Department of Primary Industries
and Regional Development

Minutes

Line & Trap Harvest Strategy Working Group meeting 6

Details

Location: Wolli Creek NSW 2205

Date: 11–12 June 2024

Chairperson: Ian Cartwright

Attendees

1. Tony Smith, Independent Scientist
2. Sevaly Sen, Independent Economist
3. Brad Gibson, Recreational Fishing Member
4. Ian Puckeridge, Recreational Fishing Member
5. James Norris, Recreational Fishing Member
6. Daniel Stewart, Commercial Fishing Member
7. Mitchell Sanders, Commercial Fishing Member
8. Stephen McGuire, Commercial Fishing Member
9. John Stewart, DPIRD Fisheries Scientist Member
10. Darren Hale, DPIRD Fisheries Manager Member
11. Nicholas Giles, DPIRD Fisheries Harvest Strategy Manager Member
12. Aaron Puckeridge, Executive Officer
13. Rowan Chick, DPIRD Invited Participant
14. Ashley Fowler, DPIRD Invited Participant
15. Joshua Foster, DPIRD Invited Participant
16. Luke Dickens, Invited Participant (Agenda items 1–2 only)
17. Chris Innes, Invited Participant (Agenda items 1–2 only)

Apologies

Ian Puckeridge (day 2)
Chad Lunow, QLD DAF Observer

This Meeting:

No.	Issue	Action
1	Acknowledgement of country and introduction	The Chair opened the meeting with an Acknowledgment of Country, paying respect to the traditional owners of the land on which the Line & Trap Harvest Strategy Working Group (the Working Group) was meeting and paying respect to Elders past, present, and emerging.
2	Kingfish specialist discussion	The Working Group noted that at meeting 5 (27–28 February 2024), they recommended that NSW DPIRD invite a south coast Ocean Trap and Line Fishery (OTLF) fisher who targets Yellowtail Kingfish (*Seriola lalandi*) to provide their perspectives on Kingfish management at meeting 6 (Action item 5.5). The Working Group welcomed the 2 invited commercial Kingfish specialists (north and south coast Kingfish fishers) who were provided the background to the development process.

The Working Group discussed Kingfish availability, and the effect this has on data sources:

- In the last 20 years, a range of changes could impact Catch Per Unit Effort (CPUE) estimates. This includes changes to fish handling practices, the loss of some skilled fishers from the fishery and increases to shark depredation.
- It is broadly accepted that if the Kingfish stock was at a higher biomass, it would be better for the fishery. From a commercial fisher's perspective, if the stock was larger, fishers would expect to see Kingfish schools on more reefs. At present there is often a single or small number of reefs in a local area that hold Kingfish on a given day.

The Working Group proceeded to discuss Kingfish management options, noting that all possible management options are still being considered:

- Quota management (i.e., a Total Allowable Catch (TAC) and Individually Transferable Quota (ITQ)) remains an option to be considered for managing Kingfish. Some commercial fishers will consider quota as providing certainty to their business and fishery; however, some fishers will not consider quota to be beneficial.
- As the Working Group has discussed in previous meetings, the undetermined method of allocating quota shares causes the greatest uncertainty amongst commercial fishers, noting allocation criteria is often determined through an Independent Allocation Panel process.
- The Working Group has previously discussed daily and weekly catch limits. For many fishers, quota may be more viable, as Kingfish could be targeted when it is economically viable, and quota use may be planned around this. Dependent on individual business operations, catch limits may reduce the economic viability of targeted Kingfish fishing, as individual catches may be limited when demand or availability is higher. However, all options may impact fishing dependent on total harvest levels (or limits) required.
- The Working Group discussed the costs associated with quota management and noted that fisheries management which requires more administration (such as quota management) can have higher costs, which are sometimes recovered from fishers. However, quota management also provides other benefits such as a defined share of catch and greater operational flexibility.

