

## Minutes

Meeting	Mulloway Harvest Strategy Working Group		
Meeting Number(s)	11	Dates	27 <sup>th</sup> , 28 <sup>th</sup> November and 12 <sup>th</sup> December 2023
Location	Online - MS Teams meeting	Time	13:00 – 17:00 13:00 – 17:00 15:00 – 17:30
Members	<p>Independent Members: James Findlay (Chair), Sevaly Sen (Economist), Bob Kearney (Scientist)</p> <p>Aboriginal fishing: Stephan Schnierer</p> <p>Commercial fishers: Johnny Alessi, Stephen Reed, Troy Billin</p> <p>Recreational fishers: David Rae, Paul Lennon, Mark Corbin</p> <p>DPI Fisheries Manager: Heath Folpp</p> <p>DPI Fisheries Scientist: Julian Hughes</p>		
Observers	<p>Rowan Chick (DPI Fisheries Scientist, Harvest Strategies), Ashley Fowler (DPI Fisheries Scientist, Harvest Strategies), Josh Cansdell (DPI, Executive Officer), Nick Giles (DPI, Fisheries Manager, Harvest Strategies), Blake Fallon (DPI Fisheries Management Officer)</p>		
Guest	<p>Geoff Liggins (DPI Fisheries Scientist, Fisheries Research), John Stewart (DPI Fisheries Scientist, Fisheries Research)</p>		
Apologies	12/12/2023 - Stephan Schnierer, Julian Hughes		

Agenda Item	Issue	Notes & Actions
1.	Welcome and Introduction	<p>1.1 Acknowledgment of Country</p> <p>The meeting opened with an acknowledgment of the Traditional Custodians and paying respects to Elders past, present and emerging.</p> <p>1.2 Apologies and Recognition of Observers</p>

		<p>The Working Group members and observers were welcomed, and meeting guest attendance noted for the 27<sup>th</sup> of November 2023.</p> <p>1.3 Confirmation of Agenda</p> <p>The meeting agenda was accepted by the Working Group.</p> <p>1.4 Declaration of pecuniary interests</p> <p>Updates to the register of pecuniary interests were confirmed.</p> <p>1.5 Progress of other NSW fisheries harvest strategies</p> <p>The Spanner Crab Harvest Strategy has been formally adopted and will inform decision making for Total Allowable Catch determinations for Spanner crab.</p> <p>The Line and Trap Harvest Strategy Working Group has currently held four meetings and are working towards establishing the broader components for harvest strategies.</p> <p><b>Discussion</b></p> <p>1.6 Minutes of previous meetings</p> <p>The Minutes of the 10<sup>th</sup> meeting were reviewed with minor changes made, noting the meeting guests will be provided the draft minutes before formal adoption by the Working Group.</p>
2.	Updates for ongoing business items	<p>2.1 The stock assessment process for Mulloway in NSW</p> <p>DPI Stock Assessment Program Leader gave a presentation aimed to address issues raised in previous meetings regarding the current status and assessment of Mulloway in NSW. This included factors impacting on the quality/reliability of the current assessment, best practice approaches and tools for modelling stock dynamics and assessing status in the future, capacity building within DPI, and the necessary and desirable data to underpin future assessments for Mulloway in NSW.</p> <p>The presentation included a summary description of current assessment methods undertaken using best practice assessment methods using currently available data sources. The presentation also addressed enhancements underway to develop an integrated assessment model to derive estimates of Mulloway biomass and fishing mortality with current and future data sources. The presentation also described associations between types of data and biases in their collection, assessment methods and outputs and the influence these have on levels of uncertainty.</p>

