



Fisheries New Zealand

Tini a Tangaroa

The Eastern Tarakihi Management Strategy and Rebuild Plan – Progress Report

Quarterly Report: 1 October 2019 – 31 December 2019

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1. Introduction

The East Coast tarakihi stock (TAR 1 (east), TAR 2, TAR 3, and the Cook Strait portion of TAR 7) is currently undergoing a rebuild.




As part of his decisions on the October 2019 Sustainability Round, the Minister of Fisheries decided to implement the industry and Te Ohu Kaimoana led [Eastern Tarakihi Management Strategy and Rebuild Plan](#) (the Rebuild Plan).

The Rebuild Plan is designed to rebuild East Coast tarakihi through two concurrent work streams; Management Measures and Enhancing Science. The Rebuild Plan, developed by Fisheries Inshore New Zealand, Te Ohu Kaimoana, and Southern Inshore Fisheries, represents a commitment to the sustainable management of the East Coast tarakihi fishery.

As part of the Rebuild Plan, industry and Te Ohu Kaimoana are committed to quarterly reporting outlining progress towards meeting Key Performance Indicators (KPIs) outlined in their plan. To assist Industry with reporting and ensure transparency, Fisheries New Zealand has prepared this report to document Industries progress to meeting the Key Performance indicators as outlined in their plan. As a result this quarterly report should be read in conjunction with the Rebuild Plan.













To allow for monitoring of the initiatives in the Rebuild Plan, a framework to report on progress and adherence to measures is outlined in the table below.

Please note that this report only reports on progress to date on the Key Performance Indicators (KPIs) for each of the management measures. Most of the KPIs can only be measured at the end of the fishing year. This report provides a 'progress' indication using the following 'traffic light' system.

	KPI not met for the quarter and/or the year.
	KPI not met for the quarter, but on track for the year
	KPI met for the quarter and/or on track for the year.

2. Summary of Key Performance Indicators

As summarised in the table below five of the six KPIs have been met for the quarter and are on track for the year.

Management Measure	Milestones	KPI progress	
		1 st Quarter	Fishing year
Catch Reduction	<ul style="list-style-type: none"> Catch reduction progress and monitoring reporting. 	Quarterly milestone met 	On Track 
Catch Spreading	<ul style="list-style-type: none"> Cumulative reporting of TAR 1E/W and TAR 7E/W split catches against voluntary catch spreading limits Cumulative reporting of individual ACE allowances for TAR 1 & 7 E/W. 	Quarterly milestone met 	On Track 
Reporting sub-MLS	<ul style="list-style-type: none"> Summary reporting of the proportion of sub-minimum legal size tarakihi (sub-MLS TAR) by Quota Management Area (QMA). 	Quarterly milestone met 	On Track 
Move on rule	<ul style="list-style-type: none"> Reporting of the number of move on rule triggers by QMA, actions taken by fishers following the triggers and any follow-up actions taken. 	Quarterly milestone met 	On Track 
Voluntary Closed Areas	<ul style="list-style-type: none"> Reporting of the number of incidences of vessels crossing the buffer line and closed area boundaries while fishing and any follow-up actions taken. 	Quarterly milestone not met 	Not Met 
Selectivity Trials	<ul style="list-style-type: none"> Quarterly progress reports 	Quarterly milestone met 	On Track 

Industry are committed to using on-board cameras to give greater confidence in compliance. On-board cameras will monitor the significant majority of the catch in TAR 2 and TAR 3, the Quota Management Areas with the highest level of juvenile tarakihi, by the end of 2020.

Additional Measure	Milestones	KPI progress	
		1 st Quarter	Fishing year
On-board Camera Project	<ul style="list-style-type: none"> On-board camera monitoring of majority of the catch in TAR 2 & TAR 3. 	Reporting to commence in 2021	

Quarterly Reporting for 1 Oct 2019 – 31 Dec 2019

3. Regional Monitoring and Management Plans (RMMP)

Regional management and monitoring measures apply to both operational measures and research projects for the relevant regions. They bring measures together and promote the implementation of work streams to ensure regional management action is taken in a timely and effective manner.

