



# WEST COAST BACKCOUNTRY FISHERIES REPORT 2022

*A Summary of Angler Survey and Drift Diving Results for the West Coast Backcountry Fisheries, Conducted by Fish & Game West Coast for the 2021/2022 Sports Fishing Season.*

*Baylee Kersten, Fish & Game Field Officer, July 2022*



*Staff carrying out compliance in Karamea River Backcountry Area, January 2020.*



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### **Summary**

*The Karamea and Mokihinui Rivers have for many years provided excellent angling opportunities for resident and visiting non-resident anglers. Following feedback of an apparent decline in the fishery status, West Coast Fish and Game designated both catchments as a Backcountry Fishery in 2016/17. This requires anglers to obtain a free Backcountry Endorsement, in doing so providing their details for an online survey following the angling season. In conjunction with the angler's survey, drift dives were undertaken through historic dive sites in both catchments. The anglers survey has focused on evaluating fishery usage, commercial guided fishing, access methods and angler satisfaction, while offering anglers currently using the fishery the opportunity to comment on these topics and offer future management suggestions. This report summarises the back country survey and drift diving results for the 2021/22 season. Staff recommendations are: That council receives this report. That council advocate for a small fee for endorsements. That council continue to support work in the area of pressure sensitive fisheries.*

### **Introduction**

The rivers of Kahurangi National Park have for decades now been well recognised for providing premium opportunities for anglers within a remote scenic environment. Two of the most notable catchments within the park, are the Karamea and Mokihinui Rivers. During previous seasons feedback has been received by Fish and Game West Coast from several anglers and fishing guides, concerned that these fisheries are not of the quality they were previously. As a result, the West Coast Fish and Game Council has designated the Karamea River catchment upstream from Kakapo River, and Mokihinui River catchment upstream of Rough and Tumble Creek confluence, as Backcountry Fisheries. The Purpose of the designation was to gain details of all anglers entering the area to fish and gather data of angler usage and the fishing experiences of those anglers currently using these fisheries. Concurrently, drift diving surveys have been carried out through two historic drift diving sections within each catchment to examine trout abundance every season since the 2016/17 season.

## Method

A survey was designed to look at information about of fishery status in each of the catchments and was sent to all anglers that held a backcountry endorsement and provided an email address. A copy of the survey questions is included as Appendix 1. Surveys were structured to distinguish between resident and non-resident anglers, to identify viewpoints from each group, local kiwi anglers and visiting anglers on holiday.

Drift dives were completed during March when conditions allowed. The Karamea River was dived adjacent to the Crow River confluence and upstream of the Karamea Bend using six divers. The Mokihinui River was dived downstream of Goat Creek confluence and upstream of the Mokihinui Forks on the North Branch using six divers. Where Karamea and Mokihinui Rivers are referred to in this report, unless otherwise stated, this refers to the upper reaches within the designated Backcountry Area.

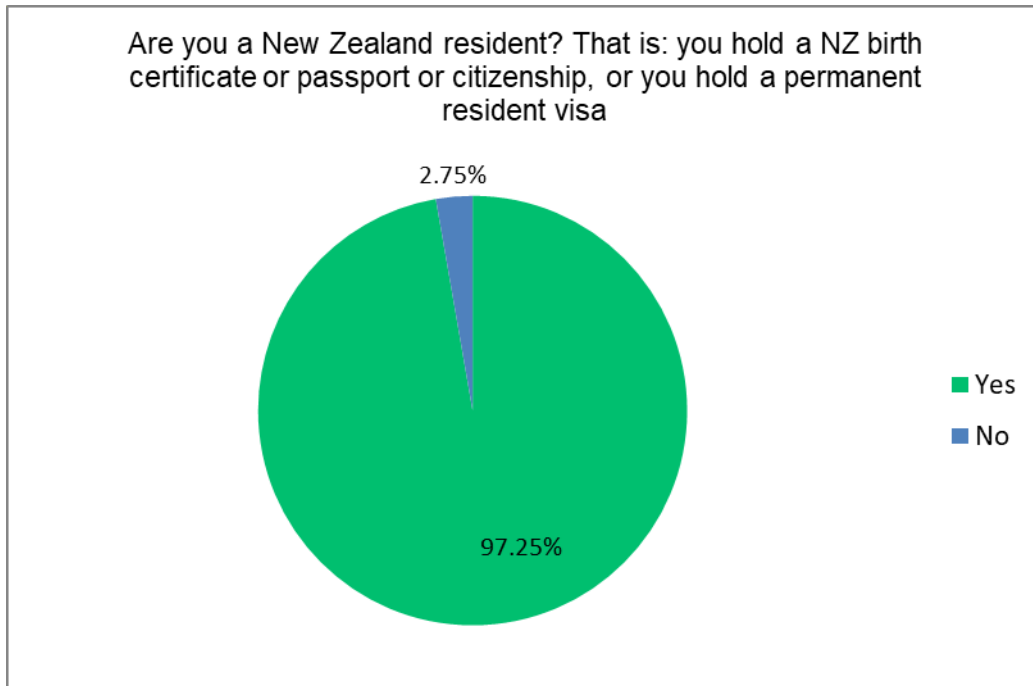
## Results

### Backcountry Survey Participation & Angler Demographics

Throughout the 2021/22 season, a total of 5,121 Anglers held West Coast Region Backcountry Fishery Endorsements, those with a current email address were invited to participate in the Backcountry Angler Survey. Please note that in some previous years the survey has been conducted in conjunction with the Nelson/Marlborough region likely resulting in an increased response. In addition to this, with Covid-19 border restrictions the last two years, very few non-resident anglers fished in New Zealand, changing the survey pool. The 5,121 anglers holding a West Coast endorsement invited to participate was reduced to 4,741 due to invalid emails and the same email address being provided for multiple licences. The survey had a response of 1,490 anglers, with 109 answering that they fished the West Coast Backcountry in the 2021/22 season consisting of 2 non-resident anglers and 106 resident anglers (Figure 1). Resident angler region of origin details was gathered. As with previous seasons surveys, a large proportion of resident anglers fishing the West Coast Backcountry Area are licence holders from the Nelson/Marlborough and North Canterbury Regions (Table 1).

*Table 1: Location of Origin for Resident Anglers.*

<b>Region of Origin</b>	<b>Percentage of Anglers</b>
West Coast	6.60%
Nelson/Marlborough	33.96%
North Canterbury	28.30%
Central South Island	14.15%
Otago	4.72%
Wellington	3.77%
Auckland/Waikato	3.77%
Southland	1.89%
Taranaki	1.89%
Eastern	0.94%



*Figure 1: Percentage of Visiting Non-Resident Anglers vs Resident Anglers from the Survey That Fished Within the West Coast Backcountry Area During the 2021/22 Angling Season.*

### **Angler Usage During the 2021/22 Season**

Anglers were questioned as to how many trips they made into the West Coast Backcountry Fishery, what was the average length of their stay and what was the total number of days fished in each catchment. Figure 2 shows the percentage of respondents to number of days in the West Coast Backcountry Fishery as a whole. Figure 3 provides answers as to how many nights respondents stayed in the area, while Figure 4 depicts how many days the majority of anglers fished each catchment. Figure 5 presents respondents frequency of encounter with other anglers whilst fishing the West Coast Backcountry. Lastly Figure 6 displays the angling pressure distribution throughout the season in the West Coast Backcountry.

Most entered the backcountry area over only one to three trips, while some anglers made up to 12 trips into the West Coast Backcountry Fishery. A high majority of anglers spent no longer than three nights in the fisheries. There was a smaller percentage that fished 5-20 days total in either or both catchments. The anglers on average fished for longer in the Karamea, with one angler spending 20 days fishing in the Karamea for the season. Anglers encountering other anglers appears to be uncommon with 68% not encountering another angler and 17% encountering anglers on rear occasions.

