

PZJA Torres Strait Finfish Fishery Working Group

FFWG Meeting

25 November 2021

JCU Conference Room -
Thursday Island

DRAFT Meeting Record

Note all meeting papers and records are available on
the PZJA webpage:

<https://www.pzja.gov.au/torres-strait-finish-groups>



Australian Government

Australian Fisheries Management Authority

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1 Preliminaries

1.1 Acknowledgement of Traditional Owners, Welcome, and Apologies

1. The 2021 meeting of the PZJA Torres Strait Finfish Fishery Working Group (FFWG) commenced at 0840 hrs. FFWG Chairperson, Mr Andy Bodsworth, welcomed participants and

acknowledged the Traditional Owners of the various lands from which members were participating and paid respects to the elders of the community past, present and emerging.

2. No apologies were received. FFWG Chairperson, Mr Andy Bodsworth, and QDAF member, Mr Ashley Lawson attended the meeting via video conference.
3. The Chairperson reminded the WG that the meeting would be recorded for the purpose of ensuring an accurate record. There were no objections to the meeting being recorded.
4. The Chairperson highlighted the obligation on members to participate in the meeting in a respectful and professional manner.
5. The WG noted the importance of allocating enough time to discuss each agenda item fully, providing all members the opportunity to discuss and clarify any points of uncertainty.

1.2 Adoption of Agenda

6. The agenda was adopted with one amendment (**Attachment A**):
 - a) Traditional Inhabitant members requested a discussion on the Western Line Closure. The WG agreed to add the discussion as agenda item 4.1.

1.3 Declarations of Interests

7. Consistent with the Protected Zone Joint Authority Fisheries Management Paper No. 1 (FMP 1), which guides the operation and administration of PZJA consultative forums, the WG noted the requirement to declare all interests, perceived or real. Each member declared their interest in the fishery as documented in **Table 1** (below). In line with the Australian Fisheries Management Authority (AFMA) standard for declaring potential conflicts of interest in Commonwealth WGs and RAGs to best protect the integrity of advice, members with grouped interests (industry, research, TSRA, AFMA) were sequentially asked to leave the room to allow the remaining WG members to:
 - freely comment on the declared interests
 - agree if the interests precluded the members from participating in any discussions and
 - agree to any methods to treat the declared interest (e.g. the member provides preliminary input but leaves the room when any advice is formed).
8. The WG noted that, in addition to the process under this item, it remained the obligation of all members to update their declarations throughout the meeting as required.
9. In addition, the Chairperson asked the WG members to raise topics which they felt important to be discussed at the meeting. Members were also reminded of the need to speak in-turn to allow efficient and respectful conversation.

Research interests

10. Members with declared research interests left the room to enable free discussion of these interests (Andy Bodsworth, David Brewer, Michael O'Neill, Trevor Hutton).
11. The WG agreed that there may be perceived conflict of interests in relation to providing advice on future research priorities. However it was noted that these members were appointed to the WG for their scientific expertise.

12. The WG noted the need for conflicts be monitored on an ongoing basis. Research members should participate in all agenda items and advice being formed, however, may be asked to leave the room during the final recommendation stage if there is a particular perceived conflict.
13. Members with research interests re-joined the WG and were advised of the WG consideration of their declared interests.

Industry members' interests

14. Members with declared fishing interests in the fishery left the room to enable free discussion of these interests (Tenny Elisala, Rocky Stephen, Harry Nona, Terrence Whap, Maluwap Nona, Tony Vass, Yen Loban, Keith Brightman, Quinten Hirakawa, and Mark Anderson).
15. The WG noted a perceived conflict of interest when recommending TACs. However, the WG agreed that the 'competitive TAC' system in the Finfish Fishery limits the benefit to individual operators in setting a higher TAC.
16. The under-caught nature of the coral trout fishery was also noted.
17. It was noted though that the members were engaged in the meeting to provide industry expertise and knowledge within their cluster nations. This expertise and knowledge is critical to forming balanced recommendations to meet the objectives of the Act.
18. The WG also noted the TSRA's link to leasing arrangements as a perceived conflict of interest.
19. On balance, the WG agreed that the interests of industry members represent the fishery as a whole, and therefore the remaining members recommended that industry members participate in all agenda items and contribute expertise and advice as needed.
20. The industry members re-joined the meeting and were advised of the WG consideration of their interests.

Government agencies interests

21. Members with interests related to the business of the TSRA, AFMA, and QDAF left the meeting (Mark Anderson, Tenny Elisala, Rocky Stephen, Keith Brightman, Yen Loban, Chris Boon, Selina Stoute, Ash Lawson).
22. The remaining WG members discussed the declared interests of the members and participants that had left the room. It was noted that the TSRA had declared their holdings of Sunset licences and revenue generated from leasing these entitlements for the benefit of Traditional Inhabitants.
23. Consistent with advice from earlier WGs and RAGs, it was noted that it is important to maintain an awareness of this potential perceived conflict and ensure members acted in the interest of the fishery. It was further noted that the TSRA Fishery Advisory Committee has approved for Zenadth Kes Fisheries to manage the leasing arrangements for the 2022/23 season.
24. The members agreed that TSRA views were important in forming advice to the PZJA.
25. The members noted AFMA's interest was managing the fishery in a sustainable way, while providing maximum benefit to Traditional Inhabitants. The WG noted that there is a transparent decision-making framework in place to guide the allocation of funding for research projects across Torres Strait fisheries.
26. AFMA and TSRA members re-joined the meeting and were advised of the members' consideration of their declared interests. The WG agreed that TSRA, AFMA, and QDAF members should participate in all agenda items and advice being formed.

Table 1. Attendance and declarations of interest – 2021 Finfish WG meeting members.

Name	Position	Declaration of interest
Andy Bodsworth	Independent Chair	<ul style="list-style-type: none"> Independent Consultant – Cobalt Marine Resource Management. Currently involved in Marine Stewardship Council (MSC) fishery assessments. Has previously been commissioned to undertake Torres Strait related fisheries research projects (For example the Torres Strait Finfish Fishery Action Plan). Previously worked from AFMA and as Chair other PZJA Advisory Committees (e.g. HCWG)
Rocky Stephen	Traditional Inhabitant Industry Member, Kemer Kemer Meriam (Ugar, Mer, Erub)	<ul style="list-style-type: none"> Councillor for Ugar. Chairperson of Kos and Abob Fisheries Ugar. Works with brother in a commercial fishing business on Ugar (Brother Bear Fisheries). Eastern cluster representative on the PZJA Finfish RAG & Working Group. Traditional inhabitant member - Torres Strait Scientific Advisory Committee. TSRA Board member for Ugar TSRA Finfish Quota Management Committee. TSRA Board Fisheries Advisory Committee member. Member of Zenadth Kes Fisheries company.
Hilda Mosby	Traditional Inhabitant Industry member, Kulkalgal Cluster (Masig, Warraber, lama, Poruma)	<ul style="list-style-type: none"> No direct interest in fisheries but has long history with Torres Strait fisheries through family involvement. TSRA Board Member for Masig. Councillor on Masig. TSRA board member for Masig. (environment portfolio, and finfish quota management). Director for Yorke Island Fisherman's Corporation.
Harry Nona	Traditional Inhabitant Industry member (Kaiwalagal)	<ul style="list-style-type: none"> Fulltime fishermen. TIB licence holder Member for Kaiwalagal
Terrence Whap	Traditional Inhabitant Industry member (Maluialgal)	<ul style="list-style-type: none"> Member of the PZJA TRL working group President of the local fisherman's association in Maluialgal PBC Director TSRA Board Member and Ranger
Tenny Elisala	Traditional Inhabitant Industry Member, (Gudmalulgal)	<ul style="list-style-type: none"> TSRA Ranger Dauan. TIB licence holder. PBC director.

Name	Position	Declaration of interest
Michael O'Neill	Scientific Member	<ul style="list-style-type: none"> Principal fisheries scientist working with the Queensland Government (Department of Agriculture and Fisheries, Fisheries Queensland) in the stock assessment program. Principal investigator for TSSAC three-year project for Spanish mackerel stock assessment work. Co-investigator of biological sampling project. Member of PZJA Finfish RAG and Working Group.
David Brewer	Scientific Member	<ul style="list-style-type: none"> Director – Upwelling P/L (David Brewer Consulting). Honorary Fellow - CSIRO Chair - Torres Strait Finfish RAG Scientific member – Torres Strait Finfish Working Group Scientific member – Northern Prawn Fishery RAG Current consultancies with Quandamooka Yoolooburrabee Aboriginal Corporation. Co-investigator on the completed Torres Strait 'Non-commercial catch' project funded by TSSAC with RAG member Kenny Bedford. As a fisheries consultant, may apply for funds for Torres Strait fishery research projects in the future where consistent with his role as Chair.
Chris Boon	Executive Officer (AFMA)	<ul style="list-style-type: none"> Employed by AFMA, no pecuniary interests or otherwise
Selina Stoute	AFMA Member	<ul style="list-style-type: none"> Employed by AFMA, no pecuniary interests or otherwise
Mark Anderson	TSRA Member	<ul style="list-style-type: none"> Employed by TSRA. Program manager for economic development fisheries and infrastructure. No pecuniary interests as an individual - TSRA holds fishing licences on behalf of traditional inhabitants.
Permanent Observers		
Tony Vass	Industry permanent observer	<ul style="list-style-type: none"> No financial interests in the Torres Strait. Former mackerel fisher in the Torres Strait 1990 to 2008, does not own or operate a licence in the Torres Strait.
Ash Lawson	QDAF Observer	<ul style="list-style-type: none"> Manager of the east coast Spanish mackerel, charter, and deep water line fisheries. Currently transitioning into managing the east coast inshore finfish fishery.
Trevor Hutton	Scientific permanent observer	<ul style="list-style-type: none"> Employed by CSIRO. Member of the PZJA Finfish Working Group. Principle investigator for past FF harvest strategy project. Could have interests relating to future research projects within the Finfish Fishery.

Name	Position	Declaration of interest
Maluwap Nona	Malu Lamar (Native Title) permanent observer	<ul style="list-style-type: none"> Chair of Malu Lamar TIB licence holder
Casual Observers		
Quinten Hirakawa	TSRA Senior Project Officer	<ul style="list-style-type: none"> TSRA project officer. TIB licence holder with mackerel, line, cray, and BDM endorsements. Former commercial TRL fisher. 25 years working with Queensland Boating and Fisheries Patrol (QDAF). Recent employment with TSRA Ranger Program and now with the TSRA Fisheries Team. Co-investigator on behalf of TSRA for the current Spanish mackerel and coral trout biological sampling project.
Yen Loban	TSRA Fisheries Portfolio member	<ul style="list-style-type: none"> TIB licence holder. Board director of the Zenadth Kes Fisheries Company. Chair of the TSRA Board Fisheries Advisory Committee.
Keith Brightman	TSRA fisheries Project Officer	<ul style="list-style-type: none"> No personal pecuniary interests. Role with TSRA is to support Traditional Owners

1.4 Review of Action Items from Previous WGs

27. The WG noted an update from the WG Executive Officer (EO) on the status of actions as detailed in the agenda paper.
28. The WG EO advised that the one outstanding action item, *AFMA to arrange a Biosecurity officer to present to the WG on invasive fish species*, is to be pursued for a future meeting. The WG noted that past attempts to arrange a presentation were not successful due to availabilities. The WG noted that AFMA intends to arrange for a Cairns based Biosecurity officer to present at a future WG meeting.