Implementing measures regionally will better reflect the nature of the specific area as a part of the overarching Rebuild Plan, and improve the ability to manage the complexity of the fishery as a whole.

Key Performance Indicator (KPI): 90% of quota share signatories (all regions/sub-stock areas)	1 Oct – 31 Dec 2019	Fishing year
TAR 1	●	●
TAR 2	●	●
TAR 3	●	●
TAR 7	●	●
Total	●	●

Supporting information:

	Number of quota holder signatories/total quota holders	% of total quota shares
TAR 1	27/86	89.21%
TAR 2	17/38	91.39%
TAR 3	17/34	96.90%
TAR 7	20/49	90.03%
Total	81/207	91.88%

4. Catch Reduction

In October 2019, the Minister of Fisheries decided to reduce the total annual commercial catch (TACC¹) for TAR 1, TAR 2, TAR 3 and TAR 7 for the second consecutive year. The TACCs for the 2018/19 and the 2019/20 fishing years following the Minister's decisions are:

	2018/19 TACC (tonnes)	2019/20 TACC (tonnes)
TAR 1	1,097	1,045
TAR 2	1,500	1,350
TAR 3	1,040	936
TAR 7	1,042	1,024
Total	4,677	4,355

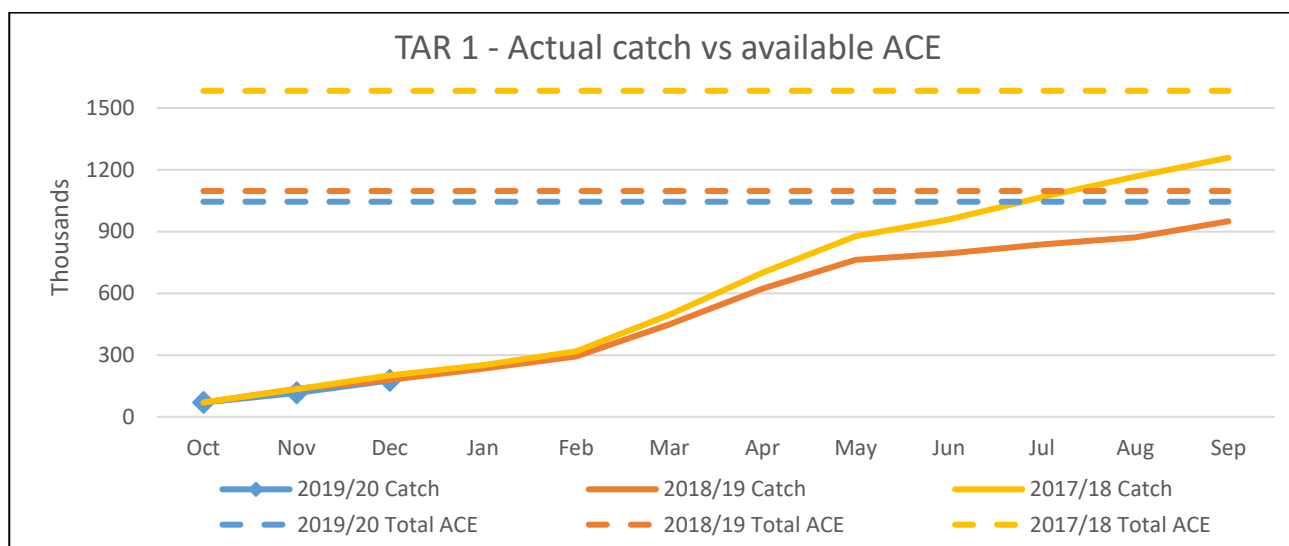
¹ TACC is the quantity of each fish stock that the commercial fishing industry can catch in a given year.

A comparison of the catch to date versus TACC by month across the relevant tarakihi stocks is provided in the sections below. In addition, the cumulative percentage of the Annual Catch Entitlement (ACE²) caught by month is compared to the available ACE, which allows for monitoring and analyses of any discrepancies.