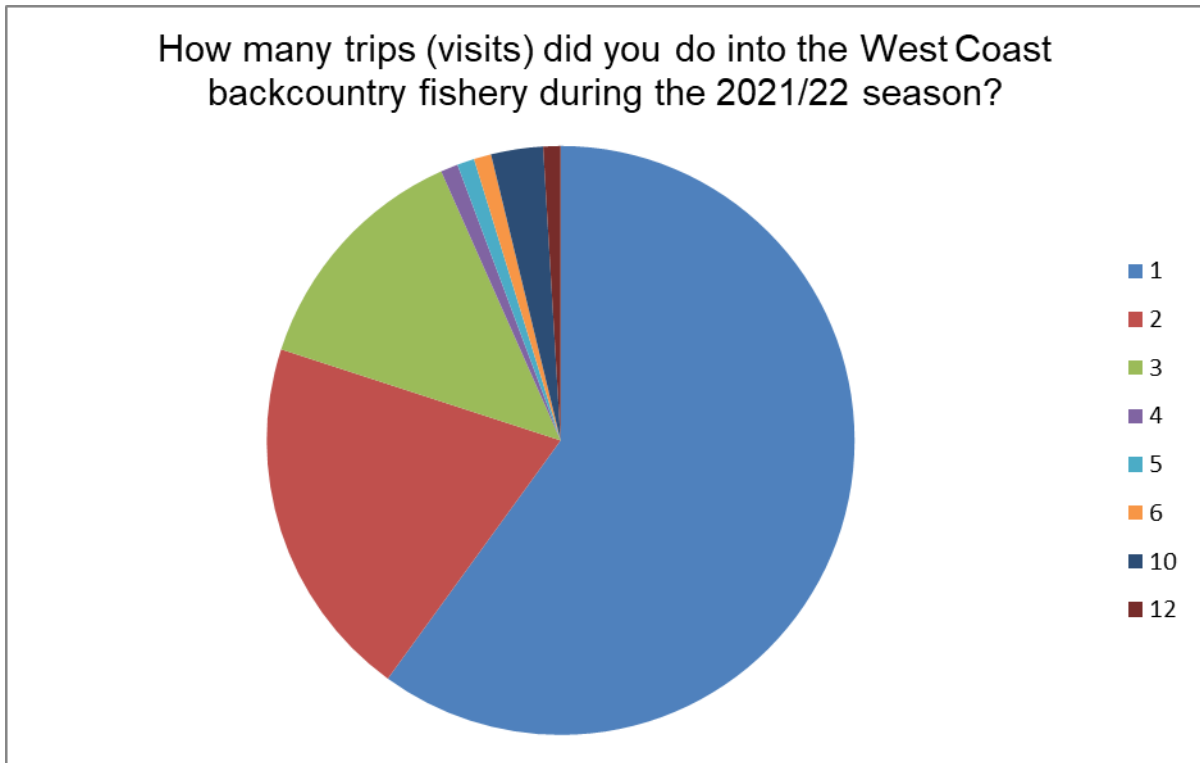


Figure 2: Number of Trips into The West Coast Backcountry Fisheries by respondents.

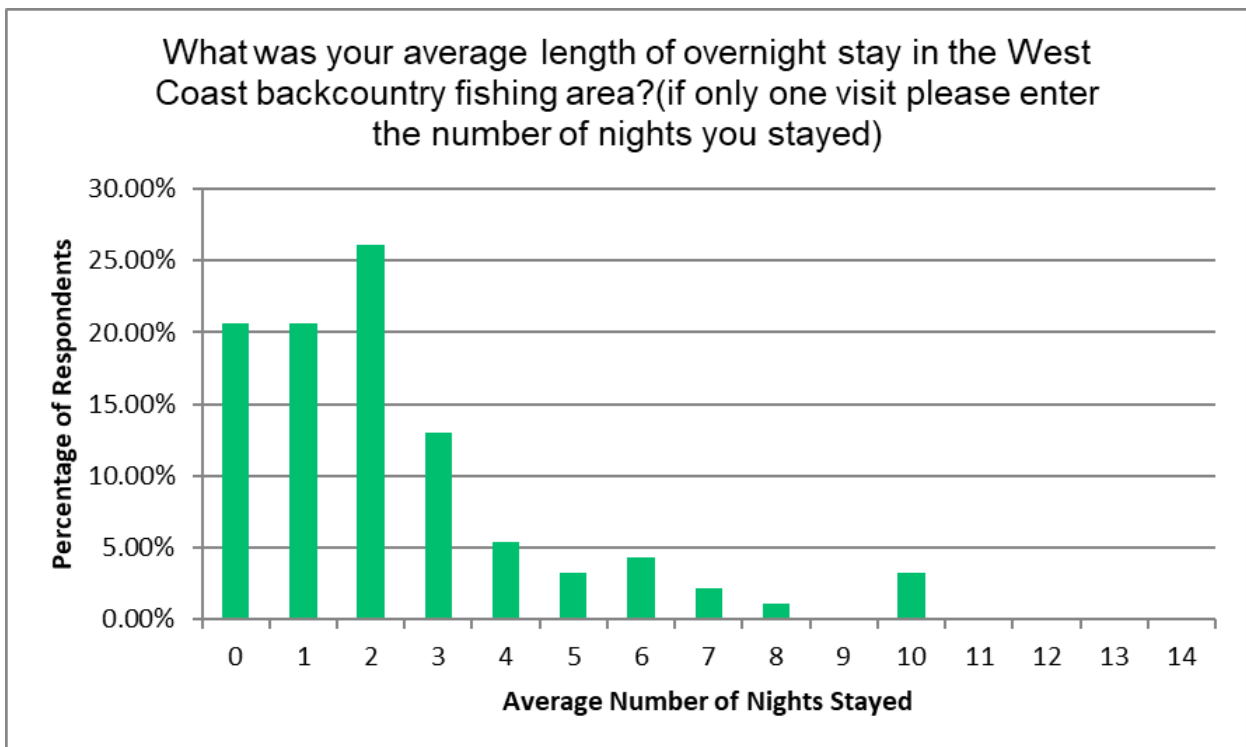


Figure 3: Average Number of Nights Stayed by Respondents.

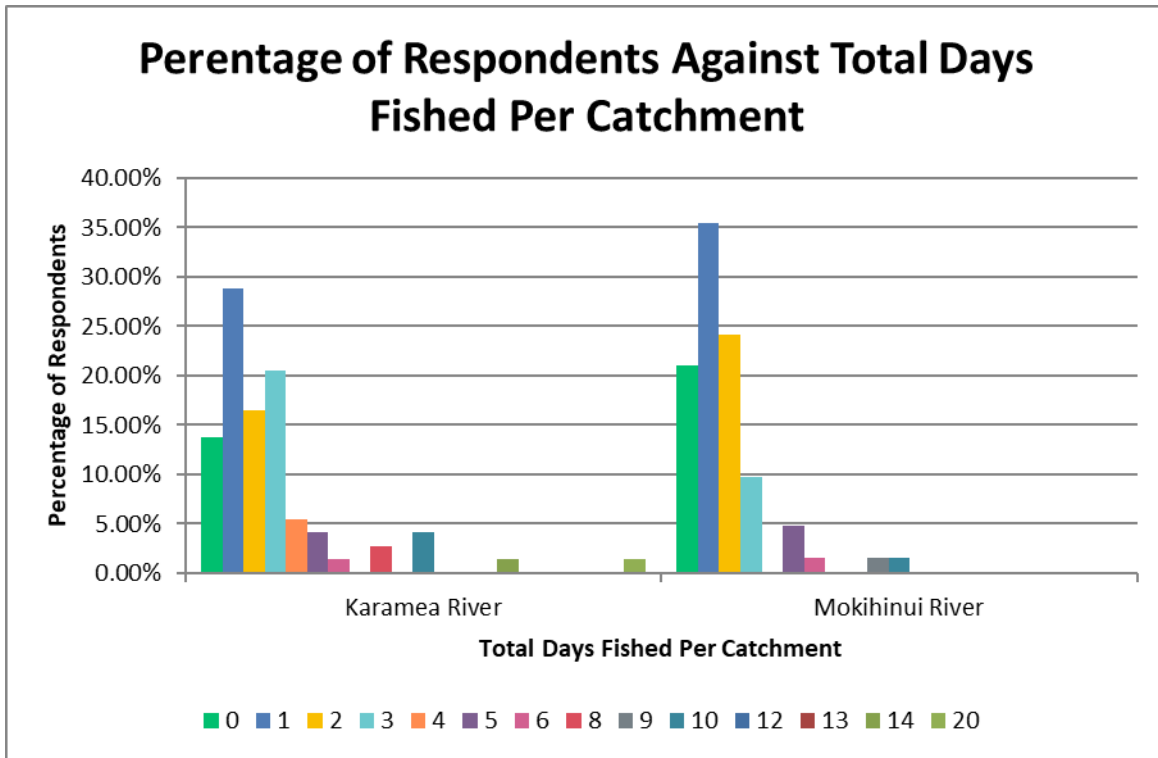


Figure 4: Distribution of Anglers vs Total Days Fished in Each West Coast Backcountry Catchment for the 2021/22 Season.