		<p>It was confirmed that development of the new integrated assessment model will run concurrently with the development of the harvest strategy, with the model underpinned by the improved assessment approach and data to increase precision of the assessment estimates.</p> <p><b>Discussion</b></p> <p>Members discussed the ability for the harvest strategy to effectively manage the Mulloway stock noting existing uncertainty surrounding the current stock status and specific biomass level, also recognising measures have been established to reduce uncertainty. Discussion reiterated that the range of potential stock depletion estimates described a stock potentially depleted to around a limit reference level. Discussion recognised that harvest strategies are designed to manage fish stocks regardless of the level of certainty by applying suitable levels of precaution when necessary, and the harvest strategy has been designed to accommodate existing uncertainty and improvements to reduce this in order to ensure that rebuilding under the harvest strategy will be successful.</p> <p>Discussion then led to consideration of the many variables aside from fishing that cause fluctuations in stock biomass levels, noting that the effect of environmental variables and other anthropogenic impacts are not currently well understood, but are likely to have influenced the resilience and abundance of the Mulloway stock.</p> <p>Members discussed the potential to conduct an assessment based only on age information, using data currently available. DPI noted aging data is influenced by factors including management changes (e.g. size limit changes from 45 to 70 cm), in addition to contemporary data likely not being spatially representative of the NSW Mulloway population. Thus the existing assessment uses a suite of data in addition to age to allow comparative assessment and reduce uncertainty arising from relying on single data sources. It was noted that ageing data are one of the more valuable sources of data to inform an assessment, also one of the more expensive types of data to collect and that a strategic, cost effective and reliable data collection plan would include population representative age data along with various other data types required to underpin a fully-</p>
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		<p>integrated assessment modelling approach for Mulloway in NSW.</p> <p>Discussion then led to the various factors that would have to be considered in collecting representative data (including age data), foremost of which was an understanding of Mulloway stock structure and numerous other spatial and temporal variables. DPI clarified that the collection of further ageing and related data is of high importance and has been explicitly included in the commencing enhanced research program for Mulloway and will be incorporated into the developing integrated assessment modelling approach.</p> <p>2.2 Ongoing business items</p> <p>DPI presented an update for ongoing support measures for the Mulloway harvest strategy including continued development of recreational and commercial data collection programs, the communications program to promote awareness of Mulloways stock status and to encourage responsible fishing practices, continued work to reduce risks of incidental mortality, Mulloway management changes commenced in September 2023 and a compliance update.</p> <p>2.3 Outstanding catch returns</p> <p>DPI updated the Working Group on measures implemented since the previous meeting, aimed at improving commercial catch reporting. This included continued enhancements to online commercial fishing reporting systems and recent communications to industry regarding a compliance focus to improve timely and quality reporting.</p> <p><b>Discussion</b></p> <p>Members reiterated the importance of timely catch reporting. The Chair noted while the majority of fishers or business owners report quality information punctually, delayed, and inaccurate reporting can undermine the process that supports more reliable outputs from stock assessments and functional harvest strategies. This puts fish stocks at risk and the productivity of fisheries can be underestimated, with precautionary management approaches then required that are unlikely to provide the greatest economic returns from that underlying productivity. The Working Group agreed, measures to strengthen good reporting conduct should be applied to all fishing sectors noting improved information from both the commercial and recreational fishing sectors would strengthen the stock assessment and effective operation of the harvest strategy.</p>
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3.	Time series of price/volume data	<p>The Independent Economist member presented information on Sydney Fish Market price data of Mulloway looking at price/volume relationships from the past 15 years.</p> <p><b>Discussion</b></p> <p>Members examined daily average prices in comparison to the maximum prices received at market, recognising consistency in volume across the market floor and discussed possible causes for any notable fluctuations in price. Discussion acknowledged the contrast between maximum and minimum prices which has also remained consistent. Members contemplated several factors that may be cause for low prices received at market.</p> <p>Members discussed potential for changes to market volume and price if management measures resulted in a more stable supply. Predictions saw such measures e.g. a quota management system or a cap on catch increasing market prices as well as reducing the gap between maximum and minimum prices. It was noted that, prices are likely to increase and stabilise if there is confidence from buyers in continuity of supply.</p> <p>Members then discussed the market grading system and price trends over time, recognising a change in certain size classes of Mulloway which was considered to be based on changes in fisheries management or changes in fishers grading under market grading system.</p>
4.	Harvest strategy regulatory framework	<p>DPI presented information on a range of management options for both the recreational and commercial sectors to effectively manage harvest levels under the harvest strategy, noting the strong likelihood of regional stock components and the benefits of managing harvest at more regional levels to minimise potential for localised depletion. The presentation explored several spatial options for regional management based on reported geographical catches, a timeline for operation and procedures of the harvest strategy and a summary of advantages and disadvantages of unresolved options from previous Working Group discussions regarding potential management options.</p> <p><b>Discussion</b></p>