Key Performance Indicator (KPI)	1 Oct – 31 Dec 2019	Fishing year
Fish within the allocated ACE	●	●

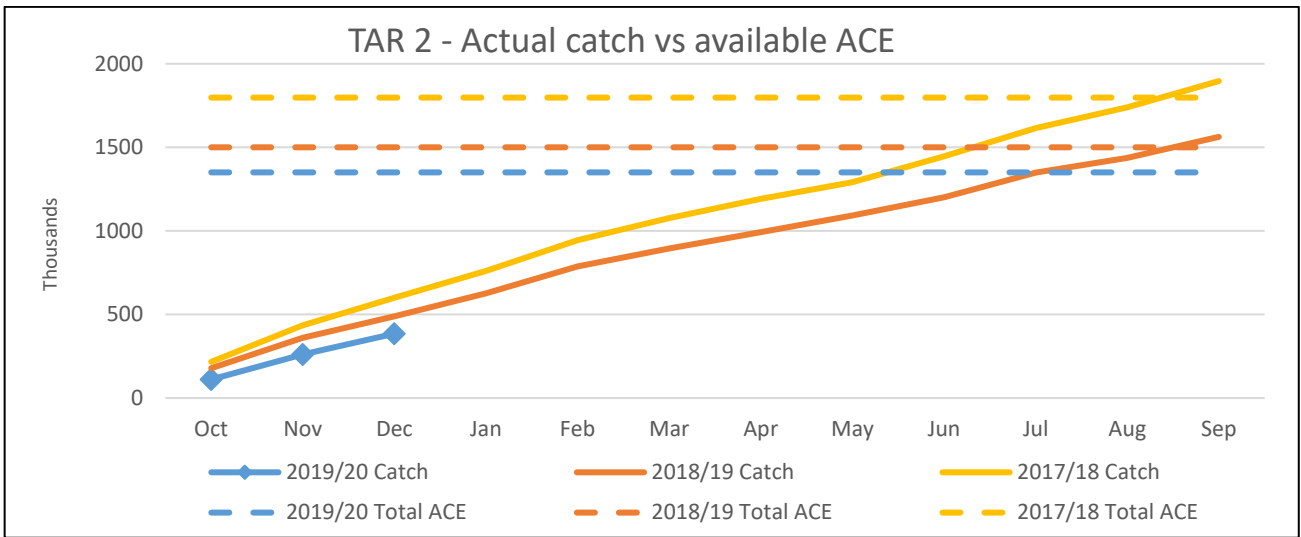
Supporting Information:

TAR 1 - Actual catch vs. TACC		October	November	December
2019/20	Catch per Month (kg)	69,768	45,685	61,407
	Cumulative % TACC caught	6.7%	11.1%	16.9%
2018/19	Catch per Month (kg)	69,011	66,970	44,109
	Cumulative % TACC caught	6.3%	12.4%	16.4%
2017/18	Catch per Month (kg)	69,878	64,664	67,368
	Cumulative % TACC caught	4.8%	9.3%	14%

