OUT18/19542

# NSW Lobster Industry Working Group

## Harvest strategy and Real time reporting workshop

### 25-26 September 2018

## Purpose of workshop

The purpose of the workshop was to:

- Discuss the drivers and process for developing a harvest strategy for the NSW commercial lobster fishery
- Identify collaborative objectives for preparation of a draft harvest strategy for wider consultation
- Review and assess real time reporting functionality to identify preferred functionality for full implementation

## Attendees

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|---|---|
| Scott Westley (Industry) | Nicholas Giles (DPI Commercial Management) |
| Peter Offner (Industry) | Geoff Liggins (DPI Science & Research) |
| Lee Monin (Industry) | Joseph Wright (DPI Compliance) |
| Noel Gogerly (Industry) | Heath Calder (DPI Systems development) |
| Daniel Stewart (Industry) | John Heskins (Spatial Vision Systems development) |
| Oly Wady (Recreational) | Amber Rumer (DPI FishOnline support) |
| Mark Horne (Industry observer) | |

## Workshop background

The workshop was held as part of agreed undertakings to progress key management issues for the lobster fishery under the Lobster Fishery Action Plan 2018/19 (Attachment A). The action plan was developed and reached agreement with working group representatives in August 2018.

The workshop was held in two sessions over two days, with agreed direction established for each objective. The workshop outcomes will be used to develop a draft harvest strategy for wider consultation, and to assess and develop enhancements to real time reporting functionality to support full implementation for the lobster fishery.

## Drivers and process for developing harvest strategy

Current objectives of the Fisheries Management (Lobster Share Management Plan) Regulation 2000 (the Lobster Plan) were put in place to promote recovery of the previously severely depleted lobster stock.

Over the life of the plan, the key objective has been to recover the stock to sustainable harvest levels, which has been achieved by precautionary catch setting, implementing management changes such as reducing the maximum size limit, and investing in research programs to increase knowledge of the stock.

Management has been successful, and the stock has now recovered to a level of approximately 30-35% of the virgin biomass, which is a level considered acceptable from a sustainability perspective. However, the Lobster Plan does not identify management targets that identify the potential benefits that should be pursued.

In particular, management targets are needed by the Total Allowable Fishing Committee (the Committee) to assist setting of Total Allowable Commercial Catches (TACC's). Setting catch at different levels can promote different benefits from the stock, often at different risk levels. Most common targets are around Maximum Sustainable Yield (MSY), Maximum Economic Yield (MEY), or somewhere between these common objectives.

The 2007 Lobster Fishery Management Strategy (Lobster FMS) does much of this work, however a contemporary approach and revision of key objectives and performance indicators for the fishery is needed.

A harvest strategy is an appropriate and cost effective means of providing management objectives supported by a new transparent decision framework for TACC setting, providing greater certainty to catch setting for Government and industry.

A draft harvest strategy will be developed based on workshop outcomes; however consultation and feedback on the draft strategy from all shareholders, fishers and other interested stakeholders will be important.

The draft strategy will be developed using existing resources contributed under the lobster fishery budget and management charge. The first draft will focus on the commercial fishery while work is undertaken to improve available information for harvest by other stakeholder sectors.

***Outcome***: Participants recognised the drivers and need to develop a harvest strategy for the commercial lobster fishery. The draft strategy will be developed with a view to consultation in the first half of 2019.

## Harvest Strategies

A harvest strategy sets out agreed objectives and decision rules for management of fish stocks. Harvest strategies often contain quantitative decision rules, such as changes to allowable catch when certain indicators (e.g. catch per unit effort, biomass levels etc.) meet decision indicators, targets or limits.

Formally, a harvest strategy is a framework that specifies the pre-determined management actions in a fishery for defined species (at the stock or management unit level) necessary to achieve the agreed ecological, economic and/or social management objectives.

A harvest strategy is needed to determine key management objectives for the lobster stock, and provide the Committee with appropriate information to assist with the Total Allowable Commercial Catch (TACC) setting process.

The harvest strategy will define fishery objectives, performance measures, data collection and analysis to inform decision making and provide greater certainty to the Committee and shareholders.