1.5 Out of Session Correspondence

29. The WG noted the out-of-session correspondence since the last WG meeting (25 November 2020) as detailed in the agenda paper.

2 RAG Updates

2.1 Industry and Scientific Updates

30. Traditional Inhabitant members provided the following updates to the RAG on developments within the Torres Strait Finfish Fishery since the last WG meeting (25 November 2021):

- a) The sunset sector reported good catches of Spanish mackerel so far for the season. Shark depredation was reportedly far less of an issue compared to previous years. Conversely, the prawn fishers have been having issues with sharks biting through the cod-end of the trawl nets.
- b) It was reported that the current market has resulted in some buyers struggling to meet the demand for Spanish mackerel across Queensland, with prices rising and fluctuating due to uncertainty.
- c) Good weather has arrived in the straits, and as expected, a lot more traditional fishing is being undertaken (especially in October). October until around March is the peak effort for traditional fishing.
- d) At Erub the main form of fishing has been for kai kai, as the commercial freezer is out of operation;
- e) It was reported that there is a single buyer from Cairns who is purchasing fish from Masig. Some fishers are also selling locally on the domestic market.
- f) On Mer, there are five dingies operating, with fishers out fishing every day. There is also one buyer purchasing fish from this community, with positive outcomes for the local economy and community.
- g) The focus for Zenadth Kes Fisheries has been developing infrastructure. The company is still in the first phase of starting the business, and are building towards obtaining buyers.

31. The WG noted that the scientific members had no further updates from those that will be provided as part of the tabled agenda items.

2.2 Government Agencies Update

AFMA update

32. The WG noted AFMA updates as detailed in the agenda paper. The WG considered in detail, four of the updates:

- a) In October 2020 the Australian Fisheries Management Authority applied for export approval for the Torres Strait Finfish Fishery (TSFF) under the EPBC Act. The application was assessed and the fishery was approved as a Wildlife Trade Operation (WTO) under Part 13A of the EPBC Act until 1 November 2023.
 - The WG noted that the Finfish Fishery Resource Assessment Group (FFRAG) reviewed several of the 'conditions' of the WTO approval at the 9th and 10th meetings of the FFRAG (14-15th October 2021 & 18-19th November 2021). Namely, the FFRAG reviewed the size limits for Spanish mackerel, and the process to develop a harvest strategy. Both of these conditions are also to be reviewed by the WG.
- b) It was also noted that AFMA proposes that the RAG and WG review 'shark management best practice' in 2022 (WTO condition 6). The results of this review found that current arrangements in the Finfish Fishery are mostly consistent with Commonwealth best practice. AFMA informed the WG that an Ecological Risk Assessment (ERA) for the fishery is scheduled to be undertaken in 2022, and shark bycatch management measures will be included as part of this process.

- c) AFMA has launched electronic Catch Disposal Records (eCDRs) as part of the mandatory Fish Receiver System. This will provide Torres Strait fish receivers with an optional fast and easy way to electronically report landed catch information to AFMA.
- d) In August 2021, the PZJA provided policy approval to a suite of proposed amendments to both the *Torres Strait Fisheries Act 1984* and the *Torres Strait Fisheries Regulations 1985*. Of particular relevance to the Working Group, the amendment to provide for catch reporting across all licence holders will allow for the implementation of mandatory daily logbook reporting by TIB licence holders. The WG noted that this amendment provides the power to implement such requirements, and that there will be a thorough consultation process with industry and communities before any such mandatory reporting system roll out.

33. After reviewing the 'catch watch' report provided by AFMA in the agenda papers, the WG recommended that scientific names should be used as much as possible on catch watch reports and in agenda papers to avoid any confusion with common names.

QDAF update

34. The QDAF representative advised the WG that the east coast Spanish mackerel working group met in May 2021 to review the progress of the fishery's stock assessment. It is expected that the assessment will be peer-reviewed and published by the end of 2021. Management measures may be amended for the 2022/23 season.

35. The WG noted that this is a relevant fishery, and that is beneficial to keep up to date with the management arrangements and stock status. It was noted that AFMA and QDAF are currently working together to include Torres Strait industry members in QDAF working group meetings and correspondence.

TSRA update

36. The WG noted that TSRA had no further updates.

2.3 Papua New Guinea National Fisheries Authority Update

37. The WG noted that PNG NFA were unable to attend the meeting and that reports for the most recent Traditional Inhabitant Meeting and Joint Advisory Committee meetings were provided in the agenda paper. No further update on PNG Fisheries was provided.

2.4 Native Title Update

38. The WG noted that *Malu Lamar (Torres Strait Islander) Corporation RNTBC* fully supports the western line opening. The WG was advised that Malu Lamar has progressed discussions with communities on defining the boundary line for this recommended fishery opening.

3 Total Allowable Catch Advice

3.1 Spanish Mackerel Total Allowable Catch Advice for the 2022-23 season

Reviewing the 2021 stock assessment results and recommendations from FFRAG 10

39. The WG noted a presentation by scientific member Dr Michael O'Neill under the funded project "*Torres Strait Spanish mackerel stock assessment*" (project number 200815) (**Attachment B**).

40. The WG considered the results of the updated Spanish mackerel stock assessment and Recommended Biological Catch (RBC) estimates as endorsed by the FFRAG at their 10th meeting on 18-19th November 2021.
41. The WG noted that the stock assessment and RBC calculation process was the same as the process used in 2020. As part of this process, the RAG endorsed a range of data inputs and treatments. Six individual stock assessment model runs were conducted based on these inputs (**Table 1**).
42. The range of potential RBC figures are derived from the mean of the results from the six stock assessment model runs.
43. The key outputs or 'summary indicators' from the 2021 stock assessment are provided in **Table 2**. This table includes a range of RBC values relating to various levels of forecasted stock biomass. For example, the 'F40' value is the RBC to build the stock biomass to 40% over 12 years.
44. Of note, the 'median 2020-2021 spawning biomass/unfished biomass' output is an indicator of the current health or 'stock status' of the fishery. This value is a mid-point of the values produced by the six stock assessment models. The result of this output indicates that the size of the spawning-stock biomass is 29% of virgin biomass. This result is very similar to the 2020 stock assessment which estimated the biomass to be 30%. The standardised catch rates also indicate that the stock level remains at a similar level to 2020.
45. Therefore, the stock assessment results indicate that the current stock biomass is above the limit reference point of 20%.
46. The 2020/21 total annual harvest of 52 t was among the lowest in the time series for the fishery. The WG noted that annual harvests in recent years have declined in line with reductions in catch rates and TAC's. However, the standardised catch rates stabilised in 2019, and then increased to the level it is currently.
47. The WG noted that the FFRAG recommended an RBC of 95 t. This figure was the 'F50' value, which the stock assessment model estimated would build the stock to 50% virgin biomass over 12 years.

Table 1. Analyses / model runs applied to the 2021 Torres Strait Spanish mackerel stock assessment.

Label	Fish weights	Catch rate series	Natural mortality rate (M)	Steepness parameter	Harvest pre-1989	Ageing data	Start year for data
1	Weighted average	No tender data. Fishing power included.	0.3	Estimated	Historic catches actual + polynomial model + IUU tapered	All years	1940
2	Weighted average	No tender data. Fishing power included.	0.35	Estimated	Historic catches actual + polynomial model + IUU tapered	All years	1940
3	Weighted average	No tender data. Fishing power included.	0.4	Estimated	Historic catches actual + polynomial model + IUU tapered	All years	1940
4	Weighted average	No tender data. Fishing power included.	0.3	Estimated	Historic catches actual + logistic model + IUU tapered	All years	1940
5	Weighted average	No tender data. Fishing power included.	0.35	Estimated	Historic catches actual + logistic model + IUU tapered	All years	1940
6	Weighted average	No tender data. Fishing power included.	0.4	Estimated	Historic catches actual + logistic model + IUU tapered	All years	1940

Table 2. 'Summary indicators' from the 2021 Torres Strait Spanish mackerel stock assessment.

Indicator	Median results
Median 2020-2021 spawning biomass/unfished biomass	29 per cent
Limit point: spawning biomass / unfished biomass	20 per cent
Harvest taken in 2020-2021 (all fishing sectors)	52 tonnes
Recommended Biological Catch (RBC) for 2021-2022	94 tonnes
Maximum Sustainable Yield (MSY) for 2022-23	131 tonnes
Median F_{40} harvest from the $B_{2022-23}$ exploitable biomass	129 tonnes
Median F_{48} harvest from the $B_{2022-23}$ exploitable biomass	102 tonnes
Median F_{50} harvest from the $B_{2022-23}$ exploitable biomass	95 tonnes
Median F_{60} harvest from the B_{2021} exploitable biomass	68 tonnes

Other considerations of the 2021 stock assessment

48. The WG discussed the importance of determining via genetic study whether the TS Spanish mackerel stock is a standalone stock. The current assumption is that the stock is a genetically isolated stock which does not mix with neighbouring stocks. However if this understanding was found to be inaccurate, then it would become even more important to consider the stock dynamics occurring in adjacent fisheries. It would mean that the Torres Strait stock assessment could not stand alone without factoring in the health of neighbouring fisheries.
49. The WG noted that biological sampling revealed a strong year class of 2 year old fish in 2019. Further sampling revealed a significant reduction in abundance of this year class in 2020. The stock assessment model could not account for the reduction of this year class, given the low annual harvest of 52 t. This indicates that the reduction is not due to fishing, suggesting that there are further unknown influences impacting the Spanish mackerel stock. These could include environmental factors such as ocean currents, or the health of neighbouring stocks.
50. The WG noted that these influences cannot be controlled, but it is important have an understanding of them in order to account for them in the TAC settings.

Comparative application of the Stock Synthesis model

51. The WG noted the stock assessment team conducted a trial run of the Stock Synthesis (SS) stock assessment software alongside the current 'custom' stock assessment model. The results of this initial analysis of the SS model yielded comparative outputs to the custom model.
52. This was a positive result in that it validates the accuracy of the current model, and suggests that the SS may be appropriate to apply to the Spanish model stock assessment in future years. This method will be further developed and tested over the 3 year period of the current stock assessment project to ensure accuracy of the model.
53. The WG discussed what should be considered if/when transitioning to the SS model. *Why should it be considered more desirable than the custom model?* There is no evidence to suggest that the SS model would be more accurate, however the SS model offers an obvious improvement because it is more streamlined, and cheaper to conduct. The current trial process is to ensure the SS is an accurate model with low levels of uncertainty before using it as a standalone model.
54. The WG noted that the greatest lever to reduce the uncertainties in the stock assessment model is to continue to improve the quantity and quality of data.

