone (Monday-Friday x 8 Hours per day x 9 Weeks)