Australian Government
Australian Fisheries Management Authority

Great Australian Bight Management Advisory Committee (GABMAC)

Meeting # 1 – February 2020

(Rescheduled December 2019 Meeting)

Final Minutes

Date: 7 February 2020

9:06am – 12:59pm (AEST)

The Chair opened the meeting at 9:06am

Agenda Item 1 – Preliminaries

1.1 Welcome and Introductions

1. Mr Barry Windle (the Chair) welcomed members and invited participants to the meeting and made an Acknowledgement of Country statement; recognising the traditional custodians of the land on which we meet, the Wurundjeri people of the Kulin nation and paying our respect to their Elders past, present and future.

2. The Chair welcomed Dr Robert Gale as the new Economic Member and Ms Anissa Lawrence as the new Environment/Conservation Member.

3. Attendees (see list provided at Attachment A) introduced themselves and outlined their relevant background and experience.

1.2 Declarations of Interest

4. Attendees considered the agenda and discussed items where there were potential conflicts of interest.

5. It was noted that industry members may have a conflict of interest for the following agenda items: Upper Slope Dogfish Management Strategy Review (Agenda Item 3), Orange Roughy (Agenda Item 4) and TAC Recommendations for 2020/21 (Agenda Item 5).

6. Industry members left the room while the remaining members discussed their participation in these agenda items.

7. Recognising their knowledge and ability to contribute to the discussions, the members agreed that it was appropriate for industry members to participate in the discussion, however, they would be asked to leave the room when TAC and Research Catch Allowance recommendations were made.

8. A copy of the Declarations of Interest is provided at Attachment B.

1.3 Adoption of Agenda

9. The MAC agreed to revise the order of the Agenda, prioritising items requiring MAC recommendations.

10. The MAC adopted the revised agenda (Attachment A); and agenda items are numbered as per the revised agenda throughout these minutes.

1.4 Action Items Review

11. The AFMA Member provided the MAC with an update on the status of action items arising from previous GABMAC meetings. The following updates were discussed:

    November 2017 - Action item 1 – Agenda Item 1.4

    AFMA to formally write to the Department of the Environment and Energy to enquire about the granting of WTO accreditation for a period of 10 years.

    The Chair questioned the wording provided for the progress against this item, stating that it conflicted with the wording of the action item itself.

> **Action Item 1**
>
> AFMA to amend the wording provided for the progress against Action item 1 – Agenda Item 1.4 (November 2017) to clearly identify why this item arose and the progress made to date.

12. AFMA keep a record of historical action items, and the MAC suggested making this available to all MAC and RAG members.

> **Action Item 2**
>
> AFMA to circulate the table containing historical action items (GABRAG and GABMAC) to MAC and RAG members.

13. The Chair asked attendees whether there were any other questions relating to action items before moving on to the next agenda item.

14. The list of action items was updated after the meeting (Attachment C). Items that were noted as completed (highlighted green) at the meeting will be removed and an updated list will be provided to the next GABMAC meeting in 2020.

15. The list of action items arising from this meeting is included at Attachment D.

Agenda Item 2 – TAC Recommendations for 2020/21

2.1 Bight Redfish & Deepwater Flathead

16. The MAC reviewed the outcomes of the Tier 1 assessments for Bight redfish and deepwater flathead, including Recommended Biological Catch (RBC) advice from the Great Australian Bight Resource Assessment Group (GABRAG), held the day prior.

17. An overview of the assessment outcomes, including key points from the MAC discussion and Total Allowable Catch (TAC) advice for the 2020/21 SESSF season is provided at Attachment E

Recommendation 1

GABMAC recommended the following TACs for the 2020/21 SESSF season:

Bight Redfish: **5 year MYTAC** with a 2020-21 TAC of **893 t**

Deepwater Flathead: **3 year MYTAC** with a 2020-21 TAC of **1238 t.**

18. As part of its TAC advice, the MAC noted:
    - there is a need to schedule future Tier 1 stock assessments and Fishery Independent Surveys (FIS) in different financial years, to minimise annual financial pressures on industry.
    - GABRAG should consider postponing the 2022-23 GABFIS to 2023-24 to avoid a Tier 1 assessment and FIS falling in the same financial year; and to maintain a three year gap between FISs.

Agenda Item 3 – Orange Roughy

19. The AFMA Member provided the following overview of orange roughy management arrangements in the Great Australian Bight Trawl (GABT) sector:

<u>Orange Roughy Rebuilding Strategy 2014 (the Rebuilding Strategy)</u>

- The *Commonwealth Fisheries Harvest Strategy Policy 2018* (HSP) requires a rebuilding strategy to be in place for all species assessed as being below their biomass limit reference point (rebuilding species).
- The Rebuilding Strategy, first implemented as the Orange Roughy Conservation Program in 2007, was last reviewed in 2014 and is subject to a five-year review.
- The Rebuilding Strategy is designed to prevent targeted fishing of orange roughy to promote rebuilding of the stock. In the GABT, this is primarily achieved through a series of deepwater closures, placed over historical orange roughy grounds.
- An incidental catch limit (bycatch TAC) has been in place for orange roughy since the implementation of the Rebuilding Strategy. In recent years, this has been set at 50 t and applied to orange roughy caught in the Albany and Esperance quota zones.

