



Proposal for an in-season increase to the Total Allowable Catch for Flatfish 3

MPI Discussion Paper No. 2016/14

Prepared for consultation by the Ministry for Primary Industries

ISBN No: 978-1-77665-229-7 (online)

ISSN No: ISSN 2253-3907 (online)

April 2016

Contents		Page
2	Executive Summary	2
3	Purpose	3
2.1	Need for Action	3
2.2	Management Approach	3
4	Background Information	5
4.1	Biological Characteristics of FLA 3	5
4.2	Commercial Fishery	5
4.3	Recreational Fishery	6
4.4	Māori Customary Fishery	6
4.5	Other Sources of Fishing-Related Mortality	7
4.6	Previous Review	7
4.7	Science Information	7
5	Legal Considerations	8
5.1	Setting Management Measures	8
5.2	Further Considerations	8
6	Proposed Response	9
6.1	Option 1 (status quo)	9
6.2	Option 2 (preferred option)	9
7	Other Matters	70
7.1	Future Management Considerations	Error! Bookmark not defined.0
8	Conclusion	10

1 Submission Information

The Ministry for Primary Industries (MPI) welcomes written submissions on any or all of the proposals contained in the Consultation Document. All written submissions must be received by MPI no later than 5pm on Monday 2 May 2016.

Written submissions should be sent directly to:

Inshore Fisheries Management
Ministry for Primary Industries
P O Box 2526
Wellington 6011

or emailed to FMsubmissions@mpi.govt.nz

1.1 OFFICIAL INFORMATION ACT 1982

All submissions are subject to the Official Information Act and can be released (along with personal details of the submitter) under the Act. If you have specific reasons for wanting to have your submission or personal details withheld, please set out your reasons in the submission. MPI will consider those reasons when making any assessment for the release of the submission if requested under the Official Information Act.

Flatfish 3 (FLA 3)

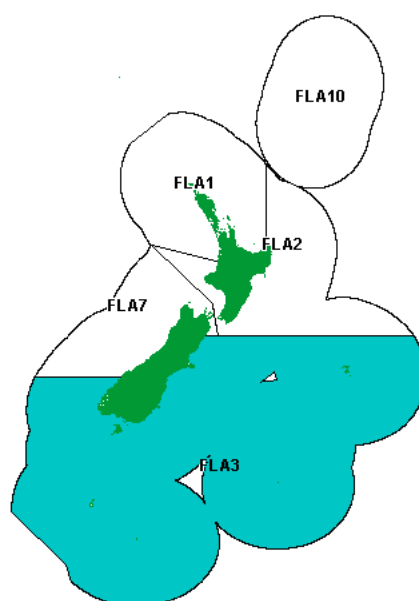


Figure 1: Quota Management Areas (QMAs) for flatfish (FLA) stocks. FLA 3 is indicated by shading.

2 Executive Summary

The Ministry for Primary Industries (MPI) is seeking tangata whenua and stakeholder information and views on a proposal to change the management settings for flatfish in FLA 3, ¹(see Figure 1) for the remainder of the 2015/16 fishing year. FLA 3 is one of a limited number of stocks whose TAC can be adjusted during a fishing year in response to increases in abundance.

The current TAC, total allowable commercial catch (TACC) and allowances for FLA 3 are shown as *status quo* in Table 1. These are commonly referred to as “baseline settings” because of the provisions to make increases for the FLA 3 TAC within a fishing year.

Table 1: TAC, TACC and allowances for FLA 3

	Total Allowable Catch (t)	Total Allowable Commercial Catch (t)	Annual Catch Entitlement ² under s68 (t)	Allowances		
				Māori Customary (t)	Recreational (t)	Other sources of fishing-related mortality (t)
Option 1 (<i>Status Quo</i>)	1617	1430	0	5	150	32
Option 2	1867	1430	220	6	173	38

¹ FLA 3 comprises: yellow-belly flounder, *Rhombosolea leporina*; sand flounder, *Rhombosolea plebeia*; black flounder, *Rhombosolea retiaria*; greenback flounder, *Rhombosolea tapirina*; lemon sole, *Pelotretis flavilatus*; New Zealand sole, *Peltorhamphus novaezeelandiae*; brill, *Colostium guntheri*; and turbot, *Colostium nudipinnis*.

² Annual Catch Entitlement is used for balancing commercial catch under the Quota Management System

MPI proposes two initial options for discussion. Option 1 is to make no changes to the *status quo*. The commercial fishing sector is the most constrained by the baseline settings, and therefore the most impacted by this option. Option 2 is to increase the TAC and allowances, as outlined in Table 1, and to create additional “in-season” Annual Catch Entitlement (ACE) to provide for increased utilisation until 30 September 2016, when settings would return to the baseline.