Working Group recommendations

55. The WG considered the stock assessment results and recommendations of the FFRAG. The WG noted that the FFRAG's recommended an RBC of 95 t. The WG further noted that an RBC of 95 t would yield a TAC of 75 t after taking into account the estimated 20 t of predicted catch outside the commercial fishery for the 2022/23 season.
56. The WG took a break to further discuss the FFRAG's process to reach the 95 t RBC recommendation. Traditional Inhabitant members were given the opportunity to freely discuss the stock assessment method, and to clarify aspects of uncertainty with scientific members.
57. The WG resumed the meeting and the Traditional Inhabitant members advised the remaining members that they supported the 95 t RBC and 20 t estimate of catches outside the commercial fishery.
58. The remaining members advised that they also supported these figures as endorsed by the FFRAG.

59. The WG noted that there is a high level of confidence amongst all members in the scientific process of the stock assessment, and thanked the scientific members for their diligence.
60. The WG agreed to deduct the 20 t estimate of catches outside the commercial fishery from the recommended RBC of 95 t.
61. The WG agreed to **recommend** a TAC of 75 t for the 2022/23 season of the Torres Strait Spanish Mackerel Fishery.

3.2 Coral Trout Total Allowable Catch Advice for the 2022-23 season

Reviewing the recommendations of the FFRAG

62. The WG noted that the FFRAG reviewed and recommended a coral trout TAC at their meeting on 18-19th November 2021.
63. Of note, the FFRAG considered recent catch data, previous assessments, outcomes the 1995-1996 CSIRO dive survey and the updated CPUE data series (non-standardised). All available evidence suggests that the coral trout fishery is at a healthy level. Past research suggests the biomass level ranges from F60 to F80 (60%-80% of virgin biomass).
64. The FFRAG recommended a TAC of 135 t for coral trout for the 2022-23 season. This is the nominal TAC amount which has been in place since 2007/08. The status of the coral trout stock was evaluated by Management Strategy Evaluation (MSE) in 2006, and 135 t was deemed an appropriate allowable catch for the fishery. The RAG noted there is no newly available information to suggest that this TAC is no longer appropriate.
65. The RAG also agreed that there is no need to pursue an estimate of catches outside the fishery at this point in time.

Working Group considerations

66. The WG agreed there is no current information to guide a change to the nominal TAC. However it was noted that there's a need to prioritise and plan for future stock assessments.
67. The WG noted that further data should be collected while the fishery is still in an under-fished state. This will prepare for effective management of the fishery should fishing effort increase in the future.
68. The WG noted that a 'catch rate standardisation' research project scope was developed by the RAG at FFRAG 10. Tabled for TSSAC funding in 2022/23, this project would standardise commercial catch rates in a way to enable this metric to be used as a proxy for abundance. This method could feed into a formal stock assessment, but also stand alone as an individual fishery monitoring tool.

Working Group recommendations

69. The WG agreed that there is no new information to guide a change to the nominal TAC of 135 t, and based on all lines of evidence it is highly unlikely that the stock is at risk from fishing.
70. The WG also agreed that there is no need to provide an estimate of catches outside the fishery for the 2022/23 season.
71. The WG **recommended** a TAC of 135 t for the 2022/23 season. This is in line with the nominal TAC since the 2007/08 season.

4 Management

4.1 Western Line Closure

72. The WG noted the proposed work plan to address the recommended opening of the 'western line closure' area which was tabled at FFRAG 9 meeting (14-15th October). This work plan was progressed as an action from the FFWG meeting on 25 November 2020.
73. The WG noted that advice was received from Traditional Inhabitant members at FFRAG 10 meeting (18-19 November 2021) that stakeholders are frustrated with the seeming lack of progress towards the opening. Accordingly, Traditional Inhabitant members sought clarification of the work plan considered at the RAG's previous meeting (FFRAG 9) and advised of their initiative to travel to Gudamalulgal communities between 6 and 10 December 2021 with the support of the TSRA and Malu Lamar.
74. Traditional Inhabitant members advised the WG that the purpose of these meetings is to communicate the previously identified considerations to support the opening (as identified at previous RAG meetings). The outcomes from discussions at the current WG meeting will also be tabled at these meetings.
75. The WG noted RAG Traditional Inhabitant members' recommendation that the western line opening be tabled for approval by the PZJA at its first meeting of 2022. WG Traditional Inhabitant members also recommended the opening be tabled for approval as soon as possible. It was noted that there are perceived sensitivities in the community due to the long consultation process.
76. The representative for Malu Lamar raised the seriousness of the unemployment issue in these communities. There are perceived barriers to economic development, and this is creating structured poverty. As such, this concern highlights the importance of opening the fishery as soon as possible, as recommended by Traditional Inhabitant members.
77. The WG noted AFMA advice from FFRAG 10 that as part of any recommendation to the PZJA to change the closure, it is necessary to provide the PZJA with advice on likely risks (and benefits) and corresponding management strategies to address those risks. The key purpose of the meetings proposed with Gudamalulgal communities is to engage those communities directly in the identification, consideration and management of potential risk to fish stocks in the opening area.
78. The WG noted that scientific members advised at FFRAG 10 that collecting robust catch data as soon as the fishery opens is crucial for the effective monitoring of the stock.
79. WG industry members advised that no more than 5 boats from Boigu are expected to commence operating, with a similar number for Dauan/Saibai combined.
80. The Malu Lamar representative advised the WG that there has been an agreement reached between the relevant Native Title groups that the southern boundary line for the opening area should be drawn as a straight line of latitude in line with the southernmost point of Turnagain (Buru) Island
81. The WG discussed the potential risks to black jewfish, which, due to market demands for their swim bladders, as well as their biology, are known to be susceptible to over-fishing. It was noted that an email correspondence from scientific member Dr Michael O'Neill, which provides background information on black jewfish biology and existing research, will be distributed to FFRAG and FFWG members. The current information suggests that the most likely spawning period for jewfish in Cape York is April to September. However, noting the significant variation in spawning periods between neighbouring stocks, further research is required to determine the spawning period for black jewfish in the Torres Strait.
82. Of particular note from the email correspondence is the potential opportunity for Torres Strait black jewfish gonad samples to be included in a current research project. The WG agreed that it

would be highly valuable participate in this research, noting that a means to store any samples in Gudamalulgal communities would need to be arranged.

Working Group advice to support community meetings

83. As previously identified, the WG noted that meetings with Gudamalulgal communities should aim to educate the community about the importance of collecting comprehensive CDR upon fishery opening. Specifically, this pertains to a high uptake of the voluntary 'Part B – Effort' section of the CDR form. This section already has a very high completion rate across the existing finfish fishery, and the community meetings will serve as platform to foster similar data stewardship in Gudamalulgal communities.
84. In addition to CDR reporting, the WG suggested that the community meetings could involve introducing other forms of data collection to fishers. Notably, an identified data need for the fishery is the collection of length data. This data would greatly assist in the scientific assessment of the stocks. AFMA offered to provide a length-measuring sheet to be taken to the meetings to garner community interest in potential catch-measuring exercises in the future. Information received from the community will guide specific monitoring options once the fishery opens.
85. AFMA also agreed to provide fact sheets to support the community meetings. The fact sheets would include licencing information and FAQs, fishery regulations, example CDR forms, and a summary of RAG and WG advice to support a responsible opening. The WG recommended that information guides be produced and distributed before the opening to provide information to fishers on species identification and regulations.
86. The WG noted the importance of communicating all of the identified considerations to support the fishery opening. This will build ownership of the fishery and its data needs within the Gudamalulgal communities.

4.2 Spanish Mackerel and Grey Mackerel Size Limits

87. The Working Group noted that it is a condition of the wildlife trade operation approval for the Torres Strait Finfish Fishery for the PZJA to review the appropriateness of the current minimum size limits for Spanish mackerel. The Working Group further noted that it has previously considered the appropriateness of the size limit for grey mackerel.
88. The Working Group considered advice from the RAG recommending that the minimum size limit for Spanish mackerel be retained and the minimum size limit for Grey mackerel be increased from 50cm total length (TL) to 75cm TL. As detailed in the agenda paper and outlined by the RAG Chair at the meeting, the RAG advice was based on the following:
 - a) Spanish mackerel: Having regard for available information on the biology of the stock, catch information for the fishery, and an understanding of fishing practices and capacity, the FFRAG recommends that the minimum size limit for Spanish mackerel be retained on the basis that:
 - i. arrangements in the fishery are effective in managing risks to the stock from fishing given the very low level of catch taken of fish sized between the estimated minimum length at maturity (90cm TL) and the current minimum size limit (75cm TL);
 - ii. the relative size structure of catches in the fishery continue to be monitored and risks to the stock reassessed as necessary; and
 - iii. an increase to the minimum size limit would likely have a disproportionate impact on the Traditional Inhabitant commercial fishing sector. Given the RAG's advice in (i) above, a size limit increase may impact the pursuit of other management objectives under the Act, specifically to develop and implement licensing policy, to the desirability of promoting economic development and employment opportunities for traditional inhabitants.

- b) Grey mackerel: Having regard for available information on the biology of the stock, catch information for the fishery, FFRAG recommends that the minimum size limit for Grey mackerel be increased from 50cm TL to 75cm TL on the basis that the size limit is the sole species-specific management measure in place for the species and should therefore align with minimum length at maturity which is understood to be 75cm.
89. Having considered advice from the RAG and having regard for view of members, the Working Group also **recommended** that the minimum size limit for Spanish mackerel be retained and the minimum size limit for Grey mackerel be increased from 50cm TL to 75cm TL.

4.3 Harvest Strategy

90. The Working Group noted an update from the AFMA member on work to date on developing harvest strategies for Spanish mackerel and coral trout.
91. The Working Group considered the following advice from the RAG, as outlined by the RAG Chair at the meeting:
- a) The RAG recommends that a Management Strategy Evaluation (MSE) now be undertaken to finalise a harvest strategy for Spanish mackerel that meets Traditional Owner objectives and are robust to uncertainties. It was the RAG's view that the objectives (including guiding principles), indicators (biomass) and reference points (target and limit reference points) for a future Spanish mackerel harvest strategy were well progressed.
 - b) The RAG agreed that:
 - i. based on stock status and fishing levels, the highest priority for the fishery should be to progress a harvest strategy for Spanish mackerel; and
 - ii. consistent with its advice on 14-15 October 2021 (meeting 9), the highest immediate research priority for coral trout is to progress the CPUE standardisation methodology and analysis. Given the likely status of the stock, the size of the fishery in terms of catch, the level of information available for the fishery, and the costs involved in undertaking fishery independent surveys, it is likely that CPUE analysis will be central to harvest strategy options in the short to medium term. The RAG also noted that biological and catch composition data is now being collected for the fishery. These data will support future stock assessments.
92. The Working Group noted that the RAG had agreed to defer further discussion on coral trout until its next meeting given the order of priority described above.
93. The WG sought to clarify the purpose of the MSE process for the harvest strategy. The scientific members provided the following explanation:
- The current stock assessment model is a stand-alone method which produces projections of stock biomass based on factors such as fishing pressure, biological assumptions, and environmental data. However, it does not test hypothetical variables or 'harvest control rules', within a framework of an Operating Model (OM) and the Estimation Model (EM – often the assessment model).
 - Using computer simulations, the effects of a multitude of potential scenarios the fishery may experience can be analysed. It would allow the harvest strategy to account for uncertainties such as variations in assumptions about biological parameters (and in some

circumstances prices and costs if available), and enable harvest control rules to be refined.

