NSW GOVERNMENT
Department of Primary Industries

PUBLIC CONSULTATION PAPER:

Reform options for the NSW Ocean Trawl Fishery

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Public consultation paper: Reform options for the NSW Ocean Trawl Fishery

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More information

www.dpi.nsw.gov.au/fisheries/commercial/reform

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Readers guide

This paper includes reform options for comment that are specific to the NSW Ocean Trawl Fishery (OTF), including the following share classes:

- Northern fish trawl shares;
- Inshore prawn trawl shares;
- Offshore prawn trawl shares; and
- Deepwater prawn trawl shares.

Anyone with an interest in these share classes should read the options presented in this paper and, where possible, provide feedback.

The following provides an overview of the documents available:

General information paper	Provides general information about the reform program and issues applicable to all reform fisheries. **A 'must read' for everyone to understand the background.** The paper is titled "*General information relating to the reform program and reform options for the NSW commercial fisheries*"
Fisheries options papers **This paper you are reading**	These contain information about the options that have been shortlisted for specific fisheries or share classes. They include possible linkages, total catch/effort levels and proposed changes to existing restrictions, along with the advantages and disadvantages of each option. **A 'must read' if you hold shares in, or have an interest in, these fisheries.**
Technical paper	A separate paper has been prepared detailing how the proposed total catch/effort levels have been calculated. The paper is titled "*Setting the Interim Total Commercial Access Level (ITCALs)*".
Submission forms	Submission forms are available for each of the fisheries options papers. Relevant forms will be mailed to all shareholders and will also be available on the reform webpage: www.dpi.nsw.gov.au/fisheries/commercial/reform

A short summary document is also available summarising the main points contained in this paper. It is important, however, to include the level of detail in this paper to allow shareholders to understand the rationale behind the various proposals.

NOTE:

This paper provides specific issues that DPI is seeking feedback on. These are detailed in red boxes throughout this paper and are included in the Ocean Trawl Fishery submissions form. It is important to note however, that this should not limit any feedback on the overall options; comments are welcome on all aspects of the reform options.

Have your say

A key part of the Reform Program is getting valuable feedback and ideas from industry and interested stakeholders. Constructive feedback to help work out the best overall approach will assist in shaping future management arrangements.

The complexity of the options laid out in this paper are acknowledged, as is the difficulty some fishers may have in working through the issues covered. If you require assistance in understanding the options presented or in developing a submission please contact the relevant Fisheries Manager, or the Industry Liaison Manager on the contact details provided below.

DPI staff will be visiting regional ports over the consultation period, during which time commercial fishers will have one-on-one opportunities to discuss questions and issues.

A submission form is available to provide comments. Alternatively, you may submit your comments in another form, such as a letter or summary of your views on each of the reform options presented in this paper.

Note that submissions may suggest variations to the options presented in the fisheries options papers, provided they are within the broad scope of what the NSW Government approved and announced in November 2012[1] and are consistent with the reform program objectives described below.

However you choose to provide comment, it is important to note that subsequent decisions will be based on merit, rather than numbers for and against particular options.

The closing time for comments is 8am Monday 19th May, 2014.

Send your response to:

Mail: PO Box 4291, Coffs Harbour, NSW, 2450

Fax: (02) 6391 4726

Email: commfish.wg@dpi.nsw.gov.au

Following the closing date, a summary of the submissions will be prepared and made available on the DPI website. In arriving at decisions, the Minister will consider the issues raised in submissions, the views of key stakeholder groups, DPI's advice and final recommendations from the independent Structural Adjustment Review Committee (SARC).

For more information on the NSW Commercial Fisheries Reform Program visit:
www.dpi.nsw.gov.au/fisheries/commercial/reform

Or contact Commercial Fisheries Management on (02) 6691 9684.

[1] See www.dpi.nsw.gov.au/__data/assets/pdf_file/0005/448187/Govt-response-to-independent-comm-fisheries-review.pdf

Foreword

The Ocean Trawl Fishery (OTF) has been actively restructuring since 2007 in response to diminishing profitability. However, the rate of adjustment has not kept pace with the ever-changing global environment around it. This has resulted in more shareholders exiting or trying to exit the industry than ever before. For those still operating in the fishery, capacity to respond to sustainability or resource sharing issues remains limited.