The proposed increases are based on a scientifically reviewed management procedure that is updated each year with data from the commercial fishery. The management procedure is designed to inform in-season TAC adjustments and to estimate a commercial catch level for the fishing year that maintains abundance at or above a sustainable level.

Although the management procedure relies on data from the commercial fishery, MPI considers that it is reasonable to assume that the output reflects the increased overall abundance of FLA 3 and greater availability to all fishing sectors.

MPI is seeking tangata whenua and stakeholder information and views on the proposed options to support the development of final advice for decision by the Minister for Primary Industries.

3 Purpose

3.1 NEED FOR ACTION

The FLA 3 stock is managed to recognise its annual variability with an agreed procedure for estimating the in-season abundance and sustainable catch. A scientific assessment of the stock in early 2016 indicated an increase in flatfish abundance that could support additional commercial catch of 220 tonnes above the baseline setting.

MPI considers that the abundance in FLA 3 may also result in additional fishing and catch by other sectors and this should be considered in any decisions.

3.2 MANAGEMENT APPROACH

The “flatfish complex” of eight species³ is managed together under a single stock. This approach provides flexibility for fishers, as the abundance of different species within the complex can vary from year to year.

The annual TAC for FLA 3 can be increased within a fishing year under s 13(7) of the Fisheries Act 1996 (the Act) as the stock is included on Schedule 2 of the Act and recognised to have high inter-annual variability in abundance. The management approach is designed to enable responsiveness to increases to the overall abundance of flatfish while maintaining a baseline setting for stock sustainability over the longer term.

Key indicators used to monitor and inform management of FLA 3 include catch per unit effort (CPUE) indices from the commercial reporting of sand flounder, lemon sole and New Zealand sole (three of the species in the FLA 3 complex).

³ FLA 3 comprises: yellow-belly flounder, *Rhombosolea leporina*; sand flounder, *Rhombosolea plebeia*; black flounder, *Rhombosolea retiaria*; greenback flounder, *Rhombosolea tapirina*; lemon sole, *Pelotretis flavilatus*; New Zealand sole, *Peltorhamphus novaezeelandiae*; brill, *Colostium guntheri*; and turbot, *Colostium nudipinnis*.

Since 2010, a management procedure⁴ has been updated annually to inform decisions on whether to make in-season adjustments to the FLA 3 TAC. This management procedure was reviewed and updated by the Working Group in 2015. The in-season procedure is based on achieving an agreed target exploitation rate (a fixed proportion of abundance) that maintains abundance at or above a sustainable level. The procedure predicts the catch for each fishing year based on information on relative abundance (i.e. standardised CPUE) from the first two months of the fishing year.

The outputs from the management procedure and other relevant information are discussed further in the background section below.

4 Background Information

4.1 BIOLOGICAL CHARACTERISTICS OF FLA 3

Flatfish abundance is highly variable, and the species that make up the stock have different biological characteristics. Some species (e.g. soles and flounder) are fast-growing and short-lived, generally only surviving to 3-4 years of age, with very few reaching 5-6 years. Others, such as brill and turbot, are longer lived, reaching a maximum age of 21 years and 16 years respectively.⁵ Juvenile survival of all species is highly variable, and adult mortality is high. Nonetheless, fecundity is high in FLA 3 species, for example from 0.2 million to over 1 million eggs in sand flounders.

The variation in biological characteristics means that an in-season increase in the TAC for FLA 3 is likely to have different impacts on each of the eight different species that make up the FLA 3 stock complex – i.e. there will be more risk to the longer lived brill and turbot from an in-season increase and less risk to the shorter lived soles. These risks should be considered in any decision on whether and by how much, to increase the TAC.

4.2 COMMERCIAL FISHERY

Much of the catch in FLA 3 is targeted (between 85% and 97%). Around 95% of targeted FLA 3 landings are taken by bottom trawl, 3% are taken by set net and less than 1% by Danish seine. The majority of trawling occurs on the open coast from Pegasus Bay south to Te Waewae Bay. Danish seining occurs almost exclusively off Lyttleton. Peak catches in the trawl fishery occur in spring to autumn for most of the areas within FLA 3.

Reported commercial landings from FLA 3 in the last five years have varied between a low since QMS introduction of 1027 tonnes in 2010/11 to catches of approximately 1500 tonnes in 2011/12 and 2012/13. Historically catches have varied from year to year, and at times exceeded 2000 tonne. Peaks of 2573 tonnes and 2458 tonnes occurred in 1996/97 and 1988/89, respectively.