<u>GABT Orange Roughy Research Plan (the Research Plan)</u>

- Industry are able to apply for scientific permits, issued under the Research Plan, allowing them to fish within orange roughy closures to collect data.
- The Research Plan was developed by AFMA and GABIA to meet the requirements of the Rebuilding Strategy, to ensure robust scientific information is collected to allow for

an assessment of the status of the stocks; with the ultimate aim of determining sustainable harvest levels for commercial fishing.

3.1Bycatch TAC Recommendation

20. In considering it's advice for an orange roughy bycatch TAC for the Albany and Esperance quota zones, the MAC noted the following:

    - The incidental bycatch TAC for orange roughy in the Albany & Esperance Quota Zones have been set at 50 t since the 2009-10 fishing season. All catches taken within these zones must be covered by quota.
    - There are five additional GAB orange roughy management zones: far west, west, central west, central east and east. Each of these zones have a 10 t catch trigger limit, however are not subject to quota.
    - Orange roughy catch in the GABT has remained below the incidental bycatch TAC, with no catch recorded since the 2008-09 season (with the exception of 0.1 t recorded in 2015-16).
    - Industry raised concerns that orange roughy closures (Albany and Humdinger Magic) are placed over the Albany & Esperance Quota Zones. Access to these areas is only allowed under scientific permit, which effectively means the bycatch TAC cannot be taken.
    - Given these areas are where historical catches were taken, it makes sense that closures would have been placed over them. However, it is not clear whether consideration was given to the fact that the bycatch TAC could not be taken because of it.

Action Item 3

AFMA to investigate why the Albany and Humdinger Magic orange roughy closures were placed over the Albany and Esperance quota zones; noting these are the only areas where the orange roughy bycatch TAC can be caught.

Recommendation 2

GABMAC recommended maintaining the Albany & Esperance Bycatch TAC at 50 t for the 2020-21 fishing season.

3.2 Rebuilding Strategy 5 Year Review

21. The MAC noted the overview of the Rebuilding Strategy and the discussion paper provided in the meeting papers. The MAC was asked to provide advice on the effectiveness of the Rebuilding Strategy in the context of management in the Great

Australian Bight (GAB), noting that the South East Management Advisory Committee (SEMAC) were providing similar advice for orange roughy stocks in the south east.

22. The MAC considered the advice provided by GABRAG at its November 2019 meeting:
    - Management arrangements outlined in the Rebuilding Strategy, particularly spatial closures and catch triggers, remain effective for the purpose of deterring targeting and promoting rebuilding in the GAB.
    - The eastern stock has rebuilt and is now subject to targeted fishing under the SESSF Harvest Strategy. Industry have raised issue with the fact that GABT orange roughy were listed as Conservation Dependant and managed under the Rebuilding Strategy because of what occurred in the east. It stands to reason that the GABT stock have shown a similar recovery, noting there has been very little catch over the last fifteen years.
    - The RAG asked AFMA to consider the implications for other stocks managed under the Rebuilding Strategy now that the eastern stock has rebuilt.
23. Noting the questions raised with regards to the eastern stock and implications for other stocks under the Rebuilding Strategy, the MAC supported the RAG's advice, and did not offer any advice regarding required changes to the Rebuilding Strategy.

3.3 Orange Roughy Research Program

24. The MAC noted the proposed amendments to the GABT Orange Roughy Research Plan 2016-2020 (the Research Plan), as agreed to by GABRAG at their meeting in February 2020:
    - Shot information requirements to be amended to include only standard data collected in daily fishing logbooks.
    - Crew to record length frequency measurements from two (2) bins per shot where possible.
    - Introduction of a 5 tonne trigger limit for when biological samples, other than lengths, are to be collected and AFMA are to be notified for port-collection purposes.
    - All extractive biological samples, including otoliths, gonad staging and fin clips (stock discrimination), are to be extracted from the same individuals.
    - Removal of the bycatch section from the Research Plan as this data is reported in logbooks and will be addressed in the *Great Australian Bight Trawl Fishery Boat Operating Procedures Manual.*
    - Opportunistic acoustic surveys are to be conducted if the vessels' acoustic system has the capacity to record information.
    - Maintain the 200 t research catch allowance, but remove the 50 t catch limit per zone.

25. The MAC adopted all changes proposed by the RAG.

26. The MAC discussed the following:

- The GAB orange roughy stock is not believed to have undergone the same level of depletion as in the east, prior to the species being listed as Conservation Dependent.
- It might be possible to use historic data to develop a model, noting that there has been very little catch since the closures were implemented, to demonstrate that the stock will have recovered by now.

Action Item 4

GABRAG to investigate whether a model (using historic data) could be developed to estimate the current GABT orange roughy stock status.

- It is currently unclear whether scientific permits only allow for fishing within the orange roughy research zones, or whether the research catch allowance can also be utilised outside of the closures.
- The MAC agreed that scientific permits should allow for orange roughy fishing within the entirety of the GAB fishery; not just within orange roughy research zones. This needs to be explicitly outlined in the GABT Orange Roughy Research Plan 2020-2024.
- Industry suggested that skippers of vessels with orange roughy scientific permits should be inducted by AFMA and GABIA. The AFMA Member agreed to arrange for a meeting in Port Lincoln.