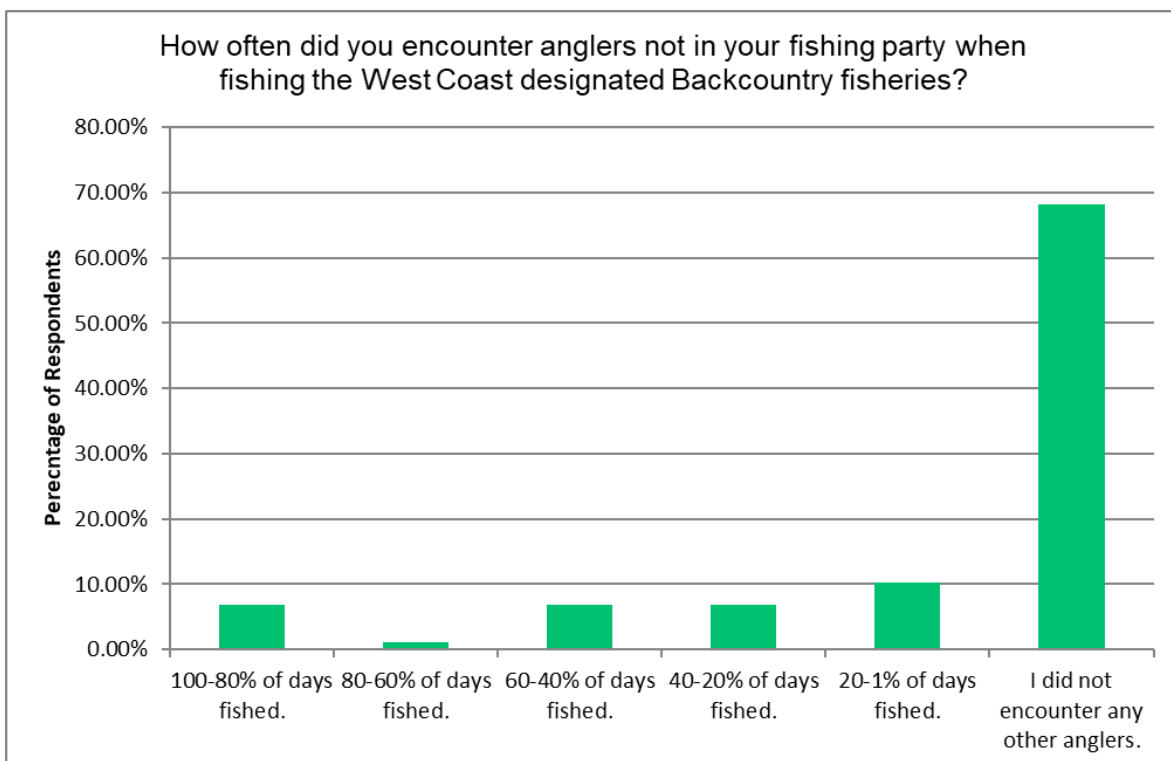


Figure 5: Frequency of Encountering Other Anglers in the West Coast Backcountry

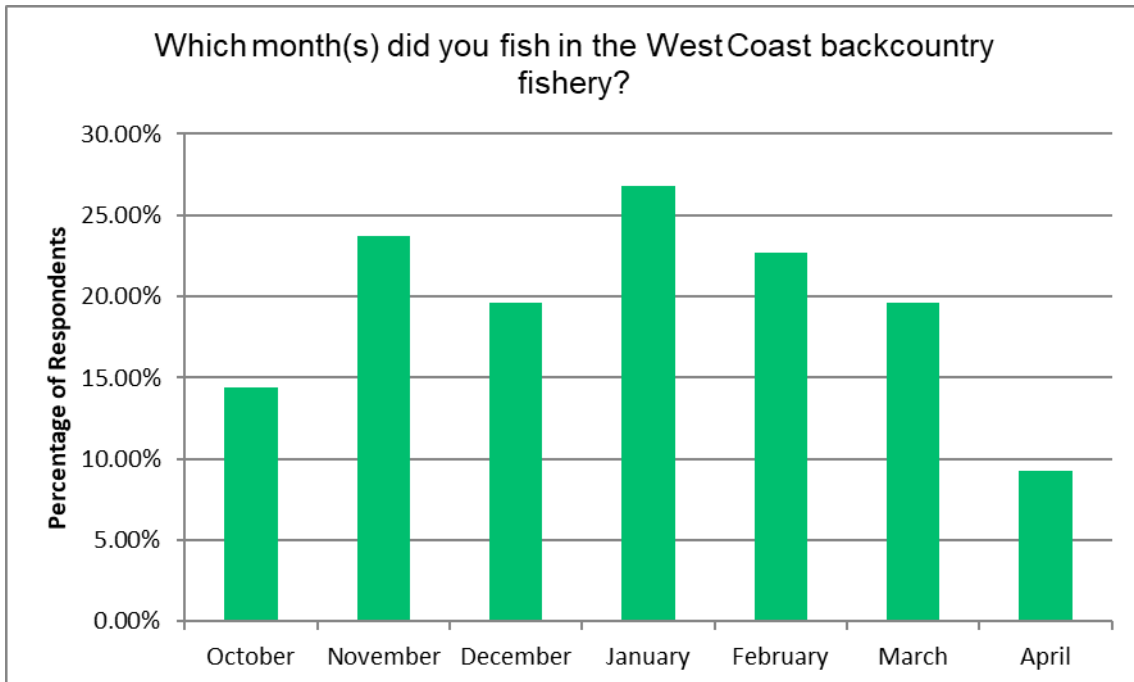


Figure 6: Angling pressure distribution throughout the season in the West Coast Backcountry. (Note some respondents have answered to more than one option).

### Commercial Guides

During the survey respondents were asked if they were fishing guides. As shown in Figure 7 below, approximately 6% of those surveyed were fishing guides. Survey respondents were asked if they were guided into the Backcountry, please refer to Figure 8. 17 anglers answered yes, be approximately 16% of respondents.

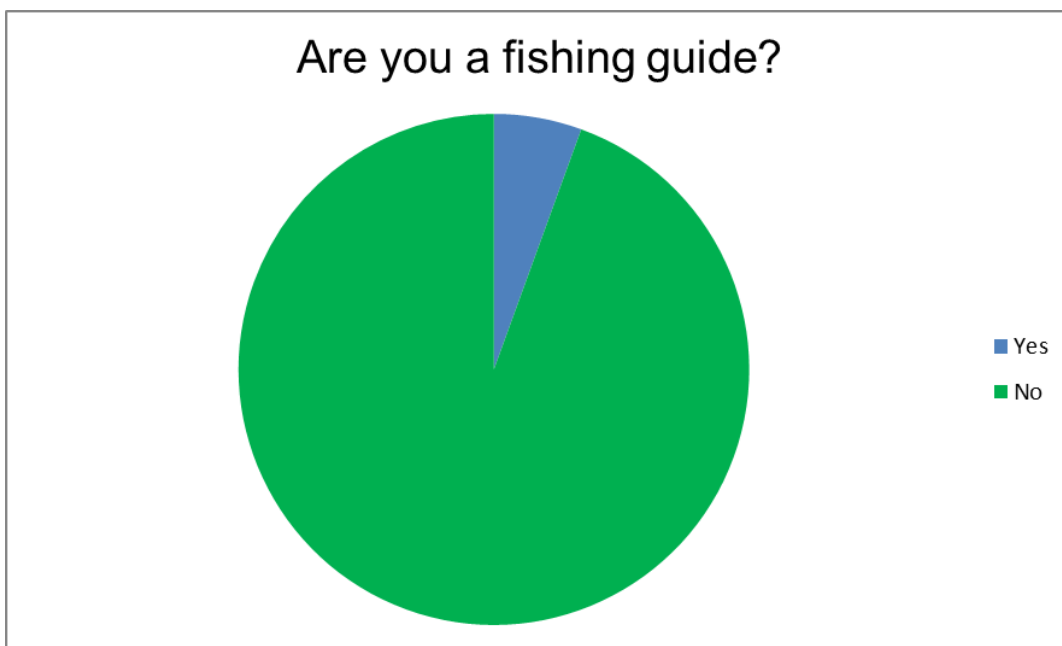
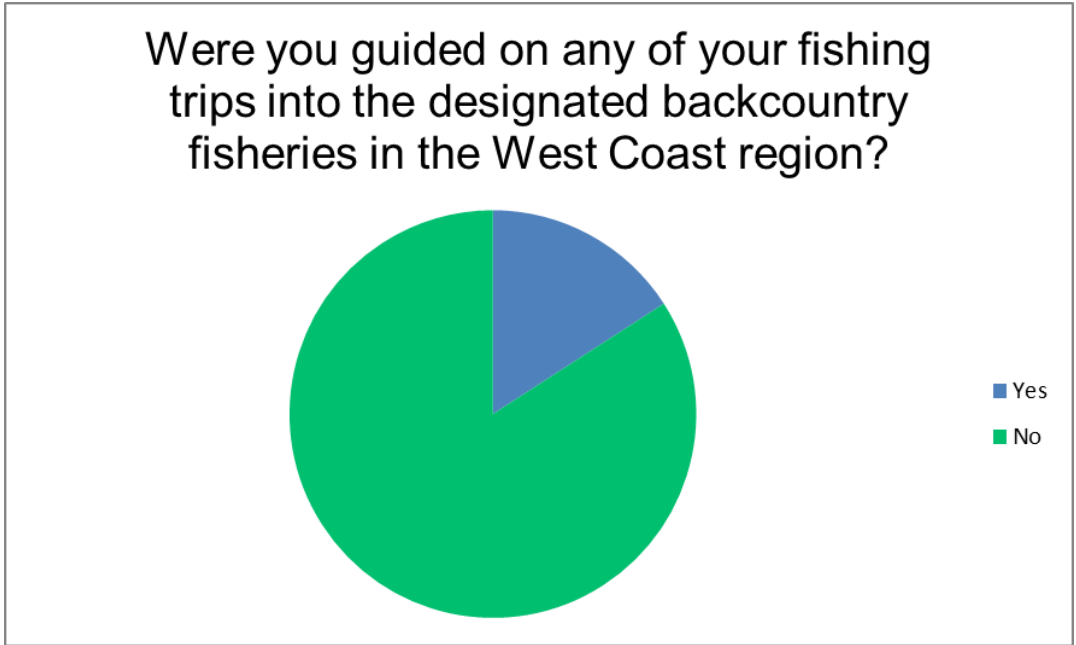


