

Minutes

Line & Trap Harvest Strategy Working Group 1st Meeting

Details

Location: Rydges World Square
389 Pitt Street
Sydney, NSW 2000

Date: 8–9 May 2023

Chairperson: Ian Cartwright

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, DPI Fisheries Scientist Member
10. Darren Hale, DPI Fisheries Manager Member
11. Nicholas Giles, DPI Fisheries Harvest Strategy Manager Member
12. Aaron Puckeridge, Executive Officer
13. Ian Knuckey, Guest Presenter
14. Rowan Chick, DPI Observer
15. Ashley Fowler, DPI Observer

People present

1. Tony Smith, Independent Scientist
2. Sevaly Sen, Independent Economist
3. Brad Gibson, Recreational Fishing Member
4. Ian Puckeridge, Recreational Fishing Member

Apologies

1. Chad Lunow, QLD DAF Observer
2. Ian Puckeridge (Day 1)

This Meeting:

No.	Issue	Action
1	Acknowledgment of Country and introduction	<p>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.</p> <p>Working Group members introduced themselves and their backgrounds. The Working Group also welcomed the meeting’s observers and guest presenter.</p>
2	Line & Trap Harvest Strategy Working Group timeline and meeting schedule	<p>NSW Department of Primary Industries (DPI) presented the proposed timeline for the Working Group. The second meeting has been scheduled for 29–30 May 2023 and progressive meetings will recur roughly every 6–8 weeks. NSW Harvest Strategy Working Groups have typically developed harvest strategies in around 8 meetings through a 12–18 month period, with timing and the number of meetings dependent on the complexity of the fishery or strategy being discussed.</p> <p>The Working Group noted that they have been tasked with developing harvest strategies for Snapper (<i>Chrysophrys auratus</i>) and Yellowtail Kingfish (<i>Seriola lalandi</i>) and will also consider a broader fishery level strategy. The Working Group will be amongst the first NSW Harvest Strategy Working Groups to consider a fishery level harvest strategy, which will require consideration of complex interactions between multiple species, fishing sectors and methods.</p>

NSW DPI noted that the fishery level harvest strategy had not been allocated a detailed timeline yet. While considering Snapper and Kingfish as priority species, broader cross fishery issues are expected to arise, contributing to discussion around the fishery level strategy.

The Working Group noted that they may seek advice and comments from additional fishing sector representatives, and progress updates will be provided to the Recreational Fishing NSW Advisory Council (RFNSW), the Commercial Fishing NSW Advisory Council (CommFish NSW) and the Aboriginal Fishing Advisory Council (AFAC). The CommFish NSW and RFNSW representatives on the Working Group will also provide a direct communication conduit between the Working Group and these groups.

3 Introduction to fisheries management and scientific information	Dr Ian Knuckey (Guest Presenter, Fishwell Consulting) presented an introduction to fisheries management and scientific information, aimed at providing fishers with the background to interpret this technical information. Content included: <ul style="list-style-type: none">• Common graphs, techniques and concepts used in scientific presentations, such as interpreting trends from biological length frequency histograms• Background to fish biology, life histories and their impact on how fisheries are monitored and managed• Components and methods of a fisheries stock assessment
4 Introduction to harvest strategies	Dr Ian Knuckey presented an introduction to harvest strategies, explained their key elements, and provided some current examples applying to similar fisheries. Key harvest strategy elements include: <ul style="list-style-type: none">• Scope – a definition of a fishery which a harvest strategy applies to• Objectives – a definition of what the harvest strategy aims to achieve• Indicators – data used to track and measure the performance of a fishery over time against the harvest strategy objectives• Reference points – reference points (or levels) for key indicators (e.g. stock biomass) used to track performance of a fishery in relation to its objectives. This commonly includes a:<ul style="list-style-type: none">– target reference point (the level of performance the harvest strategy aims to achieve)– limit reference point (the level of performance to be avoided and where strong action such as a fishery closure should be considered)– trigger reference point (a level of performance indicating the fishery is moving too far away from the target reference point and a change in management actions or response strength could be considered)• Decision rules – management actions linked to indicators and reference points aimed at moving the fishery towards or maintaining it around the target reference point• Meta rules – rules which may consider fishery and management changes in exceptional circumstances

Discussion

The Working Group discussed the legislative and policy basis of harvest strategies, key harvest strategy components and principles, and some contemporary harvest strategy challenges. It was recognised that the primary function of harvest strategies is to control the major sources of fishing mortality (harvest) but broader issues including ecosystem function or potential environmental impacts should also be considered. While these issues may influence harvest strategy design, management for these may not be specifically prescribed under a harvest strategy. There are many ways in which broader pressures can be managed, including spatial management, by-catch policies, observer programs and fishing gear modifications and restrictions.