Action Item 5

GABRAG to be contacted, out of session, to confirm that they support the orange roughy 200 t research catch allowance being applied to the entire GAB fishery; not just limited to the orange roughy research zones.

Action Item 6

AFMA and GABIA to hold an induction workshop in Port Lincoln for skippers fishing under the Orange Roughy Research Plan, and provide them with an information package including details of relevant closures.

Recommendation 3

GABMAC recommended that the orange roughy research catch allowance be set at 200 t for the 2020-21 fishing season; to be utilised across the entire GAB fishery, not just within orange roughy research zones.

Agenda Item 4 – Upper Slope Dogfish Management Strategy Review

27. The AFMA Member provided the MAC with an overview of the Upper Slope Dogfish Management Strategy Review and how it applies to the GABT Fishery:
    - The Upper Slope Dogfish Management Strategy (the Strategy) is currently undergoing a five year review.
    - Industry were invited to provide feedback on the Strategy, and five proposals submitted by industry. Two of these proposals related to the GABT Fishery:
        1. Provide access to waters deeper than 700 m in the Kangaroo Hill closure and Racetrack/Hamburger closure for the purpose of fishing under the GABT Orange Roughy Research Plan.
        2. Excise slope waters between 400 m to 700 m from the Kangaroo Hill closure to allow access to traditional slope species.
    - SEMAC have provided in-principle support for proposal (1) as targeted fishing for orange roughy in waters deeper than 700 m is considered to be low risk to southern dogfish, given the relatively small degree of overlap in the depth range of the two species; and the method of fishing for catching roughy further reducing the likelihood of catching southern dogfish.
    - SEMAC did not support proposal (2). The Conservation Dependant status of southern dogfish is dependent on 25 per cent of suitable habitat being protected across the species distribution. The Kangaroo Hill closure contributes 4.67 per cent towards the 25 per cent of suitable habitat closures under the Strategy.
    - The review documents are being presented to the Threatened Species Scientific Committee before being sent out for public comment in early 2020.
    - Revisions to the Upper Slope Dogfish Management Strategy are expected to be considered by the AFMA Commission in May 2020.

28. The MAC discussed the following:
    - There is a Fisheries Research and Development Corporation (FRDC) project proposal for a survey to establish a baseline estimate of abundance for Harrisson's dogfish and southern dogfish; using Baited Remote Underwater Video (BRUV).
    - The project design does not currently include sampling the GAB within the study area. The MAC agreed that it would be worth investigating whether the GAB could be included within this survey.
    - Industry want to explore mitigation options for dogfish, with a view to gaining access to fishing grounds. The MAC agreed that GABRAG should consider a research

project to investigate mitigation options for board trawlers to prevent capture of deepwater sharks.

- There is currently an FRDC project that has been supported to investigate mitigation options for board trawlers in southern Australia - *Improving and promoting fish-trawl selectivity in the SESSF and GABTS* (FRDC: 2019-027). This project is mostly focused on reducing bycatch of teleosts, however it would be worth communicating to FRDC that there is an interest for mitigating shark species.
- Industry requested that if dogfish are caught while AFMA observers are onboard, that they record length measurements, life status and take photos to assist with species identification. Industry questioned the ability to adequately identify dogfish species caught, particularly to establish if they are southern dogfish. It was acknowledged that species ID will be difficult.

Action Item 7

GABRAG to investigate research options for dogfish in the GAB. Options identified by GABMAC:

- Inclusion of the GAB within the survey design for the FRDC project proposal to establish a baseline index of abundance for Harrison's dogfish and southern dogfish (research scope is currently being considered by FRDC).
- Investigate options for mitigating catch of deepwater shark species as part of the FRDC project - *Improving and promoting fish-trawl selectivity in the SESSF and GABTS* (2019-027)
- Developing a GAB specific project to explore mitigation options to prevent capture of deepwater sharks.

Action Item 8

AFMA to advise ISMP observers undertaking GAB trips to record length measurements and life status of any dogfish caught as incidental bycatch. Photos should also be taken to assist with species identification (where possible).

Agenda Item 5 – Management Items

5.1 Manager's Update

32. AFMA provided the following update:

South Australia Offshore Constitutional Settlement (OCS).

- In order to protect snapper stocks in South Australian (SA) waters, which have recently been assessed as depleted, the South Australian Government implemented

a total ban on snapper fishing for the Spencer Gulf, West Coast and Gulf St Vincent until 31 January 2023. Limited snapper fishing will be permitted in the South East region during the spawning period between February and October each year.

- The Commonwealth have been asked to implement complementary management arrangements, which AFMA have agreed to; however this agreement is contingent on resolving a number of outstanding issues relating to the OCS. Those relevant to the GAB include:
    - Agreement to allow GAB operators to land snapper caught in Western Australia in South Australia. The SA Government have agreed to this condition; and this is currently being implemented.
    - Correcting the Offshore Constitutional Settlement (OCS) agreement to give the Commonwealth the responsibility for managing Bight redfish (*Centroberyx gerradi*), with SA to manage it as a bycatch species. The SA Government have agreed to discuss this issue further.