Figure 7: Percentage of Respondents That Fished in The West Coast Backcountry Fishery Area During the Survey Period That Are Fishing Guides.

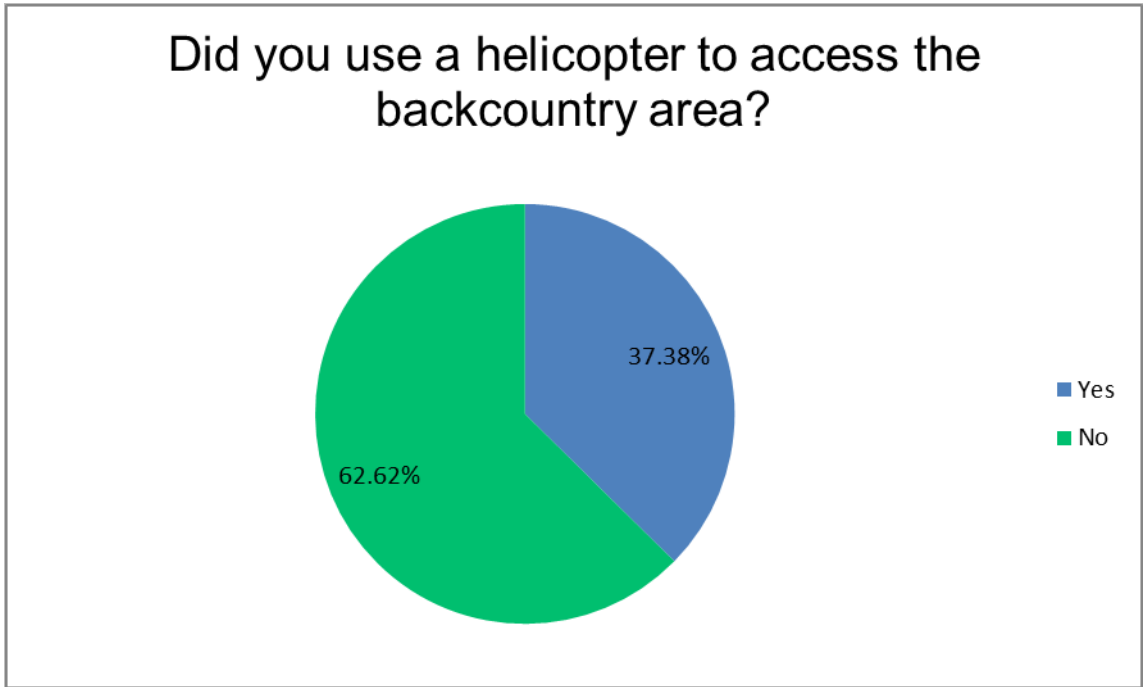




*Figure 8: Percentage of respondents that fished in the West Coast Backcountry fishery area during the 2021-22 season that were guided.*

**Backcountry Access Methods**

Anglers surveyed were asked if they used helicopters as a means of access to determine the level of helicopter usage. As shown in Figure 9 below, just over a third, 37.38% flew in. This is up from last year’s portion of 26.58% but down on years prior. In terms of helicopter use to each of the individual fisheries, as shown in Figure 10, close to three quarters of helicopter usage was in the Karamea catchment.



*Figure 9: Percentage of Survey Respondents Accessing the West Coast Backcountry Fisheries Via Helicopter 2021/22 Season.*



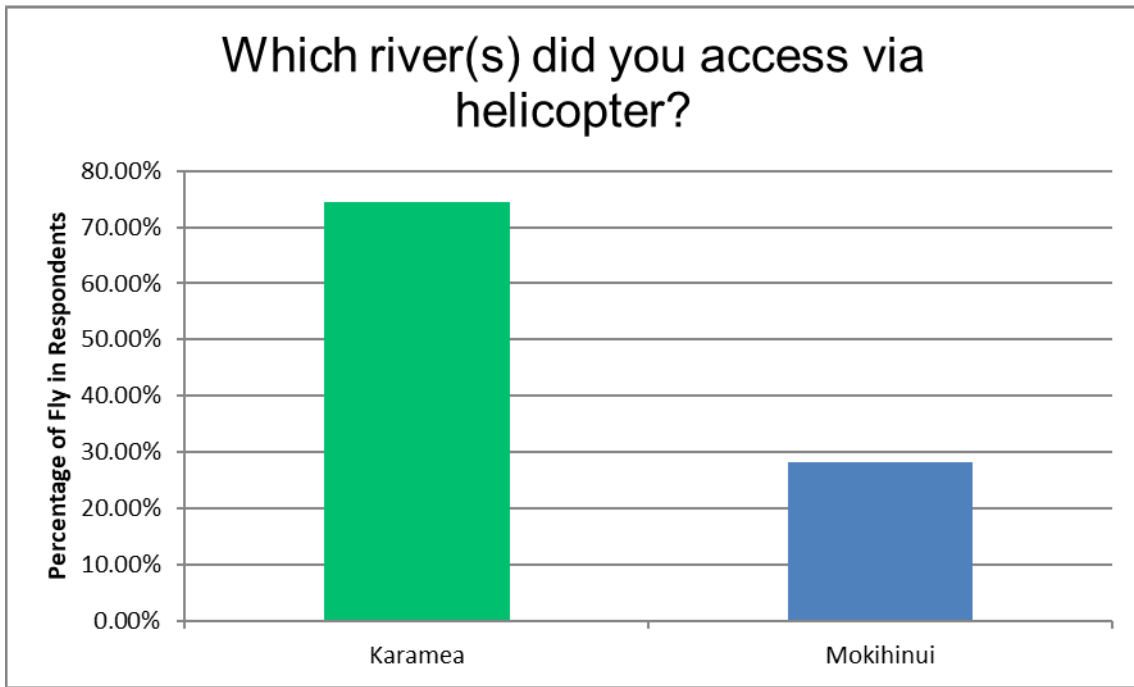


Figure 10: Percentage of Fly in Survey Respondents Accessing Each Catchment by Helicopter

### Distribution of Usage Within and outside of the Kahurangi Wilderness Area

Respondents were asked if they fished within the Kahurangi Wilderness area. The majority of anglers from the survey, 70%, fished outside of the wilderness area.