94. The Working Group noted that whilst a final harvest strategy is yet to be agreed for the Fishery, a consistent and effective approach has been applied over recent seasons. This approach is consistent with progress made to date on developing a preferred harvest strategy for the fishery. Given this, the Working Group considered whether it was value for money to invest in a potentially complex and costly MSE. It was also questioned whether an MSE would have an 'insurance' value for guiding investment decisions in the fishery by providing more certainty in the effectiveness of the harvest strategy/stock assessment process. The Working Group noted the following:

- a) It would be consistent with Australian Government Policy¹ to undertake an MSE of the proposed harvest strategy;
- b) The value of the Fishery goes well beyond a monetary value. The fishery has significant cultural and social value to Torres Strait Islanders. This value is relevant when considering value for money;
- c) Advice from the Economics Permanent Observer member that MSE will provide guidance on key drivers for uncertainties in a particular harvest strategy approach and test the effectiveness of potential strategies to deal with those risks. For example, the impact of having a significant break in the CPUE time series for the Fishery if for whatever reason the sunset sector does not fish in the fishery; and
- d) An MSE would support industry make informed decisions on harvest strategy options to achieve the operational objectives they recommended for the Fishery under the previous harvest strategy project. In particular, options for building the stock to B_{60} (60 percent of the unfished biomass). That is in the event, that following MSE testing, this target reference point remains an aspirational goal for the industry.

95. The Working Group also considered condition 8 of the wildlife trade operation approval for the Fishery requiring the PZJA to develop a harvest strategy for the Torres Strait Finfish Fishery by 30 June 2023. The Working Group was satisfied that the proposed work plan from the RAG to progress the Spanish mackerel harvest strategy, together with the biological data collection and proposed CPUE standardisation work on coral trout, was a well targeted and prioritised work plan for the Fishery. The WG agreed that the work plan was based on an informed understanding of management needs and risks for the Fishery.

96. Having considered advice from the RAG and having regard for the views of members, the Working Group endorsed the recommended RAG approach for progressing harvest strategies in the fishery and **recommended** that the Working Group be consulted throughout the proposed MSE process of the Spanish mackerel harvest strategy.

5 Torres Strait Finfish Management Priorities

97. The Working Group reviewed the management priorities discussed at the WG meeting on 25 November 2020 as outlined in the agenda paper. Having considered member's views and management issues discussed at the meeting, the Working Group recommended the following priorities:

¹ Commonwealth Fisheries Harvest Strategy Policy. Framework for applying an evidence-based approach to setting harvest levels in Commonwealth fisheries. Second edition. 2018

- HIGH: Supporting recommended changes to the Western Line Closure. Traditional Inhabitant members recommend this priority be moved to the highest priority for the Fishery;
- HIGH: Progress the development of a harvest strategy;
- HIGH: Review current measures applied to the management of the take of sharks in the Fishery to ensure that they are in line with Commonwealth best practice (condition 6 of the Wildlife Trade Approval for the fishery). AFMA is aiming for an Ecological Risk Assessment to be undertaken for the Fishery in 2022 which may also inform management needs as it relates to the take of sharks.
- MEDIUM: Formalising total allowable catches for the Finfish fishery.
- LOW: Potential application of VMS of tenders

98. The Working Group also **recommended** that the priority to support the PZJA's consideration of quota unit allocation options be removed from the Working Group's priorities at this time noting that further work on this priority is pending a PZJA decision.

6 Torres Strait Finfish Fishery Research Priorities

99. The Working Group noted that several essential research priorities for the Fishery are currently being addressed through funded projects. These are:

- Torres Strait Spanish mackerel stock assessment (funded for a further three years);
- Spanish mackerel and coral trout biological sampling (funded for a further three years); and
- Scoping study for an alternative index of abundance for the Torres Strait Spanish mackerel stock.

100. The Working Group considered advice from the RAG on future research priorities for the Fishery as detailed in Table 1 of the agenda paper. The Working Group endorsed the priorities identified by the RAG. Noting the existing research commitments in the fishery and the remaining essential priorities, the Working Group further endorsed the RAG's advice to recommend that the Torres Strait Scientific Advisory Committee consider calling for funding applications to address the following two essential research priorities for the Fishery:

- Management Strategy Evaluation (MSE) of draft harvest strategy
- Coral trout catch-per-unit-effort standardisation

7 Other Business

101. There was no other business nominated for consideration.

8 Date and venue for next meeting

102. The Working Group agreed that its next meeting would be held at the end of November 2022 with the exact date to be determined out of session. The Working Group noted that the meeting schedule may change depending on whether or not an MSE project on the Spanish mackerel harvest strategy is undertaken. The Working Group also noted the meeting schedule agreed to for the RAG (Table 1 below).

103. The Chairperson in his closing remarks raised that feedback on the Working Group process is always welcome. Any feedback from Traditional Owner members is particularly important to ensure that the current system is still working effectively to support the Owners in managing the fishery. The Chairperson invited feedback to be provided directly to AFMA, or OOS by email, or via phone to the Chair or AFMA members if preferred.

104. The meeting concluded at 1530 hrs.

Table 1. Torres Strait Finfish Fishery FFWG and FFRAG meetings and key items for 2022.

Date	Group	Key agenda items
January 2022 (TBC)	PZJA	Decision on 2022-23 season TACs.
1 July 2022 - Torres Strait Finfish Fishery 2021-22 Season Opens		
8 September 2022	FFRAG 11 Data Meeting	Review new data available from 2021-22 season to support 2022 stock assessments. Review and advise on research priorities
3-4 November 2022	FFRAG 12	Stock assessment update for Spanish mackerel. RBC advice for 2022-23
End of November 2022 (TBC)	FFWG 2022	TAC advice for 2023-23 season.

Attachment A

PROTECTED ZONE JOINT AUTHORITY TORRES STRAIT FINFISH FISHERY WORKING GROUP MEETING 2021

25 November 2021 (8:30 am - 5:00 pm)

Joint face-to-face meeting / Video Conference

Venue: Thursday Island - JCU Conference Room

DRAFT AGENDA

1 PRELIMINARIES

1.1 Acknowledgement of Traditional Owners, Welcome and Apologies

The Chair will welcome members and observers to the 9th meeting of the FFRAG.

1.2 Adoption of Agenda

The FFWG will be invited to adopt the draft agenda.

1.3 Declaration of Interests

Members and observers will be invited to declare any real or potential conflicts of interest and determine whether a member may or may not be present during discussion of or decisions made on the matter which is the subject of the conflict.

1.4 Action Items from Previous Meetings

The FFWG will be invited to note the status of action items arising from previous meetings.

1.5 Out-of-Session Correspondence

The FFWG will be invited to note out of session correspondence on FFWG matters since the previous meeting.

2 UPDATES FROM MEMBERS

2.1 Industry & Scientific Members

Industry and scientific members will be invited to provide a verbal update on matters concerning the Torres Strait Finfish Fishery, in particular, providing comment on fishing patterns, behaviours, prices, and market trends this season.

2.2 Government Agencies

The FFWG will be invited to note updates from AFMA, TSRA and QDAF on matters concerning the Torres Strait Finfish Fishery.

2.3 PNG National Fisheries Authority

The FFWG will be invited to note a verbal update from the PNG National Fisheries Authority if a representative is in attendance.

2.4 Native Title

The FFWG will be invited to note a verbal update from Malu Lamar (Torres Strait Islander) Corporation RNTBC if a representative is in attendance.

3 TOTAL ALLOWABLE CATCH ADVICE

3.1 Spanish Mackerel Total Allowable Catch Advice for the 2022-23 Season

Having considered advice from the FFRAG 10 (18 Nov 2021) on Recommended Biological

Catches and best estimates of catches taken outside the fishery, FFWG will discuss and

provide advice on Total Allowable Catches for the 2022-23 fishing season for Spanish mackerel.

3.2 Coral Trout Total Allowable Catch Advice for the 2022-23 Season

Having considered advice from the FFRAG 8 (18 Nov 2021) on Recommended Biological

Catches and best estimates of catches taken outside the fishery, FFWG will discuss and provide advice on Total Allowable Catches for the 2022-23 fishing season for coral trout.

4 MANAGEMENT

4.1 Western Line Closure

The FFWG are invited to note and discuss an update provided by Traditional Inhabitant members and the Australian Fisheries Management Authority (AFMA) on the progression to date towards the recommended opening of the western line closure.

4.2 Spanish Mackerel & Grey Mackerel Size Limits

Having regard for any advice from the FFRAG (to be considered by the FFRAG on 14-15 October 2021), the FFWG will be invited to discuss the size limits of Spanish mackerel & grey mackerel in the context of the WTO condition, neighbouring jurisdictions, and size-at-maturity data.

4.3 Harvest Strategy

Having regard for any advice from the FFRAG (to be considered by the FFRAG on 18 November 2021), the FFWG is asked to discuss and provide advice on options for progressing the development of a harvest strategy for the fishery.

5 TORRES STRAIT FINFISH FISHERY MANAGEMENT PRIORITIES

FFWG are asked to discuss and provide advice to AFMA and the PZJA on management priorities for 2021-22.

6 TORRES STRAIT FINFISH FISHERY RESEARCH PRIORITIES

FFWG are asked to discuss and provide advice to AFMA and the PZJA on research priorities for 2021-22.

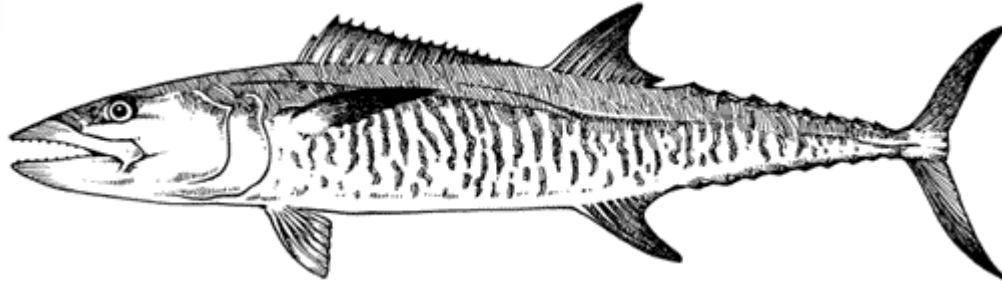
7 OTHER BUSINESS

FFWG members are invited to discuss other business for consideration.

