



Fisheries New Zealand

Tini a Tangaroa

The Eastern Tarakihi Management Strategy and Rebuild Plan – Progress Report

Quarterly Report: 1 January – 31 March 2020

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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 industry progress towards 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	
		2 nd 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 be used to 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	
		2 nd 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 Jan 2020 – 31 March 2020

3. Regional Monitoring and Management Plans (RMMP)

Regional management and monitoring plans 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 Jan – 31 Mar 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 allowable 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	4,679	4,355

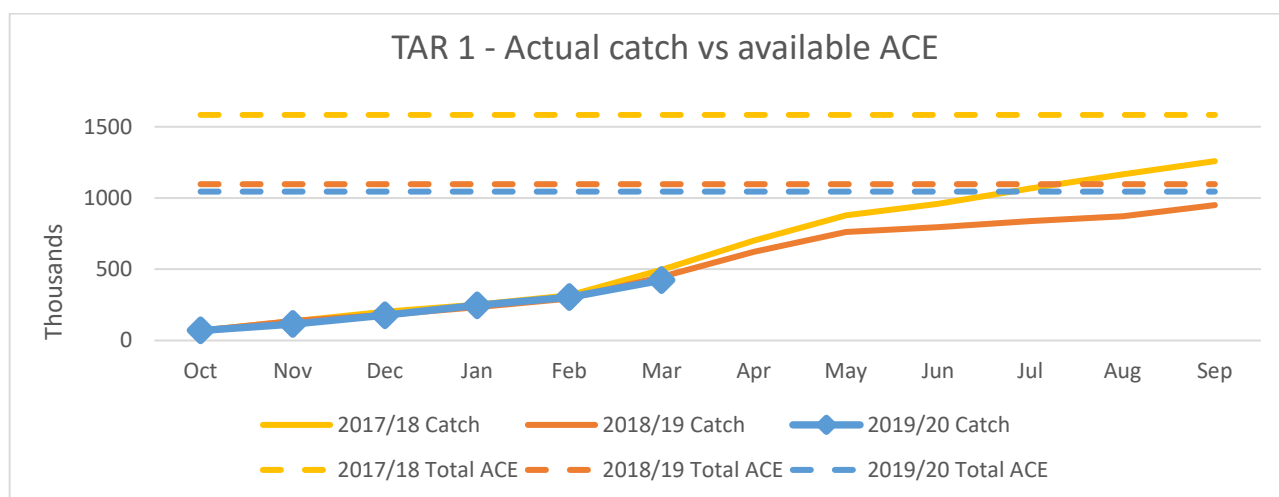
¹ TACC is the quantity of each fish stock that the commercial fishing industry can catch in a given year.

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 Jan – 31 March 2020	Fishing year
Fish within the allocated ACE	●	●

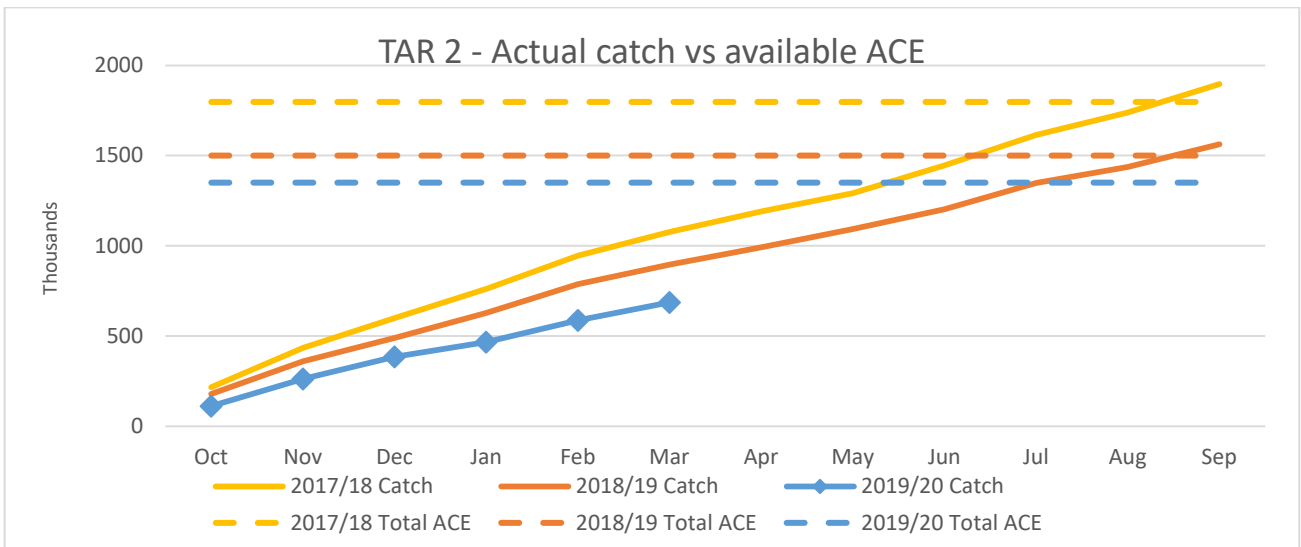
Supporting Information:

