Department of Primary Industries

OUT22/5682

Minutes

Meeting	Mulloway Harvest Strategy Working Group		
Meeting Number(s)	2	Dates	11/12 April 2022
Location	Sydney and online.	Time	09:00 – 17:00 08:30 – 12:30
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: Stephan Schnierer DPI Fisheries Manager: Heath Folpp DPI Fisheries Scientist: Julian Hughes		
Observers	Rowan Chick (DPI), Ashley Fowler (DPI), Shane McGrath (DPI, Executive Officer), Natalie Dowling (CSIRO, FishPath Facilitator)		
Apologies	Recreational fishing representative: David Rae (Day 2)		

Meeting 1 Part a 15 November 2021

Agenda Item	Issue	Notes & Actions
		Day 1
1.	Welcome and introduction	1.1 Welcome and introduction The Chair opened by acknowledging Traditional Custodians and paying respects to leaders past, present and emerging. He then welcomed all members and observers to the meeting. 1.2 Apologies and recognition of observers Apologies were received from David Rae for Day 2. Observers from DPI and CSIRO were accepted. 1.3 Confirmation of Agenda The Agenda for the meeting was accepted without modification. 1.4 Introduction to Members The Chair asked members and observers to introduce themselves.

		1.5 Declaration of Pecuniary Interests Updates to the register of pecuniary interests were provided. 1.7 Progress of other NSW fisheries harvest strategies DPI provided an update on development of other NSW harvest strategies. 1.8 Minutes of the previous meeting These were adopted following minor revision.
2.	Harvest Strategy Support Measures	The Chair informed the group that he had received a response from DPI to the advice the group provided on Mulloway Harvest Strategy Support Measures, noting that the intent of such measures would be to ensure that there is no further decline in the stock while the harvest strategy is under development. Measures focused on targeted data collection and analysis, as well as compliance and other management measures are being considered as priority measures, noting that they would also be designed to complement the operation of the future strategy. Discussion was deferred to Day 2 to allow enough time for stakeholder input to FishPath on Day 1.
3.	Introduction to FishPath	DPI introduced the harvest strategy decision support tool *FishPath*, which the group will use to characterise the fishery and identify Data monitoring, Assessment and Management options. *FishPath* provides a series of targeted questionnaires to characterise the stock and fishery and provide viable, data supported options for the three critical harvest strategy components, *Data monitoring, Assessment* and *Management measures*. This method provides a thorough, transparent and structured approach to identifying and defining the data monitoring, assessment and management measures available to support a harvest strategy and the recovery and long-term sustainability of the Mulloway stock.
4 – 6.	FishPath for Mulloway	DPI representatives and Dr Natalie Dowling (CSIRO) outlined the process for using *FishPath* to support development of the Mulloway harvest strategy. An ethics statement was provided to the group supporting the use of outcomes in subsequent scientific research. The working group completed the questionnaires for *Data Monitoring* and *Management Measures*. Given the technical nature of the *Assessment* component, this was drafted out of session by DPI staff working with the Independent Scientist and Chair, with facilitation by Dr Dowling, and made available for review by the group.