5.2 Industry Update

33. Industry provided the following update:

- Industry are encouraged by signs of recovery for both Bight redfish and deepwater flathead – with exceptional catches of flathead (of several size classes) being recorded.
- Progress is being made with their project aimed at optimising the quality and value of undervalued, underutilised or bycatch species within the GAB. The project is designed to understand and document market requirements (existing and new channels) and then developing a strategy and action plan to capitalise on opportunities and address barriers.
    - The project is investigating marketing opportunities for 5 GAB species: Bight redfish, latchet, ocean jacket, ornate angelshark and yellowspotted boarfish.
- The Environment/Conservation Member advised the MAC that the Australian Marine Conservation Society (AMCS), Humane Society International (HSI) and World Wildlife Fund (WWF) have committed to focus on protection and sustainability of sharks and rays in Australia over the next few years. Dr Colin Simpfendorfer produced a report in 2019 which assessed the sustainability of Australian shark and ray species. A number of shark and ray species found in the GABT were assessed as part of that project.
- The MAC noted the outcomes of the 2019 GABT Ecological Risk Assessment; no shark or ray species were assessed as high risk.

Action Item 9

For species relevant to the GABT, AFMA to compare the results of the project *A Report Card for Australia's Sharks* (Simpfendorfter *et al*., 2019) against those in the 2019 GABT Ecological Risk Assessment.

Agenda Item 6 – Other Business

34. The Chair asked members whether there was any other business.

35. The MAC noted that the recent outbreak of the Coronavirus in China is starting, and will continue to, have impacts on Australia's seafood industry; due to large export markets. Impacts have already been observed, with crayfish fishermen having to return their catch to the water.

36. It is currently unclear whether the Coronavirus will have an impact on the viability of the GABT Fishery.

Agenda Item 8 – Meeting Close

37. The Chair noted that the Executive Officer will contact members to organise the dates for the 2020 GABMAC meeting.

38. The Chair thanked all attendees for their input into discussions.

39. The meeting was closed at 12:59pm.

Attachment A – Adopted Agenda

Agenda

Friday 7 February 2020

Time (AEST): 09:00am

Mantra Tullamarine, Melbourne Airport

Chair: Mr Barry Windle

Members	
Name	**Membership**
Mr Barry Windle	Chair
Mr Lance Lloyd	Scientific Member
Ms Anissa Lawrence	Environment/Conservation Member
Mr Neil MacDonald	Industry Member
Mr Jim Raptis	Industry Member
Ms Marcia Valente	Industry Member
Dr Robert Gale	Economic Member
Mr Daniel Corrie	AFMA Member
Ms Kehani Manson	Executive Officer

Invited Participants	
Name	**Affiliation**
Ms Anna Willock	AFMA
Ms Fiona Hill	AFMA
Mr Brett McCallum	AFMA Commission

Time	Item	Lead presenter
09:00	**1. Preliminaries** 1.1 Acknowledgement of country, introductions and apologies 1.2 Declarations of interest 1.3 Adoption of agenda 1.4 Action items review	Chair (30 mins)
09:30	**2. TAC Recommendations for 2020/21** 2.1 Deepwater Flathead 2.2 Bight Redfish	Dan Corrie (1 hour)
10:30	**Morning Tea**	
10:45	**3. Orange Roughy** 3.1 Bycatch TAC Recommendation (Albany & Esperance) 3.2 Rebuilding Strategy 5 Year Review 3.3 Orange Roughy Research Program • Updates to research program • Research catch allowance (ORR Zones)	Dan Corrie & Neil MacDonald (1 hour)
11:45	**4. Upper Slope Dogfish Management Strategy Review**	Dan Corrie (45 mins)
12:30	**5. Management Items** 5.1 Manager's Update 5.2 Industry Update	Dan Corrie & Neil MacDonald (15 mins)
12:45	**6. Other Business**	Chair (15mins)
13:00	**Adjourn**	

Attachment B – Declarations of Interest

Member	Declared Interest
Mr Barry Windle	• No interest, pecuniary or otherwise
Mr Lance Lloyd	• GABRAG Chair • Member of GABMAC and SESSFRAG • Board Member, AwF – Aquaculture without Frontiers (Australia) • Director – Lloyd Environment Pty Ltd. • Research Fellow – Federation University Australia No pecuniary interest
Ms Anissa Lawrence	• Director of TierraMar Consulting • Independent consultant • Undertakes contracts for a number of conservation NGOs, government departments, non-government agencies and the private sector on a range of fishery related matters • President of the Ocean Future Fund (previously SEA LIFE Trust (ANZ) • Director of FISHI International • Conservation Member on SPFRAG, SEMAC and the South Australian Rock Lobster MAC No pecuniary interest
Mr Neil MacDonald	• Director NMAC (SA) P/L • Executive Officer of the Great Australian Bight Industry Association (GABIA) • Executive Officer of Surveyed Charter Boat Owners and Operators Association South Australia • Executive Officer Southern Fishermen's Association • Executive Officer of Saint Vincent Gulf Prawn Boat Owner's Association • Executive Officer of Marine Scale Net Fishers Association • Committee support services South Australian Rock Lobster Management Advisory Committee & Research Sub-Committee • Chair – CGG Gippsland MSS Scientific Advisory Committee
Mr Jim Raptis	• GABRAG Industry Member • Operates two boats in the GABT Fishery and owns four GAB SFRs as well as quota in the Southern and Eastern Scalefish and Shark Fishery
Dr Robert Gale	• Director – Next Level Sustainability • Environment Institute of Australian and New Zealand (paid membership) • Committee for Waste Reduction (Cairns) (paid membership) • Adjunct Professor – James Cook University • Independent reviewer of the 2018 SA State of the Environment Report for the SA Environmental Protection Authority
Mr Daniel Corrie	Employed by AFMA. Manager of Southern Trawl, Scallop and Squid Fisheries. No pecuniary or other interest in the SESSF.
Ms Kehani Manson	Employed by AFMA. Executive Officer of GABRAG. No interest, pecuniary or otherwise.

