

Fishery Resource Advisory Group (FRAG)

Meeting 3/2018

Friday August 17, 2018

IMAS, Nubeena Crescent Tarooma

Minutes

1. Present:

Members:

Ian Cartwright (Chair), J McKibben, D Lisson, D Hansen, A Brown, B Cobbing, B Ransom, S Crocker, J Huddleston, P Richardson, C Mundy, Jamie McAlister (IMAS), M Bradshaw (DPIPWE), J Freeman (minutes),

Observers:

B Amos, S Larby, N Harris, J Ramsden, T Dermoudy, B Wilson, G Woodham, B Richardson, T Lesser, B Lesser, T Chadwick, M Porteus, R Urquhart, J Franklin,

Apologies:

T Bush, A Gray, R Scanlon, G Forsyth, B Rex,

2. Welcome and opening remarks:

The Chair welcomed members and observers to the third FRAG meeting of 2018. The main purposes of the meeting were outlined; these were to review catches, catch rates and other information for the season to date, gain an overall view of the status of the resource and discuss other matters related to the assessment and, where appropriate, the management of the fishery. It was noted that the TAC recommendation will start to be firmed up at this meeting, and will be based on IMAS data, diver, and other industry input, and the MCDA process.

The Chair acknowledged the presence of observers, including divers, and thanked them for their time. It was emphasised that they are always welcome and their input is appreciated.

3. Adoption of agenda;

The agenda as circulated was agreed with the addition of;

- North East Boundary Change
- PST Testing

4. Minutes of the previous meeting:

Members agreed the minutes of the FRAG meeting held on June 19, 2018, which were accepted as a true and accurate record.

5. Actions Arising from Previous Meeting:

Action 1. Research proposal – augmenting stock recovery within Tasmania’s abalone fishery:

The AIDF Research Project is underway with a report to be tabled at the General meeting in April 2019. Consideration of all options of augmenting stock including Farm reared product, four options will be presented to the Members to vote on: translocation, larval seeding, placement of juveniles and do nothing.

The TACL is keen to get members' views on the use of farm-reared product, given the long-held view there a biosecurity risk associated with farmed abalone being relocated to the wild and that currently the TACL has a policy of no farm reared abalone permitted in Tasmanian waters.

Ongoing

Action 2. Finalise report on size limits and boundary paper:

IMAS noted that the report on size limits has been completed and circulated at AbFAC. This document has been peer reviewed with the scientific evidence suggesting that the LML should be set at $L_{50} + 3$ years. This is an increase over the current $L_{50} + 2$ years and will provide additional protection from overfishing and local depletion. A further peer review of the paper will be undertaken by an independent reviewer. To date comments from the peer review and others sources have been positive, with some minor changes to be made to the text.

Ongoing

Action 3. Workshop to increase the understanding of abalone stakeholders of the science of the proposed size limit policy and the TAC setting process;

ACTION – IMAS (Craig Mundy) will run a workshop at IMAS to increase an understanding of the science of the proposed size limit and the TAC setting process Tuesday September 4, 2018

Ongoing

Action 4. North East Boundary revisions:

The final proposal has been agreed to at several FRAG meetings and at AbFAC; there is a response from Malcolm Budd and Bill Grierson to AbFAC. The following action was agreed at FRAG #2 and at AbFAC.

ACTION:

The FRAG agreed to the following:

1. Blacklip - Relocate eastern Bass Strait Zone blacklip boundary from block 40/41 to block 39/40 with size limit of 110mm
2. Relocate the Northern Zone boundary in block 31A southwards to Cod Bay, north of Georges Rock, size limit 132mm with no increase in TACC.

DPIPWE will commence discussions with internal process and Marine Police etc.

3. Relocate boundary 31A/30C to Red Rocks south of Eddystone, such that the contiguous reef between Eddystone Point and Victoria Rocks falls into 31A.
4. IMAS to draft a revised set of maps outlining the proposed changes.

The DPIPWE response was as follows:

'It has been determined that DPIPWE is to arrange for a compliance review.'

“Response – Agenda Item 8. Meeting 88, 23 July. AbFAC”.

“Boundary Principals

Once established, any adjustment to existing fishery parts or blocks brings with it administrative costs associated with the re-configuration of monitoring platforms used to regulate the fishery and any associated training and education for the regulator and Industry.

