Department of Primary Industries

OUT22/6853

Minutes

Meeting	Mulloway Harvest Strategy Working Group		
Meeting Number(s)	3	Dates	23 May 2022
Location	Online	Time	11:30 – 15:00
Members	Independents: James Findlay (Chair), Sevaly Sen (Economist), Bob Kearney (Scientist) Commercial fishers: Johnny Alessi, Stephen Reed, Troy Billin Recreational fishers: David Rae, Paul Lennon, Mark Corbin Aboriginal fishing representative: Stephan Schnierer DPI Fisheries Managers: Heath Folpp DPI Fisheries Scientist: Julian Hughes		
Observers	Nicholas Giles (DPI), Rowan Chick (DPI), Ashley Fowler (DPI), Shane McGrath (DPI, Executive Officer)		
Apologies	Nil		

Meeting 3 - 23 May 2022

Agenda Item	Issue	Notes & Actions
1.	Welcome and introduction	1.1 Welcome and introduction The Chair opened by acknowledging Traditional Custodians and paying respects to Elders past, present, and emerging. All members and observers were then welcomed to the meeting. There was then some discussion from the Chair around the details of the letter that was drafted and sent to DPI regarding potential support measures on behalf of the working group. 1.2 Apologies and Recognition of observers Observers from DPI were accepted. 1.3 Confirmation of Agenda The Agenda for the meeting was accepted without modification. 1.4 Declaration of Pecuniary Interests The register of pecuniary interests was confirmed.

		1.5 Progress of other NSW fisheries harvest strategies DPI provided an update on the development of other NSW harvest strategies. Harvest Strategies for the Lobster and Trawl Whiting fisheries have been developed and are anticipated to be released shortly. Development of a harvest strategy for the Spanner Crab fishery is underway. 1.6 Minutes of the previous meeting Changes were requested to the previous meeting minutes to reflect views provided on matters relating to Aboriginal cultural fishing. These were resolved out of session.
2.	Fish Path update	DPI presented an update on the FishPath assessment and developing a shortlist of options for data monitoring, assessment and management measures. **Discussion** It was requested that DPI present the shortlist of options for review so that they can be progressed further. The Aboriginal fishing representative considered that the harvest strategy process and the FishPath tool currently does not adequately address Aboriginal cultural rights and interests and agreed to work with the developers to further develop this aspect. Members noted a project is underway to develop an Aboriginal Harvest Strategy Framework, with a project briefing to be provided at a following meeting. **Actions:** 1. DPI present further information on the FishPath assessment as a key topic for the next meeting 2. DPI arrange a project briefing for the Aboriginal Harvest Strategy Framework for the next meeting
3.	Mulloway Harvest update	DPI presented updated information on Mulloway harvest including data for the two most recent fishing periods. The data represented an increase in commercial catch in the two most recent fishing periods compared with recent years. **Discussion** It was noted that the fishing effort data is unstandardised and hence is unlikely to be an accurate representation of the actual fishing effort and this would increase the uncertainty of catch per unit effort (CPUE) trends. Members noted that overall commercial fishing effort in fisheries which take Mulloway has decreased in recent years, with some members expressing the view that recent increases in catch of Mulloway may be evidence that stocks may be improving. The group noted that there is no data on the proportion of reported