The harvest strategy will be important to define objectives for TACC setting by the Committee; however will not replace the independent catch setting process. The harvest strategy will be reviewed and assessed by the Committee in line with their decisions based on available information, and over time should transition to a greater role in setting TACC's according to changing performance indicators.

It is important that harvest strategies are developed with agreement of stakeholders and according to the responsibilities of Government to ensure sustainable harvest of fish stocks, to promote a viable commercial fishing industry, and to share fisheries resources appropriately.

***Outcome***: Participants discussed harvest strategy theory, content and structure, including examples of existing Australian lobster harvest strategies.

## Draft harvest strategy objectives

Prior to the workshop, working group members identified and provided a list of industry intentions for the lobster fishery to the Department as an independent submission to potential aims and objectives for a harvest strategy (Attachment B).

The intentions were developed by industry members, supported by ongoing discussions at annual working group and TAC meetings, an out of session industry discussion with Dr Keith Sainsbury in September 2017, and review and input from all working group members.

The intentions identified views on desirable management outcomes, unacceptable management outcomes and recommendations for key harvest strategy elements.

Participants discussed industries views, which broadly met the intentions of the Department for development of a draft harvest strategy. Importantly, views for key strategy elements mirrored the current long standing assessment methodology, and the default economic yield target reference currently used by the Committee for TAC setting in recent years.

***Outcome***: Participants agreed on key principles to be used for development of the draft harvest strategy, including:

- The key operational objective should be to promote industry profitability and a safe and low risk stock sustainability biomass provided by a default economic yield target, with a view to developing a robust economic assessment strategy
- Stability and measured improvement of catch is important over fluctuating catch levels, which should be provided by safe approaches to changes in TAC or other arrangements such as size limits
- Existing monitoring and assessment strategies should continue (e.g. catch and effort data, independent and puerulus survey programs, estimates of recreational, unreported and Aboriginal catches)
- Existing scientific assessment methods should be continued (assessment model, including biomass, settlement and recruitment)
- Decision rules should provide for measured TAC adjustment, such as increase of x% or x tonnes with a monitoring period (e.g. 2-3 years) to assess fishery response and performance before making additional changes

## Real time reporting review

Real time reporting was partially implemented in December 2017 with validated weight reported online using the FisherMobile App and other information continuing to be reported using the paper logbook.

The Department agreed to take further time with the working group to assess and discuss reporting functionality before full implementation, in response to industry concerns that integrity of some assessment data (e.g. discard information) could be affected by later reporting under the arrangements proposed in the previous consultation paper (within 48 hours of landing) than is currently provided under the logbook system.

Participants were provided a demonstration of current system functionality with a view to identifying potential enhancements to address previous concerns and improve reporting functionality from a fisher perspective.

***Outcome***: Participants discussed the current system functionality during the presentation. Several suggestions were raised for assessment by the systems development team, which will be further investigated with feedback to the working group and wider consultation to determine final real time reporting arrangements.

The working groups preferred option is to replicate current logbook reporting requirements in an online format (i.e. report effort, tags, discards and number of individuals in a pre-land report at the landing location, and report validated weight within 2 hours of landing).

Participants agreed that:

- The number of lobsters taken should be reported in the pre-land report instead of the estimated number of lobsters currently provided
- Crew information is not required as crew registration requirements were previously removed
- To support data assessment, reporting the number 0 for discards is required rather than leaving the field blank
- Pre-populating the starting tag number based on the last completed report would assist data entry for fishers
- Providing ability to set user preferences such as fathoms for depth information would assist data entry for fishers
- Reporting design should provide ability to report bycatch weights when determined at consignment
- Reporting design should provide ability to report multiple storage or disposals for each catch (e.g. catch 100kg, pen 20kg land 80kg and dispose to more than one receiver)

Potential to report catch and effort on a trap by trap basis was discussed; however industry advised that most fishers would not prefer this level of detail. Whilst this would provide more detailed catch information, this is not currently required for the assessment process as catch and effort information is aggregated at larger scales.