The reform options presented in this paper focus on two important components of the broader reform program:

1. creating a stronger link to resource access; and
2. adjusting existing restrictions which have built up over many years and constrain efficiency.

The key objectives of the reform program are to:

- improve the long-term viability of the NSW commercial fishing industry;
- improve the strength and value of shareholders' access rights (i.e. shares); and
- provide shareholders with improved opportunities and flexibility to tailor their access.

The reform options in this paper have been developed by DPI having regard to:

- the Commercial Fisheries Reform Program as approved by the NSW Government in 2012 (after consideration of the *Independent Review of NSW Commercial Fisheries Policy, Management and Administration*);
- ideas submitted by shareholders in writing and through discussions with fisheries managers;
- views from the Ocean Trawl Share Linkage Working Group (OTSLWG) put forward at several face-to-face meetings; and
- advice and recommendations of the Structural Adjustment Review Committee (SARC).

The outcomes of meetings of the OTSLWG and the SARC throughout 2013 and early 2014 provide insight into the many options and issues considered in the lead-up to developing the reform options in this paper and are available on the NSW DPI website at:

OTSLWG webpage: www.dpi.nsw.gov.au/fisheries/commercial/consultation/commercial-fisheries-working-groups/ocean-trawl-share-linkage-working-group

SARC webpage: www.dpi.nsw.gov.au/fisheries/commercial/reform/sarc

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Acronyms

DPI	NSW Department of Primary Industries
DPT	Deepwater Prawn Trawl
GVP	Gross Value of Production[2]
IPT	Inshore Prawn Trawl
ITCAL	Interim Total Commercial Access Level
ITQ	Individual Transferable Quota
IVR	Integrated Voice Response system
JKP closures	Juvenile king prawn closures
NFT	Northern Fish Trawl
OPT	Offshore Prawn Trawl
OTF	Ocean Trawl Share Management Fishery
OTSLWG	Ocean Trawl Share Linkage Working Group
SARC	Structural Adjustment Review Committee
SESSF	Commonwealth Southern and Eastern Scalefish and Shark Fishery
SFTF	Southern Fish Trawl Restricted Fishery
SLWG	Share Linkage Working Group
TACC	Total Allowable Commercial Catch
TACE	Total Allowable Commercial Effort
VMS	Vessel Monitoring System

[2] Calculated at first point of sale only and using Sydney Fish Market average prices.

Introduction

The NSW Ocean Trawl Fishery (OTF) includes four classes of shares, each with a corresponding endorsement:

1. Northern fish trawl (NFT) shares (northern fish trawl endorsement);
2. Inshore prawn trawl (IPT) shares (inshore prawn trawl endorsement);
3. Offshore prawn trawl (OPT) shares (offshore prawn trawl endorsement); and
4. Deepwater prawn trawl (DPT) shares (deepwater prawn trawl endorsement).

A small number of changes to the management arrangements applying to the NFT share management fishery are proposed to be extended to the Southern Fish Trawl Restricted Fishery (SFTF), however, the share linkage options in this paper are not relevant to the SFTF.

This paper seeks your feedback on two primary reform options for the OTF, and an optional extra that could be applied over and above the two primary options, these include:

Option 1: a two-stage minimum shareholding program designed to deliver adjustment (i.e. the trading of shares and reductions in endorsements) with the first increase 1 July 2015 and the remainder 1 July 2016.

Option 2 involves:

- for the DPT sector, managing the number of endorsements using a two-stage minimum shareholdings program (as per Option 1),
- for the NFT, IPT and OPT sectors, a modest increase to the minimum shareholding requirements before transitioning to a delayed hull unit day regime.

Reform optional extra (can be applied in addition to either Option 1 or 2): Catch quota (also know as Individual Transferable Quotas (ITQs)) for designated species where there are sustainability issues or where competition for catches within the OTF, or between the OTF and other stakeholder groups, is high. In some cases the ITQs proposed may present a feasible alternative to current controls that are in some cases resulting in perverse outcomes such as the discarding of otherwise marketable product.

