West Coast Rock-based Fisher Safety Project 2023

Drowning Prevention Auckland

SURF LIFE SAVING NORTHERN REGION

Auckland Council
Te Kaunihera o Tāmaki Makaurau

Preface and Acknowledgements

This report is an evaluation of the 2023 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 18th 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 Life Rings to be installed on their land and allowing us access to maintain them.

The Project was again coordinated by personnel from three regional organisations Drowning Prevention Auckland (DPA), Surf Life Saving Northern Region (SLSNR), and Auckland Council (AC). Key people involved in the promotion of fisher safety from Drowning Prevention Auckland were Harry Aonga, Josh Carmine, and Madison Chang, From Surf Life Saving Northern, key contributors were James Lea, Tom Kearney, Kael Mead, and Tayla Worthington. From Auckland Council, park ranger Stuart Leighton and his staff of rangers were actively involved in all aspects of leadership and delivery of the programme.

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https://www.dpanz.org.nz/research/rock-fishing/

Executive Summary

Overview

Rock-based fishing (a form of land-based fishing) is one of the deadliest recreational pursuits in New Zealand. A 10-year review conducted by Surf Lifesaving New Zealand from 2011-2021 reported an annual average mortality rate of 3 fatal drowning incidents per annum associated with land-based fishing (National Beach and Coastal Safety Report 2021, SLSNZ, 2021). Of these, most were male (93%) and the key demographic group were 25-64 year-olds of Asian ethnicity. From 2018-2022, there were 25 land-based sea fishing fatalities in New Zealand. Auckland accounted for one-half (48%, *n* = 12) of all incidents, Waikato one-quarter (28%, *n* = 7), South Island 16%, *n* = 4, and rest of North Island 8%, *n* = 2. All bar one of the 12 fatalities in Auckland were Asian, and 83% were male (*n* = 10), and in the Waikato, all were male, and 71% Asian (*n* = 5) (Drownbase, WSNZ, 2023). Similar statistics are reported across the Tasman with an average of 13 deaths per annum, of whom 95% were male, average age 45 years, 53% were Asian born, and 83% were confirmed as not wearing a lifejacket (Cooney, Lawes, & Daw, 2020).

1. Background

This is the eighteenth year of the *West Coast Rock-based Fisher Safety Project*, a collaborative intervention by the Auckland Council, Drowning Prevention Auckland (DPA) (formerly 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.

Note: Beaches and access roads were closed due to the poor weather (Anniversary Weekend and Cyclone Gabrielle) which barred access to many locations.

2. Aims

The aims of this eighteenth 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 2022-23 season,
3) To make recommendations for future rock fishing safety promotion based on the information obtained in the survey conducted during the 2022-23 season.

3. Methods

A cross sectional study of fishers at high-risk locations on Auckland's west coast was undertaken during the summer safety campaign between December 2022 and June 2023. A total sample of 67 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 life 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 participants (N = 67) were predominantly male (84%), most were aged 30-64 years (68%)
- One third (36%) had been resident in New Zealand for less than 10 years
- The respondents were primarily Asian peoples (61%), comprised mainly of people of Korean (33%) and Chinese (33%) descent
- It was the first visit to the site for 21% of fishers, 58% had visited less than 5 times, and 7% had visited the site where interviewed >20 times
- The reason most fishers gave for fishing on the day of interview was fun and enjoyment (43%), 18% to feed the family, 20% to be with mates

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

- 19% of respondents reported that they were aware of previous west coast fisher safety projects (2022, 19%)
- Of these, most fishers (58%) thought that the campaign had been successful, 42% thought it had not been successful
- More fishers (34%) were aware of the current 2023 Project than in the previous year (2022, 9%)
- 25% of fishers were wearing lifejackets at the time of interview, with 24% of these reporting always wearing one when fishing. 40% didn't wear one because they didn't think it risky enough

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

- Most fishers (97%) reported seeing on-site life rings where they fished (2022, 94%)
- 45% had read the instructions on how to use the life rings (2022, 36%)
- Most fishers (84%) thought they could use the life rings in an emergency (2022, 89%)
- One third (34%) had used, or seen one used in an emergency (2022, 25%)

4.4. Perceptions of Drowning Risk

- Most fishers (61%) agreed that getting swept off rocks was likely to result in their drowning (2022, 68% agreed)
- 40% of fishers agreed that drowning was a constant threat when fishing from rocks on the west coast of Auckland (2022, 51% agreed)
- Most (84%) agreed that other fishers were at greater risk than themselves but only 25% thought they were strong swimmers compared with others (2022, 61% and 54% respectively)
- Only half of the fishers (49%) agreed that wearing a lifejacket made rock-based fishing safer (2022, 89% agreed)

- Almost all fishers (96%) avoided fishing in bad weather (2022, 91% agreed)
- 31% agreed that turning their backs to the sea was very dangerous (2022, 64% agreed)
- 30% thought that their swimming proficiency would get them out of trouble (2022, 81% agreed)
- Half of the fishers (52%) thought that their local knowledge of the site would keep them out of trouble (2022, 58% agreed)
- Many fishers (89%) thought that their experience of the sea would keep them safe when fishing from rocks (2022, 59% agreed).

4.5. Water Safety Behaviours of Fishers

- 34% reported *often/always* wearing a lifejacket/buoyancy aid (2022, 40%)
- 18% reported *never* wearing any lifejacket/buoyancy aid (2022, 40%)
- Half of fishers (52%) reported *never* consuming alcohol when fishing (2022, 85%)
- Many fishers (58%) reported *sometimes/often* wearing gumboots/waders (2022, 55%)
- Many (88%) reported *sometimes/often* going down rocks to retrieve snagged lines (2022, 88%)

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

- Most fishers (87%) considered that their safety knowledge had improved in the past year (2022, 80% agreed)
- Half of fishers (51%) considered that their fishing safety attitudes had improved (2022, 73% agreed)
- One third (34%) thought that their safety behaviour when fishing had improved (2022, 74% agreed)
- Most fishers (67%) thought that the safety behaviour of their mates had improved (2022, 67% agreed)
- Most fishers (58%) considered that the safety behaviour of other fishers had improved (2022, 64% agreed)

TAKE AWAY POINTS

- **The survey participants were predominantly male, ethnically diverse, and a mix of newcomers and experienced fishers, still a transient population who had not taken part in previous surveys**
- **One fifth (20%) were first-time visitors to the fishing site where they were interviewed.**
- **Never wearing a lifejacket when fishing from rocks continues to be a persistent high-risk behaviour**
- **One quarter of fishers (25%) were wearing a lifejacket when completing the survey but, of the non-wearers, 40% did not because they didn't consider it risky enough, 18% didn't like wearing one, 30% didn't own one, and 8% had forgotten to bring it on the day of interview**
- **One fatal drowning event in 2023 (see press release summary, page 30)**

Drowning Prevention Auckland (DPA) Education Programme YE2023:

Programme was based on the key findings from the Rock-based Fishing Report 2022 which reported that:

- Fishers were predominantly male (93%), aged 30-64 years (68%), and one third (36%) had been resident in New Zealand for less than 10 years.
- Primarily Asian peoples (50%) comprised mainly of Filipino (23%), Korean (33%), and Chinese (33%) descent.
- It was the first visit to the site for 20% of fishers.
- Forty per cent reported *often/always* wearing a lifejacket and forty per cent reported *never* wearing any lifejacket.

The reported overestimation of competence, combined with an underestimation of risk and the 'newness' of many fishers to the west coast sites has highlighted the importance of the continuance of the initiative.