		The process sought to characterise the stock(s) based on the available data and capture the complexity of the fishery across all of the harvest groups such that some viable harvest strategy options for *Data Monitoring* and *Management Measures* could be developed. To support specific *Data Monitoring* and *Management Measure* options among the different harvest groups the Working Group defined the scope for the *Estuary General Fishery – Mesh Netting* group, the *Recreational* fishing sector and *Indigenous cultural fishers*. Out of session, DPI and Dr Dowling will integrate these results with information for all sectors before presenting the results to the working group for consideration at the next face-to-face meeting. Specific *FishPath* outputs will also be provided working group in the form of short-listed options for *Data Monitoring* and *Management Measures*, including rationale for each of the options selected.
7.	Fishing in the good old days	The independent scientist Prof. Bob Kearney provided background of his book *Fishing in the Good Old Days*, noting that this contains a historic perspective of recreational Mulloway fishing in NSW over time. The working group members congratulated Dr Kearney on the publication.
Day 2		
8.	Bycatch reduction methods in the Prawn Trawl fishery	DPI presented Working Paper WP-02-01 *Minimising unintended mortality in NSW trawl fisheries* following request from the working group for information on this topic. Minimising unintended mortality is a key objective for all fisheries and fishing sectors, with a range of potential management responses. Bycatch of juvenile Mulloway was identified as a management issue in trawl fisheries the late 1980s / early 1990s, with significant work since undertaken to investigate and implement technology (e.g. gear configuration or modifications) to reduce unintended mortality associated with fishing for target species. In general, there are three management options available to reduce interactions and/or mortality for non-target species: (1) spatial or temporal closures to fishing; (2) modifications to fishing gear to improve selection; or (3) changes to operational procedures to improve discard survival. Spatial limitations are in place in many forms, such as restriction of estuarine prawn trawling to three of the 130 or so major estuaries, and within these to around 50% of tidal waters. Short-term closures are also used adjacent to major rivers following flooding, and as needed in other ocean and estuarine waters. Whilst gear construction is heavily regulated, several

		modifications can be used to improve selectivity by maintaining catch of target species while minimising bycatch. Many modifications to prawn trawls have been developed, refined and reassessed, and are in place in trawl fisheries throughout Australia and internationally. Selectivity is primarily governed by mesh size, with additional refinement provided by changes to gear configuration. Bycatch reduction in trawl (or other) fisheries can be improved using mechanical or behavioural separators (i.e. bycatch reduction devices or configurations), or a combination of both approaches. Mechanical separation is achieved by physically excluding non-target species. Behavioural separators are based on using or modifying water flow to exclude non-target species from the gear, or by reducing the likelihood of bycatch entering the gear. Behavioural modifications can be valuable where bycatch species are the same size as target species, with selectivity often governed by both mechanical and behavioural exclusion. Recognising that environmental conditions can influence catch, the potential for controls such as bycatch-to-target species catch ratios was discussed. This can provide protection to non-target species, whilst encouraging innovation to improve gear selectivity or changes to fishing practices (such as fishing methods or locations) in accordance with changes to catch composition. A good biological understanding and basis is important as a foundation to determining acceptable catch levels or ratios, so that fishing mortality is appropriately understood and constrained. The Chair observed that voluntary reporting of breaches to bycatch triggers can create an incentive for non-reporting; use of technology such as on-board cameras can help monitor and demonstrate commitments and actions to reducing or avoiding unintended mortality. Monitoring and assessment programs are also important to ensure that bycatch reduction measures are providing the protection they were designed to deliver. The group will consider gear technology and application of spatial boundaries further as it develops the harvest strategy.
9.	FishPath for Mulloway summary	A summary of the previous day's work using *FishPath* was provided and discussed by the working group. The outputs, including specific notes on inclusion/exclusion of options, will be provided in full to a subsequent meeting of the group for review. This will include discussion of next steps in using *FishPath* to assist with development of the Mulloway harvest strategy.

Agenda Item 2. revisited	Harvest Strategy Support Measures	The Chair re-opened discussion on Mulloway Harvest Strategy Support Measures by noting that spatial variability is clearly very important. With much discussion on commercial fishing, recreational fishing is also a significant component of total catch and is very spatially variable. While there is some evidence of discreet sub-populations obtained via tagging studies, the spatial scale of sub-population structures is currently uncertain. As it is likely that there is spatial variability in abundance, this will be important to consider, including how this could be better informed in the future. Given the time constraints at this meeting the Chair proposed a dedicated online meeting for further discussion on Mulloway Harvest Strategy Support Measures. This will be followed by another face-to-face meeting to further consider *FishPath* outputs and start moving on to objectives for each sector and complementary objectives for the stock overall.

Next meeting: Online on Monday 23 May on Harvest Strategy Support Measures.