Changing existing restrictions to improve business and operational efficiency is a key aspect of the broader reform program. In this document, the potential changes to current restrictions for each linkage option are also presented for consideration.

The ability to implement the potential changes to current restrictions generally increases with the strength of the linkage option, with minimum shareholdings being the weakest form of linkage and catch quota (ITQs) being the strongest (see the general information paper for further information).

To assist in considering the options and providing feedback, a number of advantages and disadvantages have been identified for each option, and these are contained at the back of this paper.

Please note: It is important that the reform options are considered within the overall structure of the fishery. Those unfamiliar with this fishery, including shareholders unfamiliar with current numbers of shareholders and endorsements and the distribution of shares in each share class, are encouraged to read the ‘Overview of the NSW Ocean Trawl Fishery’ in Appendix 1.

Option 1: Managing endorsement numbers (minimum shareholdings)

This option involves actively managing the number of endorsements in each sector of the fishery. The proposal to manage endorsement numbers involves:

1. identifying a **maximum number of endorsements** for each share class, and
2. **increasing the minimum shareholding** requirements in two-stages over the short to medium term to reduce the number of endorsements in each sector.

Managing endorsement numbers is achieved by applying minimum shareholding requirements that must be satisfied if a shareholder is to remain eligible for an endorsement to fish in the relevant sector. To streamline administration and minimise costs, DPI proposes a consistent approach to implementing this option across all fisheries where it is proposed (e.g. aligning the timing). The following approach is proposed for the OTF:

Maximum numbers of endorsements

Northern fish trawl

The proposed maximum number of endorsements for the NFT is based on the number of endorsement holders who took 97% of the Gross Value of Production (GVP) over the three year period 2009/10 to 2011/12. The maximum number of endorsements proposed is based on 97% GVP, rather than the 95% GVP proposed in other options, in recognition of the relatively low risk of inactive endorsements being activated and because there are few controls proposed to be removed that could result in increased fishing efficiency in the fishery. Risk of activation is considered low due to the requirement for specialised skills and experience to be profitable in this sector and high investment costs.

Inshore prawn trawl and offshore prawn trawl sectors

The proposed maximum number of endorsements for the IPT and OPT sectors are based on the number of endorsement holders that took 95% of the GVP in each sector, respectively, over the three year period 2009/10 to 2011/12. The maximum number of endorsements proposed for the IPT and OPT sectors are slightly more conservative than the NFT sector because of reciprocal proposals (see Potential changes to current restrictions, page 13) that could result in increased fishing efficiency in these sectors (e.g. removing engine power and rationalising net length restrictions etc.).

Deepwater prawn trawl sector

Given lack of activity in the DPT sector in recent years due to high fuel costs, increased competition on the domestic market and the high Australian dollar, consideration could not be given to recent activity levels for the purpose of determining the maximum number of endorsements for this sector. Instead, the proposed maximum number of endorsements (i.e. 15) is based on advice from members of the OTSLWG having regard to the number of businesses that the DPT could reasonably be expected to support.

The maximum numbers of endorsements proposed for each sectors of OTF are presented in Table 1.

Table 1. Current numbers of shareholders and endorsements and proposed maximum numbers of endorsements

Share class	Current number of shareholders	Current number of endorsements	Proposed maximum number of endorsements
Northern fish trawl	45	38	20
Inshore prawn trawl	194	161	57
Offshore prawn trawl	176	147	69
Deepwater prawn trawl	41	16	15

For further information on the setting of the ITCALs proposed refer to the separate technical paper "*Setting the Interim Total Commercial Access Levels (ITCALs)*" available on the DPI website.

Proposed minimum shareholdings

A two-stage approach is proposed to reduce the initial financial burden on shareholders with the timing of the initial increase designed to capitalise on the lower market price for shares expected around the time of the exit grant process. These stages include:

1. a larger increase in the minimum shareholdings following the exit grant process; and
2. a smaller increase in the minimum shareholdings 12 months later.

The following table (Table 2) summarises the proposed minimum shareholding requirements and timeframes.