1. Fishery Part Change – Bass Strait/Northern Zone – shift to align with block 40A

In summary, administration, compliance and policing costs will be increased. The proposal invites the unlawful taking of fish by intent or mistake and in that context, increases risk to the fishery. The substantial benefits of the proposal to the Crown and Industry would need to be properly quantified for the proposal to proceed to a balanced decision.

2. Fishery Part Change – Northern Zone/Eastern Zone – move block 31B south

In summary, the proposal invites the unlawful taking of fish and in that context increases risk to the fishery. The substantial benefits of the proposal to the Crown and Industry would need to be properly quantified for the proposal to proceed to a balanced decision.

3. Fishery Block Change – Relocate the block boundary south to Red Rocks, so as to include Victoria Rocks Reef.

Administration, compliance and policing costs will be increased. The benefits of the proposal to the Crown and Industry would need to be properly quantified for the proposal to proceed to a balanced decision.

Summary,

On the face of the proposal it seems to be minor boundary adjustment bringing greater access to the fishery. However, a deeper review of the proposal reveals the proposed boundary adjustments are significant in the context of administration, compliance and enforcement. The associated costs and complexity would need to be outweighed by a clear examination and explanations of the benefits of the proposal.”

FRAG Comments;

The industry members of the FRAG strongly disagreed with the view expressed the DPIPWE Manager, Licensing/Compliance/Operational Support, Marine and Rescue Services and Tasmania Police,. Industry considers the risks to be manageable and that the boundary changes to be in force for January 1, 2019. The DPIPWE Fisheries Manager made it clear that if the boundary change as suggested was to go forward then there would need to be clear case made for doing so, given the concerns expressed by Compliance/Marine Police.

Action: Paul and Joey to meet with Malcolm Budd (DPIPWE) and Marine Police to present a case supported by an analysis of likely costs benefit from the proposed NE boundary changes.

Ongoing

Action 8. Provide a draft copy of Harvest Strategy for TACL Website:

Posted On the website for public consultation from 27 August to 28th September

Ongoing

Action 10. Catch update available from DPIPWE monthly:

Dean to write to DPIPWE to wave the 5 diver rule: the value of the fishery outweighs any privacy concerns as the data is important to the industry.

Ongoing

6. Outcomes of FAC #2, July 23 2018 meeting relevant to FRAG:

Nil

7. IMAS presentation of data, fisheries assessment including the MCDA outcomes and additional diver/stakeholder input:

Craig gave the observers an overview of the Harvest Strategy (HS) Summary. Electronic fishery-dependant data and how the data is transposed to a location grid.

Eastern Zone:

IMAS Notes:

- Stock declines in the eastern zone due to multiple factors
 - Overfishing during the 1990's
 - Reduction in fishing grounds by *Centrostephanus*
 - Marine heat wave mortality
 - Marine heat wave sub-lethal effects (growth, reproduction)
 - Storm events (2011, 2016)
- Understanding contribution of these events critical for informing management decisions
 - e.g. Block 16 catch and CPUE declining for many years, but no *Centrostephanus*, and before MHW events?
 - Cost of rebuilding stocks will be significant and require 8 - 10 years of restoration work.
 - Minimising fishing mortality in the short term will increase rate of recovery.
- PST closures north of Cape Pillar limiting information on state of the fishery in those blocks (except 29 and 31).
- Reduced catch targets for blocks north of Cape Pillar needs consideration.
- Block 13 catch rates may be easing.
- CPUE in blocks 17, 20, 21, 29 and 31 improving but catch levels are very low YTD.
 - Block 13 catch overrun of 111 tonnes in 2017 (61 tonnes in 2016) permitted to ease fishing pressure on blocks affected by heat wave and storms.
 - Consecutive catch overruns of this magnitude are unlikely to be sustainable.
 - Catch rates appear to be flattening. IMAS considering need for a smaller catch cap in block 13 for 2019

The data shows the utilisation of the Eastern Zone reef system overall. 18% of reef is giving 50% of fish with 78% being harvested from the remaining 50%. There is an overall improvement in the Eastern Zone over the last two years.

Block 13 – Actaeons, 100t caught, is below target, levelling out fishing well and looking healthy, the catch allocation is not fixed, and will be reviewed when 80% caught.
MCDA score suggests a 10% reduction. There was an overrun in 2016/17 due to allowing the catch to help the areas affected by heat wave events. There was discussion on whether to follow the MCDA or follow the MetaRule objectivity. Some members are suggesting a more cautionary approach.
Divers are reporting positive fishing and are seeing an abundance of juveniles.

