

Minutes

Line & Trap Harvest Strategy Working Group meeting 7

Details

Location: Online

Date: 15 & 18 November 2024

Chairperson: Ian Cartwright

- 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. Ashley Fowler, DPIRD Invited Participant
- 14. Philip Bolton, DPIRD Invited Participant
- 15. Chad Lunow, QLD DAF Observer
- 16. Geoffrey Liggins, DPIRD Invited Participant (Agenda items 3–4 only)

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

Apologies

James Norris (Day one)
Darren Hale (Day one)
Brad Gibson (Day 2)
Ashley Fowler (Day 2)

This Meeting:

No.	Issue	Action
1	Acknowledgement of country	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	Introduction and action items	The Chair noted that Brad Gibson (Recreational Fishing Member), who resigned from the Working Group during <u>meeting 6</u>, had elected to remain on the Working Group following a change of circumstances. The Working Group welcomed Brad back to the group’s membership. The Executive Officer (EO) updated the Working Group on the progress of the ongoing action items:

3.3 DPIRD to schedule a Management Strategy Evaluation (MSE) discussion

5.2 DPIRD to examine the appropriateness of the Snapper and Kingfish reference points through MSE

The Working Group noted that model based MSE is unlikely to be available before the harvest strategies are implemented, since integrated assessment models are still being developed, however MSE may be undertaken using alternate approaches such as scenario testing. Harvest strategy performance will also be able to be more strongly evaluated as models develop, and model based MSE may be undertaken for development of future iterations of the Snapper (*Chrysophrys auratus*) and Yellowtail Kingfish (*Seriola lalandi*) harvest strategies. It was recognised that quantitative MSE is complex, takes time to develop, and many harvest strategies throughout Australia are still working towards quantitative MSE testing.

4.1 During the Working Group's lifespan (before 12 February 2026), the Working Group to create a document to brief the DPIRD executive on fishery level management options for the broader Line & Trap fishery

As discussed at meeting 4, the Working Group will consider the fishery level harvest strategy framework when the Snapper and Kingfish harvest strategies are further developed. DPIRD is currently considering the issue of fishery wide, multi-species and multi-sector harvest strategies as a broader issue and will update the Working Group on its progress during 2025.

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

DPIRD and the Independent Scientist are continuing to collaborate to develop the NSW Snapper and Kingfish stock assessments. Updates on the status of these assessments were provided in Agenda items 3 and 4.

6.2 DPIRD to examine the market value of Kingfish of various size classes

6.4 DPIRD to simulate Snapper and Yellowtail Kingfish quota share allocation scenarios to help inform further discussions

6.5 DPIRD to provide further catch limit analyses, including monthly catch limits, and how catch limits may look if they are applied partway through a fishing season

DPIRD completed all data-related action items from meeting 6. An update on these was provided in Agenda item 5.

6.3 The Chair to write a letter to the DPIRD executive, providing an update on the Working Group's recent management discussions for Kingfish

The Chair provided the update letter to the DPIRD executive on 24 July 2024.

6.6 DPIRD to prepare an explanatory document which will accompany the draft harvest strategies when they are released for publication

The explanatory document will be drafted prior to meeting 8, when the Snapper and Kingfish harvest strategies are further developed.

3 Snapper stock assessment update

DPIRD provided a summary of recent Snapper stock assessments, and progress on the developing NSW assessment:

- Previous assessments of the East Coast biological stock have been created in collaboration with QLD DAF, with the last update in 2018.
- DPIRD is now developing an integrated stock assessment model for the NSW portion of the eastern Snapper stock, which is assessed separately in SAFS.
- The current iteration will include a single spatial unit for all of NSW. There are plans to include multiple spatial components for NSW in future iterations of the assessment.
- DPIRD is in the final stages of developing the assessment and anticipates being able to share the results soon.

Discussion

The Working Group discussed fisher observations of Snapper, and how these will relate to the developing stock assessment:

- Commercial fishing members have previously informed the Working Group of their observations of Snapper movements in water deeper than around 90 m, and that Snapper in this depth appear to be a highly mobile cohort of fish which move northwards during winter months.
- While exceptions exist, previous Snapper tagging studies, which have mainly focussed on large individuals over 60 cm, likely in shallow water, generally indicate low movement. The perceived contrast between the tagged fish, and anecdotally mobile deep-water fish is interesting, and a better

understanding of this movement could help support the future spatially compartmentalised Snapper stock assessment.