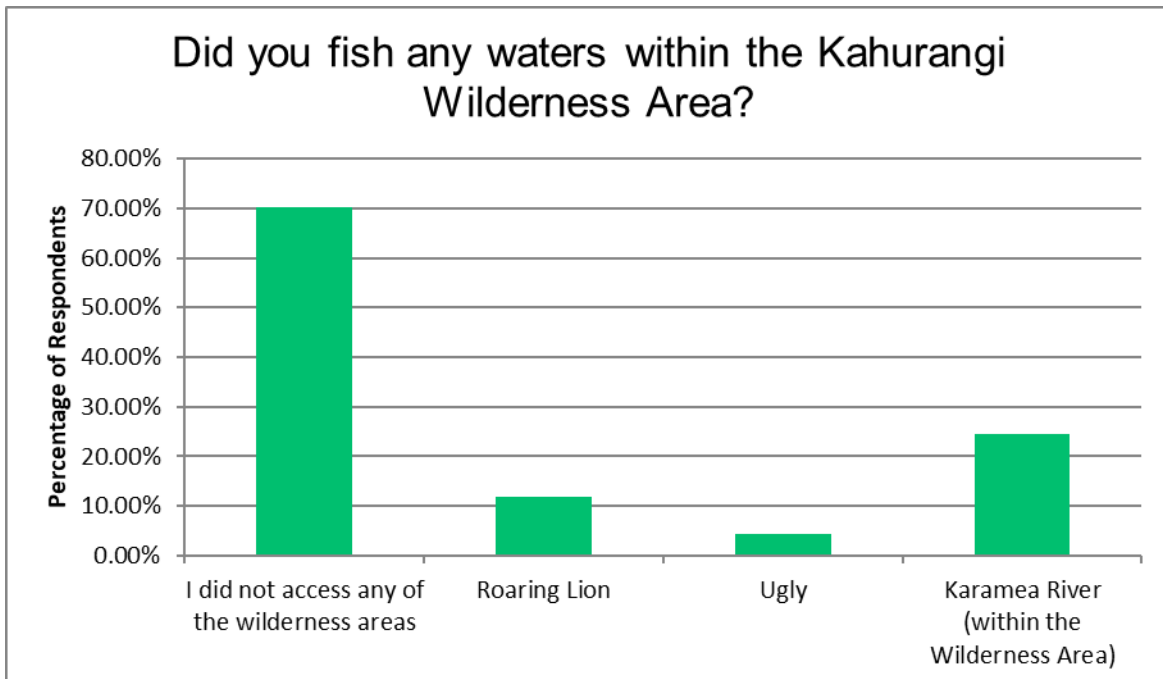


Figure 11: Angler Usage Within and Outside of The Kahurangi Wilderness Area. (Note some respondents have answered to more than one option)

## Trout Caught/Kept

Results were gathered from anglers as to how many trout they caught in total from each of the Backcountry catchments, see Figure 12 below. Figure 13 shows how many trout were kept by anglers from each catchment. While a high number were caught from each catchment with some anglers catching 20+ fish, most anglers chose to release their trout. Over both catchments 80-90% of respondents kept no trout regardless of the number of days fishing.

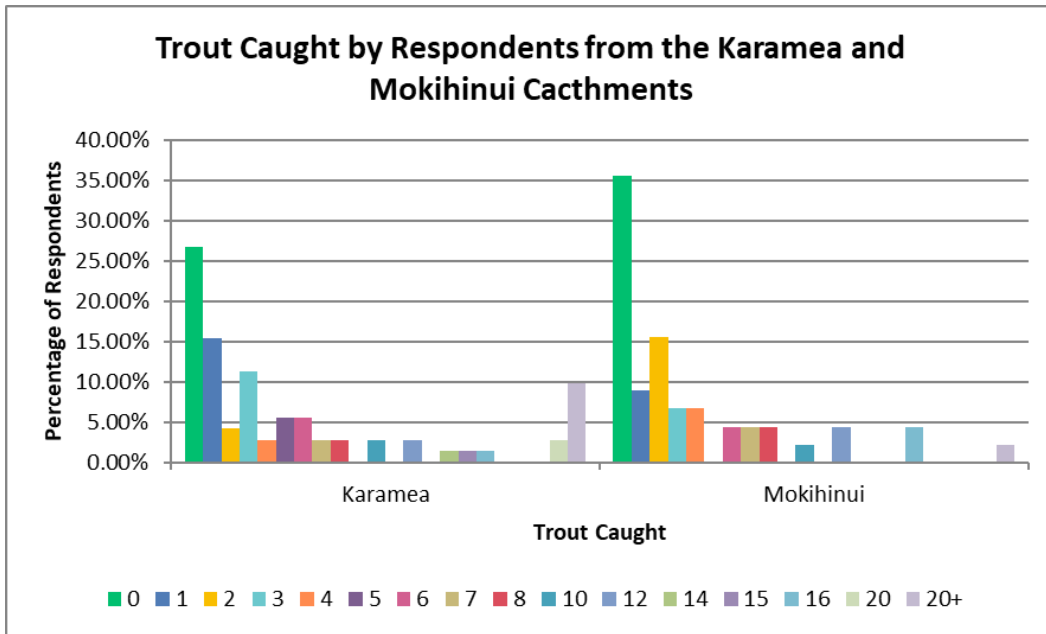


Figure 12: Total Trout Caught in West Coast Backcountry Fisheries by Respondents

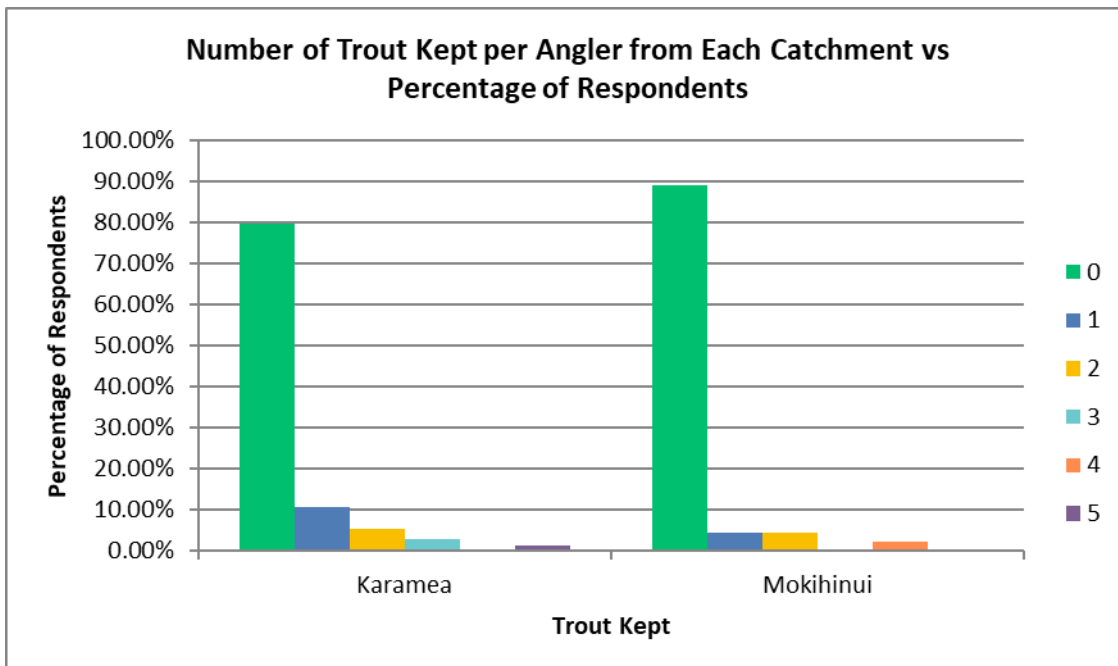


Figure 13: Total Trout Kept by Survey Respondents from Each West Coast Backcountry Catchment

## Angler Satisfaction

Previous backcountry angler surveys have found that angler satisfaction is not simply a derivative of the number of trout caught, but a combination of the fishing experience, scenic environment, sense of remoteness, pristine environment, large trout seen and positive angler interactions. As part of the survey anglers were asked to rate their backcountry fishing experience on a scale of 1-5, with options for very satisfied, satisfied, neutral, dissatisfied and very dissatisfied, along with an option for not fishing that catchment.

Figure 14 below represents how anglers viewed their experience in each West Coast catchment during the 2021/22 season. Table two is the same data, but with the removal of the *I did not fish this river* proportion of participants and consists of also the data collected over the previous five seasons. To identify what may be impeding a positive backcountry experience, survey participants were asked *Which of the following most limited your satisfaction when fishing the West Coast backcountry fisheries?* For those anglers who choose other and specified, I have summarised their responses into six categories, please refer to Table 3 below.