Table 2. Summary of current and proposed minimum shareholding requirements

Share class (total no. of shares)	Current minimum shareholdings	Minimum shareholdings to be satisfied by 1 July 2015	Minimum shareholdings to be satisfied by 1 July 2016
Northern fish trawl (2,164)	40 NFT shares	79 NFTshares	104 NFT shares
Inshore prawn trawl (11,035)	40 IPT shares	132 IPT shares	192 IPT shares
Offshore prawn trawl (9,798)	40 OPT shares	101 OPT shares	141 OPT shares
Deepwater prawn trawl (656)	20 DPT shares	34 DPT shares	42 DPT shares

The proposed minimum shareholding requirements have been calculated by dividing the *total number of shares* by the *maximum number of endorsements* proposed above. However, to minimise the financial burden on active shareholders without compromising the proposed maximum endorsement numbers, the minimum shareholding requirements have been adjusted down slightly, using a standard formula (refer to the "*Setting the Interim Commercial Access Levels (ITCALs)*" technical paper).

Transitional arrangements would also be implemented. Under these arrangements existing shareholders with endorsements would remain eligible for those endorsements until:

- the new minimum shareholdings apply, in which case eligibility for an endorsement will be based on the minimum shareholding requirement and how many shares are held; or
- the shareholder transfers, assigns, forfeits or surrenders one or more shares or one or more shares are cancelled, in which case eligibility for an endorsement will be subject to the upcoming minimum shareholding level.

Under a stand-alone minimum shareholding program, if viability needed to be improved or if total catch (or effort) were to increase beyond sustainable levels or to a point where resource sharing issues between the fishery and other stakeholder groups become evident, consideration would

need to be given to increasing the minimum shareholdings to reduce the number endorsements in relevant sectors of the fishery.

Note: Additional variations to the option presented above, and the other options, were also considered by the OTSLWG. Details of the variations that have not been included in the options presented in this paper are provided in Appendix 2.

Option 2: Minimum shareholdings and 'hull unit days'

The second reform option involves:

- for the DPT sector, actively managing the number of endorsements using minimum shareholdings; and
- for the NFT, IPT, OPT sectors, a small increase to the minimum shareholding requirements following before transitioning to a delayed (i.e. 2016) 'hull unit day' regime.

Minimum shareholding requirements would remain an option for future application in the NFT, IPT and OPT sectors should they be needed by industry to deal with any issues that may arise, such as increased competition, reduced profitability or diminishing asset values.

Managing endorsement numbers in the deepwater prawn trawl sector

It is proposed that the number of endorsements in the DPT sector be managed using minimum shareholdings, as per the two-stage approach set out under Option 1, rather than adopting a hull unit day regime. Managing endorsement numbers is proposed because of low activity levels, potential to redevelop this sector and the cost of pursuing finer scale linkages (e.g. hull unit days or catch quotas) likely to outweigh the benefits.

Northern fish trawl, inshore prawn and offshore prawn minimum shareholdings

With respect to the NFT, IPT and OPT sectors it is proposed that the minimum shareholdings be increased around the time of the exit grant program, as a transitional step to a hull unit day regime.

The following table summarises the proposed minimum shareholding requirements proposed to be required by 1 July 2015 to remain eligible for endorsements.

Table 3. Summary of current and proposed minimum shareholding requirements (to be satisfied by 1 July 2015)

Share class	Current minimum shareholding	Current average shareholding (per FB)	Proposed minimum shareholding
Northern fish trawl (NFT)	40 NFT shares	49 NFT shares	70 NFT shares
Inshore prawn trawl (IPT)	40 IPT shares	60 IPT shares	70 IPT shares
Offshore prawn trawl (OPT)	40 OPT shares	59 OPT shares	70 OPT shares

These minimum shareholdings, nominated by DPI with input from the OTSLWG, aim to stimulate shareholders, including those who hold the maximum original allocation of 65 shares, to make an initial decision about whether to make a small investment and remain in the fishery or transfer shares to others.

Increasing the minimum shareholdings soon after the exit grant process seeks to capitalise on the lower market price for shares expected around that time.

Hull unit day regime

The hull unit day regime presented in this paper is similar the day regime that applies in the Queensland East Coast Trawl Fishery. It is a form of effort control, and is based on days fishing and hull units[3] – which are two of the more important factors when managing effort in an ocean-based trawl fishery. Under a hull unit day regime a shareholder using a larger boat consumes his or her quota at a faster rate than a shareholder using a smaller boat.