		commercial effort that is targeting mulloway or other possible changes in effort patterns so it is difficult to make any firm conclusions about changes in raw CPUE trends. It was also noted that despite the catch increasing, the numbers of fish caught could potentially be decreasing if the catch is predominantly larger fish. There was also discussion around data quality and availability, including the importance of accurate data reporting and data sources, which provide information on harvest levels or estimates and assessment of the fishery. Commercial fishers confirmed that it may be difficult to estimate the actual fishing effort for Mulloway based on current reporting requirements, as the level of targeted Mulloway fishing is limited and this species is also taken as incidental catch when targeting other species. Members noted benefits of improving information on harvest from all sectors to improve ability to assess stock health and changes over time, including whether or when stock health may improve. The potential benefits of mandatory reporting by all sectors was noted. There was discussion and interest around the recent DPI research project regarding the use of Mulloway hydroacoustic surveys undertaken simultaneously with the collection of water samples to test for Mulloway DNA in the water column that occurs from shedding (known as environmental DNA, or eDNA). This research is still in its developmental stage but might offer future insights into assessment approaches using non-invasive sampling methods.
4.	Harvest Strategy Support Measures *Improving information*	The Chair continued the discussion on potential support measures to support rebuilding of the Mulloway stock and operation of the harvest strategy. The Chair provided an overview of potential measures, noting this meeting will focus on data and mortality. **Discussion** Improving information and data is a critical step, and DPI is progressing options previously identified. The working group requested advice on compliance data to provide guidance on Mulloway offences and compliance with management arrangements. DPI advised the working group that fisheries compliance officers have recently been focusing on compliance in the Mulloway fishery. Discussions then led to quantifying recreational catch and DPI confirmed the Department is investigating potential to use virtual tags for Mulloway when caught and retained by recreational fishers, similar to the successful lobster program in place in Victoria. Virtual tags could potentially be assigned through the recreational fishing app (Fish Smart App) via taking a photograph of the fish and then a unique tag ID is assigned to the image. The photograph could then be used for determining size and improved recreational harvest information. If virtual tags were mandatory and used in conjunction with fin clipping it would also help reduce risks from illegal fishing.

		The Chair noted benefits and support for virtual tagging and noted potential to seek funding from DPI and FRDC to assist. The working group also recognised the potential benefits of a commercial tagging program noting that ease of reporting would greatly contribute, such as tagging and scanning a QR code (or other methods) to assist recording and reporting. **Action:** 3. DPI present further information on compliance aspects of the Mulloway fishery 4. DPI engage CommFish and RFNSW regarding options to improve data collection
4.a	*Reducing Mortality – Incidental catch*	As part of discussions on sources of harvest mortality, the working group discussed the potential impacts of incidental catch from trawl fishing on juvenile Mulloway biomass. It was recognised there has been a lot of work completed on BRDs to reduce by-catch and commercial fishers are pro-active in use and further development of methods to reduce by-catch, especially if it is related to reductions in catches of juvenile species such as Mulloway. **Discussion** Depending on environmental conditions, juvenile Mulloway may aggregate in specific areas of estuarine or ocean waters, especially after high rainfall events, with potential benefits from active spatial management measures. DPI plans to discuss this issue further with Commercial Fisheries Management, noting that there are existing arrangements in place to limit mortality risks. In addition to arrangements including limited entry, spatial and seasonal closures, gear design to improve selectivity for target species and mandatory use of BRD's, spatial flood closures are triggered when a specific river height is breached due to high rainfall. DPI suggested that improved co-management might be a way forward in terms of further reducing risk of incidental juvenile Mulloway catch via trawl fisheries, noting that existing measures, further BRD development, industry and DPI engagement and self-management is already undertaken to reduce potential risk. Members also discussed changes to structure in the trawl fisheries over time, with significant reduction in vessel numbers, changes to management arrangements and development of fishing gear and BRD's since pre-2000. Members noted uncertainty of when significant stock impacts may have occurred, as well as the source (e.g. fishing mortality vs other sources such as habitat degradation). Considering the long-term depletion, depletive impacts may have been historic (e.g. more than 20 years ago), noting uncertainty regarding the effect on the stock and its recovery associated with changes to management arrangements and participation over time.