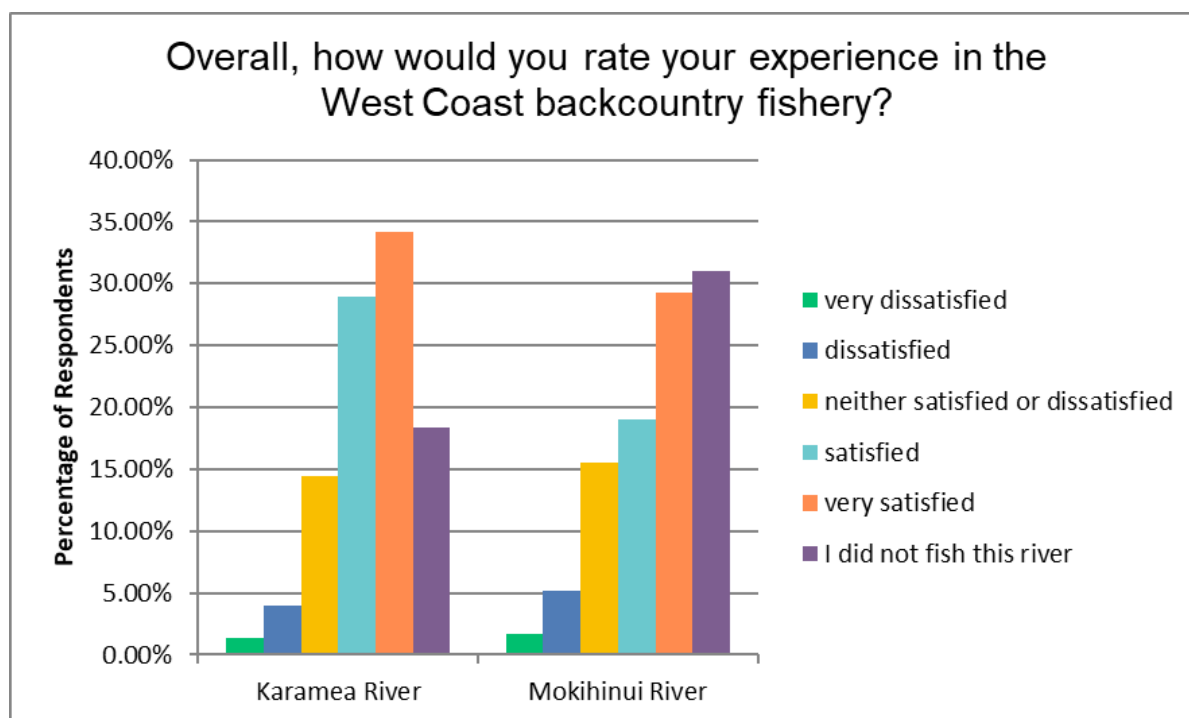


Figure 14: Angler satisfaction within the West Coast Region back country catchments 2021/22.

Table 2: Table of Angler Satisfaction Within the West Coast Region Backcountry Catchments over the last five seasons.

		Experience Rating - Percentage of Respondents		
		Very Dissatisfied / Dissatisfied	Neither Satisfied nor Dissatisfied	Satisfied/ Very Satisfied
<b>Karamea River</b>	2021-22	4.59%	17.46%	77.95%
	2020-21	4.65%	11.63%	83.72%
	2019-20	4.29%	14.29%	81.42%
	2018-19	4.00%	9.05%	86.95%
	2017-18	14.40%	10.94%	74.66%
	2016-17	11.50%	16.95%	71.55%
<b>Mokihinui River</b>	2021-22	5.44%	21.95%	72.61%
	2020-21	5.00%	20.00%	75.00%
	2019-20	9.84%	20.00%	70.49%
	2018-19	12.12%	9.10%	78.78%
	2017-18	22.60%	5.41%	71.99%
	2016-17	21.20%	15.30%	63.50%

Table 3: Table of what most limited angler satisfaction in the West Coast Backcountry fisheries.

Answer Choices	Responses 2021-22		Responses 2020-21		Responses 2019-20		Responses 2018-19	
	%	Count	%	Count	%	Count	%	Count
The size of the trout.	3%	3	0%	0	5%	5	6%	4
The number of trout.	16%	14	22%	16	18%	19	11%	7
How challenging the trout were to catch.	2%	2	15%	11	7%	7	21%	14
Coming across other anglers.	5%	4	8%	6	11%	12	12%	8
Coming across people not fishing - loss of wilderness experience.	2%	2	0%	0	3%	3	5%	3
Weather conditions/river flows.	23%	20	15%	11	16%	17	21%	14
Nothing limited satisfaction	44%	38	27%	20	30%	31		
Other (please specify)								
Other - Nothing limited satisfaction	3%	3	5%	4	1%	1	12%	8
Other - Hut/river crowding issues	0%	0	0%	0	3%	3	5%	3
Other - Wildlife complaints (insects/birds)	0%	0	4%	3	2%	2	5%	3
Other - Didymo	0%	0	1%	1	0%	0	2%	1
Other- Helicopters	0%	0	0%		4%	4	2%	1
Other- Everything	0%	0	1%	1	1%	1	2%	1
<b>Total</b>	<b>100%</b>	<b>86</b>	<b>100%</b>	<b>73</b>	<b>100%</b>	<b>105</b>	<b>100%</b>	<b>66</b>

## Backcountry Fisheries Drift Diving Results 2022

### Mokihinui River: (South Branch site)

This season the dive at the Mokihinui South Branch on 3 March 2022 resulted in a count of 2 small/km, 7 medium/km and 47 large/km. Numbers of large fish were above average but there was very few medium and small fish.

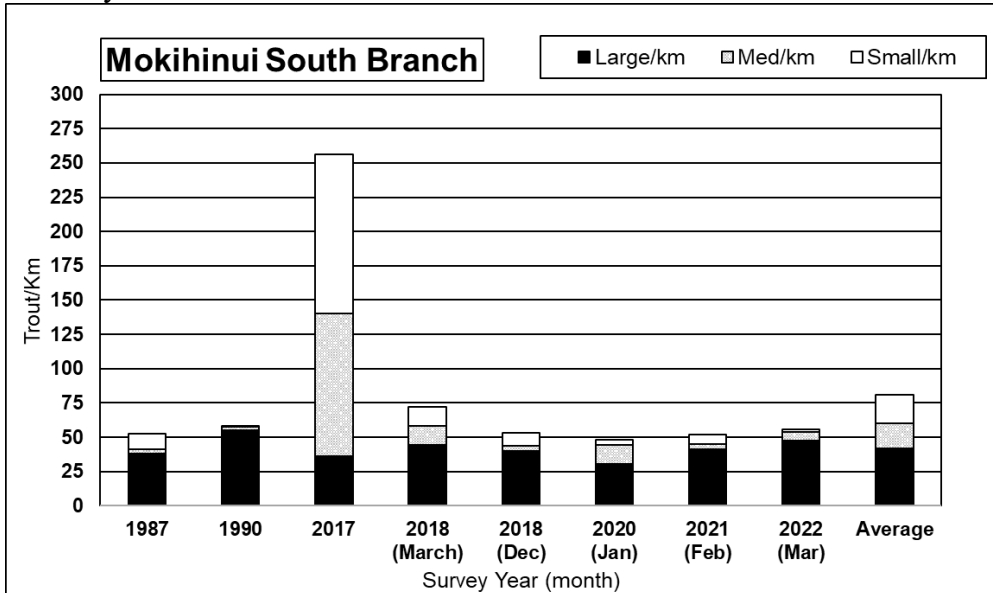


Fig 8. Number of Brown Trout recorded during drift dive surveys at the Mokihinui River, South Branch 1987 - 2022.

### Mokihinui River (Below Gorge)

This season the dive at the Mokihinui North Branch site below the gorge on 3 March 2022 resulted in a count of 5 small/km, 9 medium/km and 22 large/km. Numbers of fish were slightly below average and that was due to a lack of small trout which is similar to previous years.

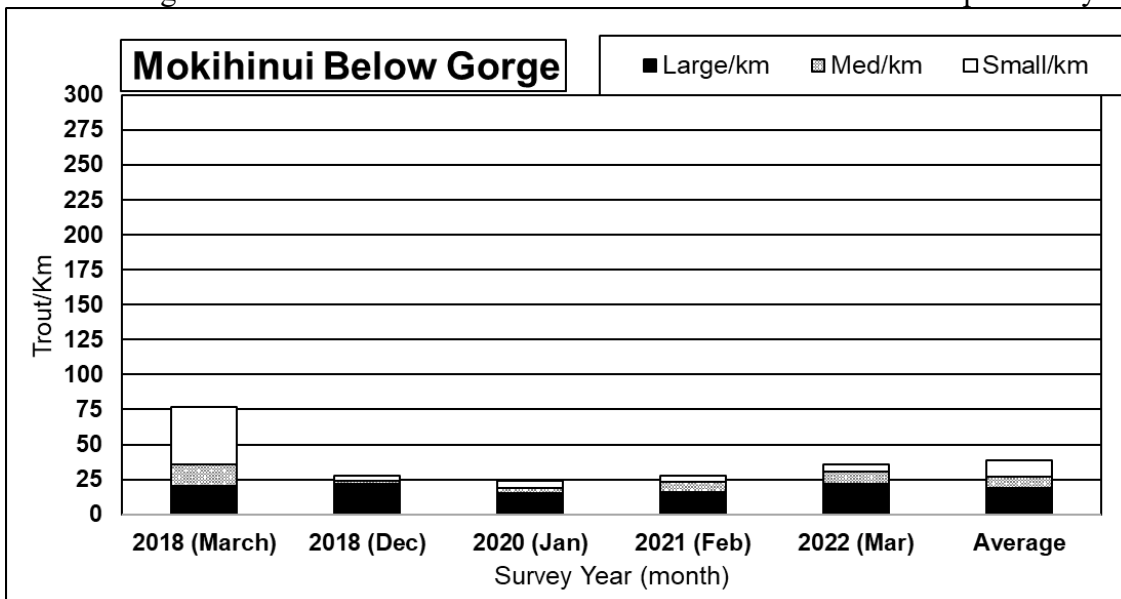


Fig 9. Number of Brown Trout recorded during drift dive surveys at the Mokihinui River, North Branch below gorge 2018 -2022.