Harvest strategies should be designed to respond to changes in stock health in a timely manner, providing clear and transparent management actions to ensure decisions will be taken to manage stocks to achieve the objectives of the harvest strategy. Extenuating circumstances can be considered by meta rules, such as response to unforeseen environmental impacts, disease, or extreme changes in stock status.

Designing a harvest strategy is easier when a fishery is productive, profitable and its stocks are at or near the target biomass levels. Discussions around decision rules, particularly for rebuilding stocks, can be sensitive, particularly when they will require immediate or unexpected management action leading to significant reductions to allowable catches.

5 Introduction to the cultural framework project

Dr Ian Knuckey presented the Working Group with the current progress of an ongoing project funded by NSW DPI 'Development of a harvest strategy framework for Aboriginal cultural fishing in NSW'. Under the Fisheries Management Act 1994 (FMA), Aboriginal cultural fishing is defined as '*fishing activities and practices carried out by Aboriginal persons for the purpose of satisfying their personal, domestic or communal needs, or for educational, ceremonial or other traditional purposes, and which do not have a commercial purpose.*'

This project aims to create a framework to assist with incorporating Aboriginal cultural fishing in harvest strategies. This is being achieved by consulting and building capacity in the Aboriginal cultural fishing sector, primarily through AFAC.

To further consider Aboriginal cultural fishing needs in fisheries management, NSW DPI has partnered with the Hastings and Tweed coastal communities to trial the Tweed Aboriginal Cultural Fishing Local Management Plan (Trial Plan) and Birpai Barray (Hastings) Aboriginal Cultural Fishing Local Management Plan (Trial Plan). Ongoing local management plan trials such as these, will provide further guidance to the Working Group on incorporating Aboriginal cultural fishing in harvest strategies.

Discussion

The Working Group expressed interest in developing an understanding of Aboriginal cultural perspectives and noted the importance of this ongoing project to assist integrating Aboriginal cultural fishing interests into harvest strategies. Members noted that the Aboriginal Fishing position on the Working Group is currently vacant and recognised the

benefits of engaging and regularly updating AFAC and seeking feedback as the Working Group progresses through the harvest strategies.

The Working Group also noted that building Harvest Strategies that ensure effective management and healthy stocks that are robust to environmental and recruitment changes will benefit all fishing sectors. To ensure the views of all fishing sectors and stakeholders are considered, public consultation will be completed as a part of the harvest strategy process. The Working Group will continue to pursue harvest strategies that support fisheries management objectives, while seeking guidance from this ongoing project and AFAC to ensure, in as far as possible, Aboriginal fishing interests are considered and fully accounted for.

Action items

1. The Executive Officer is to distribute the *Tweed Aboriginal Cultural Fishing Local Management Plan (Trial Plan)* and *Birpai Barray (Hastings) Aboriginal Cultural Fishing Local Management Plan (Trial Plan)* to the Working Group before the next meeting
2. The Chair will write to AFAC, indicating strong support from the Working Group for further engagement and guidance regarding Aboriginal cultural fishing interests, including the opportunity for participation of an AFAC nominee

6 Snapper and Yellowtail Kingfish management

NSW DPI provided an overview of Snapper and Yellowtail Kingfish management and harvest. Both species are important recreational and commercial species in NSW, with the largest harvest from the eastern stocks taken in NSW. Both recreational and commercial sectors take significant proportions of the total catch and therefore need to be considered. Estimates of cultural harvest are not available and assumed relatively low. The eastern populations of both species cross management jurisdictions.