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Attachment C – List of all GABMAC items (updated)

- Complete/Redundant
- Underway
- Yet to start
- Need SESSFRAG advice

Table 1 Action item summary

	Meeting & agenda item reference	No.	Action Item	Agency/Person Responsible	Timeframe	Progress
	1.4 / Nov 2017	1	AFMA to formally write to the Department of the Environment and Energy to enquire about the granting of WTO accreditation for a period of 10 years.	AFMA	As soon as practicable	**Complete:** GABMAC had raised concerns about the current three year accreditation being too short for the GABT, and asked AFMA to request a ten year accreditation. AFMA investigated, and noted that the WTO applies to the entire SESSF fishery, including the GABT. Most of the conditions relate to specific sectors; very few of which directly relate to the GAB.
	5/ Nov 2017	4	GABIA to review the port sampling program and put forward an alternative proposal	GABIA	Next 12 - 18 Months	This item was removed by the MAC at the December 2018 meeting. It was replaced with a new action item 1.4/Dec 2018 (1).
	8/ Nov 2017	9	AFMA to clarify that the $300,000 licensing cost was a one off item relating to system upgrades and that no further additional costs will be incurred in the 2018-19 budget	AFMA	As soon as practicable	This was confirmed to be a one off cost relating to system upgrades

	1.4/Dec 2018	1	AFMA and GABIA to ensure that there is a record outlining the port sampling schedule for GAB vessels; including species landed by vessel and where they are being landed.	AFMA/GABIA	As soon as practicable	AFMA has provided copies of the ISMP quarterly reports to GABIA as requested. Crew collected sampling reports have also been provided.

Note: All items marked green (complete) will be removed from the list of action items that is prepared for the next meeting (GABMAC 2020)

Attachment D – Action Items Arising from GABMAC February 2020

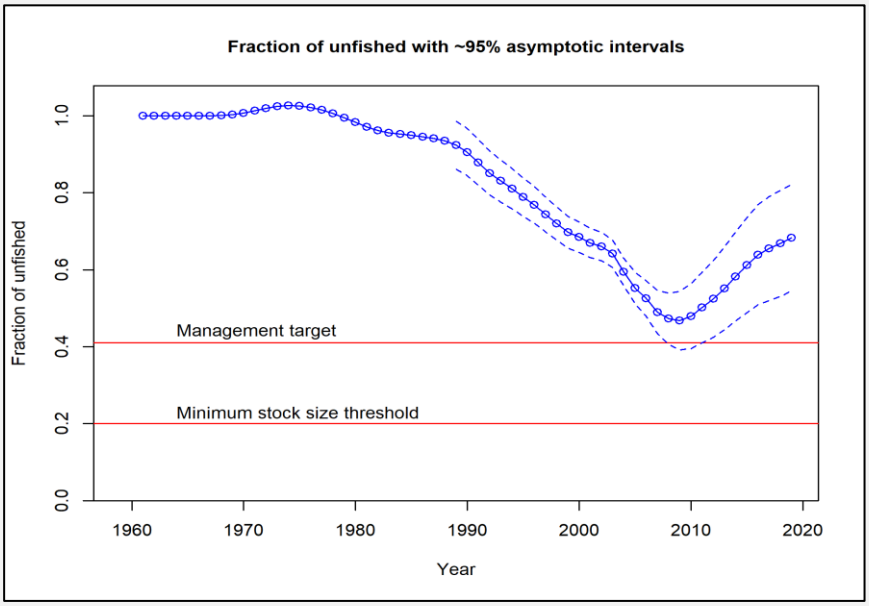
Action Item	Agenda Item Ref	Description	Responsibility	Timeframe
1	1.4	AFMA to amend the wording provided for the progress against Action item 1 – Agenda Item 1.4 (November 2017) to clearly identify why this item arose and the progress made to date	AFMA	As soon as possible
2	1.4	AFMA to circulate the table containing historical action items (GABRAG and GABMAC) to MAC and RAG members.	AFMA	As soon as possible
3	3.1	AFMA to investigate why the Albany and Humdinger Magic orange roughy closures were placed over the Albany and Esperance quota zones; noting these are the only areas where the orange roughy bycatch TAC can be caught.	AFMA	As soon as practicable
4	3.3	GABRAG to investigate whether a model (using historic data) could be developed to estimate the current GABT orange roughy stock status.	GABRAG	As soon as practicable
5	3.3	GABRAG to be contacted, out of session, to confirm that they support the orange roughy 200 t research catch allowance being applied to the entire GAB fishery; not just limited to the orange roughy research zones.	AFMA	As soon as practicable
6	3.3	AFMA and GABIA to hold an induction workshop in Port Lincoln for skippers fishing under the Orange Roughy Research Plan, and provide them with an information package including details of relevant closures.	AFMA/GABIA	As soon as practicable
7	4	GABRAG to investigate research options for dogfish in the GAB. Options identified by GABMAC: - Inclusion of the GAB within the survey design for the FRDC project proposal to establish a baseline index of abundance for Harrison's dogfish and southern dogfish (research scope is currently being considered b FRDC). - Investigate options for mitigating catch of deepwater shark species as part of the FRDC project *Improving and promoting fish-trawl selectivity in the SESSF and GABTS* (2019-027)	GABRAG	As soon as practicable