TAR 1 - Actual catch vs. TACC		January '20	February '20	March '20
2019/20	Catch per Month (kg)	69,547	57,435	118,696
	Cumulative % TACC caught	23.6%	29.1%	40.4%
2018/19	Catch per Month (kg)	53,281	60,328	154,392
	Cumulative % TACC caught	21.3%	26.8%	40.8%
2017/18	Catch per Month (kg)	49,721	65,703	178,317
	Cumulative % TACC caught	17.4%	21.9%	34.2%

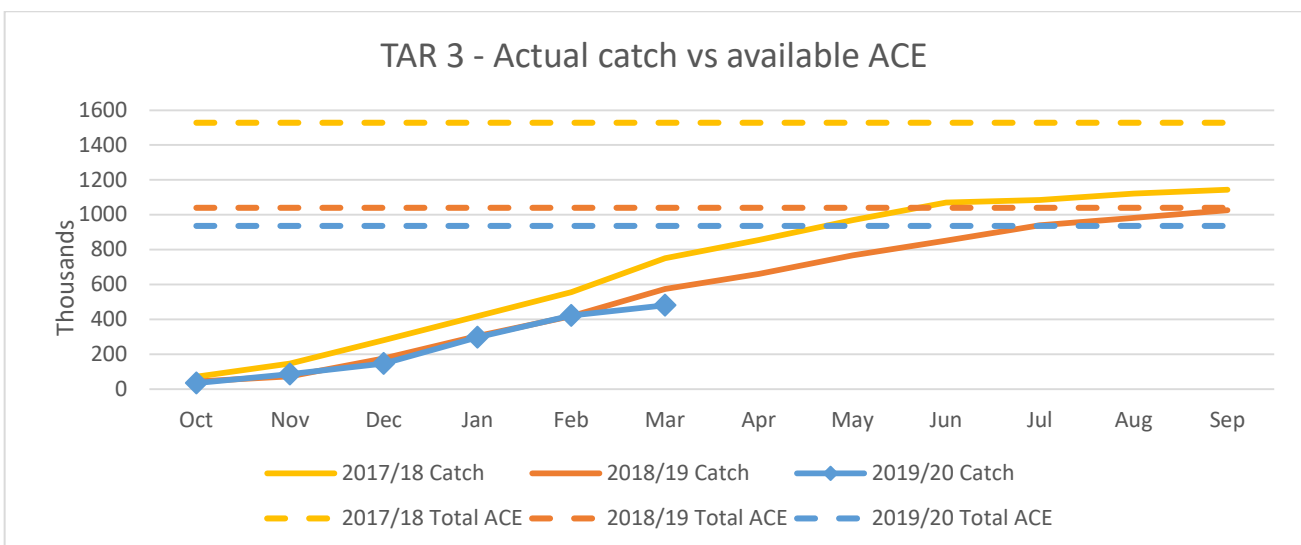


² ACE is the right to catch a certain amount of a fish stock during the fishing year. For most stocks, if a fisher doesn't catch their full ACE amount during the fishing year, they will get a certain amount of it issued to them the following year – this is called an under fishing allocation. Therefore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