Block 14 – stable catch rates, below target. MCDA suggest a reduction of 5t.
Appears to be a bi-annual fishery.

Block 16 – stable catch rate, picking up, too early to make any decisions.

- Block 17 – catch rate improving
- Block 19 – not a lot of catch. MCDA suggests a 15% reduction
- Block 20 – catch rates have improved, MCDA with MetaRule applied
- Block 21 – catch rates are improving, small amount of catch
- Block 22 – 28 closed due to PST – environmental factors and *Centrostephanus*,
- Block 29 – cap reached, catch rates high, positive sign
- Block 30 – closed, not many recruits seen. A different species of PST algae in the mid-East Coast, funding for research of ‘*Alexandrium Tamarense*’ with Southern Rock Lobster, samples from 3 blocks 30A, 24A, and 22C.
- Block 31 – fishing and catch rates ok, there is an abundance of small fish, but is fishing below target the *Centrostephanus* incursion moving down the coast.

FRAG Comments;

The West Australian hatchery reseedling program is successful, but is not going ahead because there is an abundance of *Haliotis Roei* stock.

Discussion on a rebuilding strategy;

1. Build 5 areas to 20t each in the Eastern Zone over 10 years to create a \$20m industry.
2. Leave stock on the bottom from Cape Pillar to Eddystone point: a serious consideration for a faster recovery.
3. Optimism vs conservatism - a reduction of 20% on West Coast – other zones are less robust and to rebuild the resource, leave block 28 for several years to reseed the biomass.

There was discussion about the blocks that are currently closed due to PST and whether or not they should be opened if given the ‘all clear’.

Any MCDA adjustment will be reviewed At FRAG #4. MCDA – would mean a slight reduction in blocks 14 and 16.

IMAS is ramping up activity of establishing juvenile collectors.

The Dive Chair expressed a wish that given the East Coast TACC will be reduced, there should be an undertaking that the TACC will not be reduced further in 2019. This was not agreed.

For the currently closed blocks (PST) it was noted that there is around 8 tonnes left to catch. There was some concern that allowing it all to come off those blocks may not be optimal considering the state of the resource and the upcoming investment in stock rebuilding. Others felt that the catch was low enough not to be concerning. A compromise was reached to allow 8t to come off these blocks, with careful monitoring by both processors and catch reports. The blocks would then be reviewed and a decision taken as to necessary action.

Darvin Hansen expressed i) his disagreement with the 8t being free of specific fishing/reporting requirements etc , and ii) his preference for a structured fishing approach as had been proposed in the previous FAC decision to be recorded.

Western Zone:

IMAS Notes;

- CPUE in blocks 6, 9, 10, and 13 increasing.
- CPUE in blocks 7, 8, and 12 stable.
- CPUE in block 11 declining.

- Fishing at depth in Western Zone Block 13 is increasing, with \approx 30% effort deeper than 11m in 2017. IMAS will recommend holding catch in Block 13 Western Zone at current catch target.

Summary;

Overall improvement in catch and catch rate

Block 6D – catch rates up, plenty of small fish, optimistic with positive signs

Block 7 – improvement,

Block 8 – improvement

Block 9 – improvement, fishing well.

Block 10 – cap nearly reached, catch rates improving, and recommend to close at 120%.

Block 11 – cap nearly reached, catch rates flat, and recommend to close at the cap.

Block 12 – 80% caught, steadily improving

Block 13 – closed, good improvements over 3 years, positive signs, recruitment driven.

FRAG Comments;

Action: Review Blocks 10 and 11 after the next weather pattern and determine management action.

There was discussion on the merits of re-establishing the ‘Central West Zone’ for Blocks 6, 7 & 8; to be discussed further. Darwin to write up a paper to be discussed at AbFAC.

Increasing the size limit on the West Coast from 140mm to 145mm would give a greater buffer, the benefit of a size limit is to spread the load. Any changes are introduced gradually with the expectation to leave a residual egg production biomass.

The attention of the FAC was drawn to an article in the recent ‘Fish Magazine’ – “Western Zone Victoria, prior to the AVG incursion the LML was 120mm and decision was made when the fishery was re-opened the LML would be 130mm allowing additional time to spawn and rebuild the fishery”.

It was noted that the Paua industry in New Zealand has a voluntary size limit of 138mm, the biomass has increased allowing the TACC to be increased, for the benefit of the industry.