		Developing a GAB specific project to explore mitigation options to prevent capture of deepwater sharks.		
8	4	AFMA to advise ISMP observers undertaking GAB trips to record length measurements and life status of any dogfish caught as incidental bycatch. Photos should also be taken to assist with species identification (where possible).		As soon as practicable
9	5	For species relevant to the GABT, AFMA to compare the results of the project A Report Card for Australia's Sharks (Simpfendorfter et al., 2019) against those in the 2019 GABT Ecological Risk Assessment.		As soon as practicable

	Recommendations
1	GABMAC recommended the following TACs for the 2020/21 SESSF season: Bight Redfish: 5 year MYTAC with a 2020-21 TAC of 893 t Deepwater Flathead: 3 year MYTAC with a 2020-21 TAC of 1238 t.
2	GABMAC recommended maintaining the Albany & Esperance Bycatch TAC at 50 t for the 2020-21 fishing season
3	GABMAC recommended that the orange roughy research catch allowance be set at 200 t for the 2020-21 fishing season; to be utilised across entire GAB fishery, not just within orange roughy research zones.

Attachment E – 2020-21 TACs

Bight Redfish

Application of the SESSF Harvest Strategy	
Stock assessment	Bight redfish was last assessed in 2019 using a Tier 1 assessment. Species summaries are included in the meeting minutes. In 2018, it was determined that the stock assessment would be moved forward from 2020 to 2019 and the TAC would be lowered from 800 t to 600 t for the 2019/20 season, noting that: • the 2015 and 2018 Fishery Independent Survey (FIS) estimated a decrease in the relative biomass; • the depth distribution of bight redfish appeared to have shifted, with movement inshore apparent; • there had been a reduction in the proportion of bight redfish in each shot (catch composition); and • the FIS length frequency measurements of bight redfish had decreased from a modal length of 30-35cm in previous years to a modal length of 29cm in 2018.
Stock status against reference points and trend	**Current (2020)** / **Target** / **Limit** 64% B_0 / 41% B_0 / 20% B_0  Modelling suggests a slow decline in abundance consistent with the fish-down of a developing fishery to near the target in 2009, with a steady increase to an estimated biomass of 64%B_0 at the start of 2020. Depletion of the stock occurred more rapidly in the mid-2000s when substantial fishing effort occurred, but the stock has never fallen below the maximum economic yield (MEY) biomass target. The current biomass is higher than the target biomass.

<table>
<tr><th colspan="3">Application of the SESSF Harvest Strategy</th></tr>
<tr><td>Previous season catch and TAC (2018-19)</td><td colspan="2"><table>
<tr><th>Catch (t)</th><th>Agreed TAC (t)</th><th>TAC (t) after unders/overs</th><th>Percentage caught</th></tr>
<tr><td>220</td><td>800</td><td>880</td><td>25%</td></tr>
</table></td></tr>
<tr><td>RAG comments on data and assessment</td><td colspan="2">Adding recent catch, standardised CPUE and FIS indices made very little difference to the 2020 estimate of biomass, compared to the 2015 estimate.

There has been a decrease in the commercial CPUE from 2009 to 2015, however the last three points have shown an increase. While the model does not fit well to the early CPUE series, it fits quite well to the recent increase in CPUE (2016-2018). The last three FIS indices have also shown a decrease in abundance.

Model fits to commercial CPUE are poor up until 2015 and variation in CPUE over time is unexpected for such a long-lived species. The variation in CPUE is more likely driven by availability, rather than changes in biomass.

While the CPUE and FIS points may be influenced by availability, the scientific member urged caution; noting a similar instance for the eastern redfish stock, where the model and stock indicators suggested the stock was sustainable, and was later assessed to be overfished. There was no suggestion that the bight redfish stock is in an overfished state, simply that the model may not tracking the biomass correctly.