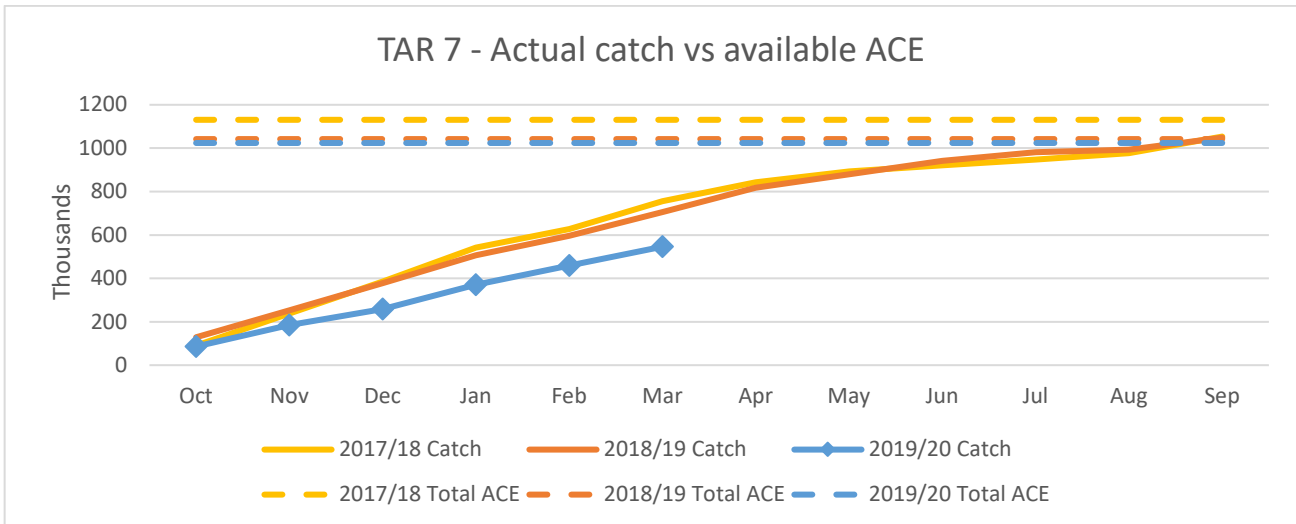
TAR 2 - Actual catch vs. TACC		January '20	February '20	March '20
2019/20	Catch per Month (kg)	81,318	120,513	98,651
	Cumulative % TACC caught	44.6%	56.2%	65.6%
2018/19	Catch per Month (kg)	138,196	160,695	107,347
	Cumulative % TACC caught	57.1%	71.8%	81.6%
2017/18	Catch per Month (kg)	161,134	183,680	131,995
	Cumulative % TACC caught	52.6%	65.3%	74.4%



TAR 3 - Actual catch vs. TACC		January '20	February '20	March '20
2019/20	Catch per Month (kg)	149,776	125,350	57,957
	Cumulative % TACC caught	31.7%	45.1%	51.3%
2018/19	Catch per Month (kg)	128,934	114,176	155,281
	Cumulative % TACC caught	29.3%	40.3%	55.2%
2017/18	Catch per Month (kg)	138,032	137,143	194,613
	Cumulative % TACC caught	29.8%	39.6%	53.5%



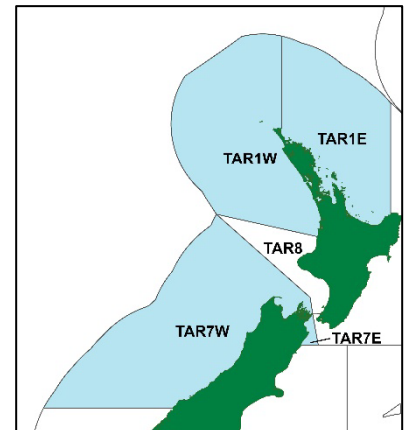
TAR 7 - Actual catch vs. TACC		January '20	February '20	March '20
2019/20	Catch per Month (kg)	112,300	88,444	87,440
	Cumulative % TACC caught	36.2%	44.8%	53.3%
2018/19	Catch per Month (kg)	129,661	89,661	108,452
	Cumulative % TACC caught	48.7%	57.3%	67.7%
2017/18	Catch per Month (kg)	157,139	85,460	128,229
	Cumulative % TACC caught	49.8%	57.6%	69.4%



5. Catch Spreading

The East Coast tarakihi stock includes the eastern portions of both TAR 1 and TAR 7 (referred to as 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 a disproportionate amount of the 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.