⁴ A management procedure in this context is a set of agreed science-based decision rules to inform advice on the adjustment of current management measures.

⁵ Stevens DW, Francis MP, Shearer PJ, McPhee RP, Hickman RW, Tait M (2001) Age and growth of brill (*Colistium guntheri*) and turbot (*C. nudipinnis*) from the west coast South Island. Final research report for Ministry of Fisheries research project FAL2001/01. 35 p.

The main associated bycatch is usually comprised of large quantities of red cod and lesser amounts of barracouta, skate, elephant fish, giant stargazer, gurnard, spiny dogfish and tarakihi.

Flatfish is only a significant bycatch when trawling for red cod. Flatfish is a minor bycatch of other targeted species, e.g. elephant fish, hāpuku and bass, ling, red cod, red gurnard, rig, school shark, sea perch, and tarakihi.

Anecdotal information suggests that catches of sand flounder are currently better in the northern part of FLA 3 – around Timaru. Commercial fishers have reported high abundance of yellow-belly founders in Lake Ellesmere. Commercial landing data provides support for the anecdotal information about regional variation in abundance. The data illustrates that there have been historically higher landings in the southern part of FLA 3 (mainly the Otago and Southland coastal areas), although the north-south distribution of catch has fluctuated from year-to-year. The fluctuation may reflect the natural seasonal variability of flatfish.

Anecdotal information is in-line with the most recent CPUE index for sand flounder, which is well above the long term mean, while lemon sole is near the long term mean, with New Zealand sole below it.

MPI has recently clarified the reporting obligations which require individual flatfish species codes to be reported in the Catch Effort section of forms. Obtaining catch effort data by species rather than a generic “flatfish” figure is important because the data is used to monitor all the species that make up the stock. Reporting by species will assist with the functioning of the management procedure and help MPI to better assess the abundance of individual species within the complex.

4.3 RECREATIONAL FISHERY

Flatfish is an important recreational fish species. Important recreational fisheries for sand, black and yellow-belly flounder occur in most estuaries, coastal lakes and coastal inlets throughout the South Island, including the east coast harbours and estuaries, shallow bays, and Lake Ellesmere. The main methods are set netting, drag netting, and spearing.

There is a minimum legal size for flatfish (except for sand flounders) of 25 cm. For sand flounders, the minimum legal size is 23 cm. There is a minimum set net mesh size (100mm) for flatfish. The maximum daily bag limit is 30 in the FLA 3 area.

The most recent National Panel Survey of recreational fisheries harvests estimated 21.9 tonnes of flatfish were caught by recreational fishers in the FLA 3 management area in the 2011/12 fishing year.⁶ This catch estimate is low compared to the 150 tonne recreational allowance, however, MPI notes that there is uncertainty in using the estimate from 2011/12 to estimate or predict current catches. An updated estimate of recreational catch is expected to be available in 2017 and could inform any setting of the baseline recreational allowance in the future.

In past reviews, some recreational fishers advised that they considered the abundance of some components of FLA 3 was low, especially around some southern estuaries, and as a consequence they were effectively being denied access to the resource. This issue has been compounded by the ban on recreational set nets for open water. The FMA 3 & 5 Recreational

⁶ Wynne-Jones J, Gray A, Hill L, Heinmann A (2014) National Panel Survey of Marine Recreational Fishers 2011-2012: Harvest Estimates. New Zealand Fisheries Assessment Report 2014/67. 139p.

Fishing Forum members still maintain this is the case. Forum members have proposed that recreational fishers be permitted the use of powered recreational trawls to be able to access the deeper sole stocks.

4.4 MĀORI CUSTOMARY FISHERY

Flatfish are important Māori customary species. Information on customary catch is uncertain but MPI has no information to indicate that customary catch has changed significantly over the last few years. Anecdotal information suggests that customary catch is occurring within the recreational daily bag limit of 30 flatfish. In meeting obligations to Māori, MPI is working together with the Te Waka a Māui me ōna Toka Forum (TWAM) to improve customary reporting at all levels.

There is a proposal to increase the customary allowance for FLA 3. The best available information suggests that new settings will provide for both current levels of catch and possible increased customary harvest of flatfish in FLA3. The allowance for customary use is not set to constrain catch, but to reflect levels of current utilisation.