- 4** Yellowtail Kingfish assessment update
- DPIRD provided a summary of recent Kingfish stock assessments, and progress on the developing NSW assessment:
- The eastern Kingfish stock has previously been assessed using a weight of evidence approach, designed to satisfy the needs of the Status of Australian Fish Stocks (SAFS) report. The main component of this is a surplus production model.
 - Creating a stock assessment to inform the developing harvest strategy is a high priority, and additional resources have been allocated to completing this.
 - DPIRD is currently considering completing either a Spawning Potential Ratio (SPR) model, or an integrated stock assessment for Kingfish.

Discussion

The Working Group discussed challenges with the developing Kingfish assessment:

- Pending development of an integrated or SPR assessment for Kingfish, the first iteration of the harvest strategy may rely on empirical indicators. The Kingfish harvest strategy could also include provisions to change from an empirical to a model-based harvest control rule, supporting transition to model-based assessments.
- A complexity of the Kingfish assessment is the spatial availability of Kingfish as they increase in size. It is believed that large Kingfish may have sporadic availability and understanding the balance between targeting of larger fish and availability has important implications for assessing stock biomass.

The Working Group discussed the NSW commercial sampling programs, and their representativeness given recent changes to fish receiver costs:

- DPIRD has implemented a trial waiver of Registered Fish Receiver fees for 24 months that may result in fewer fish moving through traditional markets that the DPIRD Commercial Fisheries Port Monitoring Program focusses on.
- The DPIRD Commercial Fisheries Port Monitoring Program collects length frequency information from fish sold through co-ops and the Sydney Fish Market, providing data for stock assessments. Noting that distribution patterns could be changing, monitoring programs may need to be adjusted to

ensure data remains representative of all commercially harvested fish.

5 Data requests

DPIRD presented the results of the data requests, commencing with the example quota simulation and catch limit analyses, to provide context on primary management control options which could be used in the Snapper and Kingfish harvest strategies:

- The Working Group noted that this was an example of how a quota allocation process could look, using recent catch and share ownership data, and similar methods used in the Business Adjustment Program (BAP). Furthermore, the Working Group noted that this was purely an example to assist with discussing the most suitable management controls, and this information had no bearing on how future management regimes or allocation processes may look.
- It was recognised that allocation processes normally account for a range of fishery information, including whether there have been indications of potential change to management arrangements, which could trigger changes to fishing behaviour.
- The Working Group noted the large number of shareholders in the Ocean Trap and Line Fishery, and the effects of potential allocation scenarios dependent on catch and share levels.
- Previous allocation processes have allocated quota or quota shares on the basis of existing shares held, and different weightings of shares and catch. The approach used has largely been determined through an assessment of the potential impact of allocation scenarios on fishing activity.
- Higher weighting of catch generally provides allocations more consistent with activity of higher catch businesses, however the value of existing shares has also been recognised as an important factor and included in past allocations, with weighting generally designed to balance recognition of access rights held and risk of industry disruption.
- The Working Group noted that while a non-quota catch limit system may have greater flexibility for some operators, it would need to apply to all endorsement holders equally and may impact higher catch businesses to a greater extent as they are likely to take higher individual catch levels. In contrast, lower catch businesses may consistently remain below any catch limits.

- While all management options will require some level of adjustment from fishing businesses, the Snapper and Kingfish harvest strategies are required to include some form of management, which will guide the biomass towards the target level when needed.

DPIRD noted that the Working Group had requested information around Snapper and Kingfish price data, so that the Working Group could further examine the commercial impacts of restraining the harvest of larger individuals:

- In recent years, small Kingfish have received higher prices than larger size classes, although this price difference is small.
- Snapper prices increase marginally through size classes, with extra-large fish receiving the highest price on average.
- For both Snapper and Kingfish, smaller size classes comprise most of the fish sold, providing the most commercial fishing business income.
- Whilst there are slight price differences between the size classes, all size classes of Snapper and Kingfish are high value. Extra-large Snapper and Kingfish are generally not targeted by commercial fishers but can be worth more than \$200 per individual, therefore can supplement a fishing business' income and are valuable to commercial fishers.

Discussion

The Working Group discussed the details of a quota allocation process, and how, if it was recommended, could be best tailored to suit the commercial fishing industry:

- The Working Group discussed a hypothetical situation, where a share allocation process occurs, but a Total Allowable Catch (TAC) is not implemented until catches need to be restrained to sustainable levels. If pursued, businesses would have limited incentive to adjust their share levels in accordance with their business needs, and shares would hold limited current value. By the time a TAC is activated, quota shares/allocations may not reflect fishing levels. This approach risks greater future disruption to fishing businesses.
- Similarly, if an allocation process was recommended under a biomass trigger in the harvest strategies, there may be fishing businesses shifting their behaviour in anticipation of an allocation process.