The purpose of the project

1. To raise water safety awareness, skill, and knowledge around rock-based fishing in at-risk for drowning groups, specifically men.
2. To develop safer rock-based fishing practices in at-risk groups.
3. Continue focus on research to further develop understanding of the 'fisher' profile and their behaviours.

DPA Limitations

- Beaches and access roads were closed due to the poor weather (Anniversary Weekend and Cyclone Gabrielle) which barred access to many locations.
- Limited to carpark to conduct surveys and engage rock-based fishers.
- Language barriers with rock-based fishers particularly with Chinese ethnicities.
- Not having a bilingual educator available to do the surveys.
- Reduced access to engagement areas such as on the rocks or where rock-based fishers' fish due to health and safety protocols.

Drowning Prevention Auckland achieved the outcomes and outputs set for the 2022-2023 season with funding made possible from Auckland Council.

DPA Outcomes 2022-2023

- 83% of participants from the workshops and presentations have increased knowledge and improved attitudes regarding water safety when land-based fishing.
- 82% of participants indicate they will now wear a lifejacket when land-based fishing after participating in the seminars, workshops, or presentations.
- 100% of participants who have taken part in the programme indicate they will now exhibit safer behaviour when land-based fishing.

DPA Outputs 2022-2023

- 40 hours use of DPA staff member as a Rock-Based Fishing Advisor at Auckland West Coast Beaches
- DPA supported SLSNR to collect additional surveys in the carparks from rock-based fishers.
- Completed 4 x Rock Fishing Education workshops.
- Completed 4 x Rock Fishing Seminars.
- Updated and purchased 400 rock fishing multi-tools
- Completed rock-based fishing education and presentations to 1800 participants with an estimated 50% being of Asian ethnicity, 15% Māori and 20% Pacific.
- Training and upskilling of DPA rock-based fishing Educators.

Recommendations for future delivery are;

- **Research** – New incentive-based giveaways, a prize draw to win a 'prezzie card', to encourage fishers to complete the survey supplementing the lifejacket and fishing multi tool giveaways.
- **Research** – Observations of fishers on-site to ascertain actual risk behaviours of fishers.
- **Research** - Develop a methodology (rock-fisher journey) as a trial.
- **Research** - Translate surveys into Mandarin, Cantonese, Tongan, Samoan, and Korean.
- **Education** - Increase community presentations to raise awareness on how to be safer when rock-based fishing, importance of wearing a lifejacket and Public Rescue Equipment (PRE) education.

- **Education** - Hosting seminars to rock-based fishing communities across Tāmaki Makaurau.
- **Community Engagement** – Additional marketing of the lifejacket hub at Bethells Beach Surf Lifesaving Club so rock-based fishers are aware of how and where to access lifejackets.
- **Community Engagement** - Increased promotion of rock fishing safety messaging at community events such as Chinese New Year Festival, Pacific Peoples (church congregations).
- **Community Engagement** – Explore potential opportunities to partner with SafeSwim and other marine weather providers e.g. Met Service to provide key rock-based fishing messaging on their website and app.
- **Community Engagement (Media) -** Media – agreement and consistency among partners with media reporting and media releases.
- Planned approach to media promotion.
- **Sustainable Funding** - Identify sustainable funding streams to continue and expand the programme.
- **Partnership -** Continue the collaboration with Auckland Council, Surf Lifesaving Northern Region/New Zealand, and Drowning Prevention Auckland.

RECOMMENDATIONS

On the basis of the findings of the 2023 Survey, it is recommended that:

Auckland Council:

- Retain the services of the safety advisory for a 2023/24, and look to funding the expansion of onsite public liaison into the shoulder seasons (Spring and Autumn - October – June)
- Continue to provide regional leadership and support future fishing safety promotion, including the installation of life rings and safety signage at high-risk sites,
- Increase provision of evidence-based public rescue equipment (PRE) in the form of life rings and throw ropes at popular and remote locations in light of recent findings of SLSNZ research: Kearney, M., & Stanley, T. (September 2023). *A guide to Public Rescue Equipment for the New Zealand Coast*. Wellington: Surf Lifesaving New Zealand.
- Support the trialling of different PRE and the development of national PRE guidelines.

Drowning Prevention Auckland, Surf Life Saving Northern Region and other safety organisations:

- Promote and evaluate the e-Learning module on the DPA website, and add a question to the annual survey,
- Increase lifejacket use in the public domain with strong media messaging,
- Commit resources and personnel to the ongoing work collaboratively with all partners to promote best practice for West Coast fishing safety education beyond 2023,
- To gain a more accurate understanding of when and how often the PRE are used in an emergency, we recommend using available technology to trial a monitoring system of the PRE at one site (e.g. Muriwai Flat Rock).

Recreational fishers, fishing organisations, lifejacket retailers, fishing outlets:

- Adopt and endorse the fishing safety messages promoted by the 2023 West Coast Rock-based Fisher Safety Project,
- Be aware of, and promote participation in, the new e-Learning website, especially in fishing magazines, newspapers, and other online media outlets,
- 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, Pasific and Asian peoples.

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Project Report – 2023

1. OVERVIEW

Rock-based fishing (a form of land-based fishing) is one of the deadliest recreational pursuits in New Zealand. A 10-year review conducted by Surf Lifesaving New Zealand from 2011-2021 reported an annual average mortality rate of 3 fatal drowning incidents per annum associated with land-based fishing (National Beach and Coastal Safety Report 2021, SLSNZ, 2021). Of these, most were male (93%) and the key demographic group were 25-64 year-olds of Asian ethnicity. From 2018-2022, there were 25 land-based sea fishing fatalities in New Zealand. Auckland accounted for one-half (48%, *n* = 12) of all incidents, Waikato one-quarter (28%, *n* = 7), South Island 16%, *n* = 4, and rest of North Island 8%, *n* = 2. All bar one of the 12 fatalities in Auckland were Asian, and 83% were male (*n* = 10), and in the Waikato, all were male, and 71% Asian (*n* = 5) (Drownbase, WSNZ, 2023). Similar statistics are reported across the Tasman with an average of 13 deaths per annum, of whom 95% were male, average age 45 years, 53% were Asian born, and 83% were confirmed as not wearing a lifejacket (Cooney, Lawes, & Daw, 2020).

2. HISTORY

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), Drowning Prevention Auckland (formerly 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. Four temporary rangers, fluent in Chinese, were employed and trained as rock fishing safety advisers and survey administrators. All rock fishers either on-site or in transit to the site were asked to complete a self-directed, written questionnaire that sought

information on fishing practices and beliefs. A very high response rate (91%) was obtained with only 21 refusals during the 10-week data-gathering period resulting in a final database of 250 fishers.

The first onsite survey, undertaken at four popular high-risk sites - Muriwai, Piha, Karekare and Whatipu), 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). 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. 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. A 10-year review of the rock-based fisher safety project using data obtained from annual surveys was published in the International Journal of Aquatic Research and Education (IJARE) in 2017 (Moran, 2017).

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 organisations.

3. AIMS AND OUTCOMES OF THE PROJECT

3.1 AIMS

The aims of this eighteenth 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.
3) To make recommendations for future rock fishing safety promotion.

3.2 OUTCOMES

The specific outcomes of this Report are:

1. Ascertain the effect of on-site rock fishing safety promotion during the summer months of 2022-2023
2. Report findings on fisher awareness and perceptions of the West Coast Rock-based Fishing Project
3. Report fisher opinions on the value of safety signage and life ring flotation devices currently located at high-risk west coast fishing locations,
4. Provide info ration on fisher:
    a. perception of drowning risk,
    b. safety behaviour and attitudes,
    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.