8 DATE AND VENUE FOR NEXT MEETING

The FFWG will confirm arrangements for FFRAG 11 and 12, and FFWG 2022 proposed for September and October 2022, and be advised of and PZJA meeting to decide next season's TACs (January 2022).

The Chair must approve the attendance of all observers at the meeting. Individuals wishing to join the meeting as an observer must contact the Executive Officer – Chris Boon (chris.boon@afma.gov.au)



Torres Strait

*Scomberomorus
commerson*

Spanish mackerel

The 2021 stock assessment.

FFWG meeting, 25 November 2021



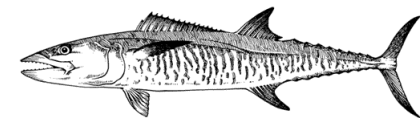
Australian Government

Australian Fisheries Management Authority



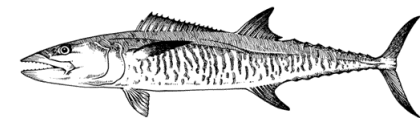
Queensland
Government

List of data inputs (treatments) for 2021.



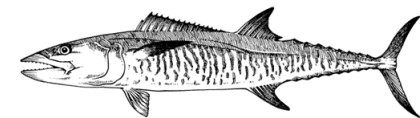
Number of treatments?

1. Total harvests: (2)
 - Two methods for historical estimates 1940-1988.
 - One Taiwanese IUU harvests.
2. Standardised catch rates: (1)
 - Tender/dory data (out)
 - Qld north east coast fishing power offset (in)
3. Fish age frequencies: (1)
 - All years with fish age or length data (in)
4. Natural mortality rate (M ; maximum age = 13.5 years) (3)
 - 0.3, 0.35, 0.4 per year (in)
5. Steepness estimated (1)
 - Estimated (in)



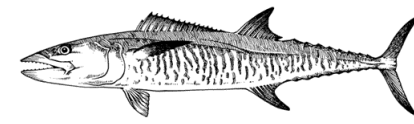
Summary indicators

Indicator	Median results
Median 2020-2021 spawning biomass/unfished biomass	29 per cent
Limit point: spawning biomass / unfished biomass	20 per cent
Harvest taken in 2020-2021 (all fishing sectors)	52 tonnes
Recommended Biological Catch (RBC) for 2021-2022	94 tonnes

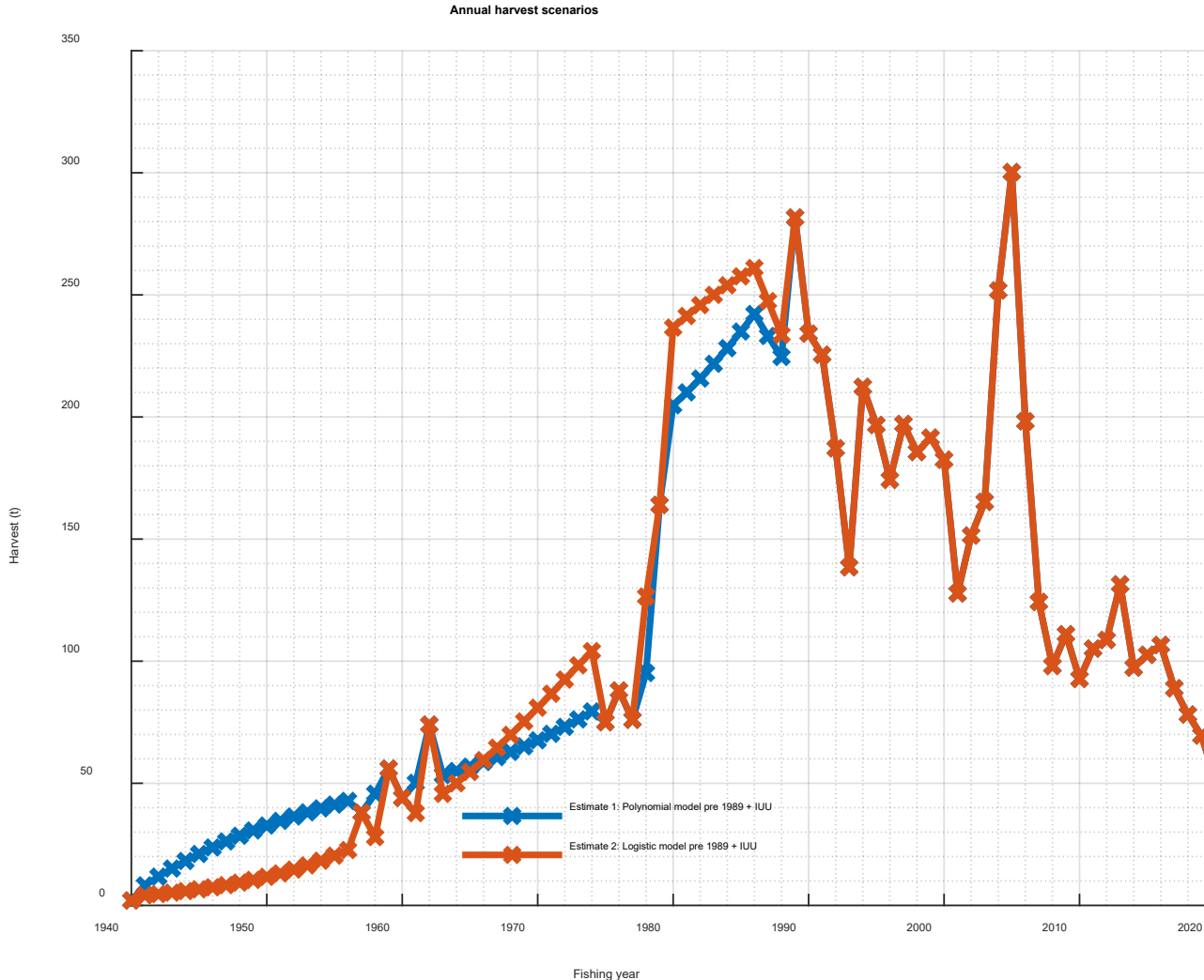


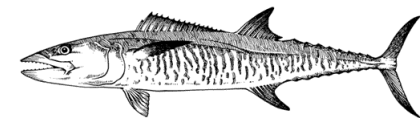
Summary indicators

Indicator	Median results
Maximum Sustainable Yield (MSY) for 2022-23	131 tonnes
Median F_{40} harvest from the $B_{2022-23}$ exploitable biomass	129 tonnes
Median F_{48} harvest from the $B_{2022-23}$ exploitable biomass	102 tonnes
Median F_{50} harvest from the $B_{2022-23}$ exploitable biomass	95 tonnes
Median F_{60} harvest from the B_{2021} exploitable biomass	68 tonnes

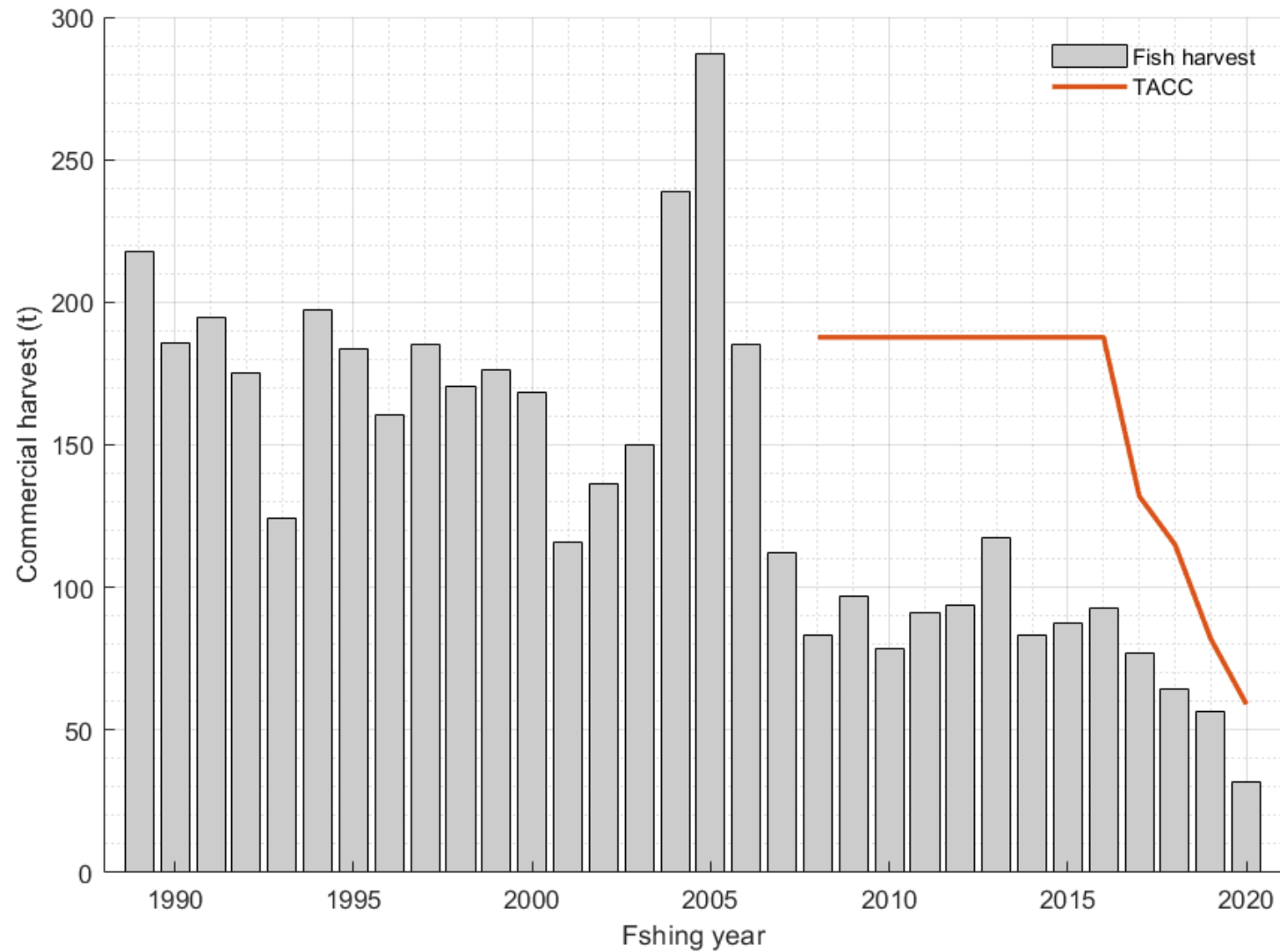


Estimated harvests (all fishing sectors)