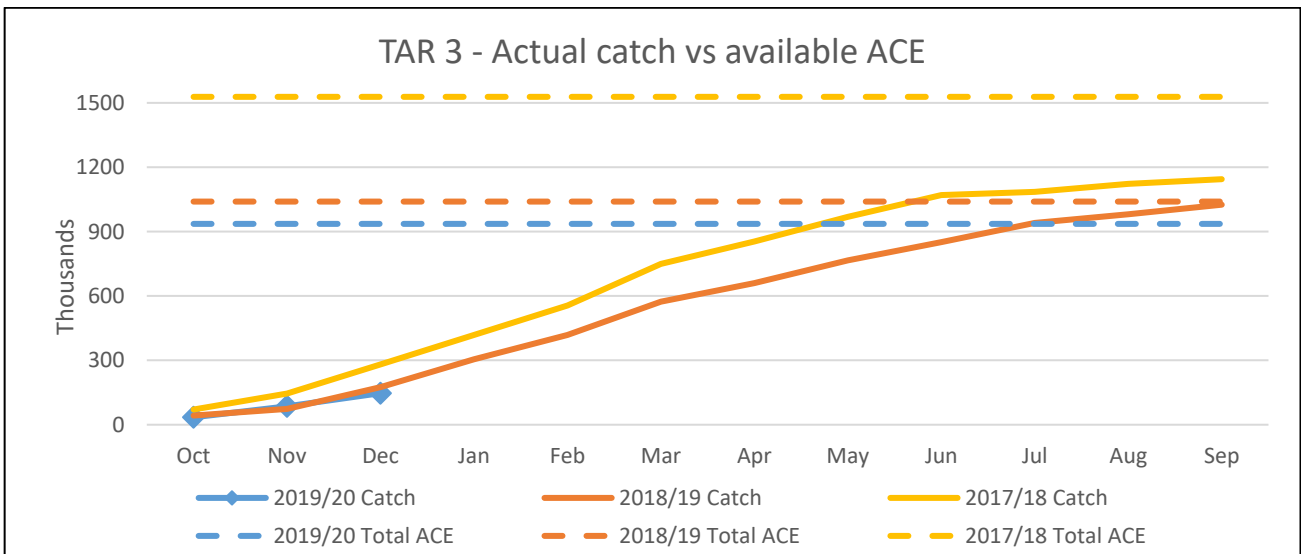


TAR 2 - Actual catch vs. TACC		October	November	December
2019/20	Catch per Month (kg)	111,271	150,108	123,678
	Cumulative % TACC caught	8.2%	19.4%	28.5%
2018/19	Catch per Month (kg)	178,778	181,388	128,476
	Cumulative % TACC caught	11.9%	24%	32.6%
2017/18	Catch per Month (kg)	216,670	217,854	165,361
	Cumulative % TACC caught	12.1%	24.2%	33.4%

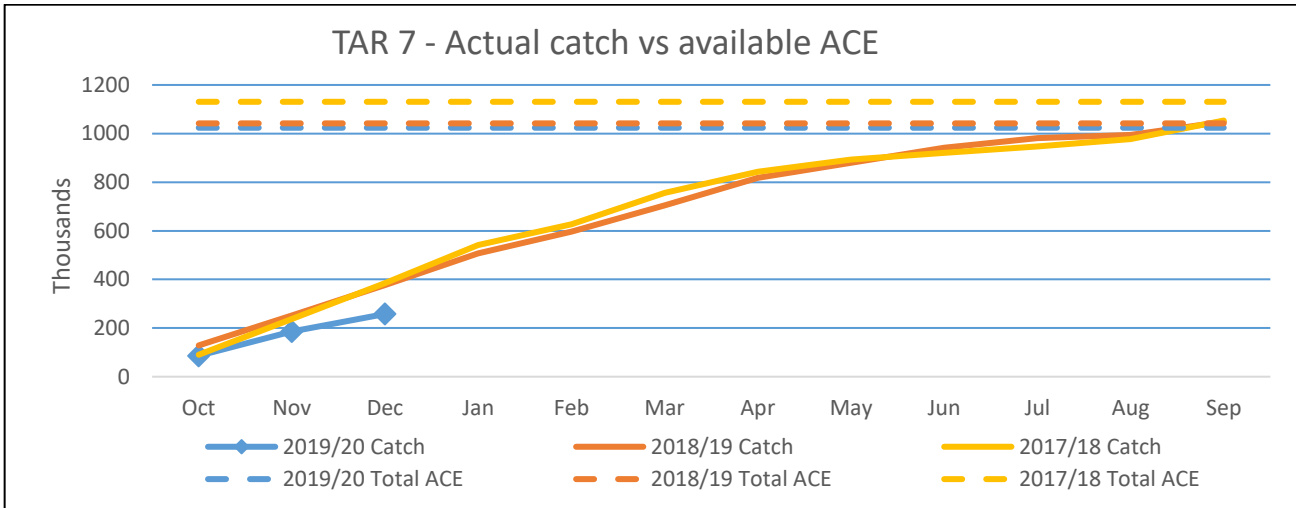
² ACE is the right to catch a certain amount of a fish stock during the fishing year. For most stocks, if a fisher doesn't catch their full ACE amount during the fishing year, they will get a certain amount of it issued to them the following year – this is called an underfishing allocation. Therefore it is possible that the 'available' ACE for a fish stock could exceed the TACC in a given fishing year.