Snapper management

NSW recreational Snapper harvest is primarily controlled through the minimum legal length of 30 cm and the bag and possession limit of 10 fish per person. Recreational catches are estimated by periodic recreational fishing surveys, which are considered conservative and have significant error ranges. Recent annual recreational Snapper harvest estimates have been 148 t (2013/14), 106 t (2017/18) and 94 t (2019/20).

NSW commercial Snapper harvest is primarily taken in the Ocean Trap & Line Fishery (OTLF) and is mainly controlled by the OTLF's input controls. This includes limited entry through shareholding and gear restrictions including trap and hook limits. Annual commercial landings have been between 244 t and 160 t between 2012/13 and 2021/22.

Yellowtail Kingfish management

NSW recreational Kingfish harvest is primarily controlled through the minimum legal length of 65 cm and the bag and possession limit of 5 fish per person. Recreational catches are estimated by periodic recreational fishing surveys, which are considered conservative and

have significant error ranges. Recent recreational harvest estimates are 120 t (2013/14), 129 t (2017/18) and 114 t (2019/20).

NSW commercial Kingfish harvest is also primarily from the OTLF, and harvest is controlled by the fishery's share management and input controls. A management change significant to Kingfish was the prohibition of pelagic fish traps from 1996. Annual commercial landings have been between 124 t and 65 t between 2012/13 and 2021/22.

Discussion

The Working Group noted that participation has declined in the OTLF due to management changes. It was suggested that low fishing effort is a contributing factor to the recent commercial catch trends, rather than an indicator of abundance. Commercial fishing members noted that drops in trap fishing effort have been influenced by the specialised nature of trap fishing, increases to trap building and other operating costs. Changing market demands have also shifted fishers to target more profitable species such as Australian Bonito (*Sarda australis*), which are typically caught by line methods.

7 Snapper stock assessment and data

NSW DPI presented the Snapper stock assessment and supporting data sources to the Working Group. Snapper is assessed as 'depleted' in Queensland but 'sustainable' in NSW. This trend in the assessment is influenced by decreasing line catch rates in Queensland's (QLD's) Rocky Reef Fishery, while NSW has observed increasing trap Catch Per Unit Effort (CPUE). The Working Group noted the range of data sources contributing the assessment including:

- Tag-recapture data
- Commercial catch and effort records
- Recreational catch estimates
- Commercial length frequency data
- Ageing data

Members also noted the key biological and ecological characteristics of the east coast Snapper stock:

- NSW and QLD share a single biological stock, evidenced by strong genetic mixing. Eastern Victorian Snapper occasionally mix with fish on the south coast
- Tagged Snapper are typically resident individuals, with only 4% moving over 100 km from their tagging location. Movements can be either northwards or southwards
- Snapper are thought to spawn inshore during Winter, with low larval dispersal
- Estuaries are nursery areas for juveniles
- Growth rates are faster in the northern NSW and southern QLD than they are on the NSW south coast

Discussion

The Working Group discussed the Snapper stock assessment, biology and ecology in relation to their understanding of Snapper. The mechanism for genetic mixing in the east coast Snapper stock is not

well understood, although fishers understand Snapper in deep water to be highly mobile and seasonal. Genetic mixing could be driven by this mobile, deep-water cohort of fish. The Working Group also noted that changes in commercial Snapper catches may be influenced by external factors such as the creation of the Solitary Islands Marine Park and the closure of the Wooli fishing cooperative. Imported Snapper is also recognised as a market competitor for NSW caught Snapper.

8 Introduction to Fishpath

NSW DPI presented background information on FishPath to the Working Group and how it can contribute to the harvest strategy development process. FishPath is a decision support tool that guides users through a series of fishery diagnostic questionnaires for major aspects of a fishery. This provides a bank of options and tools that can be included in a harvest strategy.

FishPath could be valuable to the Working Group as it provides a structured and transparent approach to harvest strategy development. The Working Group would complete the questionnaires together in a future meeting and discuss the outputs to help refine options for harvest strategy components.

Discussion

The Working Group discussed the potential benefits of using FishPath to assist refining options for harvest strategy components. NSW DPI noted there were two ways to proceed with the questionnaires:

1. NSW DPI could complete the questionnaires internally and present the results to the Working Group, potentially reducing the Working Group's meeting time
2. The Working Group could complete the entire questionnaires at the next meeting

Following discussion, the Working Group agreed to use FishPath as a decision support tool and complete the questionnaires as a single group at the next meeting, noting that this approach allows for greater buy-in and support from the group.