The current biomass is estimated to be 64%B_0, however likelihood profiles suggest this is not well estimated and ranges between 55%B_0 and 88%B_0.</td></tr>
<tr><td>ABARES status</td><td colspan="2"><table>
<tr><th>2019 ABARES biomass</th><th>2019 ABARES fishing mortality</th></tr>
</table></td></tr>
<tr><td>Other indicators</td><td colspan="2">N/A</td></tr>
<tr><td>RAG advice and any dissenting views</td><td>Recommended Biological Catch

2020 – 1024 t

Three year average – 963 t

Five year average – 912 t</td><td>• There were some concern regarding the most three recent biomass estimates from the FIS, which have estimated a decline in relative biomass.
• The RAG recommended setting up to a five year MYTAC, using either the single year RBCs, or the average RBC for the period of the MYTAC.
• Given the poor model fit to commercial CPUE and the most two recent FIS biomass estimates, the RAG recommended reviewing the inputs to the stock assessment each year of the MYTAC, with a particular focus on CPUE, age/length frequencies, and the results of the FIS, with a view to rescheduling the assessment if any concerns were identified.</td></tr>
</table>

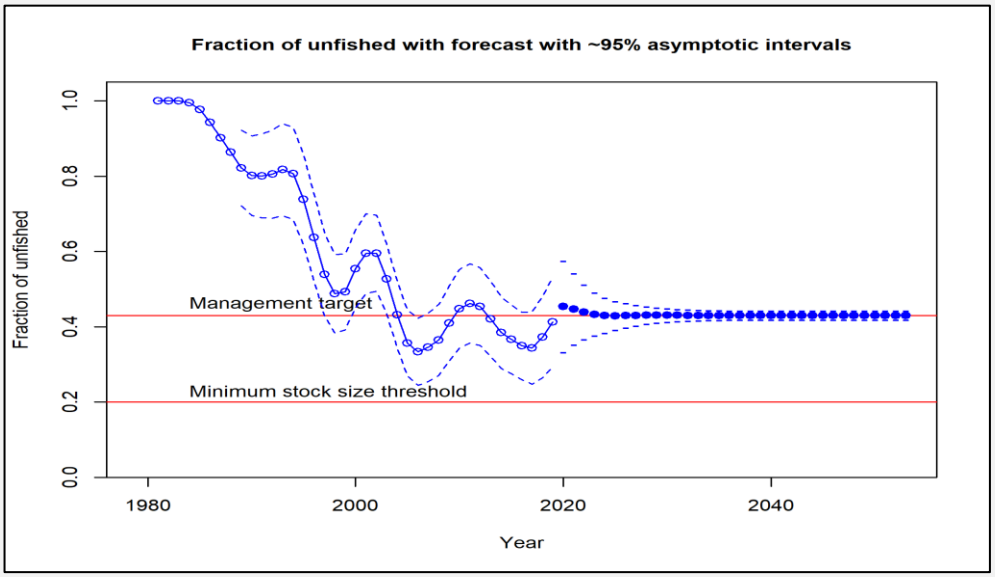
Application of the SESSF Harvest Strategy		
Discount factor	Less: N/A	• N/A (Tier 1)
State catch	Less: 19 t	• SA Catches of bight redfish
Discards	Less: N/A	• Discards are considered to be low and are not deducted from the RBC.
Recreational catch	Less: N/A	• Estimates of recreational catch are available for South Australia and Western Australia. Catches in SA were estimated to be 15.3 t in 2008 and 19 t in 2014. Catches in WA were estimated to be 13.3 t in 2008. • These estimates are not included in the assessment, and are not deducted from the TAC.
Research Catch Allowance	Less: N/A	• N/A
TAC calculation under the Harvest Strategy	**Provisional (Harvest Strategy) TAC** 1005 t (single year) 944 t (3-year average) 893 t (5-year average)	
Considerations in addition to the SESSF Harvest Strategy		
Commercial fishers' interest	N/A	
Economic considerations	In the 2017-18 financial year, Bight redfish contributed 14.2% to GABTS GVP ($9.2m). Classified as 'primary' under the SMARP project.	
Species specific management (target, companion and bycatch)	N/A	

Application of the SESSF Harvest Strategy	
MAC advice and any dissenting views	**2020-21 TAC recommendation** 893 t The first year of a five year MYTAC **GABMAC advice and any dissenting views** The MAC recognised the RAG concerns regarding uncertainty in the model and the recent biomass estimates from the FIS. The MAC also noted the new assessment with updated CPUE, FIS indices and recent catches made little difference to the 2020 estimated biomass abundance. The MAC were comforted by the support from the RAG to recommend a TAC consistent with the harvest strategy, which resulted in an increase of 293 t from the lowered 2019-20 TAC. With regular monitoring the MAC viewed setting a five year MYTAC for Bight redfish as low risk. The economic member noted the TAC is generally undercaught and questioned whether this would attract new entrants to the fishery. Industry suggested, while there is latent effort in the fishery, it would be highly unlikely to see any new entrants to the fishery due to the high operating costs in the fishery. The economic member also noted that the recommended TAC provides a considerable buffer against unsustainable catch. The length of the MYTAC is dependent on the scheduling of the deepwater flathead assessment, as well as future FIS's. Noting that the TAC is largely undercaught, GABMAC was comfortable setting a five year MYTAC, which allows for the FIS and deepwater flathead assessment to be scheduled in alternating years. The MAC supported the RAGs recommendation to closely monitor the fishery indicators each year to ensure none of the underlying assumption in the model change, and any potential risks to the stock are identified. GABMAC recommended a 2020-21 TAC of 893 t, the first of a five year MYTAC, with under and overcatch provisions set at 10 per cent and a determined amount of 2 t.