4. FISHER SAFETY SURVEY

4.1 Survey Administration

The data gathering took place during December 2022 and June 2023 and included several peak holiday weekdays and weekends. The onsite data gathering took place using a Survey Gizmo e-questionnaire and iPads, first trialled in 2014.

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. Not all sites were surveyed, but the most popular and frequented sites at Muriwai and Piha were well represented. The sites surveyed included high risk west coast fishing sites at Muriwai (Flat Rock, Maori Bay), Piha (including Whites Beach), and Bethells beach (including O'Neill Beach) (See Table 1). Three personnel, who had been involved with rock-based fisher safety data gathering in the previous year, were again used to conduct the onsite survey.

Table 1. Survey sites, Dec. 2022- June 23

Fishing location where interviewed	***n***	***%***
Muriwai (including Flat Rock, Māori Bay)	8	12%
Bethells beach (including O'Neill Beach, Ihumoana Island, & Raeakiaki Point)	51	76%
Piha (including Camel Rock and Dorsons Ledge, South Piha)	8	12%
Total	67	100%

4.2 Survey 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 17 questions, 11 of which had been included in the 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 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* (See Appendix 1, Questions 13). 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.

A new question included in the previous year's survey (2022) sought information on lifejacket use on the day of being surveyed to ascertain why or why not fishers were/were not wearing a lifejacket (See Appendix 1, Questions 1-3). It was hoped that drilling down into reasons for and against lifejacket use while fishing from rocks would help direct future efforts to promote their use. The open-ended responses were categorised into four most frequent responses for wearing a lifejacket and five most commonly occurring responses for not wearing one (see Table 8).

Two questions on at-risk fishing behaviours (See Appendix 1, Questions 16) and perceptions of drowning risk (See Appendix 1, Questions 15) from the earlier surveys were again included to compare fishing safety behaviours and risk perception. 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 risk perception question used Protection Motivation Theory (Rogers, 1983, 1997) as a guiding theoretical framework. The question on risk perception consisted of 12 statements and required fishers to state whether they *strongly agreed, agreed,* were *unsure, disagreed,* or *strongly disagreed* with the statement related to the following four risk cognition constructs:

1. Perceived severity of the threatened event (how severe is the risk of drowning?) (See Appendix 1, Question 15, Statements 1-3)
2. Perceived vulnerability to the likelihood of having trouble while engaging in aquatic activity leading to drowning (how vulnerable am I to that risk?), (See Appendix 1, Question 15, Statements 4-6)
3. Response efficacy of the risk prevention options, the belief that taking protective action will be effective in drowning prevention (water safety precautions such as swimming between patrol flags), (See Appendix 1, Question 15, Statements 7-9)

4. Perceived self-efficacy, the extent to which one can undertake the recommended prevention behaviours (how well do I know/apply water safety rules?). (See Appendix 1, Question 15, Statements 10-12)

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*. (See Appendix 1, Question 17)

As was the case in previous surveys from 2009, questions were included that sought information on public rescue equipment (PRE) that had been installed at high-risk sites in the previous years. The first question asked whether fishers had seen the life rings in high-risk locations. The second questions asked fishers to report whether they had read the instructions accompanying each life ring/throw bag. The third question asked if the fisher thought they could use the equipment in an emergency. A fourth question asked the fishers had they used a life ring in an emergency or seen one used. (See Appendix 1, Question 14)

4.3 Data analysis

Data from the completed questionnaires were downloaded from an Alchemer Survey Word file for statistical analysis using IBM SPSS Version 29.0 in Windows. Descriptive statistics such as numbers and percentages 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.

As was the case in previous years, comparisons were made between findings from the current survey with the previous year's survey because data gathering processes (electronic data gathering via Alchemer and iPad were compatible). Historical comparison with pre-2018 data should be treated with caution given this methodological limitation.

5. KEY FINDINGS

The results of the 2023 survey are presented in six sections:

5.1 Demographics of Fishers

5.2 Awareness of West Coast Rock-based Fishing Safety Project

5.3 The Installation and Usage of Angel (Life) Rings

5.4 Fisher Perceptions of Drowning Risk

5.5 Water Safety Behaviours of Fishers

5.6 Changes in Fishers' Knowledge, Attitudes and Behaviours

Illustration 2. Whatipu, remote location, not a lifejacket in sight

5.1 DEMOGRAPHICS OF FISHERS

Demographically, the participants (N = 67) were predominantly male (84%), of Asian ethnicity (61%), most were aged 30-64 years (66%), and slightly more than one quarter (27%) had been resident in New Zealand for less than 10 years (see Table 2).

Table 2. Demographic Characteristics of Fishers, 2022-23

Demographic Characteristic		***n***	***Valid %***	**Total**
Gender	Male	56	84%	67 (100%)
	Female	11	16%	
Ethnicity	European	14	21%	67 (100%)
	Māori	12	18%	
	Asian	41	61%	
	Pasifika	-	-	
Age Group	15-19 years	3	4%	67 (100%)
	20-29 years	20	30%	
	30-44 years	28	42%	
	45-64 years	16	24%	
	65+ years	0	0%	
Length of residency	< 1 year	1	1%	67 (100%)
	1-4 years	3	5%	
	5-9 years	14	21%	
	>10 years	17	25%	
	All my life	32	48%	

Table 3 shows that those who self-identified as of Asian origin (n = 41) were predominantly Korean (43%; n = 18) and Chinese/Taiwanese (54%; n = 22), and one of Indian origin (n = 1; 3%). In comparison with the previous year, no Filipino fishers or other Asian ethnicities took part in the 2023 survey. The constantly changing pattern among Asian ethnicities suggests that promoting fisher safety through written language may require multiple translation so use of illustrated messaging is again highly recommended.

Table 3. Self-identified Ethnicity of Asian Fishers, 2022-23

Asian Ethnicity	***n***	***%***
Korean	18	43%
Chinese/Taiwanese	22	54%
Indian	1	3%
Total	41	100%

Fishers were asked to describe how often they had fished at the location where they completed the questionnaire (see survey question 12, Appendix 1) and why they were fishing on the day of being interviewed (see survey question 13, Appendix 1). Table 4 shows that for one fifth (21%) of the fishers it was the first time they had visited the site where surveyed (2022, 20%). Cumulatively, most fishers (58%) reported that they had visited the site less than 5 times (2022, 65%) and 80% had visited the site less than 11 times.

This lesser frequency of visits is in contrast with the previous year's findings when more than one third of fishers (37%) had visited the site more than twenty times. This finding contradicts the trend for increased experience of the fishing locations having been evident in the findings of the full surveys completed in recent years (2013-2022). The reason for this greater site unfamiliarity (and its potential for greater risk of drowning) is difficult to explain although the greater number of survey participants from one of the more remote fishing sites (Bethells beach) may offer a plausible explanation.

When asked to give the prime reason for fishing on the day of the interview, fun and enjoyment were the most popular response. When combined with the response of being with their mates, two thirds of participants (68%) gave social reasons for fishing rather than subsistence fishing to feed the family which was reported by only one fifth (18%) of fishers.