Northern Zone:

IMAS Notes

- No fishing in Block 31 to date- status unknown
- No sign of recovery in Block 5 with \approx 12t caught. Expect low levels of recruitment over the next 6-8 years given decreasing CPUE over the past 8 years. Note: LML increase to 129mm.
- Block 6 CPUE stable with \approx 10t caught.
- King Island Block 3 CPUE down sharply from 2017.
- Unusual amount of fishing at depth in Block 3 in early 2016 and 2017 masking the state of this fishery. \approx 35% of fishing effort in 2017 in Block 3 deeper than 15m

Summary;

The catch rates are almost identical with the changes in the zones, the catch is flattening out.

Block 49D – fishing ok reasonable catch rates with 8t caught to date, the fish are large and the size limit is good

Block 5 – catch rate stable, the second increase in the size limit from 129mm to 132mm will be discussed at FRAG #1, 2019

Block 6A/C – fishing well, with 10t caught to date,

Block 1 – there is a large variation in the catch rates, not viable to take a motherboat to this block.

Block 2 – not a lot of fish caught to date

Block 3 – trending down, catch rates are variable

Block 4 - stable

Bass Strait:

IMAS Notes

- CPUE in key blocks 33 and 38 unchanged from 2017.
- Expect CPUE to fall in 33 and 38 after 8 years of catches at the new low LML of 114mm. Reduced recruitment from lower biomass following LML change will begin to influence the fishery (based on 7 to 8 years from biological recruitment to entering the fishery).
- CPUE in Block 49 improving during 2018 - low tonnage taken YTD.

Summary;

Catch has decreased over the last few years, and now includes Blocks 48 & 49.

Block 33 – catch rates are increasing and stable, most recruits entering the fishery were derived from higher biomass periods prior to the size limit reduction. It is expected that recruits to the fishery will decrease over the next 6 to 8 years as a consequence. Diver comments suggested this expectation was consistent with observations in this area.

Block 37 – not a lot of catch to date

Block 38 – *Centrostephanus* is making an impact, catch rates are similar to 2017.

Block 41 – not a lot of catch to date

Block 43 – not a lot of catch to date

Block 48 – not a lot of catch to date

Block 49 A, B & C – 7t caught to date, catch rate ok

Block 51 – no catch to date

Block 53 – variable catch rate

Block 56 – Curtis Island and Monceurs Island are fishing well

Action: Review Block 38 at FRAG #4

Greenlip Zone:

IMAS Notes

- Reverse cap in place for 2018 - and difficult weather through winter.
- Limited fishing YTD except on King Island - CPUE up from 2017.
- Central North - 1.5 of 8 tonnes taken YTD. Catch for this area to be reduced or set to zero for 2019.
- Perkins Bay open but negligible catch YTD.

- Perkins Bay is subject to selective fishing, distorting CPUE trends and status. IMAS will adopt precautionary approach and suggest following Harvest Strategy outcome.
- Sharp decline in Furneaux Group CPUE.

Summary;

Concern at the utilisation of area to catch the cap.

Not a lot of data to allocate any tonnage across the North Coast - 15-18t decrease in TACC 2019

The reverse cap hasn't worked as it was meant to, although the greenlip harvest has been held back to a better fishing period.

Action: TACL to prepare a paper outlining the experience of the reverse cap greenlip fishery and how it may be improved to be distributed before the next meeting to inform discussions

Furneaux Group – a small amount of catch, with catch rates declining, watch carefully

Action: Agenda item to be raised at the next AbFAC - decision on opening the greenlip fishery– the majority of FRAG members agree to open within the next 2 weeks i.e. September 5.

King Island – Catch rates up. North Eastern blocks 38A, B & C closed

King Island – mixed species fishing in this zone which complicates accurate calculation of catch rates

Perkins Bay – a small amount of catch, selective fishing has been occurring over the last 2 years, catch rates are falling.

North East – closed, discussion on when to open.

Central North – a small amount of catch, watch carefully

North West- no catch to date

Harvest Strategy and proposed size limits:

The Minister will review

Centrostephanus and other research issues:

IMAS will be releasing a report on the current state of barrens.

Jon Bryan (Tasmanian Conservation Trust) suggests a broader community based response involving all stakeholders, noting that to date responses have been inadequate. Large Southern Rock Lobster can be of value in insipient barrens over the long term, but cannot alone restore extensive abalone barrens. There is support for a forum for all players to meet and agree on a strategy to work on the issue, industry members are looking for immediate action rather than another 'talk fest'.