Department of Primary Industries

OUT18/12572

# Lobster Fishery Action Plan 2018/19

**August 2018**

## Objectives

This action plan establishes agreed directions with the Lobster Industry Working Group regarding key management priorities for 2018/19, being:

1. To develop and implement a harvest strategy for the lobster fishery
2. To develop a strategy for economic analysis through the Harvest Strategy
3. To assess and identify system function for full implementation of online reporting

## Harvest strategy development

*The Total Allowable Fishing Committee (Committee) has recommended that the Department and industry develop a harvest strategy with fishery specific objectives linked to target reference points.*

A harvest strategy is a framework that specifies the pre-determined management actions in a fishery for defined species (at the stock or management unit level) necessary to achieve the agreed ecological, economic and/or social management objectives.

The recommendation is focused on the need to have revised reference points for management of the lobster stock now it has recovered above the limit reference point established in the Lobster Plan. The limit reference point is established to protect and provide for recovery of the formerly highly depleted spawning biomass.

A harvest strategy is needed to determine key management objectives for the lobster stock, and provide the Committee with appropriate information to assist with the Total Allowable Commercial Catch (TACC) setting process.

A harvest strategy will define fishery objectives, performance measures, data collection and analysis to inform decision making and provide greater certainty to the Committee and shareholders.

Industry has held out of session discussions with harvest strategy experts to independently determine industry views on key harvest strategy objectives.

The following actions will be completed to develop a harvest strategy for the lobster fishery.

***Action***

1. *The Working Group will provide initial independent views for harvest strategy objectives by 21 July 2018*
2. *The Department will work up draft strategy objectives and options for discussion with the Working Group at a 1 day harvest strategy workshop in late September*
3. *Travel and sitting fee costs to be recovered in 2019/20 management charge*
4. *The Department will develop a draft harvest strategy based on workshop outcomes. The draft strategy will be released for consultation with lobster fishery shareholders and other stakeholders*
5. *Department will provide staffing and resourcing to finalise harvest strategy development by July 2019, using existing staff resources included in lobster budget.*

## Economic analysis strategy

*The Committee has recommended that the Department and industry develop a strategy for economic analysis of the fishery, including through provision of price information for quota transfers and fishery operating costs to facilitate robust economic analysis of the fishery.*

Basic economic information is voluntarily provided for share and quota sale and trading prices, and general management costs are identified in the lobster budget, however information on fishers operating cost are not known.

An ongoing Committee recommendation has been to identify specific operational costs to inform a robust economic analysis for the fishery and assessment of TACC setting to maximise profit. However, in the interim to identifying key management objectives for the stock, industry has been reluctant to invest in a dedicated economic survey to gather cost data.

Development of a harvest strategy provides an opportunity to identify the relative importance of economic management objectives, including an appropriate level of investment to data and analysis.

### *Action*

1. *Industry to continue to actively encourage reporting of price information for share and quota trading, with a view to increasing reporting of share and quota trading prices*
2. *Development of a harvest strategy to inform appropriate investment to economic assessment and analysis*
3. *The Department and industry to develop an appropriate strategy for economic analysis following the harvest strategy*

*The Committee has also recommended that the Department redevelop the stock assessment model to improve predictions for TACC setting and support robust strategic analyses of longer-term targets and harvest strategies, including explicitly representing the different depth, geographic, and gear components of the fishery.*

The stock assessment model has been further developed to improve predictions for TACC setting and support strategic analyses of longer-term targets and harvest strategies. Model redevelopment to explicitly represent different depth, geographic and gear components of the fishery is a longer term goal.

### *Action*

4. *Note the investment of the Department to development of the assessment model to inform longer term management options*
5. *The Department to continue to develop the assessment model as appropriate*

## Implementing online reporting

Online reporting was partially implemented in December 2017; with validated lobster weights reported using the FisherMobile application. Industry has requested opportunity to review and comment on the reporting design, focused on concerns to workflow of reporting and timeliness of providing assessment related data including discards.

Out of session discussions with industry indicate a need to hold a face to face workshop to assess the current reporting design and inform industry views and options to enhance the reporting structure to better meet the needs of the Department and industry.