TAR 3 - Actual catch vs. TACC		October	November	December
2019/20	Catch per Month (kg)	34,686	50,655	61,718
	Cumulative % TACC caught	3.7%	9.1%	15.7%
2018/19	Catch per Month (kg)	42,688	30,314	102,739
	Cumulative % TACC caught	4.1%	7.0%	16.9%
2017/18	Catch per Month (kg)	70,824	74,986	134,520
	Cumulative % TACC caught	5.0 %	10.4%	20.0%

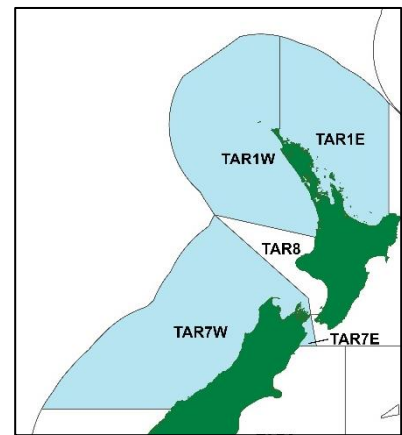


TAR 7 - Actual catch vs. TACC		October	November	December
2019/20	Catch per Month (kg)	86,255	99,122	72,518
	Cumulative % TACC caught	8.4%	18.1%	25.2%
2018/19	Catch per Month (kg)	128,671	123,730	125,029
	Cumulative % TACC caught	12.3%	24.2%	36.2%
2017/18	Catch per Month (kg)	90,300	147,193	237,708
	Cumulative % TACC caught	8.3%	21.8%	35.4%



5. Catch Spreading

The East Coast tarakihi stock includes the eastern portions of both TAR 1 and TAR 7 (TAR 1E and TAR 7E). The catch spreading measures relate to the division of catch within these two Quota Management Areas (QMAs)³. Industry has implemented voluntary catch spreading within these QMAs to:



- Restrict the take from each of the sub QMAs to prevent the entire TACC being taken out of the East Coast portion of TAR 1E and TAR 7E; and
- Ensure that the TACC reductions are effectively aimed at increasing the East Coast stock.