The Working Group discussed the likely effects of commercial catch limit systems in the Snapper and Kingfish fisheries:

- Restrictive catch limits, coupled with the high operating costs of trap fishing, would likely have high economic impacts on trap fishers focused on targeting Snapper.
- Similarly for Kingfish, periodic availability means fishers rely on larger catches when the fish are available. Catch limits would likely have high economic impacts on fishers focused on targeting Kingfish.
- If a fishing period commenced with no catch limits, then catch limits were introduced partway through, they would likely need to be set at more restrictive levels.
- Different limits can be applied to different fishing methods (e.g. snapper trap vs line fishing), however potential compliance issues would need to be carefully considered and would likely preclude such an approach.

The Working Group recognised that each management approach has different factors to consider:

- Quota management provides defined shares of catch established through the initial allocation, which may be adjusted through share or quota trading post-implementation.
- Catch limits provide a more rudimentary management control, which provide more consistent catch limits applying to each endorsement holder.

6 Recreational decision rules for Snapper and Kingfish

The Working Group discussed the current recreational management controls which had been proposed to be included in the Snapper and Kingfish harvest strategies:

- Currently it is proposed that the harvest strategies rely on bag and possession limits, soft slot limits, and boat limits as recreational management controls.
- Other controls such as partial seasonal closures may be considered if these measures are not sufficient to manage catch to appropriate levels.
- A combination of these controls would allow fishing to continue and be managed to appropriate levels under a range of biomass scenarios.

The Working Group revisited discussions around the minimum legal length and potential spawning closures as management options for Kingfish and Snapper:

- A Snapper minimum legal length increase could be considered for recreational fishers, although as discussed in meeting 6, this would be difficult for the commercial sector to reciprocate for Snapper, as this would impact the commercial sector's plate size Snapper market, and to avoid smaller Snapper, escape panel sizes would need to be increased, having flow on effects to other marketable species.
- Nonetheless, other Australian fisheries exist with different legal lengths for commercial and recreational sectors, and minimum length changes could be considered and justified for the recreational sector, if the equivalent, yet different commercial management options are used and the rationale is communicated to the public.
- It was also noted that the recreational representatives on the Working Group are aware that the recent BAP reduced the number of commercial fishing endorsements, and no equivalent recreational fishing changes have occurred. Communicating this to the public could be strong justification for interim recreational, or recreational only management changes.
- It was noted that recreational Mulloway (*Argyrosomus japonicus*) management changes were generally supported by the NSW recreational fishing community, as the public had observed the Mulloway population decline, and many fishers supported additional management support to promote stock rebuilding. Particularly for Kingfish, there are strong perspectives in the recreational fishing community that additional management is needed, and a higher biomass stock would be beneficial. This is further reinforced by the Recreational Fishing NSW Advisory Council's (RFNSW) previous management recommendations, which the Working Group has discussed.
- Recreational minimum legal length changes for Kingfish will continue to be discussed for inclusion in the harvest strategy. This raises similar cross-sectoral issues as Snapper, although for Kingfish, there is a stronger biological justification for increasing the legal length, noting that it is currently below the average size of maturity for female fish (83 cm fork length).
- The Working Group has previously discussed spawning closures for Kingfish (meeting 6), and there is anecdotal evidence of spawning aggregations being observed in NSW. Despite this, without scientific justification, spatial or spawning period closures may not be appropriate as a specific measure designed to promote recruitment. NSW Marine Parks are

expected to offer some level of constant spatial protection to both Kingfish and Snapper in NSW.

The Working Group discussed other public perception issues which are important to consider for the recreational components of the harvest strategies:

- Commercial reporting systems provide high certainty around catch levels, and there will inevitably be more uncertainty with the level of recreational catches. Recreational catches may be above or below their catch share in a given year, although stakeholders can be confident that on average, each sector will be managed to catch levels defined in the harvest strategies. Furthermore, continuous data improvements will make recreational catch estimates and management more precise into the future.
- DPIRD staff noted that an animations package is being released to help communicate harvest strategies to the broader public. Furthermore, a video package was released to help communicate the NSW Lobster Fishery Harvest Strategy. Initiatives like these will assist with communicating the harvest strategies to the public.
- The Working Group noted that recreational management discussions have focussed on effective management controls including measures to reduce catch where necessary. The harvest strategies will also be designed to consider increased harvest levels when biomass is high, recognising increased benefits to all sectors when biomass is around target levels.