Table 4. Frequency at Site Where Interviewed and Reasons for Fishing, 2022-23

How often have you fished at this site?	***n/%***		**Cumulative %**
First time at site	14	21%	21%
2-5 times	25	37%	58%
6-10 times	15	22%	80%
11-20 times	6	9%	89%
>20 times	7	%	100.0%
What is the main reason for fishing today?			
Fun and enjoyment	29	43%	
Be with mates	17	25%	67
Feed the family	12	18%	(100%)
Have a day off from work/home	9	13%	

Illustration 3. Multilingual/visual signs for Life Ring use in an emergency

5.2 AWARENESS OF WEST COAST ROCK-BASED FISHING SAFETY PROJECT

More fishers (36%, *n* = 24) of fishers surveyed in 2023 reported that they had taken part in previous west coast rock-based fishing safety surveys, a lesser proportion than that reported in the previous year (2022, 14%). The proportion for both 2021 and 2022 seasons is much lower than in previous years and may reflect the reduced opportunity for safety advisors to make face-to face contact during lockdown conditions.

Table 5 shows that, of the 24 fishers who had taken part in the previous surveys, one considered that the campaign had been very *successful* (1%) or *successful (47%)* but a much greater proportion (42%) had considered that it was *not successful*. This may again be the consequence of reduced face-to-face contact in recent years under Covid restrictions or a reflection on the sites where fishers were surveyed. It suggests that further efforts be made to increase the public profile of the safety campaign be considered.

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

Did you take part in the previous rock fishing projects?	***n***	**%**
Yes	24	36% (2022: 14%)
No	43	64% (2022: 86%)
Total	67	100%
If Yes (*n* = 24), how successful do you think it was?		
Very successful	1	11% (2022: 11%)
Successful/Quite successful	11	47% (2022: 47%)
Not successful	12	42% (2022: 42%)
Total	24	100.0%

Table 6 shows that two thirds of fishers (64%, *n* = 43) reported that they were not aware of the current safety promotion, a similar proportion to that reported in the 2022 survey (68%). When asked how they had found out about the current West Coast Fishing Safety Project most fishers responded that it was the result of interaction with the Rock Fishing Advisory (*n* = 18; 75%). Other sources of information include online websites and social media (n = 5; 21%), and via television (*n* = 1; 4%).

Table 6. Are you aware of, and how did you find out about the current (2023) project?

Are you aware of the current (2023) project?	***n***	**%**
Yes	23	34% (2022: 9%)
No	43	64% (2022: 68%)
Total	67	100%

In addition to the above questions on awareness of fisher safety promotion on the West Coast of Auckland, a further question was included in the 2023 Survey seeking information on personal protection equipment (PPE) in the form of lifejacket use (PFD). Table 7 shows that while more than one quarter (25%) of respondents were observed wearing lifejackets when interviewed on location, almost three quarters (73%) were not. When asked to explain why the prime reason for wearing a lifejacket, one third (35%) of fishers said they did so in response to media and social media advice. One quarter of fishers (24%) reported that they always wore a lifejacket around open water and a similar proportion responded that they always wore one in response to direction from partner/family (24%).

When asked to explain the prime reason for not wearing a lifejacket on the day of interview, the most frequently reported reason was that they did not consider it to be risky enough (40%). This is consistent with other research findings on risk underestimation especially among male beachgoers (Stanley & Moran, 2021; Stanley & Moran 2018; Moran, Webber, & Stanley, 2018; Moran & Willcox, 2013). One third

(30%) reported that they did not own one. Further investigation on the socio-economic status of rock-based fishers to determine if they are a resource deficit group, and, if so, what incentives to acquire a lifejacket could be included in future safety promotion. Several fishers reported that they didn't like wearing it (18%). Finally, some fishers (8%) reported that they had forgotten to bring it on the day of interview. Both responses suggests that their knowledge of the efficacy of lifejacket in drowning prevention when fishing from rocks in high-risk locations is poor and that water safety messaging promoting the essential need for personal flotation equipment needs to be persisted with.

Table 7. Reasons for Lifejacket Use/Non-use Today, 2022-23

Are you wearing a lifejacket today?	***n***	***%***
Yes	17	25%
No	50	75%
If Yes (*n* = 17) why?		
Have seen media and/or social media advice	6	35%
Always wear one around open water	4	24%
Partner/family insist I wear one	4	24%
Other reason	3	17%
If No (*n* = 50) why?		
I don't think it's risky enough	20	40%
I don't have one	15	30%
I don't like wearing it	9	18%
I forgot it today	4	8%
Other	2	4%

5.3 PUBLIC RESCUE EQUIPMENT (life rings, throw bags etc.)

Fishers were asked to report on their awareness of public rescue equipment (PRE) on the west coast high-risk fishing locations (See Appendix 1, Question 14).

Table 8 shows that almost all fishers (97%) had seen life rings at their Auckland West Coast fishing sites, a similar proportion than reported in the previous year (2022, 94%).

Table 8. Awareness of the public rescue equipment (PREs), 2022-23

Is there a life ring where you fish?	***n***	**%**
Yes	65	97%
No	2	3%
Have you read the life ring instructions?		
Yes	30	45%
No	37	55%
Do you think you could use one in an emergency?		
Yes	56	84%
No	11	16%
Have you used or seen one used in an emergency?		
Yes	23	34%
No	44	66%

When asked if they had read the associated signage and instructions on how to use the rescue equipment in an emergency, less than one half of fishers (45%; n = 49) reported that they had read the instructions (2022, 37%). As was the case in the previous year even though many fishers (55%) reported not having read the instructions, most (84%) thought that they could use the life rings in an emergency (2022, 89%). Sixteen percent thought that they could not use a life ring in an emergency (2022, 11%) which is a cause for concern given the remoteness of many of the fishing sites and the likely necessity of bystander rescue. As was the case in the previous year, one very salient finding indicative of the value of public rescue equipment related to the use of the life rings where one third (34%; n = 23) had either used or seen them used in an emergency

(2022, 24%). If this finding is accurate, it confirms the importance of PRE reported elsewhere (Velasco et al., 2022) and suggests current efforts by DPA and SLSNZ (podcast available at: https://www.dpanz.org.nz/news-media/) to extend their availability in other high risk and remote areas is a worthwhile investment.

Illustration 4. Life ring at west coast rock-based fishing site (Muriwai)

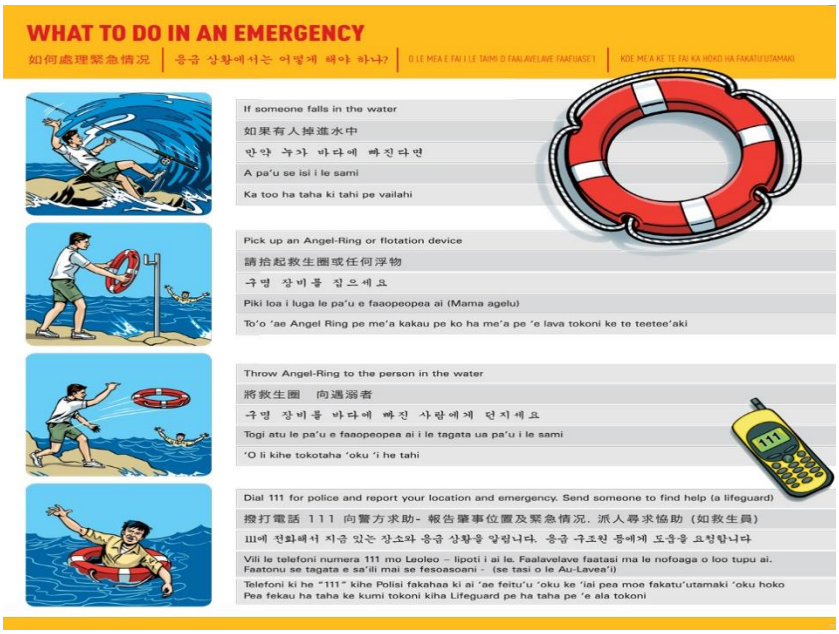

Illustration 5. Multilingual signage on how to use the life rings

5.4 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 Appendix 1, Question 15). 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 9. Fishers' Perceptions of Risk of Drowning, 2022-23