Jamie McAlister (IMAS) will be attending the Victorian industry to view the translocation and transects to view the results, and will give an update at FRAG #4.

Other Business:

1. Environmental Monitoring on the Actaeons – IMAS – new salmon leases are required to monitor rocky reefs adjacent to leases. The salmon industry undertake and fund the activity – Caleb to discuss with TASSAL and Wes Ford on how to fund and continue the monitoring. (FRDC)

Monitoring at Okehampton Bay is contracted out and the sub-contractor uses different methods of monitoring.

SMRCA – is fully subscribed, there are no surplus funds. A decision on which is more important to industry, monitoring sediment at the Actaeons or Storm Bay?

Caleb Gardner is to discuss with the Environment Protection Authority (EPA) to understand the complexities involved.

Action; IMAS to present a progress report on monitoring the impact of salmon farming on the Actaeons

Meeting closed 3:40pm

New Actions:

- IMAS (Craig Mundy) will run a workshop to increase an understanding of the science of the proposed size limit and the TAC setting process Tuesday September 4.
- Paul and Joey to meet with Malcolm Budd (DPIPWE) and Marine Police to present a case supported by an analysis of likely costs benefit from the proposed NE boundary changes.
- Blocks 22A – 28B to be re-opened with a cap of 8t with the exception of Blocks, 24C, and 22C which will remain closed for R&D purposes.
- Review blocks 10 and 11 after the next weather pattern and determine management action.
- Review Block 38 at FRAG #4.
- TACL to prepare a paper outlining the experience of the reverse cap and how it may be improved to be distributed before the next meeting to inform discussion.
- Agenda item to be raised at the next AbFAC – decision on opening the greenlip fishery – the majority of FRAG Members agree to open within the next 2 weeks i.e. September 5.
- IMAS to present a progress report on monitoring the impact of salmon farming on the Actaeons.

Action List arising from FRAG #3 2018:

Action	Responsible Member	Task	Progress
1.	Dean Lisson/IMAS	Research proposal – Augmenting stock recovery within Tasmania’s abalone fishery	AIDF project underway Ongoing
2.	IMAS	Finalise report on Size limit and boundary paper	Draft policy completed Further peer review
3	IMAS	Craig Mundy will run a workshop	To increase the understanding of the science of the proposed size limit and the TAC setting process - Tuesday September 4. ongoing
4	DPIPWE/IMAS	North East Boundary revisions	Paul and Joey to meet with Malcolm Budd and Marine Police, to present a case supported by analysis of likely costs benefit from the proposed NE Boundary change Ongoing
5	IMAS	Provide a draft copy of Harvest Strategy for TACL Website	The HS is on the DPIPWE website and open for Public Consultation Ongoing
6	TACL	Catch update monthly	Write to DPIPWE for data waving the 5 diver rule
7	IMAS/TACL	AbFAC – NE Boundary change	List of advantages and disadvantages to present to AbFAC for discussion
8	DPIPWE	East Cost opening with cap of 8T	Blocks 22A – 28B to be re-opened with a cap of 8T except 24C, 22C which will remain closed for research
9	DPIPWE/FRAG	West Coast closure	Review blocks 10 & 11 after the next weather pattern and determine management action
10	FRAG	Review Block 38	At FRAG #4
11	TACL	Reverse Cap	Prepare paper outlining the experience of the reverse cap and how it may be improved to be distributed before the next meeting to inform discussion
12	DPIPWE	AbFAC – greenlip fishery	Decision on opening the greenlip fishery – the majority of frag members agree open on September 5
13	IMAS	Effects of salmon farming on the Actaeons	Progress report on monitoring the impact of salmon farming on the Actaeons