[3] A hull unit is calculated using under deck volume ([length x depth x depth x 0.6] all divided by 2.83).

To establish a hull unit day regime in NSW a number of steps would be required, including the setting of a preliminary Interim Total Commercial Access Level (ITCAL), determining the hull units of the boats owned by shareholders and then setting a 'final ITCAL'. The reasons for this are explained below.

Proposed ITCALs and steps required to implement a hull unit day regime

An Interim Total Commercial Access Level (ITCAL) is the maximum amount of effort that may be used by a fleet over a fishing period – very much like a Total Allowable Commercial Catch (TACC) or the concept of Total Allowable Effort (TACE). For more information on ITCALs and future transitioning to TACCs and TACEs refer to the general information paper.

The ITCALs for a hull unit day regime would ideally be based on the hull units of each boat that historically operated in the fishery and the number of days that each of those boats worked. However, this information (i.e. the hull units of each boat historically used) is not available, and the following steps are therefore proposed:

- The Government determines and announces 'preliminary ITCALs' prior to the exit grant process. The preliminary ITCALs would be expressed as 'days' so that shareholders can calculate the minimum number of days they would be entitled to under the hull unit day regime and how many shares they may need (Figure 1, Step 1).
- Fishers buy and sell shares during the exit grant process, to obtain the number of shares desired – at this point some shareholders may want to exit the fishery or the industry and either sell or surrender their shares (Figure 1, Step 2).
- Once the boats owned by shareholders are unitised (which would be done in 2015 as part of the share allocation process), the Minister would approve 'final ITCALs', which would be expressed as hull unit days and calculated in such a way that shareholders are eligible for, at a minimum, the number of days expected as a result of the Government's earlier announcement (Figure 1, Step 3).

	Step 1: 2014 Government determination and announcement	Step 2: 2014/2015 Exit grant process	Step 3: 2015 DPI processes share applications
Process	**Government announces:** • **Reform packages** • **Preliminary ITCALs (based on days)**   **Shareholders:** • **Calculate how many days they would get**	**Shareholders check online brokerage and buy, sell or surrender shares** 	**DPI:** • **Determines hull units of boats** • **Allocates 'effort shares'** • **Processes any appeals**  **Government announces:** • **Final ITCAL (based on hull unit days)**
Example	**Assume Fisher A holds 100 shares, which is equal to 50 days based on the preliminary ITCAL announced**	**Assume Fisher A buys 100 extra shares. 200 shares would now give fisher 100 days based on the preliminary ITCAL announced.**	**The new 'hull unit day ITCAL' would be set in such a way that Fisher A would be entitled to fish at least 100 days per year (consistant with his expectations despite being based on his new 'effort shares').**

Figure 1. Process for setting 'preliminary ITCALs' (days), allocating new shares and setting the final ITCAL

Feedback requested (in addition to overall comments on options)

The commitment to deliver 'final ITCALs' that result in shareholders being eligible to work (at a minimum) the number of days expected as a result of the Government's earlier announcement is dependent on the assumption that shares and hull units are equally important and should be treated equally when creating the new 'effort shares'. This issue is explained in greater detail below and your feedback on it is very important.

The following table shows the 'preliminary ITCALs', in total numbers of days, proposed for each sector and the number of days (or quota) that each current share would equate to.

Table 4. 'Preliminary ITCALs' (total numbers of days) and the current number of days per share

Sectors	Preliminary ITCALs	Days per share
Northern fish trawl	2,318 days	1.07 days per northern fish trawl share
Inshore/offshore prawn trawl	14,369 days	0.69 days per inshore/offshore prawn trawl share

The 'preliminary ITCALs' proposed have been determined in accordance with the methodology set out in the technical paper "*Setting the Interim Total Commercial Access Levels (ITCALs)*" available on DPIs reform webpage.