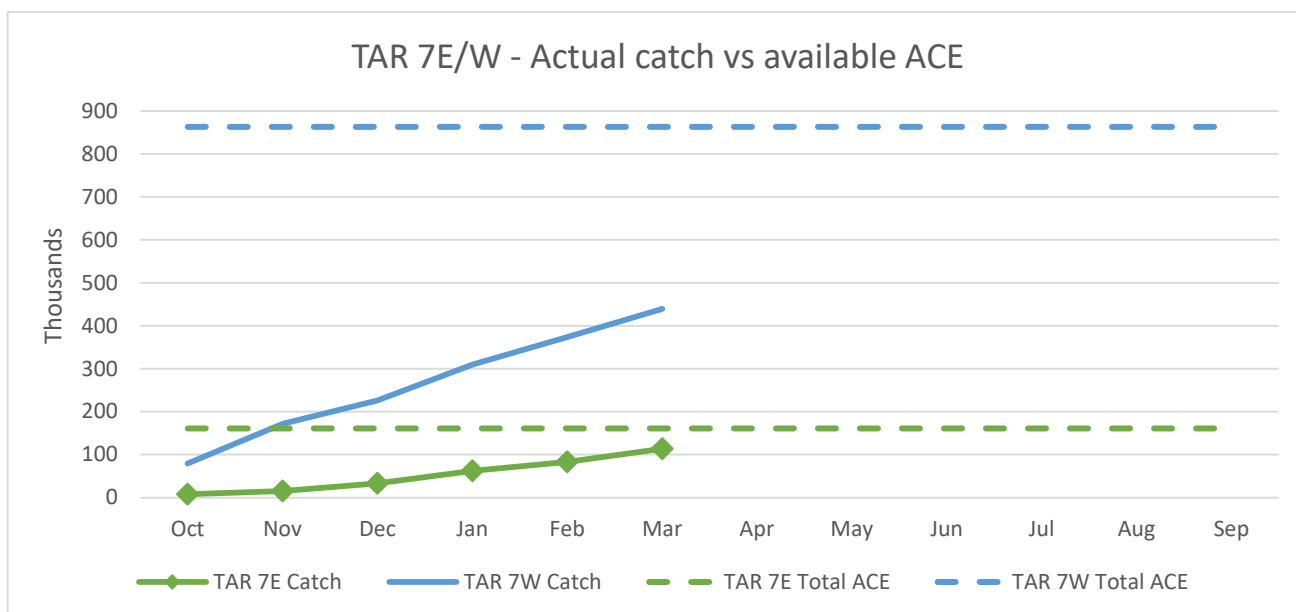
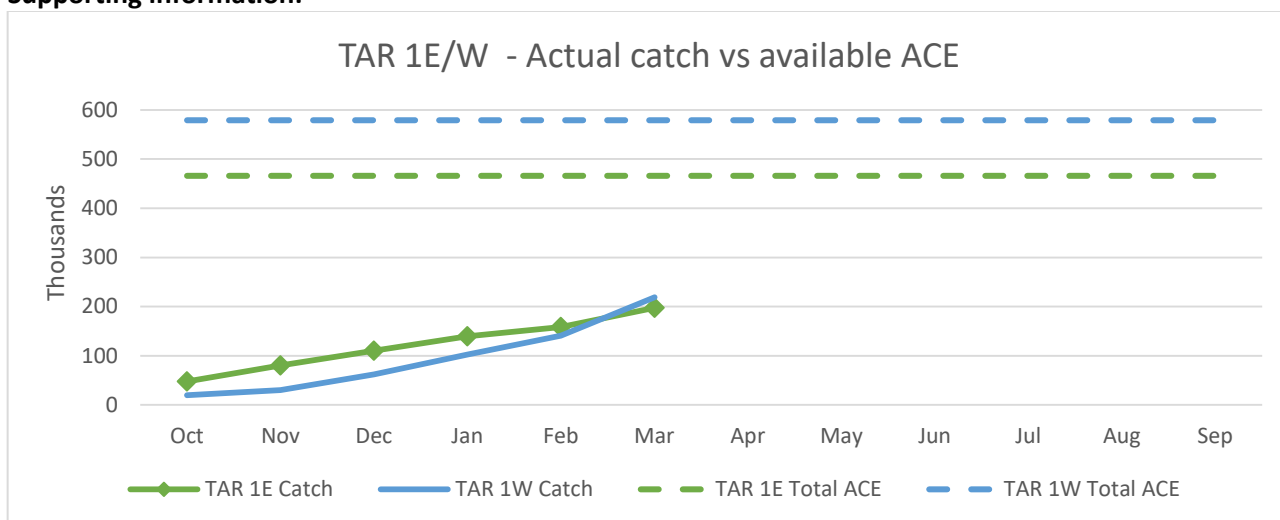
	Total ACE (tonnes) 2019/20	Total Eastern ACE (tonnes) available 2019/20	Eastern sub-area % cumulative ACE caught at the end of second quarter ⁴	Total Western ACE (tonnes) available 2019/20	Western sub-area % cumulative ACE caught at the end of second quarter
TAR 1	1,045	493	42.3%	552	37.8%
TAR 7	1,024	161	70.5%	863	50.9%