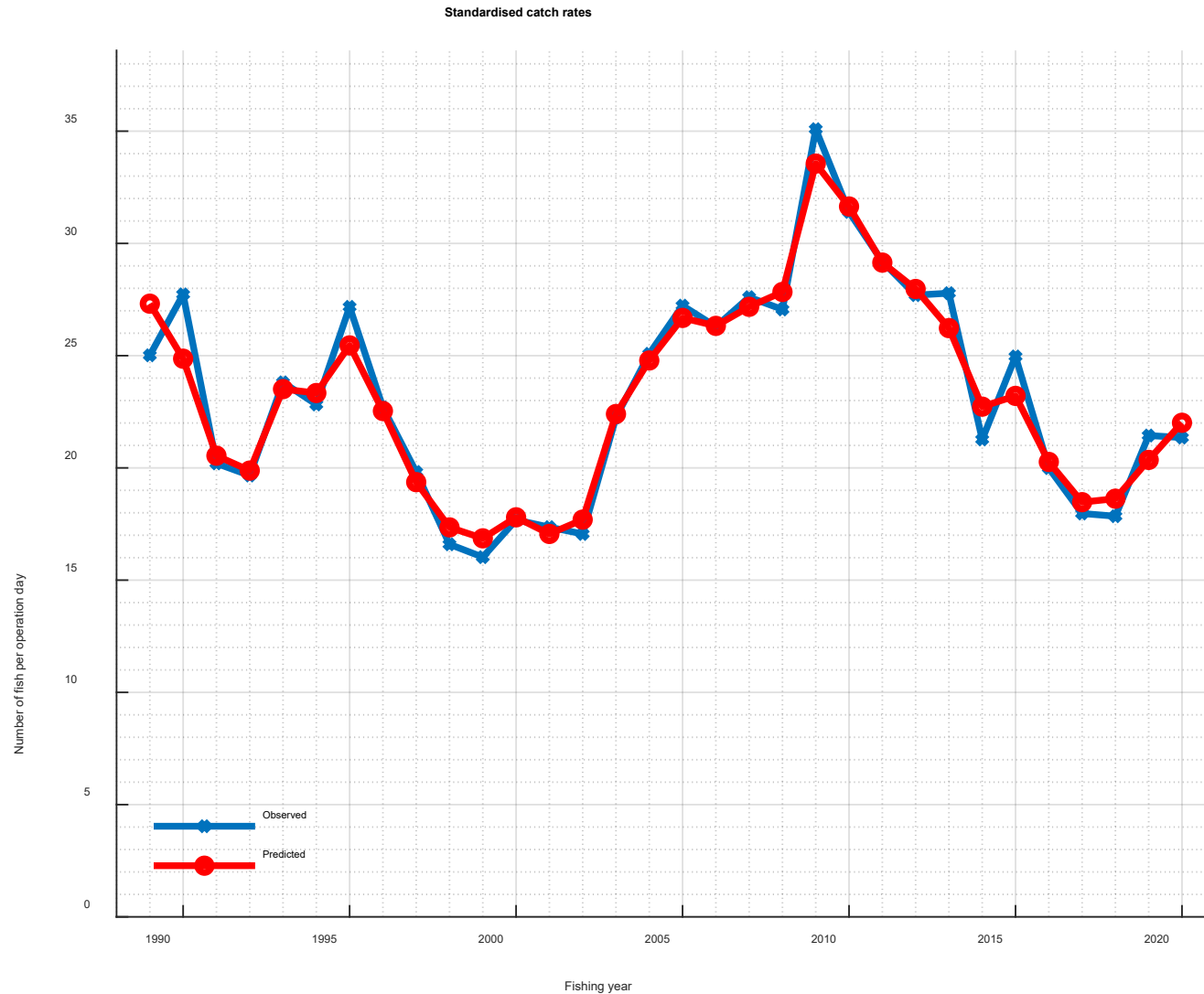
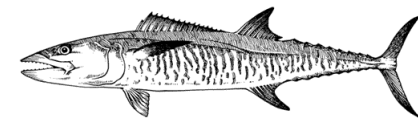


Estimated commercial harvests

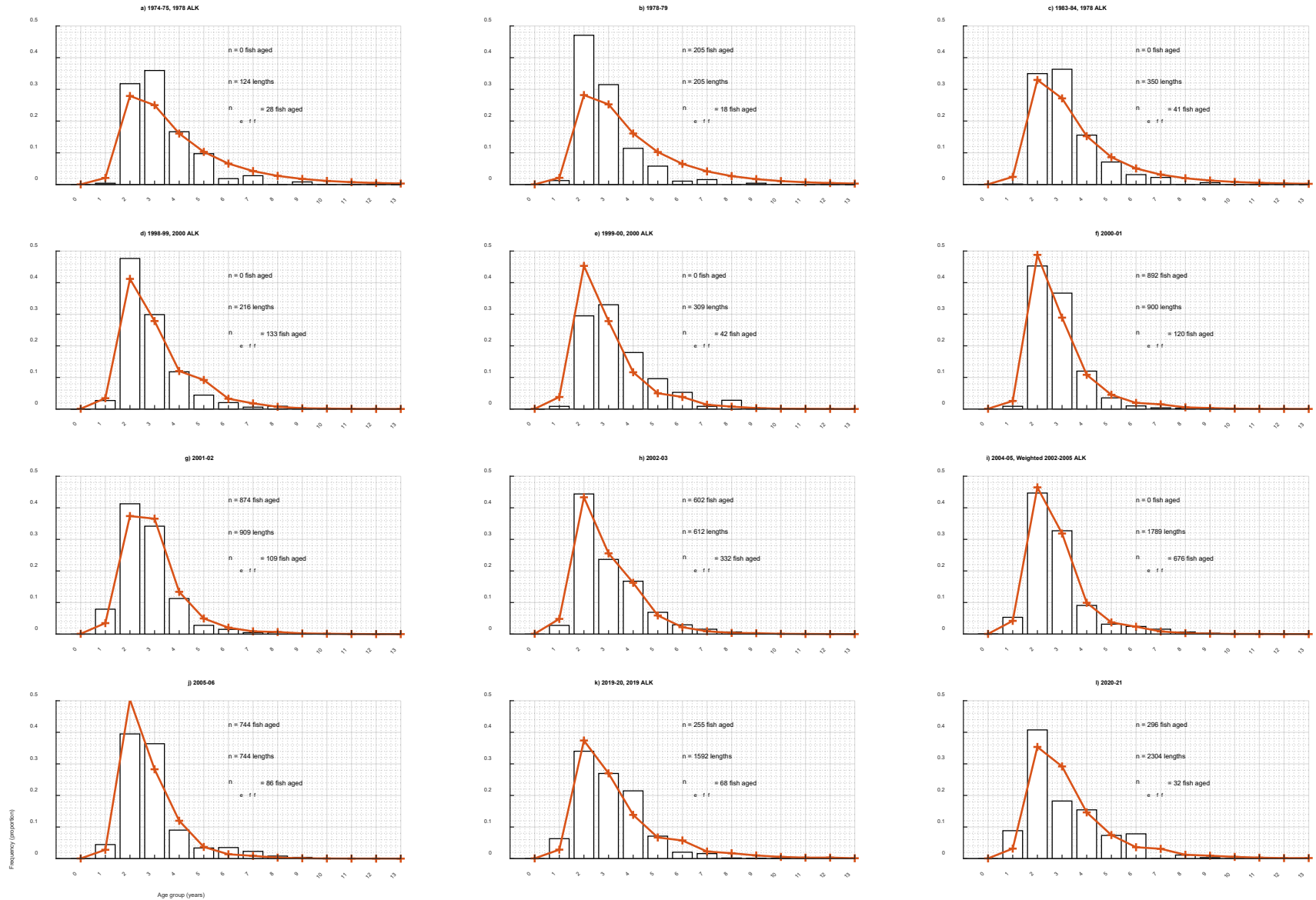
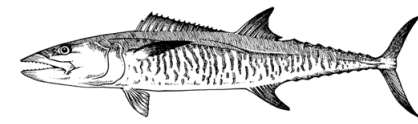


Standardised catch rates

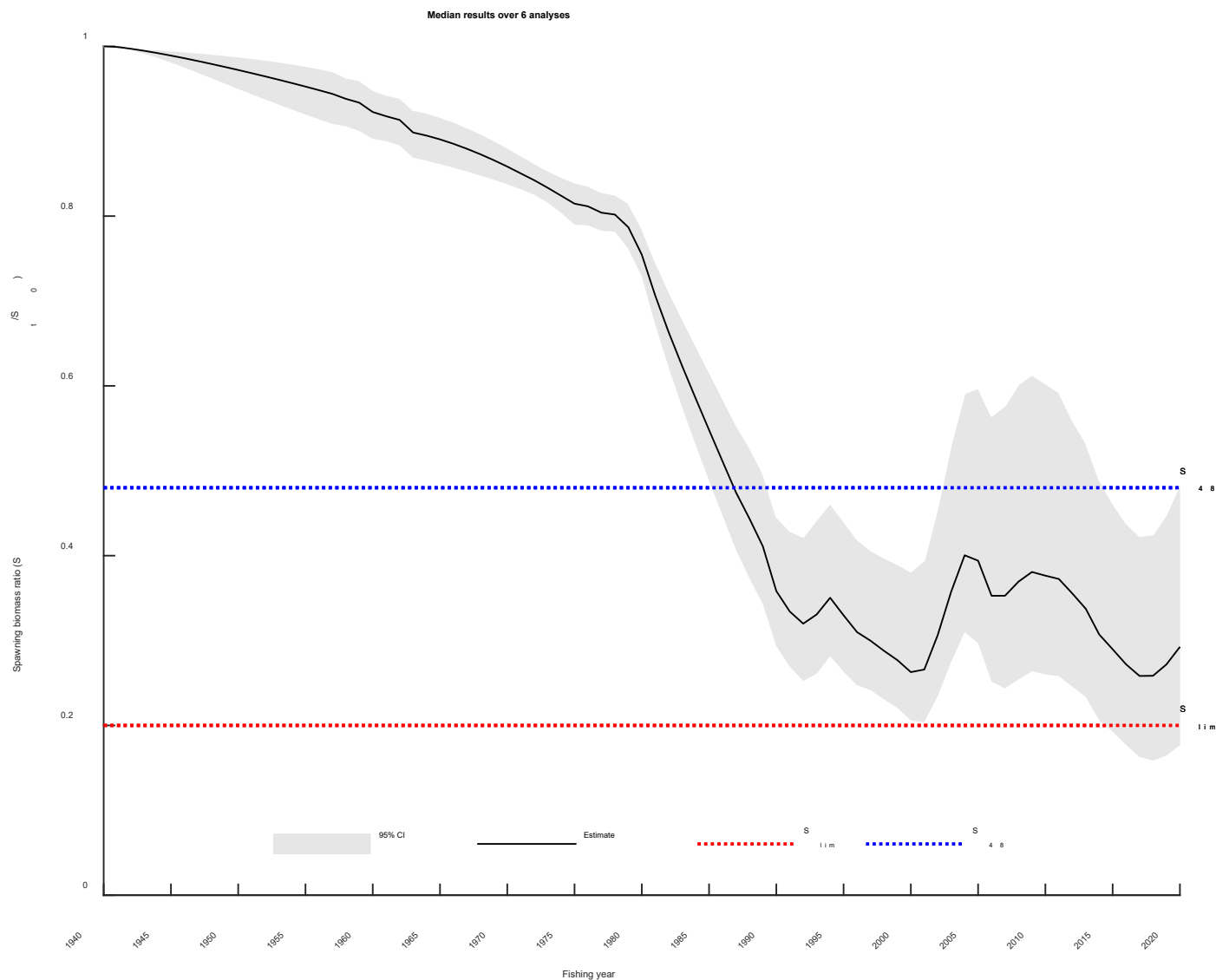
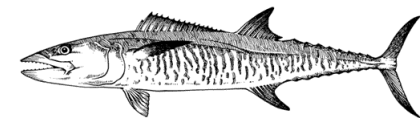
SM02 and TSF01 logbooks; CIs $\approx \pm 3$ fish