Blocks - Area	TAC 2018	KGs/Unit
Bass Strait Blacklip		
Blocks 32-38 Furneaux Group	42.8	
Blocks 50-56 Bass Strait Islands	27.2	
Blocks 42-46 Central North	7.0	
Total Bass Strait TAC	77.0	26
Central Western Zone		
Blocks 6A-6C Couta Rocks		
Total Central Western Zone TAC	00	
Eastern Zone		
Blocks 13C, -14 E. Actaeons	172.8	
Blocks 14A and 14B. Lower Huon Channel, Huon to Southport Island, inc Dover, Southport	26.6	
Blocks 14C-16 Bruny Island	18.4	
Blocks 17-21 Hobart to Tasman Island inc Nubeena	51.2	
Block 22	3.8	
Blocks 23 and 24 Deep Glen Bay to Triabunna, inc Maria	10.1	
Blocks 25-29A Freycinet and Bicheno	3.5	
Blocks 29B, 29C, 29D and 30A North East	7.2	
Total Eastern Zone TAC	293.4	84
Greenlip		
Blocks 32-38 Furneaux	47.0	
Blocks 1-4 King Island	18.0	
North West not Perkins Bay	13.4	
Block 48A Perkins Bay	21.2	
Blocks 31,39,40 North East	25.5	
Central North	8.0	
Total Greenlip TAC	133.1	38
Northern Zone		
Blocks 5A-5C	31.9	
Blocks 47-48 NW not Block 5	4.5	
Blocks 1-4 King Island	30.0	
Blocks 31B, 39 and 40 North East	48.9	
Total Northern Zone TAC	115.3	28
Western Zone		
Blocks 6D, 7 and 8. Granville Harbour, Sandy Cape	93.0	
Block 9 South of Strahan	84.8	
Blocks 10, 11 and 12A. South West	501.0	
Blocks 12B-13B South Coast	38.0	
Total Western Zone TAC	716.8	205
2018 TAC TOTAL	1335.5t	381kg/unit

Eastern Zone

Block No	Catch 2016	Catch Targ	IMAS 2018	FRAG 2018
13	253	192	121	172.8
14	63.8	33.3	26.6	26.6
15	0.1	0	0	0.0
16	23.6	23	18.4	18.4
17	22.7	10	7.5	7.5
18	0	0	0	0.0
19	3.8	2	1.7	1.7
20	30.8	30	24	24.0
21	17.9	20	18	18.0
22	14.2	20	15	3.8
23	16.8	19.6	14.7	3.7
24	20.2	34.2	25.7	6.4
27	14.8	15.2	11.4	2.9
28	3.4	3	2.2	0.6
29	17.2	20	15	3.8
30	2.8	6	1.5	0.4
31	15	16.2	12.1	3.0
Total	520	444.5	314.9	293.4

Central West Zone

Block No	Catch 2016	Catch Targ	IMAS 2018	FRAG 2018
6	42	35	0	0
Total	42	35	0	0

Western Zone

Block No	Catch 2016	Catch Targ	IMAS 2018	FRAG 2018rev
6	19.3	20	20	23
7	30.9	51	51	54
8	11.5	13	13	16
9	61.5	106	84.8	84.8
10	77.3	80	80	83
11	168	160	160	163
12	297.2	252	252	255
13	34.2	35	35	38
Total	700.1	717	695.8	716.8

Northern Zone

Block No	Catch 2016	Catch Targ	IMAS 2018	FRAG 2018Dev	FRAG 2018
1	8.3	9.6	9.6	9.6	6
2	2.6	0	0	0	0
3	43.9	32	25.6	25.6	20
4	7.7	4	4	4	4
5	56.2	42.5	31.9	31.9	31.9
31	26.1	22.5	22.5	22.5	22.5
39	4.2	5.3	5.3	5.3	5.3
47	0.1	0	0	0	0
48	7.3	6	4.5	4.5	4.5
49	31.8	26.4	21.1	21.1	21.1
Total	188.1	148.3	124.5		115.3

Bass Strait Zone

Block No	Catch 2016	Catch Targ	IMAS 2018	FRAG 2018
32	0.4	1	1.1	1.1
33	20.2	19.9	19.9	19.9
34	0.1	1		1
35	0.1	1		1
36	4.1	2		2
37	1.7	2	2	2
38	18.4	17.6	15.8	15.8
41	0.8	0	0	0
42	1.8	0		0
43	5.2	5	5	5
44	0.4	1		1
45	0.1	1		1
51	11.8	5.5	5.5	5.5
53	9.8	18	20.7	19.7
54		2		2
56		0		0
Total	74.8	77	70	77

Greenlip Zone

Block No	Catch	Catch	IMAS	FRAG
	2016	Targ	2018	2018
Bass Strait	0.2	0.5	0	0
Central	0.1	8	8	8
North	42.5	47	47	47
Furieux	23.8	20	16	18
King Island	34.5	25.5	25.5	25.5
North East	21.4	13.6	13.4	13.4
North West	16.4	21.2	21.2	21.2
Perkins Bay	188.1	140	131.1	133.1
Total				