The taiāpure of East Otago, Akaroa Harbour, Te Taumanu o Te Waka a Māui and Oaro-Haumuri, and the mātaihai reserves of Te Waha o te Marangai, Mangamaunu, Oaro, Rapaki Bay, Koukourarata, Te Kaio, Wairewa/Lake Forsyth, Opihi, Waitarakao, Waihao, Moeraki, Puna-wai-Tōriki, Waikawa Harbour/Tuma Toka, Motupōhue, Oreti, Te Whaka a Te Wera, Pikomamaku, Kaihuka, Horomamae and Waitutu are all within the FLA 3 quota management area. MPI notes that the proposals in this paper will not impact on, or be impacted by, these taiāpure and mātaihai reserves. The FLA 3 QMA does overlap two areas covered by section 186B of the Act; but proposals in this paper will not impact or be impacted by these closures.

4.5 OTHER SOURCES OF FISHING-RELATED MORTALITY

There are various potential other sources of fishing-related mortality of FLA 3, but MPI is not able to quantify these precisely. Sources may include discarding to avoid deemed value payments and unseen mortality caused by particular fishing methods. The allowance for other sources of fishing related mortality is currently set at 2.25% of the TACC. MPI has no information to suggest this proportion should be changed.

4.6 PREVIOUS REVIEWS

In the 2007/08 fishing year, the baseline TAC for FLA 3 was reduced from 2893 tonnes to 1617 tonnes. The then Minister of Fisheries noted the annual variability of flatfish abundance and that FLA 3 is on Schedule 2 of the Act. He directed that research be undertaken to develop an in-season increase management procedure by which in-season adjustments could be made to the TAC. In-season increases have occurred three times since then (2008/09, 2009/10, 2012/13).

The most recent changes to the settings for FLA 3 were an in-season TAC increase of 297 tonnes in the 2012/13 fishing year (resulting in a TAC of 1921 tonnes). This was used to generate an additional 297 tonnes of ACE.

4.7 NEW INFORMATION

The FLA 3 management procedure was updated and revised in 2015 (Starr and Kendrick in prep.). The most recent assessments indicate an increasing CPUE index for sand flounder, with lemon sole near the long term mean and New Zealand sole just below the long term mean. There is no information about the abundance of the other individual species in the FLA 3 stock complex, or the specific risks to them of an in-season increase in the TAC.

The management procedure matches the CPUE from the first two months of the fishing year against historical annual catch represented as a regression line. The output of the procedure forecasts the end of season catch to be 1650 tonnes (a 220 tonne increase above the baseline TACC) for the 2015/16 fishing year. This procedure has about a 90% confidence in forecasting an appropriate end of season commercial catch level.

MPI notes there is risk inherent in the accuracy of the procedure and potential risk to some species in the FLA 3 complex from an in-season increase to the TAC. However, MPI considers an in-season increase to be low-risk based on the available information.

5 Legal Considerations

5.1 SETTING MANAGEMENT MEASURES

This paper proposes changes to the in-season settings only. No changes are proposed to the baseline settings. As discussed in the Management Approach section of this document, flatfish (FLA, which includes FLA 3) is on Schedule 2 of the Act. Schedule 2 applies to stocks whose abundance is highly variable from year to year. For any of these stocks, s 13(7) of the Act allows the Minister to increase the TAC within a fishing year. The Minister may do so only after considering information about stock abundance in the current fishing year and after having regard to the matters specified in subsections 13(2), 13(2A) (if applicable) and 13(3) of the Act.

Section 13(2) of the Act specifies requirements for setting a TAC where a reliable estimate of the current biomass (B_{CURRENT}) of the stock and the level of biomass that can produce the maximum sustainable yield (B_{MSY}), is known. Since estimates for B_{CURRENT} and B_{MSY} are not known for FLA 3, s 13(2A)(c) of the Act provides for the Minister to use the best available information to set a TAC that is not inconsistent with the objective of maintaining the stock at or above, or moving the stock towards or above, the B_{MSY} level.

In view of the results of the in-season management procedure, MPI considers that the proposed increase of the in-season TAC for FLA 3 is not inconsistent with the objective of maintaining the stock at or above, or moving towards or above a level that can produce the MSY.

When making a decision concerning the TAC for a stock under section 13(2A), subsection (b) requires the Minister to also have regard to interdependence of stocks, the biological characteristics (discussed above) and any environmental conditions affecting the stock. MPI is unaware of any relevant information on these considerations that may affect the sustainability of FLA 3.

Section 20(4) of the Act does not allow the TACC to be increased in-season if the Minister decides to increase the TAC. Despite this, section 68(1) allows the Minister to create an additional amount of ACE equal to the amount by which he would have increased the TACC. This is provided that TAC is increased in accordance with section 13(7) and that the Minister

considers the matters referred to in section 21(1) which include Maori customary non-commercial fishing interests, recreational interests and other fishing-related mortality.