Action items

3. Completion of FishPath questionnaires for Snapper and Kingfish to be scheduled for the next meeting

9 Update on NSW fishery management structure

NSW DPI provided an overview of the key legislative and policy framework relating to existing management and statutory commercial fisheries, and the relationship of legislation and policy to harvest strategy development. The FMA is the overarching legislation which establishes management principles and frameworks. The following are also some important examples of legislation and policy:

- Fisheries Management (General) Regulation 2019
- Share Management Plan regulations
- Fishery Management Strategies (FMS's)
- NSW Fisheries Harvest Strategy Policy and NSW Fisheries Harvest Strategy Guidelines

Harvest strategies are developed under the NSW Fisheries Harvest Strategy Policy and Guidelines, which provide for the development and implementation of harvest strategies. Harvest strategies should be designed to be compatible with existing fishery objectives and use management tools available under the Act and Regulations.

The NSW Fisheries Harvest Strategy Policy and Guidelines recognise an Ecologically Sustainable Development (ESD) Risk Assessment to be completed in conjunction with a harvest strategy. The ESD risk assessment can be completed concurrently with the harvest strategy, where required and existing Environmental Impact Statements can be used as a starting point.

10 Queensland Snapper and Yellowtail Kingfish management

Noting that the QLD Department of Agriculture and Fisheries (DAF) observer provided an apology for this meeting, DPI provided a brief overview of Snapper and Kingfish between NSW and QLD, with further information and discussion to be provided by QLD at the following meeting.

The QLD Rocky Reef Fishery's key target is Snapper, which is assessed as 'depleted' in QLD and 'sustainable' in NSW. Pearl Perch (*Glaucosoma scapulare*) are also taken as a key fishery species, with the east coast stock assessed as 'depleted'. Considering that NSW and QLD share multiple fish stocks, both states are interested in shared management and complementary harvest strategies. Kingfish are taken in low levels in QLD in some years as occasional harvest.

11 Yellowtail Kingfish stock assessment and data

NSW DPI presented the Yellowtail Kingfish stock assessment and supporting data sources to the Working Group. The eastern stock of Kingfish, which spans from South Australia (SA) to QLD, is assessed as sustainable. The Working Group noted the range of data sources contributing to the assessment including:

- Tag-recapture data
- Commercial catch and effort records
- Recreational catch estimates
- Commercial length frequency data
- Ageing data

Members also noted the key biological and ecological characteristics of eastern Kingfish:

- The eastern biological stock spans from SA to QLD and eastwards to Lord Howe and Norfolk Islands, with mixing occurring with New Zealand fish
- Females reach sexual maturity at an 83 cm fork length and males mature at a 47 cm fork length
- Little is known about the spawning behaviour of Kingfish, although gravid (egg carrying) fish have been recorded along the NSW coast and in SA. Multiple lines of evidence suggest that NSW waters are important spawning areas for Kingfish
- Kingfish have a low release mortality and have a specialised swim bladder which they can vent, minimising barotrauma

Discussion

The Working Group discussed recreational and commercial fishing perspectives of Kingfish. On the north coast, commercial Kingfish catches are limited by the prevalence of 'milky' fleshed fish, most often in inshore waters. Aquaculture is also a market competitor for wild caught Kingfish. Most of the commercial and recreational catch is based upon juvenile fish (below 85 cm fork length). This may suggest there is a larger spawning biomass somewhere beyond NSW waters supporting the juvenile recruitment.

Many recreational fishers believe the Kingfish stock is in a poor condition, and Kingfish research has been a focus of RFNSW and the recreational fishing trust fund. Noting uncertainties surrounding Kingfish, a Close-Kin Mark Recapture (CKMR) project could be valuable.

- 12 Other business The Working Group noted the Minutes and Chair's summary from each meeting would be published on the [Working Group webpage](#).

Next Meeting:

The second meeting of the Line & Trap Harvest Strategy Working Group will be held on 29–30 May 2023.