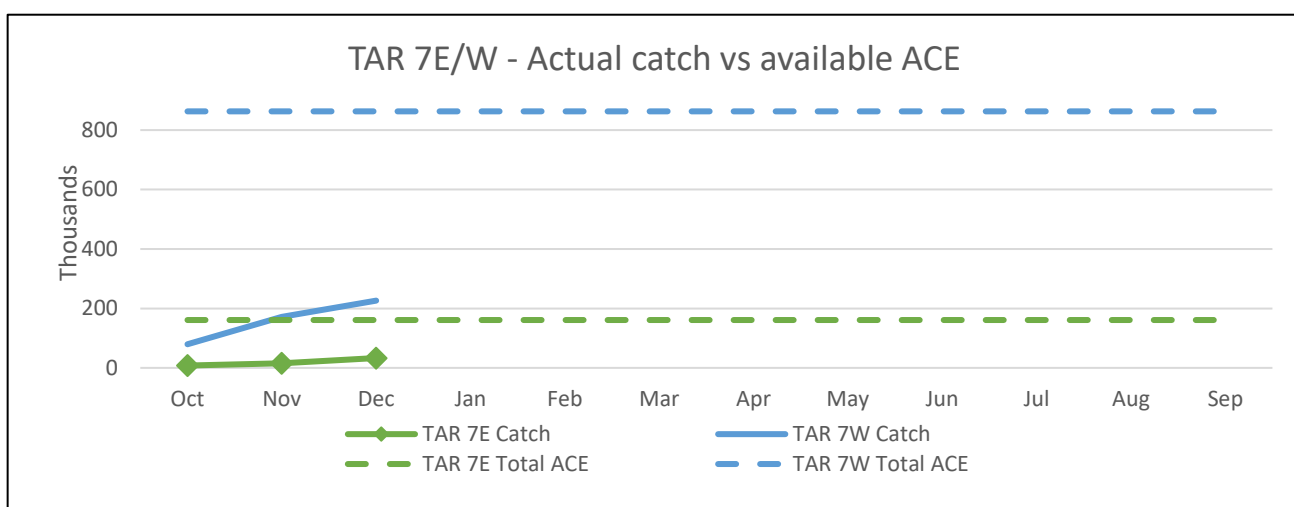
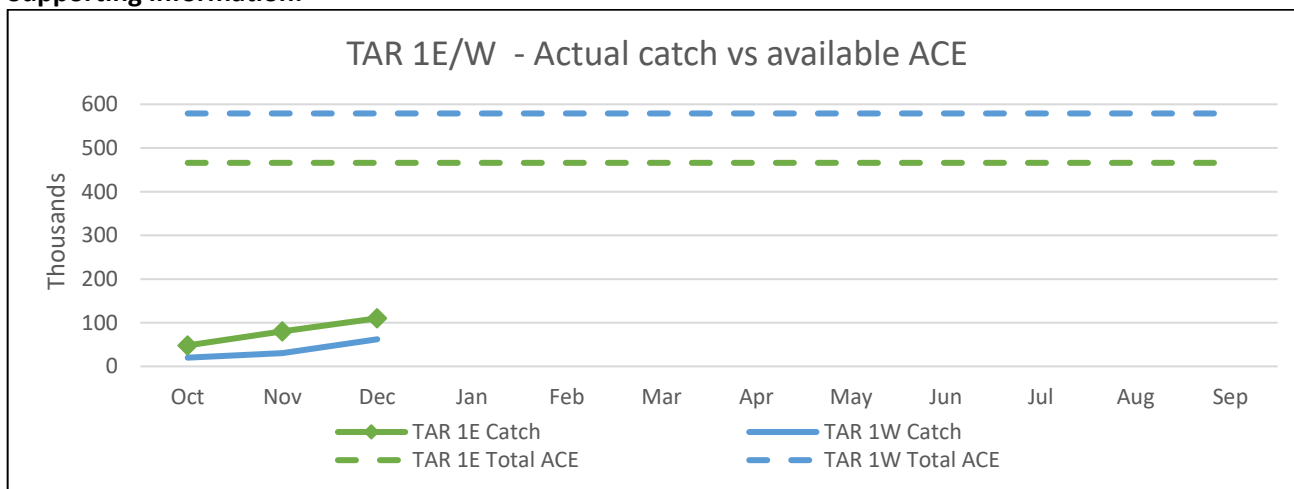
	Total ACE (tonnes) 2019/20	Total Eastern ACE (tonnes) available 2019/20	Eastern sub-area % ACE caught in the first quarter ⁴	Total Western ACE (tonnes) available 2019/20	Western sub-area % ACE caught in the first quarter ⁴
TAR 1	1,045	493	23.6%	552	10.7%
TAR 7	1,024	161	20.6%	863	26.2%

Key Performance Indicator (KPI):	1 Oct – 31 Dec	Fishing year
TAR 1		
90% of quota shares sign to voluntary split east/west for TAR 1	●	●
80% adherence to providing east/west catch reports for TAR 1 in line with East/West split arrangements	●	●
TAR 7		
90% of quota shares sign to voluntary split east/west for TAR 7	●	●
80% adherence to providing east/west catch reports for TAR 7 in line with East/West split arrangements	●	●

³ TACC is usually for a single stock across an entire QMA. However, in the case of TAR 1 and TAR 7, the geographical area of these QMAs include both the West Coast tarakihi stock (TAR 1W and TAR 7W) and the East Coast stock (TAR 1E and TAR 7E).

⁴ First quarter of the fishing year represents 1 October 2019 to 31 December 2019.