### *Action*

1. *Hold 1 day online reporting workshop following the September harvest strategy workshop*
2. *The Department to assess preferred design features and scope appropriate system development*

# NSW Lobster Industry Working Group

## Lobster fishery harvest strategy – Industry aims and intentions

These aims and intentions are presented to the Department of Primary Industries as a submission for development of a collaborative harvest strategy for the NSW Lobster fishery.

### General aims and intentions

***Great outcome***

Industry wide high profit; maximum economic yield and safe biologically sustainable level; Highest sustainable and profitable level of catch; safe biologically sustainable level

Safe biologically sustainable level; Very low risk of stock dropping below limit reference point; high levels of spawning stock well above levels that risk high levels of recruitment

Stable and consistent quota in long-term (e.g. when fully recovered), stability favoured over fluctuating catches to follow ups and downs of production to absolutely optimise catch; steady and safe recovery of the stock to the long-term target through management of the annual catch and size limits; safe approach to test the effects of changed size limits developed and applied

Fair and evidence based co-management and resource sharing across commercial, recreational and indigenous fisheries; healthy and productive relationship with other sectors (recreational, indigenous, conservation)

Industry recognised as exemplary for co-management and sustainable resource use; publically recognised as a valuable social and economic contributor; social acceptance by wider community; recognised to be responsible seafood harvester; safe biologically sustainable level

Minimise negative impacts on protected species (seals, sharks, whales etc.); Minimise negative impacts on the wider ecosystem

Mechanisms for equitable resolution of conflicts with, and impacts of, other industry sectors; oil & gas, conservation, shipping, land-based pollution/contamination, aquaculture

Catches and bycatch of species across interacting fisheries known and managed reliably and equitably (e.g. fish in lobster traps, lobsters in fish traps/trawls etc)

Consistent high level of compliance with fishery management requirements by all participants in the fishery (commercial, recreational, indigenous); penalties for non-compliance are adequate to provide a serious disincentive to non-compliance, and they are effectively and efficiently applied

Management plans and related documents are reviewed at the periodicity intended (10y)

Product quality recognised by markets and public as being very high; product handling through capture and transport supports this; mechanisms in place to deliver, enhance and reward high quality product; consistent and high-quality product is rewarded by high price and market access

***Unacceptable outcome***

Stock collapse; return to the situation of a decade or so ago

Loss of markets; loss of market share; collapse of market price

Low rates of compliance

Unresolved conflicts between fishing sectors (commercial, rec, indigenous); inconsistent management and resource sharing decisions; conflicting/competing catch by different fishing sectors not effectively managed or effectively capped; commercial share reduced or removed

Significant environmental impacts from other sectors without adequate compensation; oil & gas pollution & closure of grounds; land based pollution and contamination, introduces species and diseases; MPAs

## Elements of a harvest strategy

(approx. current approach under o points and possible additional elements in brackets)

### *Identify key operational objectives*

- o MEY

### *Indicators and reference points*

- o Primary indicators: Spawning stock biomass (SSB), default target 48% SSB, default limit 30% SSB to avoid with high probability
- o Secondary indicators without reference points: exploitable biomass, cpue by area (esp. recruitment area, general reef, shelf northward migration area), independent survey SSB index, puerulus survey index, undersize recruitment index
- o [rec catch in relation to the nominal rec allowance made in TAC/TACC decision]

### *Monitoring plan*

- o Logbooks, surveys, settlement
- o [rec catch and effort]

### *Assessment methods*

- o Assessment model
- o Empirical SSB
- o Empirical settlement and recruitment

### *Decision rules*

- o Rebuilding: increase TAC by x%, for 2-3y monitor indicators (in relation to indicators for primary reference points) and if all OK then repeat; if not OK then reverse the increase or remain stable depending on severity of poor performance
- o TAC/TACC decision includes a nominal allowance for recreational and indigenous fishing
- o [Size limits: agree monitoring and decision rules before attempting change; increase upper size limit by x%; for 2-3y monitor indicators and if all OK then repeat; if not OK then reverse size limit change]