		• Recreational fishers are supportive of increasing the Kingfish minimum legal length but this is not a preferred option by most commercial Kingfish fishers. As the average size of reproduction is approximately 83 cm fork length for female Kingfish, increasing the minimum legal length to 70 cm or 75 cm may not provide huge benefits to the spawning stock biomass. • OTLF fishers sometimes temporarily change ports for a few months of a year to target Kingfish. The harvest strategy may seek to account for this nuance of Kingfish targeting. The Working Group discussed the Kingfish spawning stock, and the value of management controls specific to reproducing fish: • The distribution and movement of the eastern Kingfish spawning stock is not well known. • It is possible that a substantial proportion of the eastern Kingfish spawning stock could be located around offshore seamounts. Ongoing research projects including 'Project Kingfish' are examining this hypothesis. • If seamounts were confirmed to be important areas for spawning Kingfish, it could be argued that Kingfish should be managed with greater precaution in these areas. Despite this, the Working Group must consider cross jurisdictional management issues, and the powers NSW has over offshore waters for some fishing activities under the Offshore Constitutional Settlement (OCS). • While details around spawning aggregations and movement are not yet clear, the Kingfish harvest strategy could seek to define appropriate management arrangements once information becomes available. The Working Group thanked the Invited Participants for their contributions, noting the value this provided for developing recommendations for commercial Kingfish management.
3	Kingfish decision rules	NSW DPIRD tabled a range of recreational and commercial data analyses to provide further context to consider decision rules. As discussed at previous meetings, the eastern Kingfish stock is assessed to be below any likely target reference point the harvest strategy may adopt, and some management changes are likely needed to assist the stock to build towards a target level. **Kingfish decision rules – commercial**

The Working Group noted that considering the discussions in Agenda item 2, meeting 5, and the recent correspondence from NSW DPIRD (4 June 2024), quota management remains an option able to be considered for Kingfish. As previously discussed, quota management (if pursued) would take time to consult on and implement. Therefore, the Kingfish harvest strategy may need to specify other arrangements that would apply in the meantime or remain in the longer-term. The Working Group discussed other arrangements which could be implemented prior to, or as an alternative to quota:

- Weekly or daily catch limits are still being considered, and if quota management was pursued, could be used as an interim arrangement.
- Commercial fishing members noted that a single-stage approach could be more acceptable for the commercial fishing industry. Adjusting to a daily or weekly catch limit system, then readjusting to a quota management system may be difficult for businesses. In this case, the least potentially disruptive changes could be implemented prior to quota being introduced, noting the requirement to being biologically appropriate to the stock status and achievement of the strategy objectives. This would support an appropriate and precautionary management approach to the harvest of Kingfish until a more dynamic management regime could be implemented.

Kingfish decision rules – recreational

NSW DPIRD presented the recreational data analyses, which simulated the introduction of various bag limits, size limits and boat limits for both the broader recreational fishery, and NSW Charter Sector:

- When assessing scenarios for recreational bag limit changes (currently 5 for Kingfish), appreciable decreases in harvest are not observed until bag limits of 2 or one fish are applied.
- Increasing the minimum legal length of Kingfish (currently 65 cm) would have a large immediate change to retained catch, although catches may increase again very quickly once the majority of juvenile Kingfish population increases to the new size limit – which could occur relatively quickly. This would not necessarily significantly increase stock recruitment, as fish may still be getting harvested below the average size of maturity for females (83 cm fork length). However, this would increase the yield per individual through increased harvest of larger fish, and

access to a larger proportion of larger fish would likely increase the recreational fishing experience.

- Applying multiple management changes simultaneously (e.g., bag and size limit changes) would likely have a larger impact on harvest levels and may support balancing changes to support the most desirable outcomes for recreational fishers. For example, a higher bag limit may be able to be maintained under a higher size limit scenario, noting the objective of maintaining total harvest to levels determined under the harvest strategy.

The Working Group discussed the availability and management of larger Kingfish, which are valuable sport and trophy fish for the recreational fishing sector:

- As discussed, there is uncertainty around the location and movements of large, mature Kingfish both within NSW and as part of the broader stock.
- Recreational fishing members noted a soft slot limit (i.e. reduced bag limit for large fish) has strong support from the Working Group to protect larger fish and discussed whether it may be complementary to apply some sort of large fish specific management to the commercial sector. Despite the desire to increase the availability of large fish, commercial management in other forms is being discussed, and the impacts of these is expected to support the increased availability of larger fish to the population such that additional changes, specific to size may not be warranted in the commercial fishery. Furthermore, when examining available data, recreational and commercial catches of large fish are much rarer than smaller fish, so management arrangements specific to larger fish are unlikely to have a substantial effect on total harvest.
- Members requested that NSW DPIRD provide data on the market value of various size classes of Kingfish, so that the Working Group can further examine the potential effects of limiting harvest of larger Kingfish.
- The harvest strategy could also commit to monitoring the size distribution of Kingfish, so that any future changes to the availability of large fish can be accounted for.
- Recreational fishing members noted that they had discussed Kingfish management options with charter operators who specialise in targeting Kingfish. These operators, particularly in the Sydney and central coast regions, have observed a decline in Kingfish availability and are supportive of bag limit and soft