Supporting information:



6. Reporting undersized tarakihi

Reducing catch of undersize tarakihi (sub-MLS TAR) ensures that a greater portion of the juvenile tarakihi remain in the fishery and subsequently contribute to a faster rebuild. Recording information on undersize tarakihi catch is essential to develop effective selectivity measures, such as; mesh size, orientation, move on rules, and spatial and temporal management measures.

Key Performance Indicator (KPI)	1 Oct – 31 Dec	Fishing year
100% compliance with undersize tarakihi reporting	●	●

Supporting information:

The table below provides summaries of the number of events that reported landings of TAR 1, 2, 3 or 7, and the proportion of juvenile tarakihi by sub-stock area and method. Data from area-method strata with less than three vessels or clients have been omitted from tables to ensure protect of individual fishers

	Method	Number of events	Number of vessels	Total TAR catch (kg)	Total sub-MLS TAR catch (kg)	% sub-MLS TAR/TAR
TAR 1	Bottom longline	719	37	19593	1	0.01%
	Bottom trawl	859	16	106555	39	0.04%
	Danish seine	141	4	4551	-	-
	Hand line	6	3	64	-	-
	Precision bottom trawl	227	3	23929	16	0.07%
	Set net	23	3	212	-	-
TAR 2	Bottom longline	77	9	1049	-	-
	Bottom trawl	1125	22	364750	164	0.05%
	Set net	7	4	22	-	-
TAR 3	Bottom longline	17	3	45	-	-
	Bottom trawl	463	24	115531	773	0.67%
	Set net	231	7	24870	-	-
	Potting	24	3	388	-	-
TAR 7	Bottom longline	87	8	718	-	-
	Bottom trawl	1386	29	246807	50	0.02%

7. Move on rule

The East Coast tarakihi fishery will be operating move-on rules where high concentrations of undersize tarakihi are found. These are also included in the Regional Management and Monitoring Plans. The move-on rules apply where both of the following triggers are met:

- Tarakihi is greater than 10% of the total catch in any haul; and
- Undersize tarakihi is greater than 15% of the tarakihi catch by weight.

Key Performance Indicator (KPI)	1 Oct – 31 Dec	Fishing year
90% of quota shares as signatories to Regional Management and Monitoring Plans (RMMP)	●	●
90% adherence to move on rule	●	●

Supporting Information:

From the 1 October to 31 December 2019, three vessels triggered the move-on rule in four instances, all of which occurred in TAR 3. One of the three vessels was a signatory of the RMMP. In three out of four incidents, the move-on rule was adhered to and no further action was required.





In one incident, the vessel did not adhere to the move-on rule. The operator of the vessel was contacted and reminded of the Rebuild Plan and voluntary measures in place. Industry will continue to engage with fishers about the Rebuild Plan and implementation of the voluntary measures.

Month	Sub-stock	# move-on rule triggers (events)	Signatory to RMMP (Y/N)	Adherence (Y/N)	Action
Oct 2019	TAR 3	1	Y	Y	NA
Nov 2019	TAR 3	1	N	N	Vessel operator contacted and informed of the voluntary measures in place as a part of the rebuild strategy.
Dec 2019	TAR 3	1	N	Y	NA
		1	N	Y	NA

8. Voluntary closed areas

The Regional Management and Monitoring Plan for TAR 2 includes four voluntary closed areas where high abundance of juvenile tarakihi has been identified (Refer Appendix One). Voluntary compliance by all signatories to not trawl in those areas for tarakihi will be monitored and reported on a quarterly basis.

Due to the dynamic nature of commercial fishing, it is understandable that there may be some minor and unintentional non-adherence early in the fishing year. This is especially relevant in the first quarter as communication around the exact coordinates, and the importance of avoiding these areas, was still occurring. This communication will continue throughout the fishing year to ensure the message is received and understood by all relevant parties.