		The Chair then led the discussion on using video cameras to monitor trawl bycatch, noting it as a potentially effective way of collecting data on juvenile Mulloway interactions. Members noted that improving information would benefit assessing risk and management options, recognising that implementing cameras on trawl or other vessels to monitor catch or by-catch could be difficult. The chair summarised the discussion from the session and suggested the following; - The working group invites a trawl fishery representative to attend a meeting, - Additional funding on BRD research and development would help further assess and reduce incidental risks, noting that improvement work is continuing, - Investigating potential options to improve understanding of potential Mulloway bycatch in the trawl fishery, including fishery independent surveys, onboard observers or remote camera trials, - A desktop study on the history of fishery changes and management actions, focused on determining how much of an issue incidental mortality may be on stock health. **Actions:** 5. DPI to provide information on the history of fishery and management changes relevant to the Mulloway fishery 6. Members invite discussion with a trawl fisher/s regarding actions to limit potential incidental mortality at a future meeting
4.b	*Reducing mortality - Temporal and/or Spatial closures*	The Chair opened discussion on the use of temporal and spatial closures to assist rebuilding the Mulloway stock, noting that all measures to enhance recovery should be considered, along with potential benefits and impacts. **Discussion** Mulloway are caught all year round, with catches not necessarily aligned to particular spawning behaviour or particular annual trends, noting higher catches generally taken around the middle of the year coinciding with periods where overnight setting of mesh nets is permitted in the Estuary General fishery. Any closures would reduce mortality on the stock, noting that fish may still be present in the marketplace due to catch taken in other jurisdictions, with potential for illegal NSW harvest. Targeted catch and release fishing could also be undertaken under a closure scenario, in contrast to the intention. Incidental catch was raised as a particular concern for commercial fishing operations, including potential for unwanted interactions and discarding. Additional concerns included loss of a major source of catch data, reduction in potential income and effort shift to other

		species, and issues for maintaining markets should supply become limited or sporadic, particularly over longer periods. Incidental catch could also be an issue for all sectors if mortality occurs due to handling or barotrauma. Members discussed potential for catch caps, including under Total Allowable Catch (TAC) arrangements or a tag system, noting potential to limit total catch whilst supporting adjustment for fishers who may encounter Mulloway as incidental bycatch. Members recognised benefits of individual quota arrangements as opposed to competitive TAC. Given importance of data to monitor stock trends and evidence of rebuilding, fishery closures could impact current information supporting assessment of stock health and trends, but this needs to be balanced against the need for stock protection. Additional discussion was undertaken around potential economic impacts, with agreement for DPI and the independent economist to investigate and report back to members on the potential economic impact of closures. The Chair noted that no consensus on seasonal or temporal closures was reached, including on potential benefit and impacts. Further discussion will be undertaken as an option for support measures and the harvest strategy. **Action:** 7. DPI and economist to consider potential economic impacts of closures
4.c	*Reducing mortality – Gear selectivity*	Noting previous discussions on stock structure and potential protection to larger spawning biomass, the Chair opened the discussion on the use of larger mesh sizes in EG mesh nets as a follow on from an earlier session. It is likely that reducing the maximum mesh size would reduce the capture of larger fish. This would be beneficial to increase protection of the spawning biomass as the larger fish have a higher fecundity (i.e. egg production) by virtue of their larger body size. **Discussion** Members recognised the potential stock benefits of reducing the maximum mesh size to 7.25 inches (normally a 7-inch net, including tolerance), noting that some fishers may have invested in larger mesh nets. Members noted that larger fish can receive a lower price per kilogram and are less preferred at market, and having a maximum limit on the net size would provide more selective targeting for the market's preferred fish size. Members noted that while the larger fish might have the highest fecundity their contribution to the overall reproductive output of the stock might

		not be as large as that produced by larger numbers of smaller mature size classes of Mulloway. A consensus was reached that additional protection to larger fish by limiting maximum mesh size would aid in increasing the number of larger fish in the spawning biomass. The chair confirmed the agreement and suggested that the changes to the net size should be tabled with CommFish for consideration. **Action:** 8. Chair to raise potential change to maximum meshing net size with CommFish
4.d	*Reducing mortality – Slot Size Limit*	In addition to discussions regarding additional protection to larger fish, members discussed potential for introducing a slot limit through implementing a maximum size limit. Members recognised potential benefits of increased protection to larger fish and the spawning biomass with support, raising concerns regarding potential mortality of incidental bycatch and barotrauma, including issues of wastage if fish do not survive the catching process. The working group considered this option should be further discussed as measures develop.

Next meeting: Proposed in person (Sydney) on 6-7 June 2022 (TBC).