Do you think that-	Strongly agree/ Agree		Unsure		Strongly disagree/ Disagree	
	n	*%*	*n*	*%*	*n*	*%*
1. Getting swept off the rocks is likely to result in my drowning	41	61%	1	2%	25	37%
2. Rock fishing is no more risky than other water activities	22	33%	22	33%	23	34%
3. Drowning is a constant threat to my life when rock fishing	27	40%	15	22%	25	37%
4. I am not concerned about the risks of rock fishing	15	22%	13	19%	39	58%
5. Others rock fishers are at greater risk of drowning than me	56	84%	10	15%	1	1%
6. I am a strong swimmer compared with most other people	17	25%	6	9%	44	57%
7. I avoid fishing in bad conditions to reduce drowning risk	64	96%	2	3%	1	1%
8. Always wearing a life jacket makes fishing a lot safer	33	49%	13	19%	21	31%
9. Turning my back to the waves when rock fishing is very dangerous	54	81%	9	13%	4	6%
10. My local knowledge of this site means I'm unlikely to get caught out	35	52%	10	15%	22	33%
11. My experience of the sea will keep me safe when rock fishing	55	82%	4	6%	8	12%
12. My swimming ability means I can get myself out of trouble	20	30%	13	19%	34	51%

Statements 1-3 in Table 9 relate to fishers' perceptions of **the severity of the risk of drowning** when fishing from rocks (see Appendix 1 – Question 15). In 2023, most fishers (61%) agreed that getting swept off rocks was likely to result in their drowning, yet fewer believed (40%) considered drowning a constant risk when fishing from rocks. In addition, yet one third (33%) thought rock fishing was no more risky than other water activities. Table 10 compares the responses of fishers' perception of risk from the current survey (2023) with the previous year (2022). Fewer fishers in 2023 appeared to have a realistic perception of the severity of the risk of drowning when compared with 2022 responses. Most fishers believed that getting swept off rocks would result in their drowning, yet many did not consider the risk of drowning was a constant threat to their life when fishing, and many perceived rock-based fishing as no more risky than other water activities. Continued promotion of realistic risk perception is recommended if behaviours are to become more safety conscious.

Table 10. Comparison of fisher beliefs in the severity of the risk of drowning, 2022-23

Do you think that-		Strongly agree/ Agree	Unsure	Strongly disagree/ Disagree
1. Getting swept off the rocks is likely to result in my drowning	2023	61%	2%	37%
	2022	68%	*11%*	21%
2. Rock fishing is no more risky than other water activities	2023	33%	33%	34%
	2022	36%	20%	44%
3. Drowning is a constant threat to my life when rock fishing	2023	40%	22%	37%
	2022	51%	16%	33%

Illustration 6. Using an angel ring, Flat Rock, Muriwai

The second measure of fishers' perception of the appraisal of drowning risk – personal **vulnerability to the risk** was determined from statements 4-6 in Question 15 and reported in Table 11.

Table 11. Comparison of fisher beliefs in vulnerability to the risk of drowning, 2022-23

Do you think that-		Strongly agree/ Agree	Unsure	Strongly disagree/ Disagree
4. I am not concerned about the risks of rock fishing	2023	22%	19%	58%
	2022	26%	*4%*	66%
5. Others rock fishers are at greater risk of drowning than me	2023	84%	15%	1%
	2022	61%	18%	*21%*
6. I am a strong swimmer compared with most other people	2023	25%	9%	57%
	2022	71%	16%	30%

Most fishers (58%) disagreed that they were not concerned about the risk of drowning (2022, 66%), yet many (84%) thought that other fishers were more vulnerable to the risk of drowning than themselves (2022, 61%). This latter finding is surprising given that fewer fishers (25%) in 2023 considered they were strong swimmers compared with other people (2022, 71%). More fishers (57%) in 2023 disagreed that they were strong swimmers when compared with others (2022, 30%). Reasons for this self-reported estimate of better swimming ability are hard to explain but it is likely to reflect male overestimation of ability and underestimation of risk previously reported (Moran, 2008, 2011, 2017).

Responses to statements 7-9 (Question 15) related to fisher perceptions of the **efficacy of preventive action** in reducing drowning risk when fishing from rocks (See Appendix 1, Questions 15). Most fishers taking part in the 2023 survey responded positively to all three statements of the efficacy of preventive actions to reduce drowning risk, although agreement of the value of lifejacket use was equivocal (Table 12). Almost all fishers in 2023 avoided fishing in bad weather (96%), half (49%) agreed that wearing a lifejacket when fishing from rocks made it a lot safer and avoided turning their back to the waves (81%). Comparable figures for the previous year (2022) were 91%, 89%, and

89% respectively which suggests that the current cohort of fishers were less aware of the efficacy of preventive actions in making their fishing safer, especially regarding the value of wearing a lifejacket. However, given that only 25% were wearing lifejackets when surveyed (see Table 7) suggests that a reality gap exists between perception and practice which needs to be addressed in future safety promotion.

Table 12. Comparison of fisher beliefs in efficacy of preventive actions, 2022-23

Do you think that-		Strongly agree/ Agree	Unsure	Strongly disagree/ Disagree
7. I avoid fishing in bad conditions to reduce drowning risk	2023	96%	3%	1%
	2022	*91%*	*5%*	*4%*
8. Always wearing a lifejacket makes fishing a lot safer	2023	49%	19%	31%
	2022	*89%*	*5%*	*6%*
9. Turning my back to the waves when fishing is very dangerous	2023	81%	13%	6%
	2023	*89%*	*4%*	*7%*

Responses to statements 10-12 (See Appendix 1, Questions 15) related to fisher perceptions of the **self-efficacy of their preventive behaviours** in reducing drowning risk when fishing from rocks. 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.

Table 13. Comparison of fisher self-efficacy to cope with risk, 2022-23

Do you think that-		Strongly agree/ Agree	Unsure	Strongly disagree/ Disagree
10. My local knowledge of this site means I'm unlikely to get caught out	2023	52%	15%	33%
	2022	*58%*	*14%*	*27%*
11. My experience of the sea will keep me safe when rock fishing	2023	82%	6%	12%
	2022	*59%*	*14%*	*27%*
12. My swimming ability means I can get myself out of trouble	2023	30%	19%	51%
	2022	*64%*	*11%*	*25%*

The responses reported in Table 13 suggest the current fishers had varying perceptions about the self-efficacy to cope with the risk of drowning than participants in the previous year's survey. Slightly fewer considered themselves capable of looking after themselves with more fishers believing that their local knowledge of the site (2023, 52%; 2022, 58%). In addition, fewer fishers thought that their swimming competency would get them out of trouble (2023, 30%; 2022, 64%). In contrast to this lower perception ability to cope with the risks posed by rock-based fishing, more fishers thought that their experience of the sea would keep them safe (2023, 82%; 2022, 59%), It is hard to reconcile this confidence in their capacities with the reality that more than half (58%) of the fishers had visited the site where fishing less than 5 times surveyed and 21% reported that it was their first visit to the site!! (See Table 4 for detail). Rather it suggests that, as in previous years, fishers generally overestimated their capacity to cope with the demands of the high-risk environments that they fish in.

Illustration 7. Essential equipment highlighted in the online Fisher safety programme available at: https://www.dpanz.org.nz/courses/safer-rock-fishing/

5.5 WATER SAFETY BEHAVIOURS OF FISHERS

Fishers were asked to report their previous water safety behaviours (See Appendix 1, Question 16) 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 14).