		<p>Members discussed the possibility for Mulloway to be managed in the commercial sector by allocation of shares and individual quota proportional to individual fishing businesses catch history, noting different fishers would have different opinions on ITQ management as an option in future. Members stated that fishing business owners who have bought more shares in a fishery with intent to increase business productivity, should be provided more access to a fishery. Discussions recognised that an ITQ allocation process is complex, and for a fair and equitable allocation, the process has previously been completed by an independent expert panel who consider many factors including catch history and share ownership. However, the extent to which these are evaluated in each allocation process will vary between fisheries and species. In addition, it was recognised that introduction of new ITQ schemes may not be supported by all fishers following completion of the recent commercial reform program.</p> <p>Members discussed the possibility of modifying meshing mesh size requirements as a means to limit use of Mulloway nets to moderate supply (e.g. reintroduce net registrations), and also discussed potential to require a mandatory single mesh size hung in a comparable manner to resolve issues around selectivity of various nets used. It was recognised that mesh size is not the only factor determining selectivity, and reporting of mesh size used provides another option to alleviate existing issues around selectivity and length data currently affecting the stock assessment without limiting or requiring reconstruction of existing fishing gear.</p> <p>Members discussed regional boundary options and how regional catch limits could be equitably managed between fishing sectors. Members suggested several alternative options consistent with the NSW Estuary General Fishery regions. The Working Group then reviewed catch history data and compared equity of catch and opportunity to catch from each of the proposed options.</p> <p>Discussion then led to potential for movement of fishing pressure across potential boundaries if regional catch limits had been reached and possible boundary options that may assist to minimise potential effort shift.</p> <p>Members also discussed potential for the commercial and recreational fishing sectors to be managed under separate regional boundaries. The discussion recognised some benefits of this approach as well as several factors that may complicate management and compliance with some</p>
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		<p>members raising some concerns with a regional management approach to manage the Mulloway stock.</p> <p>Members then discussed interim input controls (either current or revised) for managing Mulloway in the short term, if needed, pending finalisation of the harvest strategy or availability of developing data sources.</p>
5.	Decision rules and developing draft	<p>The Working group reviewed the draft harvest strategy with the aim to refine the draft towards a final draft copy.</p> <p>Members debated whether the harvest strategy should acknowledge the most recent formally published stock status for Mulloway in NSW ('Depleted' in 2021) due to differences in members opinions regarding current stock health. Several members supported recognition of the status, being the stock's formal current classification. However, the commercial fishing representative members maintained their position that they could not accept the status as the assessment was not consistent with their on-water observations, asserting the opinion that the status portrays an unrealistic viewpoint of current, observed population health.</p> <p>The Chair emphasised that the status has been formally documented and published and that individual views regarding population health are subjective, and largely restricted to observations of local populations which may be significantly variable. However, the Chair recommended that the harvest strategy should be transparent regarding the range of opinions.</p> <p>Members also discussed requirements of the Ecologically Sustainable Development component of the harvest strategy, reiterating associated knowledge gaps and spoke of the importance of completing such assessments.</p> <p>Discussion recognised work already complete, previous presentations made to the Working Group, as well as further developing components that will improve knowledge and advice on related issues.</p> <p>DPI explained modifications to the analysis section of the draft harvest strategy that reflected and incorporated outputs from the developing integrated assessment model that supported simplified design and application of the harvest control rules.</p> <p>Members discussed the use of current indicators in the new assessment model and reiterated the importance of using age data to strengthen future assessments. DPI agreed and</p>

		<p>confirmed that age data will be further integrated into developing model approaches together with other new information, providing for continued improvements to the assessment over time.</p> <p>Discussion led to potential for the collection of a time series of median length data from recreational catch of Mulloway for potential future inclusion into the harvest strategy.</p> <p>Members questioned clarification of the timing for the release of the next NSW Mulloway stock assessment. DPI noted that the stock assessment due to be published in 2024 is under development, consistent with the timeframe provided to the Working Group at previous meetings. The draft assessment is undergoing review through the Status of Australian Fish Stocks system prior to finalisation in early 2024, and will be available to inform further review of the draft harvest strategy once available and before the harvest strategy is finalised. Discussion recognised that the 2024 stock assessment will include the application of the same methods as previous stock assessments on Mulloway, as well as initial outputs from integrated modelling approaches to provide the best assessment possible given current data and knowledge. It was reiterated that the continued development of these integrated assessment models will occur concurrently with the development and operation of the harvest strategy.</p> <p>Members then restated concern about the harvest strategy commencing with limited data to inform harvest strategy indicators. Discussion recognised benefits to harvest strategies for data poor species or fisheries, as well as the ability for harvest strategies to adapt to changes or improvements in data sources. Discussion also clarified when decision rule options will be considered through the rebuilding stage of the harvest strategy, with these developed to account for the existing assessment and improvements in certainty over time.</p> <p>DPI presented several revised regional boundary options that were suggested by members through discussions in Agenda Item 4. of this meeting. Some members again stated concern with regional management options to apply additional protection to Mulloway, stating regional boundaries will prompt a 'race to fish'. DPI reminded members that other options could be considered to mitigate this issue if considered significant, and the primary objective is to provide effective limits to catch to ensure rebuilding will be successful. The Chair reminded members that limiting</p>
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		<p>catch is likely to be required to ensure the stock will rebuild, and the approach should recognise the importance of maintaining both local and overall stock biomass, but any potential negatives can be limited by choosing the most appropriate management options.</p> <p>The Chair questioned members individually to ascertain support for a regional management approach that had previously been supported by the Working Group as a management option to alleviate potential spatial pressure on Mulloway. The question saw division between members of the Working Group. However, the majority of the members agreed management arrangements should be applied equally across fishing sectors. The Chair noted the division of opinion towards regional management and recommended management arrangements be established separate to the harvest strategy.</p>
6.	Next steps for Mulloway Harvest Strategy	<p>The draft harvest strategy will be sent to the Working Group for formal approval or comments. Once the draft has been accepted by the Working Group, it will be sent to CommFish NSW and RFNSW for review before public consultation.</p>

Timing for the next meeting TBC.