		slot limit changes. Most charter boats do not currently retain large numbers of Kingfish and often tag and release fish. The Working Group noted that there is a perception that strong Kingfish recruitment is occurring with both sectors frequently observing large numbers of undersized individuals. The Working Group discussed options for recreational and commercial fishers to contribute to Kingfish recruitment indices: • The commercial sector could report discards of undersized Kingfish in their logbooks, noting that quantifying discards would provide more information for the stock assessment and the efficacy of management measures. Fishers could also report observations of juvenile Kingfish schools, however this would be of low statistical value. • Recreational fishing and charter observer surveys now record whether Kingfish have been released, and the reason for release (undersized being one reason). • The NSW commercial lobster fishery can be used as an example, where discard information is collected to assess juvenile recruitment. The Working Group discussed the developing assessment methods for Yellowtail Kingfish: • At meeting 5, NSW DPIRD noted that they were assessing options for an integrated stock assessment model for Kingfish. This is now unlikely to be available in time to service the current harvest strategy, and NSW DPIRD will be investigating a suite of alternate data-limited assessment models that can provide outputs to measure performance of the stock to inform the harvest strategy. **Action items** 6.1 The Independent Scientist to meet with DPIRD before meeting 7 to discuss empirical indicators and how they may be used in the NSW Yellowtail Kingfish Harvest Strategy 6.2 NSW DPIRD to examine the market value of Kingfish from various size classes
4	Kingfish harvest strategy review	Following the discussion of the Kingfish decision rules, the Working Group examined the current draft of the NSW Yellowtail Kingfish Harvest Strategy, and recommended some additions to other components of the document: • If quota management is pursued for the commercial sector, the harvest strategy will need to provide context on the

		management strategy, including timing of implementing quota and any interim management approaches. If this occurs, communication around the purpose and requirement of the management package will be important. It was recognised that the significant commercial fishery management reform which occurred in the BAP has resulted in a significant reduction in the number of OTLF Line West endorsements. • Noting that the harvest strategy may define shares of the Kingfish stock for the commercial and recreational fishing sectors, the Working Group suggested that an equal (50% and 50%) split between the recreational and commercial sectors may be suitable at present, noting catch estimates since 2000/01. • The Working Group will need to decide on how other commercial fisheries outside of the OTLF are addressed in the harvest strategy. Particularly if quota management was used, allocating quota shares to multiple fisheries will require thorough consideration (as does developing any quota regime). It is also likely that additional arrangements such as bag or trip limits may be required for other commercial fisheries, similar to the arrangements implemented for existing commercial quota regimes. These management arrangements should acknowledge periodic incidental catches of Kingfish can occur and keep catches within sustainable and equitable limits. **Action items** 6.3 The Chair to write a letter to the NSW DPIRD executive, providing an update on the Working Group's recent management discussions for Kingfish
5	Day 2 introduction	The Chair noted that Brad Gibson (Recreational Fishing Member) had resigned from the Working Group prior to the start of day 2. The Working Group thanked him for contributing his recreational fishing expertise to date.
6	Snapper decision rules	The Working Group continued their discussion with respect to the decision rules for the NSW Snapper Harvest Strategy. NSW DPIRD tabled a range of recreational and commercial data analyses to provide further context to this discussion. As discussed at previous meetings, the NSW portion of the eastern Snapper (*Chrysophrys auratus*) stock is thought to be increasing towards the target level with current fishing pressure, and may not need immediate management changes if fishery dynamics remain constant. If this is confirmed (pending stock assessment results) commercial and recreational catches may be below the total recommended harvest,

and major management changes may not be immediately needed. However, the harvest strategy needs to provide decision rules for all biomass levels. The Working Group must recommend measures which could be used to restrain catch and promote increases to the Snapper stock when assessed at lower biomass levels.