Table 14. Fishers' Self-reported Water Safety Behaviours, 2022-23

When rock fishing, do you -	Never		Sometimes		Often/Always	
	n	***%***	***n***	***%***	***n***	***%***
1. Wear a lifejacket or other flotation device	12	18%	32	48%	23	34%
2. Check weather/water conditions first	0	0%	4	6%	63	94%
3. Drink alcohol when you are fishing	35	52%	30	45%	2	3%
4. Wear gumboots or waders	28	42%	24	36%	15	22%
5. Turn your back to the sea when fishing	2	3%	49	73%	16	24%
6. Take a cell phone in case of emergencies	0	0%	2	3%	65	97%
7. Go down rocks to retrieve snagged line	8	12%	52	78%	7	10%

Table 14 shows a variety of safety behaviours among the 2023 cohort of rock-based fishers. On the positive side, almost all fishers reported *often/always* checking the weather and water conditions before going fishing (94%), taking a cell phone in case of emergencies (97%) and most reported *never* drinking alcohol when fishing (52%). Corresponding proportions in the previous year (2022) were 90%, 93%, and 85% respectively. Fewer fishers reported *often/always* wearing of lifejackets in 2023 (2023,

34%; 2022, 40%). Fewer reported *never* going down the rocks to retrieve a snagged line (2023, 12%; 2022, 62%) and fewer fishers reported that they *never* had turned their backs to the sea when fishing (2023, 3%; 202, 62%). Fewer also reported *never* wearing gumboots or waders (2023, 42%; 2022, 55%).

As has been reported in previous years, the high-risk behaviours seem remarkably resistant to change. Whether it is because fishers are unaware of, or underestimate the risk, or whether they consider the risk worth taking in terms of their estimation of their personal competency to deal with that risk remains unknown. Further promotion of the dangers associated with these behaviours is advised. Both are highlighted in the *Rock Fisher Safety* modules on the recently launched E-learning platform. Future survey analysis may inform us of whether fishers have accessed advice on these issues of persistent unsafe practice, and subsequently changed their behaviours.

Dramatic Pre-season Incidents for Surf Life Saving Northern Region as Surf Lifeguards Respond to Two Serious Incidents

Sunday, 8 October 2023, 7:02 pm **Press Release: Surf Life Saving Northern Region**

At Piha, surf lifeguards at Piha Surf Life Saving Club and a Westpac Rescue helicopter responded to reports of a rock fisher being washed off the rocks and into the surging waters at the southern end of the beach at approximately 8am. It is understood that the fisher was not wearing a lifejacket. The rock fisher was winched to safety by the Westpac Rescue helicopter and was thankfully secured conscious and breathing.

5.6 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 Appendix 1, Question 17)

Table 15. Comparison of Self-Reported Changes in Fishers' Safety Knowledge, Attitudes and Behaviours, 2022-23

Do you think that -	Year	Agree		Disagree		Don't know		Total	
		n	*%*	*n*	*%*	*n*	*%*	*n*	*%*
Your rock fishing safety knowledge has improved?	2023	58	87%	2	3%	7	10	67	100.0
	2022	*105*	*80%*	*4*	*3%*	*23*	*17%*	*132*	*100.0*
Your rock fishing safety attitude has improved?	2023	34	51%	6	9%	27	40%	67	100.0
	2022	*96*	*73%*	*9*	*7%*	*27*	*20*	*132*	*100.0*
Your rock fishing safety practice has improved?	2023	44	65%	4	6%	20	29%	67	100.0
	2022	98	74%	0	0%	34	26%	*132*	*100.0*
Your mates' rock fishing behaviour has improved?	2023	23	34%	28	42%	16	24%	67	100.0
	2022	*88*	*67%*	*6*	*4%*	*38*	*29%*	*132*	*100.0*
Other rock fishers' behaviour has improved?	2023	39	58%	8	12%	20	30%	67	100.0
	2022	*84*	*64%*	*6*	*4%*	*42*	*32%*	*132*	*100.0*

Table 15 shows that most fishers (87%) considered that their safety knowledge had improved in recent years. Most fishers thought that their attitudes towards fisher safety had improved (51%) and two thirds (65%) thought that their safety behaviours had improved.

Comparative figures for the previous year suggest that fishers' perception of their knowledge, attitudes, and behaviours (K-A-B) had improved to some extent. However, more fishers believed their knowledge had improved (2023, 87%; 2022, 80%), fewer believed their attitudes towards safety had improved (2023, 51%; 2022, 73%) and considerably fewer believing that their safety behaviour had improved (2023, 65%; 2022, 74%).

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 also shows that fewer fishers (34%) thought that the safety behaviour of their mates had improved (2022, 67%). When asked about the behaviour of other rock-based fishers, most fishers (58%) in the 2023 survey thought they had observed better safety behaviours of other fishers, a lesser proportion than that reported in the previous year (2021, 64%).

Illustration 8. Extreme weather and sea conditions on Flat Rock, Muriwai doesn't deter this fisher

6. CONCLUSIONS

Based on the above findings, several key points are worthy of reiteration. They include:

- In 2023, most fishers were male (84%), 66% were aged between 30-64 years of age and of Asian descent (61%). Many (73%) had lived in New Zealand for more than 10 years, 27% had lived in New Zealand for less than 10 years.
- In 2022, for 21% of fishers it was the first visit to the site and 58% had visited the site less than 5 times. In contrast, 9% had visited the site more than 20 times.
- Fishers in the 2022 survey had less awareness of the previous or current Rock-based Fisher Safety programme. Given the transience of the rock fishing community and the remoteness of fishing sites (that has characterised all previous surveys) perhaps this is not surprising. Further ways of disseminating safety knowledge (such as the recent eLearning platform modules) as well as increased onsite advisory service maybe another way of getting the messages to this elusive community.
- The 2022 cohort of fishers had low awareness of the risks associated with their fishing, some had little understanding of the need for lifejackets when rock-based fishing (demonstrably in terms of wearing a lifejacket when surveyed (only 25%) and when responding to questions about their safety behaviours). As was the case in previous surveys, many were overly confident about the protective value of their self-reported knowledge of the sea, local conditions, and swimming competency. Underestimation of risk and overestimation of competency to cope with that risk remain a critical concern among this high-risk group.
- The greatest concern is still the lack of lifejacket use with 75% of fishers not wearing one at the time of interview and only34% reported *often/always* wearing one. Other high-risk behaviours such as going down the rocks to retrieve snagged lines, wearing gumboots or waders, and turning your back to the sea are all still practised by many fishers (see Table 14, p. 21).

7. SUMMARY OF KEY SAFETY PROMOTIONS, 2023

Drowning Prevention Auckland (DPA) Education Programme YE2023:

Programme was based on the key findings from the Rock-based Fishing Report 2022 which reported that:

- Fishers were predominantly male (93%), aged 30-64 years (68%), and one third (36%) had been resident in New Zealand for less than 10 years.
- Primarily Asian peoples (61%) comprised mainly of Korean (43%; *n* = 18) and Chinese/Taiwanese (54%; *n* = 22) descent.
- It was the first visit to the site for 20% of fishers.
- Forty per cent reported *often/always* wearing a lifejacket and forty per cent reported *never* wearing any lifejacket.

The reported overestimation of competence, combined with an underestimation of risk and the 'newness' of many fishers to the west coast sites has highlighted the importance of the continuance of the initiative.

The purpose of the project

4. To raise water safety awareness, skill, and knowledge around rock-based fishing in at-risk for drowning groups, specifically men.
5. To develop safer rock-based fishing practices in at-risk groups.
6. Continue focus on research to further develop understanding of the 'fisher' profile and their behaviours.