Summary of TAC recommendations for determination

2019-20 agreed TAC (t)	2020-21 recommended TAC (t)	Overcatch and undercatch (%)	Determined amount (t)	Change in TAC from 2019-20 (t)
600	893 t	10	2	+293

Deepwater flathead

Application of the SESSF Harvest Strategy	
Stock assessment	Last assessed in 2019 using a Tier 1 assessment.
Stock status against reference points and trend	**Current**: 2019: 45% B_0 **Target**: 43% B_0 **Limit**: 20% B_0 The 2019 stock assessment estimated the biomass to be at 45 per cent of virgin stock biomass. 
Previous season catch and TAC (2018-19)	**Catch (t)**: 529 **Agreed TAC (t)**: 1128 **TAC (t) after unders/overs**: 1241 **Percentage caught**: 43%
RAG comments on data and assessment	Catches of deepwater flathead have decreased since 2012, and catches during 2018 and most of 2019 were the lowest since 1999. The decrease in 2014 was attributed to the seismic survey that was undertaken that year, however, aside from an increase in 2016, catches have not recovered since. Industry noted that catch rates in October and November 2019 are the best they've seen in a long time and reflect catches in 2016. The FIS and commercial CPUE data shows a recent decrease in catch rates, however, the age and length data are more positive. The model does not seem to be giving much weight to the recent FIS or CPUE points.

	Estimates show poor recruitment for the period 2008-2011, however, recruitment in 2012 and 2013 have recovered to be closer to the long-term average. Deepwater flathead appear to be shifting to shallower depths, and industry have observed an apparent temporal shift in the spawning season for deepwater flathead, with either no or reduced spawning events observed over the past two years. It is currently unclear what has caused this shift, however, industry suggested nutrient availability or temperature could be responsible. The RAG have suggested further research to understand this temporal shift. The biomass is estimated to be at 45% B_0 at the start of 2020, which is an increase from the 2016 estimate of 43% B_0.	
ABARES status	**2019 ABARES biomass**	**2019 ABARES fishing mortality**
Other indicators	N/A	
RAG advice and any dissenting views	**Recommended Biological Catch** 2020 – 1253 t Three year average – 1238 t Four year average – 1232 t	• There were some concerns regarding the most two recent biomass estimates from the FIS, which have estimated a decline in relative biomass. • The RAG recommended setting up to a four year MYTAC, using either the single year RBCs, or the average RBC for the period of the MYTAC. • Given the poor model fit to commercial CPUE and the most two recent FIS biomass estimates, the RAG recommended reviewing the inputs to the stock assessment each year of the MYTAC, with a particular focus on CPUE, age/length frequencies, and the results of the FIS, with a view to rescheduling the assessment if any concerns were identified.
Discount factor	NA	• NA (Tier 1)
State catch	Less: N/A	• There are no state catches
Discards	Less: N/A	• Discards are considered to be low and are not included in the RBC
Recreational catch	Less: N/A	• N/A
Research Catch Allowance	Less: N/A	• N/A

TAC calculation under the Harvest Strategy	**Provisional (Harvest Strategy) TAC** 2020 – 1253 t Three year average – 1238 t Four year average – 1232 t	
Considerations in addition to the SESSF Harvest Strategy		
Commercial fishers' interest	N/A	
Economic considerations	In the 2017-18 financial year, deepwater flathead contributed 49.9% to GABTS GVP ($9.8 million). Classified as 'primary' under the SMARP project.	
Species specific management (target, companion and bycatch)	N/A	
MAC advice and any dissenting views	**2020-21 TAC recommendation** 1238 t The first of a three year MYTAC. **GABMAC advice and any dissenting views** The economic member noted the TAC is generally undercaught, with about 500-700 t left uncaught each year, and questioned whether this would attract new entrants to the fishery. Industry suggested, while there is latent effort in the fishery, it would be highly unlikely to see any new entrants to the fishery due to the high operating costs in the fishery. The economic member also noted that the recommended TAC provides a considerable buffer against unsustainable catch. As was the case for bight redfish, the length of the MYTAC is dependent on the scheduling of the assessments and future FIS. Noting that the TAC is largely undercaught, and new entrants to the fishery are highly unlikely, GABMAC was comfortable setting a three year MYTAC. The MAC supported the RAGs recommendation to closely monitor the fishery indicators each year to ensure none of the underlying assumption in the model change, and any potential risks to the stock are identified. GABMAC recommended a 2020-21 TAC of 1238 t, the first of a three year MYTAC, with under and overcatch provisions set at 10 per cent and a determined amount of 2 t.	

Summary of TAC recommendations for determination

2019-20 agreed TAC (t)	2020-21 recommended TAC (t)	Overcatch and undercatch (%)	Determined amount (t)	Change in TAC from 2019-20 (t)
1128	1238	10	2	+ 110