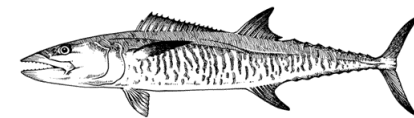


Example: analysis 3 age fit. negLL = -180.9



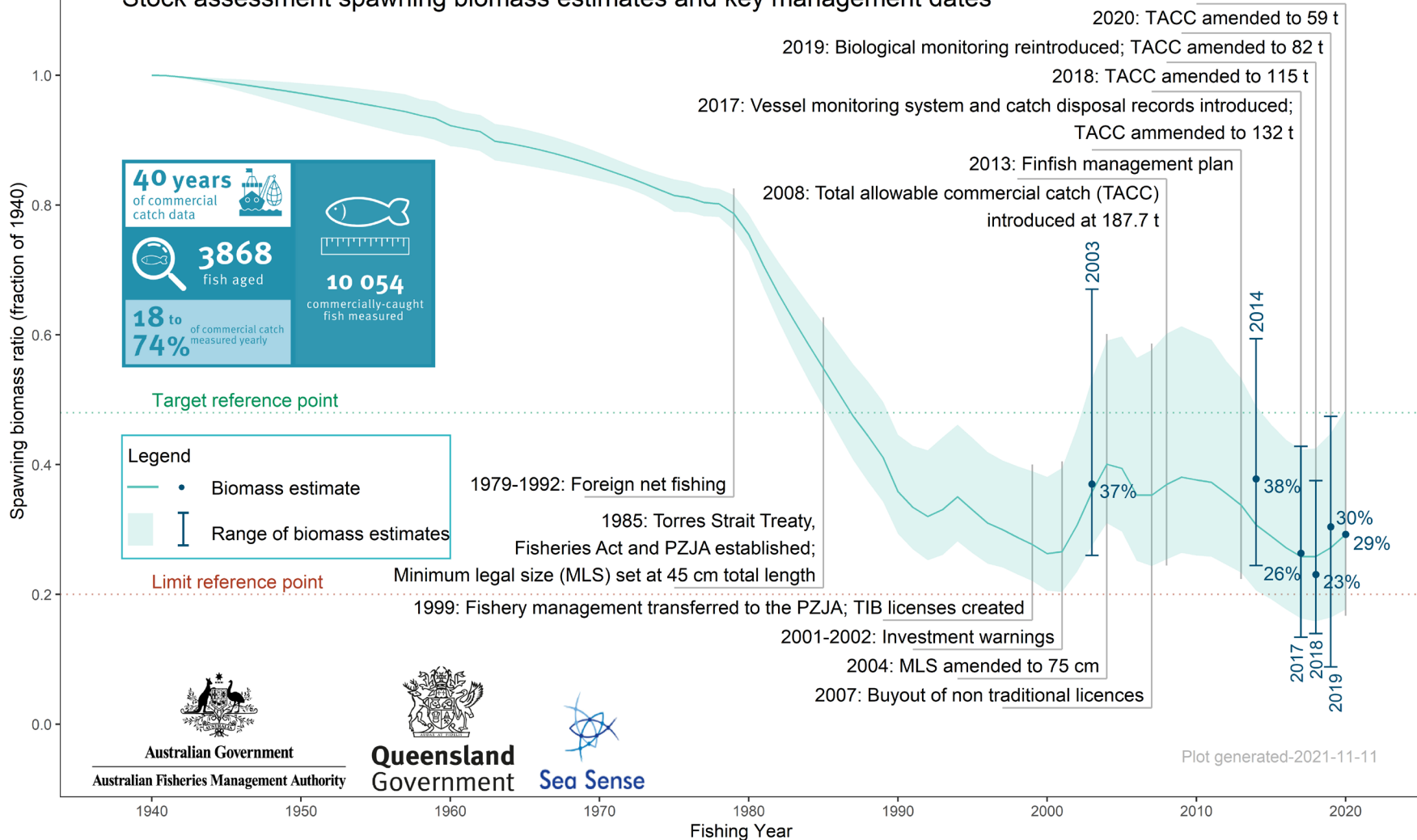
Spawning biomass (egg) ratios

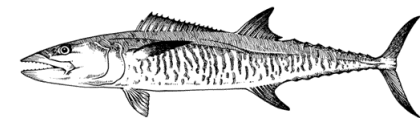




Spanish mackerel (2020) Torres Strait

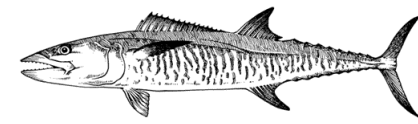
Stock assessment spawning biomass estimates and key management dates





Summary of potential RBC's for all fishing sectors

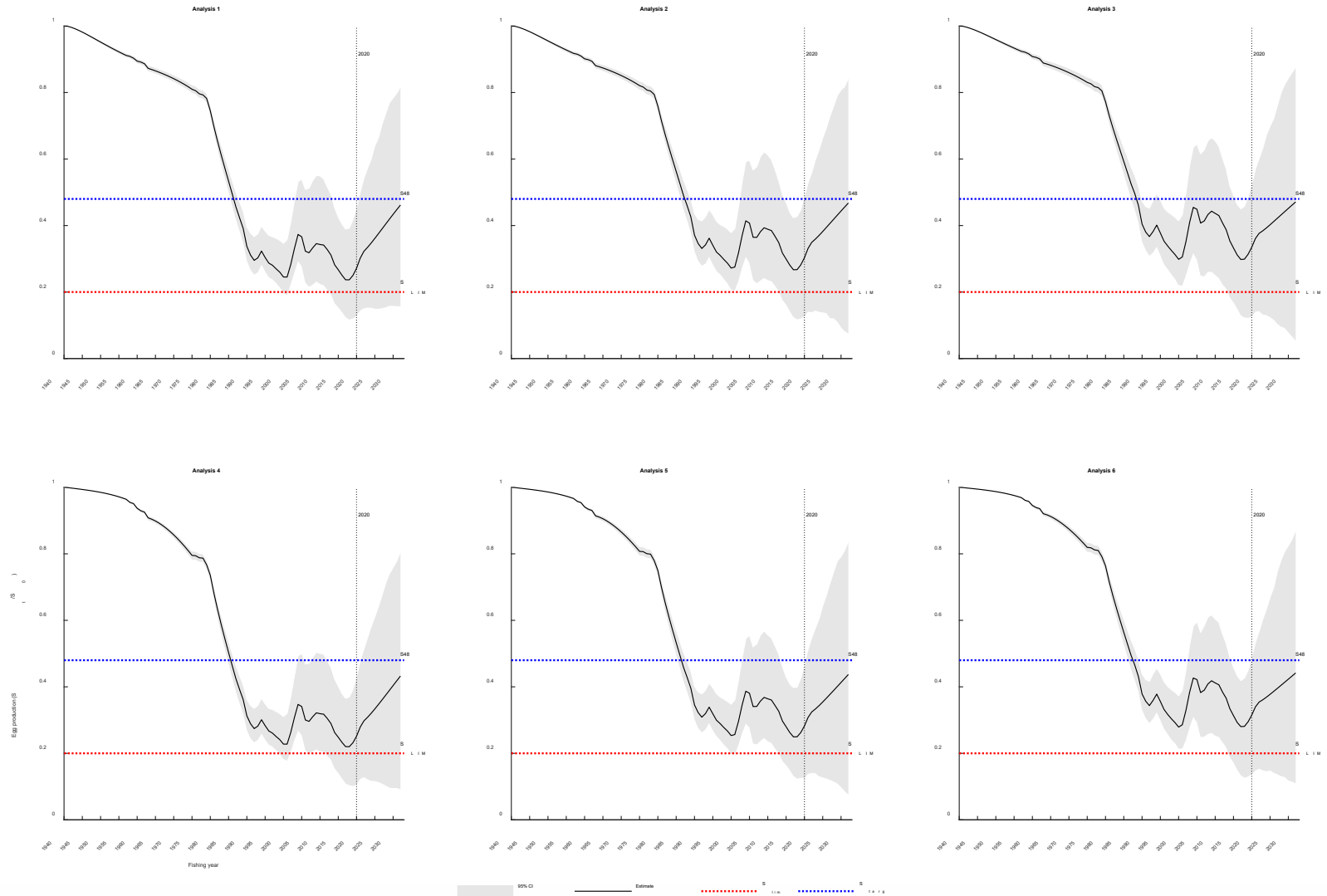
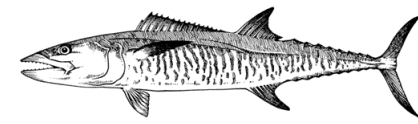
No.	Name of RBC approach 1940 custom model	Fishing year for the RBC calculation	% of <u>all</u> simulations below S_{20} over 12 years and 6 analyses Assuming average recruitment, and the constant RBC	Median RBC tonnes Over 6 analyses
1	Constant F_{MSY}	2022-23	12.8%	131
2	Constant F_{40}	2022-23	12.6%	129
3	Constant F_{48}	2022-23	10.4%	102
4	Constant F_{50}	2022-23	9.9%	95
6	Constant F_{60}	2022-23	8.6%	68