DPA Limitations

- Beaches and access roads were closed due to the poor weather (Anniversary Weekend and Cyclone Gabrielle) which barred access to many fishing locations.
- Limited to carpark to conduct surveys and engage rock-based fishers.
- Language barriers with rock-based fishers particularly with Chinese ethnicities.
- Not having a bilingual educator available to do the surveys.
- Reduced access to engagement areas such as on the rocks or where rock-based fishers' fish due to health and safety protocols.

Drowning Prevention Auckland achieved the outcomes and outputs set for the 2022-2023 season with funding made possible from Auckland Council.

DPA Outcomes 2022-2023

- 83% of participants from the workshops and presentations have increased knowledge and improved attitudes regarding water safety when land-based fishing.
- 82% of participants indicate they will now wear a lifejacket when land-based fishing after participating in the seminars, workshops, or presentations.
- 100% of participants who have taken part in the programme indicate they will now exhibit safer behaviour when land-based fishing.

DPA Outputs 2022-2023

- 40 hours use of DPA staff member as a Rock-Based Fishing Advisor at Auckland West Coast Beaches
- DPA supported SLSNR to collect additional surveys in the carparks from rock-based fishers.
- Completed 4 x Rock Fishing Education workshops.
- Completed 4 x Rock Fishing Seminars.
- Updated and purchased 400 rock fishing multi-tools
- Completed rock-based fishing education and presentations to 1800 participants with an estimated 50% being of Asian ethnicity, 15% Māori and 20% Pacific.
- Training and upskilling of DPA rock-based fishing Educators.

Recommendations for future delivery

- **Research** – New incentive-based giveaways, a prize draw to win a ‘prezzie card’, to encourage fishers to complete the survey supplementing the lifejacket and fishing multi tool giveaways.

- **Research** – Observations of fishers on-site to ascertain actual risk behaviours of fishers.
- **Research** - Develop a methodology (rock-fisher journey) as a trial.
- **Research** - Translate surveys into Mandarin, Cantonese, Tongan, Samoan, and Korean.
- **Education** - Increase community presentations to raise awareness on how to be safer when rock-based fishing, importance of wearing a lifejacket and Public Rescue Equipment (PRE) education.

- **Education** - Hosting seminars to rock-based fishing communities across Tāmaki Makaurau.
- **Community Engagement** – Additional marketing of the lifejacket hub at Bethells Beach Surf Lifesaving Club so rock-based fishers are aware of how and where to access lifejackets.
- **Community Engagement** - Increased promotion of rock fishing safety messaging at community events such as Chinese New Year Festival, Pacific Peoples (church congregations).
- **Community Engagement** – Explore potential opportunities to partner with SafeSwim and other marine weather providers e.g. Met Service to provide key rock-based fishing messaging on their website and app.
- **Community Engagement (Media) -** Media – agreement and consistency among partners with media reporting and media releases.
- Planned approach to media promotion.
- **Sustainable Funding** - Identify sustainable funding streams to continue and expand the programme.
- **Partnership -** Continue the collaboration with Auckland Council, Surf Lifesaving Northern Region/New Zealand, and Drowning Prevention Auckland.

8. RECOMMENDATIONS

On the basis of the findings of the 2023 Survey, it is recommended that:

Auckland Council:

- Retain the services of the safety advisory for a 2023/24, and look to funding the expansion of onsite public liaison into the shoulder (Spring and Autumns seasons - October – June),
- Continue to provide regional leadership and support future fishing safety promotion, including the installation of life rings and safety signage at high-risk sites,
- Increase provision of evidence-based public rescue equipment (PRE) in the form of life rings and throw ropes at popular and remote locations in light of recent findings of SLSNZ research: Kearney, M., & Stanley, T. (September 2023). *A guide to Public Rescue Equipment for the New Zealand Coast*. Wellington: Surf Lifesaving New Zealand, and
- Support the trialling of different PRE and the uptake of national PRE guidelines.

Drowning Prevention Auckland, Surf Life Saving Northern Region and other safety organisations:

- Promote and evaluate the e-Learning module on the DPA website,
- Increase lifejacket use in the public domain with strong media messaging,
- Commit resources and personnel to the ongoing work collaboratively with all partners to promote best practice for West Coast fishing safety education beyond 2023/24,
- To gain a more accurate understanding of when and how often the PRE are used in an emergency, we recommend using available technology to trial a monitoring system of the PRE at one site (e.g. Muriwai Flat Rock) and
- Continue to gather evidence of rock-based fisher behaviours, by either observations or interviews of fishers.

  NB. Additional recommendations provided by SLSNR are included in Appendix 2.

Recreational fishers, fishing organisations, lifejacket retailers, fishing outlets:

- Adopt and endorse the fishing safety messages promoted by the 2023 West Coast Rock-based Fisher Safety Project,
- Be aware of, and promote participation in, the new e-Learning website, especially in fishing magazines, newspapers, and other online media outlets,
- Encourage others in the rock-based 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, and
- Advocate for the promotion of rock-based fishing safety with community groups especially those that are identified high-risk including new migrants, Pasific and Asian peoples.

Rock fisherman drowns after being swept off rocks at Auckland's Anawhata Beach

By David Williams 24 Oct, 2023 01:16 PM

MetService recorded two-metre-high waves on Auckland's west coast yesterday afternoon and evening. Photo / Doug Sherring

Two-metre-high swells are believed to have swept a fisherman off the rocks to his death on West Auckland's Anawhata Beach.

Those who took part in the difficult rescue are being praised for the way they managed to recover the man in treacherous sea conditions and failing light.

An emergency services spokesperson said they responded to the water-related incident at 6.47pm on Monday.

Surf Lifesaving New Zealand operations manager James Lea said Piha surf lifeguards were called out close to dusk, which was "not ideal".

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APPENDIX 1

West Coast Rock Fishing Project YE2022

Date: _____

Time: _____

Location: _____

1) Are you wearing a lifejacket today?

( ) Yes

( ) No

2) If yes, why?

( ) My partner/family makes me wear one

( ) I have seen media/social media and thought I should wear one

( ) I have, or one of my friends/family have, had an incident fishing

( ) I always wear one around water

( ) Other

3) If No, why not?

( ) I forgot it today

( ) I don't have one

( ) I don't like wearing it

( ) I don't think it's risky enough

( ) Other - Please state why not:

_____

4) Are you aware of the current west coast rock fishing safety promotion in Auckland?

( ) Yes

( ) No

5) If yes, how did you know about it?

_____

6) Have you taken part in previous west coast rock fishing promotions?

( ) Yes

( ) No

7) If Yes, do you think the project is...

( ) Very successful

( ) Successful

( ) Not Successful

8) Are you?

( ) Male

( ) Female

9) How old are you?

( ) 15-19 years

( ) 20-29 years

( ) 30-44 years

( ) 45-64 years

( ) 65+ years

10) How would you best describe yourself?

( ) European New Zealander

( ) Maori

( ) Pasifika

( ) Chinese

( ) Korean

( ) Indian

( ) Other (e.g. African, French, Spanish, Taiwanese etc.):

_____

11) 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

12) How often have you fished at <u>this location</u>?