### Karamea River (Upstream of Crow)

This season the dive at the Karamea River upstream of the Crow on 8 March 2022 resulted in a count of 14 small/km, 19 medium/km and 44 large/km. Numbers of fish were below average, in particular small fish.

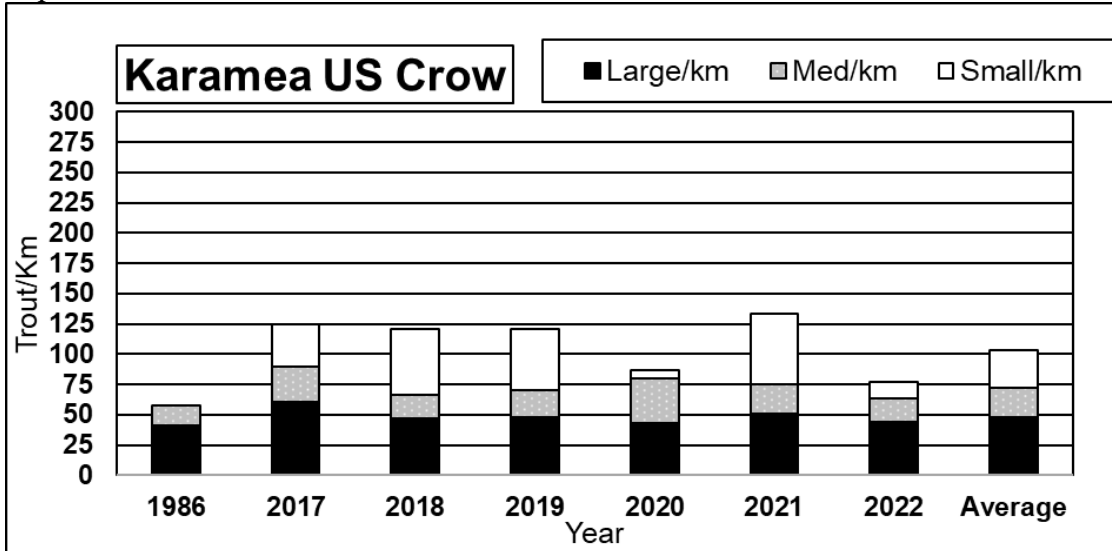


Fig 10. Number of Brown Trout recorded during drift dive surveys at the Karamea River, upstream of Crow 1986- 2022.

### Karamea River (Downstream of Crow)

This season the dive at the Karamea River downstream of the Crow on 8 March 2022 resulted in a count of 5 small/km, 10 medium/km and 25 large/km. Numbers of fish were below average largely due to a lack of medium and small trout.

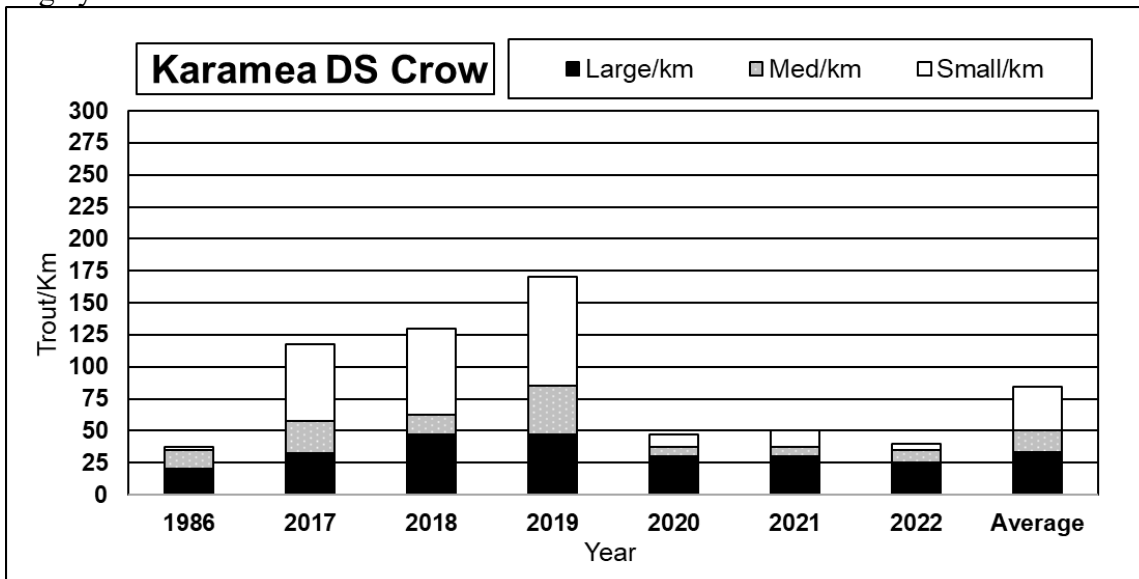


Fig 11. Number of Brown Trout recorded during drift dive surveys at the Karamea River, downstream of Crow 1986 - 2022.

### Karamea River (Karamea Bend)

This season the dive at the Karamea Bend on 8 March 2022 resulted in a count of 16 small/km, 8 medium/km and 21 large/km. This year's count was an improvement on last years but still below average.

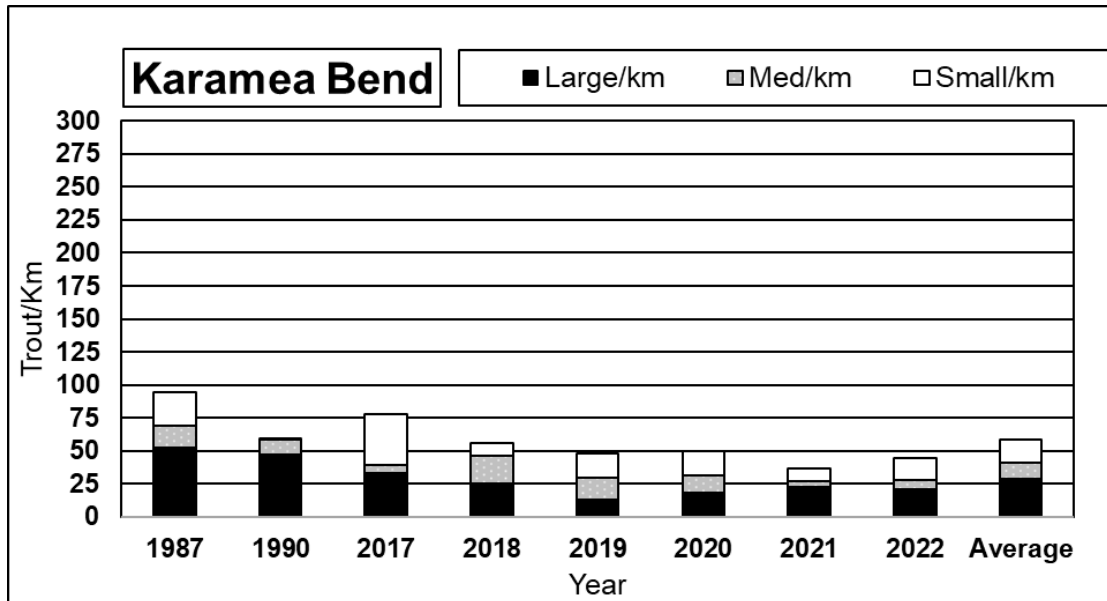


Fig 12. Number of Brown Trout recorded during drift dive surveys at the Karamea River, bend 1987-2022.

### Drift Diving Summary

Dives completed on the Karamea were all below average despite the reduction in angler pressure. The dive was completed in March, post the big February flood when the Karamea exceeded 1,000m<sup>3</sup>/s. The Karamea bend site did show improvement on last year's count which is pleasing to see. Being a slower section of the river it likely wasn't impacted as bad by the flood or maybe even increased in fish numbers, with trout being displaced from upstream. There doesn't appear to be any correlation with angling pressure and fish observed during drift dives.

The dive completed in the South Branch of the Mokihinui was up on previous years with high numbers of large trout present. The North Branch site was similar, being up on previous with high numbers of large fish. Both sites lacked small trout, although numbers observed haven't been high in previous dives other than in 2017 and 2018. The North Branch site has experienced a large slip into the river just below the get in location, changing some of the habitat and making dive conditions less favourable.