Key Performance Indicator (KPI)	1 Oct – 31 Dec	Fishing year
90% of quota shares signatories to Regional Management and Monitoring Plans (RMMP)		
100% adherence by signatories		

Supporting information:

Month	Voluntary closed area (Map Number)	# of trawl events crossing buffer zone (on area boundary)	# of trawl events within voluntary closed area	Was sub-MLS TAR caught? (Y/N)	Signatory to RMMP (Y/N)
Oct 2019	1	1*	0	N	N
	2	4*	0	N	N
	3	0	1	N	Y
Nov 2019	1	1*	0	N	N
	4	0	1	N	N

* events reported under the paper based reporting system. Due to the reporting requirements, only the start and end positions of each fishing event are reported, thus there is higher uncertainty around the exact location of these events.

9. Improved selectivity of nets

As a part of an ongoing commitment to gear innovation, the rebuild plan includes a three-phase process to improve selectivity of nets in East Coast tarakihi (“how we fish”). The work on selectivity is applied research to understand what could be an effective way of increasing gear selectivity in order to reduce the amount of juvenile tarakihi caught, and enhance the yield per recruit of tarakihi. This will be achieved by adjusting nets so larger fish are retained while undersize tarakihi is not.

Progress to date:

- Vessel arrangements and charters are being organised.
- Initiation of trials planned by the end of March, depending on logistics.

10. On-board camera project

The purpose of the on-board camera project is to provide verification of the scale of juvenile tarakihi catches in TAR 2 and TAR 3.

Progress to date:

- First milestone of providing ‘proof of concept’ proposal by the end of 2019 calendar year has been met.
- Industry is continuing to develop the project in line with timing expectations.

11. Enhancing Science

11.1. Discard chute work (Sub-Minimum Legal Size)

Fish below minimum legal size are required to be returned to the water, so small tarakihi are rarely measured. This means the age-structure of smaller fish below the minimum legal size is less well known.

A Discard Chute for Automated Measuring ('Discard Chute') will provide an efficient way of measuring all fish on deck, including sub-MLS fish, in an efficient and accurate manner that does not require additional personnel on a vessel, which is ideal for small inshore vessels.

The outcome will be a more well-informed distribution of lengths for the whole size range of tarakihi. This will better inform stock assessments and provide information on future recruitment into the fishery. This can then be used to inform projections of how the fishery is rebuilding.

Progress to date:

- Proposal developed and currently being finalised for submission for research funding by the end of February 2020.
- Proposal includes working with international experts and collaborating with range of government and non-government stakeholders.
- Alignment with selectivity trial work will be attempted.
- Field work to be conducted on vessels will most likely involve training feature recognition software, and determining any issues with the placement of equipment on small vessels.

11.2. East Coast South Island (ECSI) trawl survey

The ECSI trawl survey is considered to provide the most accurate measure of abundance for many South Island inshore species. A long-term time series of fishery-independent relative abundance indices is a useful tool to monitor fish stocks, including tarakihi. This data also supports analyses of commercial catch per unit effort (CPUE) as an input into stock assessments for these stocks.

In addition, surveys provide early indications of year-class strength, changes in maturity-at-age, growth and mortality. The information collected provides indications of any potential changes to the productivity of the stock that should be considered when making management decisions.

Progress to date:

- The latest ECSI trawl survey was conducted in 2018, with the next survey scheduled for October 2020. The timing of this survey will provide the most recent survey data to input into the stock assessment.

11.3. Catch sampling

The stock assessment is strongly informed by the age composition data from the commercial fishery catch sampling as it informs stock structure and provides information on cohort and recruitment strength. NIWA, contracted by MPI, is conducting a two-year catch sampling project to obtain this information.

Progress to date:

- Current catch sampling has been conducted since October 2018, and will be completed by the end of this fishing year (30 September 2020).
- Results will be included in the new stock assessment for tarakihi.

11.4. Genetic research

The objective of the genetic research is to better understand the connectivity of tarakihi through genetics in order to determine the structure of the New Zealand tarakihi stock.

Progress to date:

- 1,400 specimens from 19 regions, including 60 fish from Australia and 40 king tarakihi have been collected. The samples were processed to collect length, weight and sex data.
- Analysis is currently underway and results are pending.

Appendix 1 – Voluntary Closed Areas