Any additional ACE generated will be allocated to existing quota owners according to the formula in section 68(2).

5.2 FURTHER CONSIDERATIONS

Due to their low abundance in both the North and South Island, the endemic Hector's dolphin is declared as a threatened species under the provisions of the Marine Mammals Protection Act 1978. The set net and bottom trawl (when targeting flatfish) fisheries have been subject to a range of measures designed to reduce interactions of this fishery with Hector's dolphins. The Plenary report states the current interactions between the FLA 3 fishery with protected species are believed to be low. MPI considers there will be no significant change as any additional fishing effort will be mostly in the bottom trawl fishery which, as a result of the measures that now apply, is considered low risk to dolphins.

6 Proposed Options

6.1 OPTION 1 (*STATUS QUO*)

Option 1 is the status quo and proposes no changes to the TAC, TACC or allowances for customary Māori, recreational or other sources of fishing-related mortality, and no additional ACE generated under s68.

Option 1 would be a departure from the management procedure informed approach that has been in place since 2010 and would signal a more cautious approach to managing FLA 3 for the remainder of the 2015/16 fishing year. As the most recent assessments indicate an increasing CPUE index for sand flounder, with lemon sole near the long term mean and New Zealand sole just below the long term mean, the key driver for changing this approach would be concerns for other species in the flatfish complex, for which there is no indicator available. MPI is not aware of any concerns about the other species or increase in bycatch in the FLA 3 fishery but is exploring ways to improve information for future management.

Relative to the abundance of flatfish in FLA 3, the allowable catch of the commercial fishing sector is the most constrained by the baseline settings, and therefore would be the most impacted by this option.

6.2 OPTION 2 (*PREFERRED OPTION*)

Option 2 proposes:

- The TAC be increased from 1617 t to 1867 t;
- Additional ACE of 220 t to be provided, increasing total ACE for the 2015/16 year from 1430 t to 1650 t (an approximately 15% increase);
- Additional allowance of 1 t and 23 t to be provided to the customary Māori and recreational sectors, respectively, increasing the allowance for customary Māori to 6 t, and for recreational to 173 t; and

- The allowance for other sources of fishing-related mortality be increased from 32 t to 38 t

MPI considers that an in-season increase in the TAC to 1867 tonnes under Option 2 provides for increased utilisation while ensuring long-term sustainability. The proposed in-season increase is based on an accepted peer reviewed analysis.

Option 2 proposes additional ACE be provided under s 68(1) of the Act. The best available information suggests that catches at current levels would be unlikely to cause the stock to decline. MPI considers this risk is low and Option 2 provides for some increased utilisation.

Based on the 2015/16 FLA 3 port price of \$4.07/kg, full commercial utilisation of the fishery under Option 2 could potentially generate an additional \$895,400 of revenue compared to Option 1 (the status quo).

As there is potential for catches to increase for all sectors during periods of increased abundance, MPI considers it reasonable to increase the recreational and Maori customary allowance in proportion to the increase to the commercial ACE (approximately 15%). The proposed increases for the recreational and customary Māori are 23 tonnes and 1 tonne, respectively, above the baseline allowances for the 2015/16 fishing year.

MPI proposes an allowance of other sources of fishing-related mortality of 38 tonnes, pro-rated at 2.25% of the 2015/16 ACE, consistent with its current setting relative to the TACC.

7 Other Matters

7.1 FUTURE MANAGEMENT CONSIDERATIONS

MPI notes that a substantial amount of under caught FLA 3 ACE has been carried forward to the current fishing year. This is provided for under s 67A of the Act. For stocks not listed on Schedule 5A of the Act, at the end of each fishing year, MPI must allocate to ACE holders for the next fishing year the lesser of:

- the difference between the stock's ACE and reported catch from that preceding fishing year; or
- 10% of the amount of the stock's ACE from that preceding fishing year.

Given that the current management procedure uses information about in-season abundance to estimate a full-season sustainable catch limit, MPI considers that providing for the carry-forward of ACE under this provision in the Act is inconsistent with ensuring sustainability. MPI proposes to investigate, in a future specific review process, the relevance of this provision to the management of highly variable stocks.

8 Conclusion

The best available information suggests that current abundance is relatively high and there may be opportunity for increased utilisation from FLA 3, at least in the short-term and that Option 2 would provide this.

MPI is seeking information and views from tangata whenua, fishery stakeholders and other interested parties to inform the review of in-season catch limits for FLA 3.

It is important to note that the Minister has broad discretion in exercising his powers of decision-making. He will make his own independent assessment of the information presented to him by both MPI and stakeholders before making a final decision.