## Discussion

The last two years have provided a unique opportunity to see how the absence of non-resident anglers and greatly reduced guiding influenced the angling experience in the West Coast Backcountry Fisheries. As noted last year the change to angling experience appears to be far less in the West Coast than in some of our neighbouring regions. This is likely a result of already elevated satisfaction levels, low encounter rates, and environmental variables playing a larger role in fishing experiences than compared to other regions

Resident anglers obtaining West Coast Backcountry endorsements have more than doubled this year, but this has not been reflected in an increase of angling effort. The number of West Coast Backcountry endorsements is up from 1,948 to 5,121. Despite the increase in endorsements, fishing pressure looks to be similar to last year with the utilisation of the endorsement by respondents being half that of last year's at only seven percent. The increase is due to residents obtaining the endorsement, in particular from North Canterbury with a 546% increase (460 in 20/21 to 2,971 in 21/22). This is believed to be a flow on effect from the North Canterbury and Central South Island regions salmon endorsement and anglers choosing to "tick all the boxes." This results in very low accuracy estimates of actual angling pressure being obtained, with the only method to use being applying an estimated utilisation over the total number of endorsements with a high associated error. The recently proposed small fee to obtain endorsements would likely reduce this occurring and result in improved data. Therefore, it is recommended the council support a small fee for endorsements going forward.

Looking at the responses for average nights stayed and total days fished, most anglers tended to stay and fish between one and four days, with very few staying longer than six days. This is similar to previous years. There has been a drop in day trips compared to pre covid, likely due to reduction in both helicopter use and guiding.

Angler satisfaction was similar to the previous three years. Although not significant, there was a slight reduction in satisfaction compared to last year, there was no obvious explanation for this. Despite the slight drop in satisfaction, when asked what most limited satisfaction, 44% of respondents chose *nothing limited satisfaction*, being up on previous years. This was followed in popularity by *weather/river conditions* and *number of trout* which has been a common theme across the years. *How challenging the trout were to catch* was at its lowest recorded. Further supported by catch rates being up on the previous year.

Fish & Game are currently looking at pressure sensitive fisheries and how to retain resident anglers utilising them when non-resident anglers return. Although from our work carried out in our West Coast Backcountry fisheries, displacement of resident anglers is largely due to perception-displacement (the belief that the angling experience would be diminished by the perceived angling pressure) rather than actual displacement. This is highlighted by the comments received, with many anglers reporting they are fishing the backcountry due to a lack of non-residents despite satisfaction levels already being high prior to border restrictions. Although, there is areas of the West Coast that have also been identified as having actual displacement issues, observed in particular around the Reefton area. Therefore, it is recommended that West Coast Fish & Game continue to support work regarding pressure sensitive fisheries and in hope of addressing both perception-displacement and actual displacement issues on the West Coast.

Staff Recommendations:

- That council receives this report.
- That council support a small fee for endorsements.
- That council continue to support work in the area of pressure sensitive fisheries.

## References

**Kersten B. (2022).** Drift Diving Results 2022.

**Trotter, H. (2021).** 2021 NZ Backcountry Rivers Satisfaction Survey. Unpublished data.

**Unwin, M.J. (2016).** Angler usage of New Zealand lake and river fisheries: results from the 2014/15 National Angling Survey.

## Appendices

### Appendix 1: Questions Asked During Backcountry Angler Survey 2021/22

Q1: During the 2021/22 fishing season did you fish a backcountry designated fishery within the West Coast region? That is: the Karamea or the Mokihinui river catchments (including tributaries)

Q2: Are you a New Zealand resident? That is: you hold a NZ birth certificate or passport or citizenship, or you hold a permanent resident visa

Q3: Which Fish and Game Region do you hold your fishing licence with? (If unsure, please select the region where you live)

Q4: Are you a fishing guide?

Q5: Were you guided on any of your fishing trips into the designated backcountry fisheries in the West Coast region?

Q6: Did you use a helicopter to access the backcountry area?

Q7: Which river(s) did you access via helicopter?

Q8: How many trips (visits) did you do into the West Coast backcountry fishery during the 2021/22 season?

Q9: Please enter the total number of days you fished in Karamea or the Mokihinui River and/or its tributaries.

Q10: Which month(s) did you fish in the West Coast backcountry fishery?

Q11: Did you fish any waters within the Kahurangi Wilderness Area? if so, which rivers? This link gives you access to the wilderness area map.<http://www.doc.govt.nz/Documents/about-doc/role/policies-and-plans/kahurangi-map3.pdf>

Q12: What was your average length of overnight stay in the West Coast backcountry fishing area? (if only one visit please enter the number of nights you stayed)

Q13: In total for the season, approximately how many fish did you land from each designated backcountry fishery you fished?

Q14: In total for the season, approximately how many fish did you keep from each designated backcountry fishing area?

Q15: How often did you encounter anglers not in your fishing party when fishing the West Coast designated Backcountry fisheries?

Q16: Overall, how would you rate your experience in the West Coast backcountry fishery?

## Feedback

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Q17: Which of the following most limited your satisfaction when fishing the West Coast backcountry fisheries?

Q18: Have you got any further comments you would like to make on your backcountry fishing experience?

**Appendix 2: All Angler Feedback/Comments from West Coast Backcountry Survey 2021/22 Season:**

Wonderfull flyfishing experience with well accomplished guides who try hard for inexperienced anglers to the region. Nice quality Brown Trout fishery in gorgeous scenery
There were fewer fish spotted than expected despite fine weather and clear water
Such a awesome river to fish! Had an awesome time
Trout numbers in the mainstem Karamea Rv were still low comparable to the 2020-21 season, but numbers in the [REDACTED] were visibly higher. With reduced pressure trout were less spooky. Trout condition and size were good with trout between 1.6 - 3.4 kgs.
No
Karamea was full of didymo. Karamea and [REDACTED] much lower numbers than in the past. The other fishermen in there were fine men but had no more success than we did. 1 each in 4 days !!!
None
Walked Leslie Karamea Track, however it rained heavily on getting the Karamea Bend!
No guides and no tourists, limit them. The fish are in amazing condition on the whole coast , need to keep it this way.
I had a great time
mostly good. be nice to have the back country for nz anglers and guides only .. tighten up on the river access for over seas anglers having season licenses limit them to a weeks / months license only and increase the fees for over seas anglers by 500% ... were giving it away for to little !!!!!
great place to be alive in
Ban helicopter access fishing
I think guides should have to be kiwis need to limited to now many there are and the number of days they can fish. Maybe it's time we have to go on line book(and pay) for a stretch of a river for a days fishing but to see if somebody had been the day before or to get to the river to not be meet by other anglers would be worth paying for cheers
Keeping access for all is a high priority for future fishing experiences
serious flood damage
no
Fantastic Fishery
No
Paradise
Great scenic country to be in. Lovely rivers and lots of pool s & rock areas
Disappointed on the number of trout actually seen. The river levels were fine and clarity was good, weather was good too so we expected to sight more trout.
"Limit guiding in this area. Limit helicopter access
Best fishing trip of my life. Likely never to be matched
A fishing intentions book in each hut would be useful. Somewhere for angler's to write which river and sections they are fishing, there had been a party through in the week before me but I had no idea where they had fished.
Great part of the world but very few fish in areas we have seen many in previous years both in Karamea and Crow. No sign of fishing pressure as few anglers walking or helicopter in in during previous month
We fished the Karamea because of covid border restrictions - it was a window of opportunity for NZers to fish there before the international anglers returned and monopolise the river. It was wonderful window of opportunity to fish for big difficult browns without them being totally paranoid.
I accessed the Allen and Johnson rivers by helicopter and accessed the North branch by mountain biking in, the anglers I encountered here had flown in. Would like to try the south branch next season but will

## Feedback

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<p>most likely give it and a lot of other backcountry rivers a miss next season. I think the kiwi angler will find it hard next season with the borders reopened I feel the overseas anglers who have been unable to fish here will return, there will be more than average and they will stay/fish longer. I hope our backcountry rivers/fisheries will handle the pressure.</p>
<p>Control guides better once they start up again.</p>
<p>Helicopter access is a very important part of the back country experience for people that are physically disabled or time limited.</p>
<p>Great to be able to catch and release in isolated areas. Very peaceful.</p>
<p>It's such a ball ache with separate licenses etc. Just do away with it all and make general license. The remoteness controls numbers way more than some back country license nonsense.</p>
<p>It was awesome</p>
<p>I met a landowner who allowed me access up the Karamea. However there is signage saying no access except via riverbed and this isn't easy from what I could see. I would have expected f&amp;g to have arranged better access or negotiated with land owners seeing as its such a famous river. Coming from the North island I didn't appreciate its a helicopter only river essentially.</p>