Snapper decision rules – commercial

The Working Group had previously noted that ITQs were not preferred for Snapper management, and that daily or weekly catch limits may be preferred. NSW DPIRD presented analyses around daily and weekly catch limits. The Working Group made the following points:

- The presented catch limits included static catch limits set annually with the goal of reducing catches by various magnitudes on both weekly and daily timescales based on OTLF 2020–22 logbook data.
- Real time reporting would support catch limits to be used on a much finer scale through more robust reporting structure. If there is low confidence in data quality or timeliness of data, catch limits would be set at an appropriately precautionary (or conservative) level. Therefore, real time reporting would be beneficial to the operation of the Snapper harvest strategy, as data confidence would be improved.
- Catch limits could be applied dynamically. For example, they could be introduced or modified when a certain percentage of the commercial catch share has been landed. NSW DPIRD noted they had not analysed the effect of catch limits applied partway through a season but could provide further analyses if needed. Any late season dynamic catch limits would likely need to be much lower than catch limits applied across an entire fishing season, as they would need to constrain commercial catches within a reduced percentage of the commercial catch share.
- Commercial fishing members noted that the daily and weekly catch limits presented by NSW DPIRD were at levels lower than anticipated due to significant variability in catch levels between individual fishers, and it may be worth examining alternatives which may provide greater flexibility to commercial fishers, allowing them to capitalise on productive periods.
- For compliance reasons, catch limits may need to be set across the entire OTLF (or potentially broader fisheries) and not by the different methods or endorsement types.

- Quota could be considered at a future stage (e.g. on review of the harvest strategy) if catch limits were implemented and perceived to be impacting commercial operations to a greater extent than other options such as quota, noting as raised for Kingfish, a single-stage approach presents benefits in terms of industry stability.
- It would be useful for NSW DPIRD to extend the current catch limit analysis work to include other scenarios, including catch limits implemented when certain percentages of the commercial catch share are reached, or static monthly catch limits.
- Simulating a range of quota share allocation scenarios could provide further context to the decision rule discussions, particularly for Snapper where concerns around catch limits are arising. However, it was recognised that this would be theoretical only, as any allocation process would likely to be informed through an Independent Allocation Panel process.

Snapper decision rules – recreational

NSW DPIRD presented the recreational data analyses, which simulated the introduction of various bag limits, size limits and boat limits for both the broader recreational fishery, and NSW Charter Sector:

- Similarly to Kingfish, small bag limit reductions would result in minor (potentially negligible) total harvest reductions, but when significantly reduced, larger harvest reductions may be expected. Bag limits may be used as a dynamic measure in the harvest strategy, with bag limits reducing if the Snapper biomass reduces, and increasing if biomass increases.
- Boat limits could be applied in lower biomass settings to complement the effect of reduced bag limits. Based on available data, boat limits would have more effect on charter businesses (noting charter businesses would likely be given a higher boat limit than a recreational boat).
- Most recreationally harvested Snapper are between 30 and 35 cm, so increasing the minimum legal length could have a significant effect on a fisher's harvest, at least in the short term. Snapper reach maturity from 26–32 cm, so a minimum legal length increase could have a positive effect on Snapper spawning biomass.
- Available data does not indicate many harvested fish over 70 cm, so a recreational soft slot limit of one fish over 70 cm may not cause large changes to an individual fisher's harvest.

However, anecdotal evidence suggests some fishers catch many Snapper over 70 cm. A soft slot limit could bolster the availability of trophy sized fish over 70 cm to a broader group.

- The Working Group discussed whether a size limit change could be reciprocated by the commercial sector. Commercial members noted that Snapper in the 30–35 cm size range comprise a large portion of their catch and market demand, and it would result in major economic impacts to commercial fish trappers and line fishers. Although discard mortality is thought to be low, to minimise retention of 30–35 cm Snapper through gear selectivity, trap escape panel sizes would need to be increased, which would see the exclusion of many high value by-product species such as Eastern Pigfish (*Bodianus unimaculatus*). It was recognised that options should be tailored to the characteristics of each sector, and options other than commercial size limit changes are available to manage commercial harvest to levels determined through the harvest strategy.
- If the recreational sector was required to make larger harvest reductions various management arrangements could be applied in unison to have greater cumulative effects (e.g., size and bag limit changes).
- While considered a least preferred option, temporal closures remain an option to achieve harvest reductions if more significant management intervention is required to achieve the harvest strategy's objectives, or if finer scale (e.g. regional) management is needed. If considered further, the impact on charter businesses should be investigated, as they operate all year, and likely rely on Snapper as a target species. Temporal closures could cause cross sectoral conflict if only applied to one sector.
- As recommended in meeting 5, the recreational members continued their support for RFNSW's previous recommendations of a bag limit reduction from 10 to 5, and a soft slot limit with a bag limit of one fish over 70 cm as a starting point for the management framework under the harvest strategy. A Snapper size limit increase from 30 cm to 35 cm will continue to be considered as a recreational only measure pending further discussion and information.