( ) This is my first time

( ) Between 2-5 times

( ) Between 6-10 times

( ) Between 11-20 times

( ) More than 20 times

13) 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

14) Public Rescue Equipment (PRE/Life Rings)

	Yes	**No**
1. Is there any PRE located where you usually fish?	( )	( )
2. Have you read instructions on how to use them?	( )	( )
3. Do you think you could use one in an emergency?	( )	( )
4. Have you used a PRE, seen or know of one being used, in an emergency?	( )	( )

If Yes to Q14, please explain below

_____

_____

15) 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	( )	( )	( )	( )	( )
2. Rock fishing is no more risky than other water activities	( )	( )	( )	( )	( )
3. Drowning is a constant threat to my life when rock fishing	( )	( )	( )	( )	( )
4. I am not concerned about the risks of rock fishing	( )	( )	( )	( )	( )
5. Other fishers are at greater risk of drowning than me	( )	( )	( )	( )	( )
6. I am a strong swimmer compare with most other people	( )	( )	( )	( )	( )
7. I avoid fishing in bad conditions to reduce the risk of drowning	( )	( )	( )	( )	( )
8. Always wearing a lifejacket makes rock fishing a lot safer	( )	( )	( )	( )	( )
9. Turning my back to the waves when rock fishing is very dangerous	( )	( )	( )	( )	( )
10. My local knowledge of this site means I'm unlikely to get caught out	( )	( )	( )	( )	( )

11. My experience of the sea will keep me safe when rock fishing	( )	( )	( )	( )	( )
12. My swimming ability means I can get myself out of trouble	( )	( )	( )	( )	( )

16) When rock fishing, do you?

	Never	Sometimes	Often	Always
1. Wear a lifejacket / buoyancy aid	( )	( )	( )	( )
2. Check weather forecast beforehand	( )	( )	( )	( )
3. Drink alcohol when fishing	( )	( )	( )	( )
4. Wear gumboots or waders	( )	( )	( )	( )
5. Turn your back on the sea	( )	( )	( )	( )
6. Take a cell phone in case of emergencies	( )	( )	( )	( )
7. Go down the rocks to retrieve snagged line	( )	( )	( )	( )

17) 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	( )	( )	( )
2. My practice of rock fishing safety has improved	( )	( )	( )

3. My attitudes towards rock fishing safety have improved	( )	( )	( )
4. My rock fishing mates seem more safety conscious	( )	( )	( )
5. Other rock fishers around me seem more safety conscious	( )	( )	( )

Thank You!

APPENDIX 2

Rock-based Fishing Project
End of Season Report 2023
Surf Lifesaving Northern Region

Prepared by Tom Kearney

Executive Summary from Surf Life Saving Northern Region:
The project is now in its 18th year of operation in partnership with Auckland Council, Drowning Prevention Auckland (DPA) and Surf Life Saving Northern Region (SLSNR) and primarily funded by Auckland Council. The weather events of this summer created unique challenges for the Advisors which resulted in a low number of surveys collected and the extension on the project until August. SLSNR educated 150 individuals on the coastline and undertook a rescue of one rock fisher at Bethells beach, undoubtedly preventing a fatal drowning.

Purpose*:*
Deliver a partnership-based service between Auckland Council, Drowning Prevention Auckland and Surf Life Saving Northern Region to increase the safety of Rock-based Fishers and increase their awareness of risk relating to Rock Fishing activities on Auckland West Coast beaches.

Key SLSNR Outcomes:
- Two Advisors were employed across the season, due to their availability and the restricted access to west coast beaches the project period was extended from November 2022 through to August 2023.
- Thorough training and induction process to ensure the health and safety of our advisors.
- Increased Rock Fisher awareness of Public Rescue Equipment, its locations and how it can be used on rock platforms to perform a Bystander Rescue.
- Sustained proactive interactions with Rock-based Fishers, performing preventative actions when required and ongoing education.
- SLSNR Advisors were equipped and trained to be rescue ready. Providing in water assistance if required.
- Promotion of lifejacket use, correct fitting, and loan hubs across Auckland.
- Daily reporting through the Surf Patrol App to capture headcount data, preventative actions, and rescues.
- Weekly reports to collate information on sites visited, behaviours observed and educational interactions.

Key SLSNR Deliverables*:*
- Completed **101** surveys of Rock-based Fishers during the period from November to June.
- Educated **150** Rock-based Fishers between Karekare and Muriwai Beaches during this period.
- Checked, replaced, and reported on P.R.E condition.
- Over **300** hours of patrolling across the west coast beaches.
- **177** Preventative Actions were conducted involving **571** members of the public.

SLSNR Observations
- The ideal time to achieve maximum engagement with Rock-based Fishers was an hour either side of hightide. Low tide was a popular time at Bethell's Beach
- Asking the Patrol Captains of each beach to report on Rock-based Fisher activity helped the advisors coordinate location visits.
- Utilising lifeguards on patrol when available to check PRE and fishing spots with IRBs/ RWCs proved more time efficient than walking.
- Throw Bags were often tangled, or the rope was out of the bag and had to be restacked.

- Most of the Rock-based Fishers that were using lifejackets, were wearing foam types.
- Rock-based Fishers reluctant to wear Life Jackets, were often those who check weather and conditions. Showed more awareness of conditions but generally not confident in the water.
- When given a chance to try the P.R.E, Rock-based Fishers said the angel rings were too heavy to throw.
- Advisors found it easier to enter the data into the survey themselves whilst asking the questions regardless of whether Rock-based Fishers spoke good English.
- Using a phone as opposed to a tablet when on the rocks enables easier movement and not needing to carry a bag. Majority of the unsafe/risky behaviour was at places where the bulky gear was a hindrance/hazard for Advisors to carry.

SLSNR Challenges

- Surveys failing to upload was an issue again this year. Specifically, when using the local upload function
- Language barriers to completing the surveys or general conversation – having to prompt with hand gestures. Initially, surveys were missed due to questions being to hard to gesture over.
- The times when the fishers where at certain locations was difficult to predict. Particularly unclear council information around road closure due to the cyclone.
- Travel time in between beaches meant that advisors could not be present and more than two locations for the high tide in one day.
- Working alone meant not reach all the spots within the ideal fishing time, missing opportunities The weather has been an issue as it deterred fishers from going out.
- The weather events causing roading access issues from January 27th.
- State of Emergency in Auckland and the SLSNR recommendations to public not visit west coast beaches.
- Rock Fishers not listening to advise of advisors, claiming to be locals and know better.

SLSNR Recommendations

- Translated versions of the survey to capture Rock-based Fishers who don't speak English. Specifically, in Mandarin, Cantonese, Korean, Māori.
- Move to an observational survey that is completed by the advisors annually.
- More Rock Fishing Safety resources in different languages.
- On busy days in spots with multiple fishers or dangerous conditions advisors to support Lifeguard service.
- Adding the use of lifejackets to weekly report and difference between foam and inflatable.
- Lifejacket Hubs at each W/C Surf Club or advisors to carry small number for lending out.
- Safeswim to include hazards for Rock Fishing.
- Development of Surf Patrol app for Rock-based Fishing Observation Patrol and of normal patrols to accurately report on Rock Fisher engagement. Possibly with the data linked to the survey (as a backup for faulty uploading.

- Peak season (Christmas to NY) needs more hours/ advisors.
- Incentives or prizes to encourage survey completion such as Lifejackets, fishing gear or vouchers.
- Further TV/social media interventions, very few Rock Fishers had heard of the program apart from word of mouth.

Conclusion

The 2022/2023 summer season presented some unique challenges for the project because of adverse weather events. Extending the coverage of one advisor over the winter period ensured there was continued presence on the West Coast throughout the reopening of beach access to the public. SLSNR greatly appreciate the continued support of Auckland Council and Drowning Prevention Auckland to ensure the success of this project. SLSNR look forward to working with our partner organisations to grow this project in the future.