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 From 1 October 2019 to 31 March 2020.



Key Performance Indicator (KPI):	1 Jan – 31 Mar 2020	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	●	●

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 Jan – 31 Mar	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 privacy 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	736	35	26,063	6	0.02%
	Bottom trawl	890	19	17,4985	31	0.02%
	Seine (all)	92	4	1,875	-	-
	Set net	15	3	176	-	-
TAR 2	Bottom longline	35	5	282	-	-
	Bottom trawl	771	16	277,174	180	0.06%
	Set net	30	3	704	-	-
TAR 3	Bottom trawl	925	29	224,111	1,327	0.6%
	Set net	596	9	96,720	6	0.01%
	Potting	146	10	3,016	54	1.8%
TAR 7	Bottom longline	191	9	1,365	-	-
	Bottom trawl	1,103	23	266,655	57	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 Jan – 31 Mar	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 January to 31 March 2019, two vessels triggered the move-on rule, both of which occurred in TAR 3. One of the two vessels was a signatory of the RMMP. The move-on rule was adhered to on both occasions and no further action was required. 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
February 2020	TAR 3	1	Y	Y	NA
March 2020	TAR 3	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.

All non-adherence that occurred in this quarter are considered to represent minor incidents, as the events were either along the edge of, or slightly crossed the corner of a closed area, with majority of each tow conducted outside of the area. Communication will continue throughout the fishing year to ensure the importance of avoiding these areas is understood by all relevant parties. This includes phone calls to operators to let them know when they have breached a voluntary closed area.

Key Performance Indicator (KPI)	1 Jan – 1 Mar	Fishing year
90% of quota shares signatories to Regional Management and Monitoring Plans (RMMP) in TAR 2		
100% adherence by signatories		

Supporting information:

Month	Voluntary closed area (Map Number)	# of trawl events crossing/within voluntary closed area	Was sub-MLS TAR caught? (Y/N)	Signatory to RMMP (Y/N)
January 2020	3	1	N	Y
February 2020	1	2	Y ⁵	N
	2	2	Y	N
March 2020	1	1	Y	N
	2	2	Y	N

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 are not.

Progress to date:

- At-sea trialling schedules have been amended to ensure the broad catch of the tarakihi size range needed to successfully complete a selectivity trial. .
- The 2019/20 selectivity trial plan has been provided to the Minister and FNZ.

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:

- Minister responded to industry proof of concept proposal on 9 March 2020.
- Industry progressing this work and are working closely with FNZ on the project approach.

⁵ Only 1 of the 2 events caught Sub-MLS tarakihi

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 being finalised for submission for research funding by the end of May 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 2021. The timing of this survey has been delayed due to COVID-19.

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. There were delays to this project caused by COVID-19 employment restrictions. Sampling will continue once the COVID-19 restrictions are lifted.
- 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