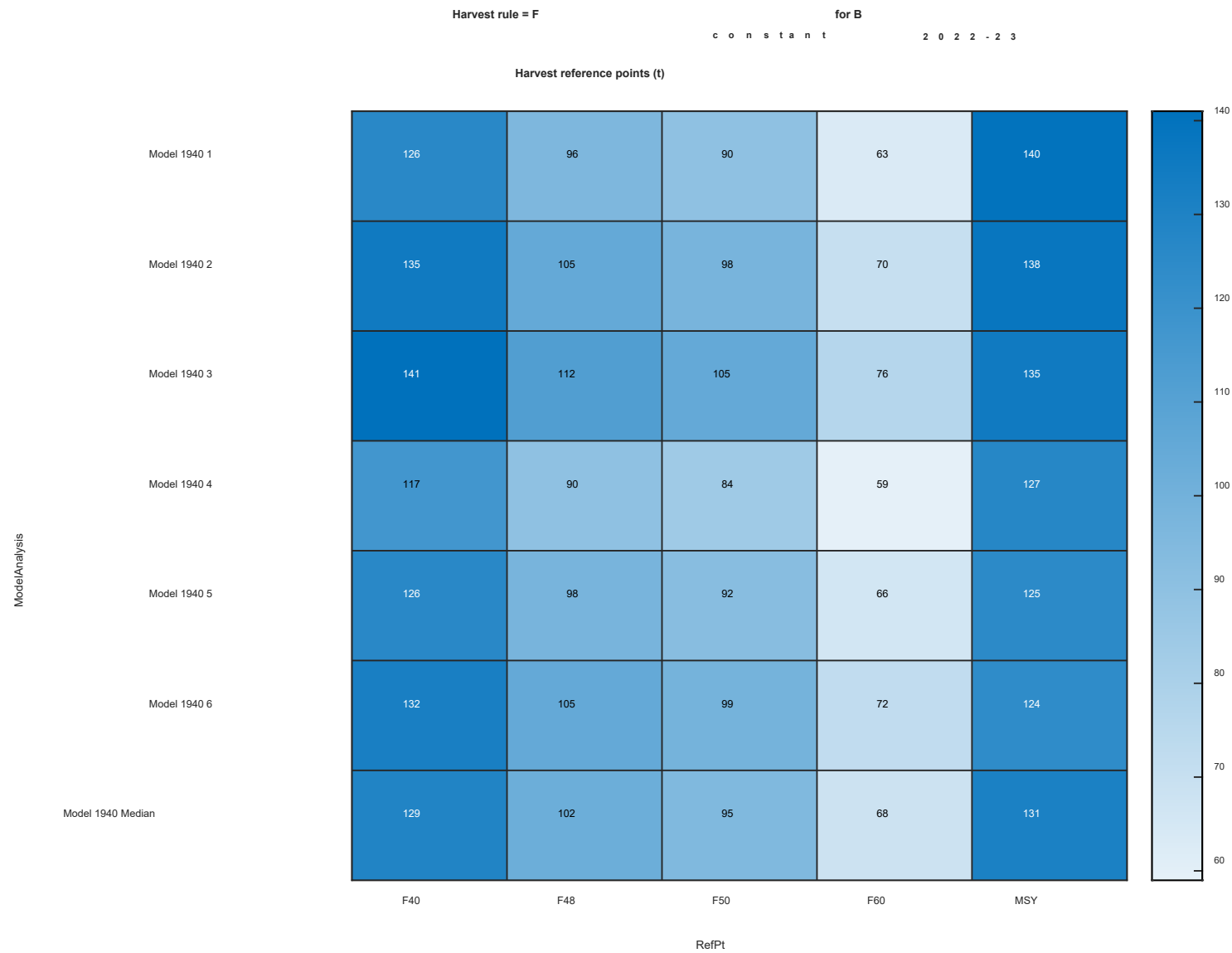
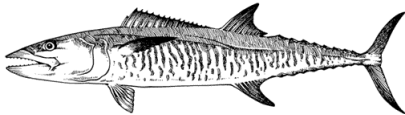
End of talk.

Supplementary slides from here

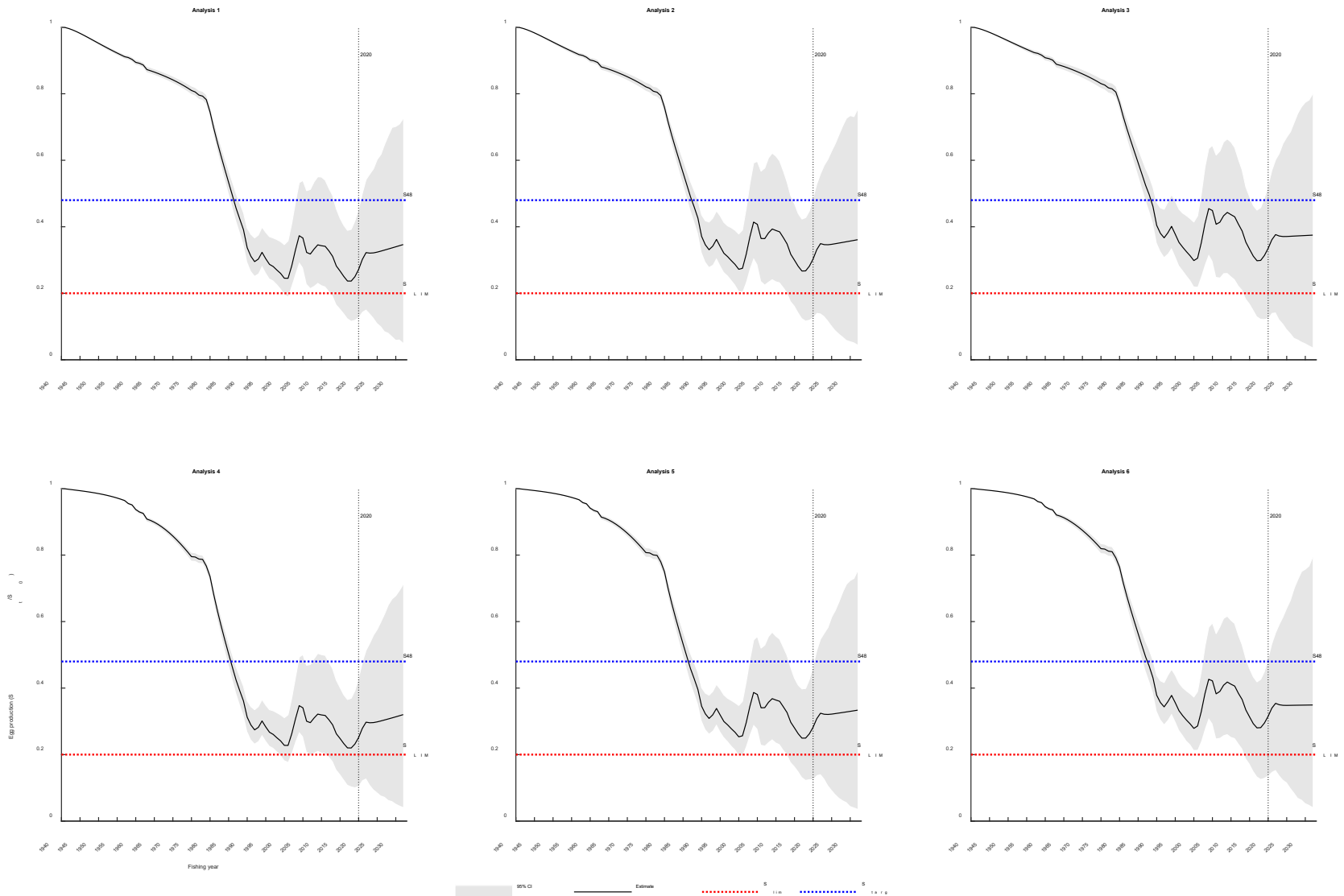
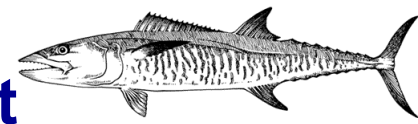
Spawning biomass forecast for the RBC = 95t



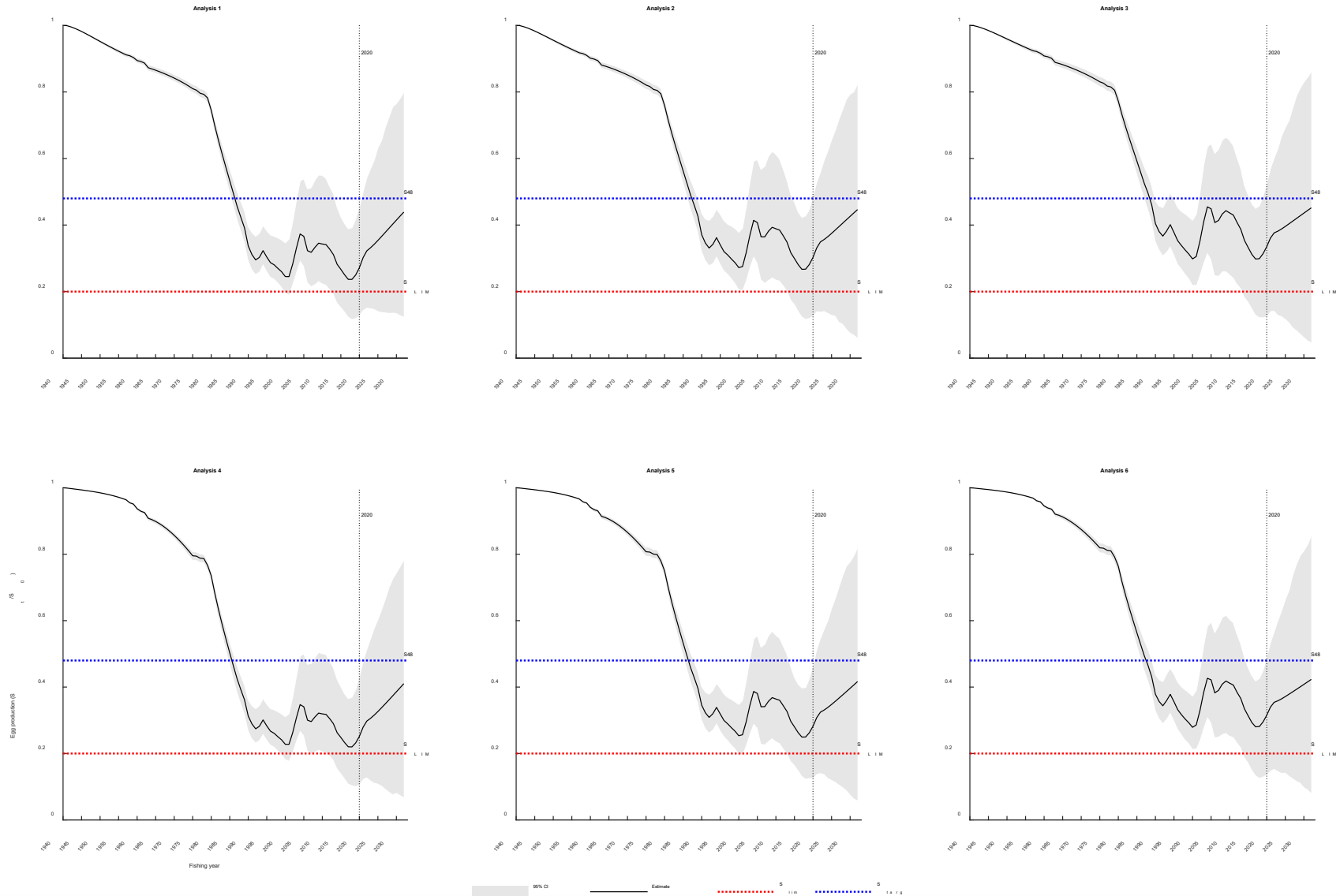
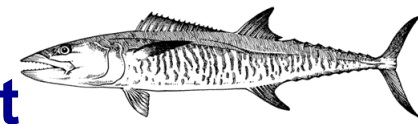
Potential RBC's for all sectors



Spawning biomass forecast for the RBC = 129 t



Spawning biomass forecast for the RBC = 102 t



Spawning biomass forecast for the RBC = 68 t