Action items

6.4 NSW DPIRD to simulate Snapper and Yellowtail Kingfish quota share allocation scenarios to help guide further discussions.

		6.5 NSW DPIRD to provide further Snapper catch limit analyses, including monthly catch limits, and catch limits applied partway through a fishing season.
7	Snapper harvest strategy review	The Working Group noted that much of the work reviewing the NSW Yellowtail Kingfish Harvest Strategy also applied to the NSW Snapper Harvest Strategy, and NSW DPIRD would transfer the relevant updates. The Working Group also discussed resource sharing to be implemented in the Snapper harvest strategy, and suggested a 55% commercial, 45% recreational catch share as a starting point, noting the existing catch distribution since 2000/01.
8	Other business and next meeting admin	The Working Group noted that they had not yet reviewed the minutes and action items as typically done at the commencement of the meeting, so that they could optimise the invited participants' contribution. The Working Group: • Endorsed the meeting 5 minutes for publication. • Noted the progress of the ongoing action items, the results of which had been presented throughout the meeting. Since the Working Group is drawing closer to completing its drafting of the Snapper and Kingfish harvest strategies, it would be useful for NSW DPIRD to begin preparing an explanatory document to accompany the draft harvest strategies when they are released for public consultation. This document should highlight the Working Group's deliberations and justify the positions it landed on for various issues. **Action items** 6.6 NSW DPIRD to prepare an explanatory document which will accompany the draft harvest strategies when they are released for publication.

Next meeting:

A date for the seventh Working Group meeting will be set following further work on the action items, which will support further development of the harvest strategies. It is anticipated that the seventh meeting will be held in October or November 2024.

Table 1. Ongoing action items at the close of meeting 6.

Meeting	Item	Action item	Status

3	3	NSW DPIRD to schedule an MSE discussion agenda item at a future Working Group meeting	In progress - MSE for Kingfish and Snapper will be best discussed after operational objectives and indicators have been defined for the Snapper and Kingfish harvest strategies. NSW DPIRD are developing stock assessments for both Snapper and Kingfish. Consider leaving this action item open until the stock assessments is closer to being finalised
4	1	During the Working Group's lifespan (before 12 February 2026), the Working Group is to create a document to brief the NSW DPIRD executive on fishery level management options for the broader Line & Trap fishery	Pending
5	1	NSW DPIRD to examine the appropriateness of the Snapper and Kingfish reference points through MSE	This may be achievable through MSE, although may require broader work from the Department. This action item is ongoing until it can be considered further alongside MSE
6	1	The Independent Scientist to meet with DPIRD before meeting 7 to discuss empirical indicators and how they may be used in the Yellowtail Kingfish Harvest Strategy	This is due to be completed in preparation for meeting 7
6	2	NSW DPIRD to examine the market value of Kingfish from various size classes	This is due to be completed in preparation for meeting 7
6	3	The Chair to write a letter to the NSW DPIRD executive, providing an update on the Working Group’s recent management discussions for Kingfish	This is due to be completed in preparation for meeting 7

6	4	NSW DPIRD to simulate Snapper and Yellowtail Kingfish quota share allocation scenarios to help inform further discussions	This is due to be completed in preparation for meeting 7
6	5	NSW DPIRD to provide further Snapper catch limit analyses, including monthly catch limits, and catch limits applied partway through a fishing season	This is due to be completed in preparation for meeting 7
6	6	NSW DPIRD to prepare an explanatory document which will accompany the draft harvest strategies when they are released for publication	This item will be prepared for the draft harvest strategies to be released for public consultation.