7 Commercial decision rules for Yellowtail Kingfish

The Working Group noted that the data request presentation had provided further background to commercial decision rules, and they were now tasked with discussing the commercial Kingfish decision rules:

- While the immediate effects of any management action require substantial debate, it is also important to consider the long-term implications of any management change, and what management options will be most suitable for the fishery.
- Weekly catch limits are likely to be too restrictive and not offer enough flexibility for commercial Kingfish fishing, so are not a preferred option.
- Monthly catch limits and a TAC with Individually Transferable Quota (ITQ) remain as options for dynamic management, noting that a range of other options have been discussed and considered less preferable at this, or previous meetings.

- Static controls such as spawning season closures could be useful complementary controls but will not allow fishing mortality to be adjusted in response to biomass changes so are not suitable as the primary dynamic management measure.
- Monthly catch limits provide greater flexibility than weekly catch limits, but when reviewing historical data, it is consistently a small number of high catch fishers who are affected most strongly by the monthly limits. Additionally, Kingfish catches are extremely variable, and if implemented, it would be difficult to set limits at an appropriate level for an upcoming season, meaning there would be risk of over or under constraining fishing businesses.
- Not accounting for any quota trading, the modelled quota allocations presented in Agenda item 5 indicated that catch reductions would be shared between fishing businesses more evenly and in proportion to their allocated quota shares.
- Additionally, a quota management system would provide fishing businesses with an access enabling asset, the ability to trade shares or quota, and plan annual fishing (including for other species) based on quota availability. It will also enable DPIRD to make fine scale adjustments to fishing mortality, so that biomass can build in appropriate timeframes.

The Working Group discussed data sources, and how data collection may look under scenarios with reduced catch, or when catches are heavily affected by management changes:

- Commercial catch data is a primary data source used for fisheries monitoring and assessment, but this is complemented by other data sources, such as biological data.
- If commercial catches became so low that they were no longer a robust indicator of fish abundance, DPIRD would need to consider other data collection options such as fishery independent surveys. However, effective management can be designed to avoid biomass decline to these levels.
- The stock assessment information presented at the next meeting should include information of how new and improved data will be incorporated into the stock assessment, to give fishers confidence of the current and future suitability of the assessment.

Much of the NSW commercial fishing community thought that following the BAP, there would not be any major management changes. Justifying management changes to commercial fishers

will be critical for the public's perception of the Kingfish Harvest Strategy. The following was noted regarding this issue:

- Commercial fishers have made business decisions around perceived management stability following the BAP. It is important to acknowledge this as it affects both high catch businesses, who depend on catch of certain species, and low catch businesses, who expect flexibility and the ability to develop their businesses and specialise within the fishery.
- Fisheries management must be flexible and adapt to changing issues, with the goal for the commercial fishery being to provide a sustainable and economically productive fishery. Kingfish are a high value species for all fishing sectors and have been identified as biologically requiring more management, despite the changes implemented through the BAP. The harvest strategy will also seek to manage all harvest, providing broader management controls and consequent benefits.

Regardless of the management arrangements implemented by the Kingfish harvest strategy, it will be important to assist commercial fishers with transitioning to new arrangements, and the Working Group should consider what support measures would be appropriate:

- If quota management is recommended, an Independent Allocation Panel (IAP) would likely be recommended and funded, to ensure a robust allocation process.
- Transition to new management arrangements may be undertaken over an appropriate period, so fishing businesses have time to adapt. A transitional TAC could also be considered so that any catch restrictions may be eased into. The benefits of this would also need to be considered alongside any sustainability risks and potential economic impacts.

8	Recreational decision rules for Yellowtail Kingfish The Working Group noted that a general discussion around recreational management had already occurred, but now discussed how the decision rules will specifically apply in the NSW Yellowtail Kingfish Harvest Strategy: • Recreational data collection will continue to improve with initiatives such as recreational near-time reporting or enhancements to recreational data programs continuing to develop. This will allow recreational Kingfish catches to be monitored and managed with greater precision into the future.
---	---

- Greater confidence and accuracy in data means less precautionary management, and better outcomes for fishers and stock health.
- Creating management changes specific to the recreational sector could cause some public contention if the changes are not well communicated or understood.
- Changes to both recreational and commercial management will be merit based and designed to provide equivalent and effective management across fishing sectors.

9 Commercial decision rules for Snapper

The Working Group noted that the data request presentation had provided further background to commercial decision rules, and they were now tasked with further discussing Snapper decision rules:

- While it is understood that the NSW portion of the eastern Snapper stock is showing some positive signs, it is assessed to be below target biomass levels and there are examples of Snapper stocks that are performing poorly. The harvest strategy provides an opportunity to implement an evidence-based framework to effectively manage stock biomass into the future.
- Contrarily, with positive signs for the NSW Snapper stock, and effort largely being constrained by operating costs, it could be argued that management change is not immediately needed, and management changes could be implemented at a trigger in the harvest strategy.
- Introducing management actions at a biomass trigger could work if catch limits are pursued, however if quota management is recommended, there are a range of issues to consider as discussed in Agenda item 5.
- Typically, it is easier to introduce management changes when stocks are in a healthier state, rather than waiting for stocks to decline. When stocks decline fishing businesses have reduced catches and income, making both the need for change and the measures applied stronger, and adjusting to changes more difficult.
- While the current discussion is revolving around quota management or catch limits, there are other options that are included in other harvest strategies throughout the world. Many of these were identified, and eliminated as options during the FishPath process in meetings 2 and 3.

- Commercial fishers are cautious of the effects that any management changes could have on fishing operations and business flexibility, particularly if management changes create 'choke species' in multi-species trap catches.
- Comparisons have been drawn to the NSW Lobster Fishery Harvest Strategy, and how its assessment process promotes inclusivity and transparency, empowering fishers to discuss the assessments and data. It takes time to develop a process which stakeholders trust and understand, but this is what DPIRD should strive towards with any future Snapper assessment and management process.
- If quota management was recommended, operators who may need to lease Snapper quota may have narrower profit margins when adding lease costs onto other operating costs. Alternately, leasing excess quota can provide income where this suits business operations. The economic effects of leasing quota and fishing may need to be considered alongside the economic effects of catch limits, as well as the potential asset value of any new quota shares established.
- As previously discussed (Agenda item 7), transitional TACs could assist with easing into the potential changes caused by new management arrangements, although may lead to a larger disruption if or when catches need to be reduced.

The Working Group discussed their role, and the effect their perspectives will have on the developing harvest strategies:

- The Working Group's exploration of new management arrangements will form a recommendation to DPIRD's harvest strategies.
- In addition to the Working Group's perspectives, DPIRD will seek comments from the Commercial Fishing NSW Advisory Council (CommFish), RFNSW, Aboriginal Fishing Advisory Council (AFAC) and public consultation. Explanatory documents will be provided alongside the draft harvest strategies, so the public can understand how the Working Group reached its recommendations.

10 Recreational decision rules for Snapper

The Working Group noted that a general discussion around recreational management had already occurred, but now discussed how the decision rules will specifically apply in the NSW Snapper Harvest Strategy:

- Once the NSW Snapper stock assessment is developed, it is anticipated that DPIRD will be able to calculate the relationship

between stock status and sustainable harvest levels. DPIRD should provide information around how the recommended biological catch changes with stock status, so that the Working Group can understand what management arrangements and catch levels may be needed to achieve the harvest strategy objectives and target levels.

- Changes to recreational and commercial management will be merit based and designed to provide equivalent and effective management across fishing sectors.

Action items

7.1 Using the developing NSW Snapper stock assessment, DPIRD to provide a figure demonstrating likely change to recommended biological catch and the recreational and commercial catch shares as biomass changes

11 Other business and next meeting admin

The Working Group noted that as soon as the stock assessments have been completed, an informal meeting should be held so that the Working Group can discuss the methods and results and provide any final feedback before the Working Group's eighth meeting.

Action items

7.2 DPIRD to organise an informal stock assessment meeting with the members of the Working Group

Next meeting:

The eighth meeting of the Working Group will be held on 23–24 April 2025.

Table 1. Ongoing action items at the close of meeting 7.

Meeting	Item	Action item	Status
4	1	During the Working Group's lifespan (before 12 February 2026), the Working Group is to create a document to brief the DPIRD executive on fishery level management options for the broader Line & Trap fishery	Pending
6	6	DPIRD to prepare an explanatory document which will accompany the	This item will be provided to the Working Group prior to meeting 8

		draft harvest strategies when they are released for publication	
7	1	Using the developing NSW Snapper stock assessment, DPIRD to provide a figure demonstrating the change to recommended biological catch and the recreational and commercial catch shares as biomass changes	This item will be provided to the Working Group prior to meeting 8
7	2	DPIRD to organise an informal stock assessment meeting with the members of the Working Group	This meeting will be organised prior to meeting 8