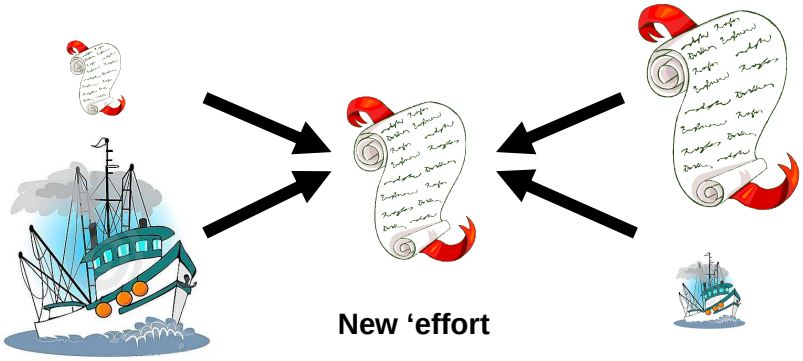
If shares are surrendered for cancellation or forfeited because of offences or failure to pay fees prior to the hull unit day regime commencing, the amount of quota per share allocated to shareholders would be greater than the estimates above.

If in future total catch (or effort) in the fishery were to increase beyond sustainable levels, consideration would need to be given to decreasing the ITCAL (or in the future the TACE) to reduce overall effort in the fishery. In the past, this would have been addressed by implementing new fishing restrictions, like fishing closures or more gear controls. Modifying those levels would also be an option for industry in to stimulate further adjustment for viability reasons if desired.

Allocating a new classes of 'effort shares'

To implement and use the hull unit day regime effectively, two new classes of shares would need to be allocated; one class of 'effort shares' for the NFT sector and another for the IPT/OPT sectors. These new effort shares would need to be allocated to existing shareholders based on the number of shares held (of the relevant class) and the capacity (i.e. hull units) of the licensed fishing boat owned by the shareholder.

With respect to the issue above, consideration needs to be given to the relative importance of shares and hull units (or boat capacity) to a fishing enterprise/ fishing power. Once this relationship is decided, DPI will be able to weight one or the other when allocating the new effort shares.



Decision rules along the following lines would also need to be applied when allocating the new effort shares:

- in the case of a shareholder with a boat licence with 'offshore prawn trawl units', the maximum hull units set out on the front of the licence would be used;
- licensed fishing boats that have not previously been unitised would need to be unitised as part of the share allocation process;
- shareholders who own multiple licensed fishing boats or multiple fishing businesses would need to identify the boat licence typically used in connection with each fishing business; and
- with respect to shareholders who do not own a boat licence, it is proposed that the effort shares would be allocated based on their shareholdings only, on the basis that DPI cannot recognise and allocate effort shares based on a 'right' that the shareholder does not hold or own. In most if not all cases this would preclude the shareholder operating in the fishery until the shareholder invests in additional 'effort shares'.

If the hull unit day option is pursued, a process for allocating the new effort shares would be required. A modest application fee would also apply.

The SARC recently provided advice with respect to allocating shares in a new share class, including a recommendation that DPI provide fishers insight into the benefits and costs of this approach. Appendix 3 contains a summary of the advice provided by the SARC and commentary relating to the proposal to allocate two new classes of effort shares in the OTF.

If the hull unit day option is pursued, the current northern fish trawl shares could be cancelled (as they would become redundant) and the new 'effort shares' used to determined: (a) eligibility to an endorsement in the northern fish trawl sector, and (b) the number of days that each business may work. Subject to legislative amendments being pursued, removal of the northern fish trawl shares could be done immediately or at a later date. Removing this share class would help simplify management and share trading and minimise ongoing administration costs.

Note: It would not be proposed to remove the inshore and offshore prawn trawl shares, as they would still play a meaningful role. Not all shareholders hold shares in both share classes and there are benefits to retaining some control over the number of participants in each of these sectors.

Fishing periods and annual quota allocations

A fishing period is the period during which a shareholder may use his or her quota of days. The fishing period proposed for the NFT and IPT/OPT sectors is a 12 month fishing period commencing 1 July each year.

At the beginning of each fishing period, effort quota would be issued to each shareholder, based on the number of 'effort shares' held by each shareholder and the ITCAL (or in the future the TACE).

If the ITCAL/TACE is increased or decreased in the future, the amount of quota allocated to each shareholder at the beginning of each fishing period would increase or decrease accordingly.

How shareholders could use their quota and acquire additional quota

Shareholders could use any boat that meets the maximum boat restrictions that apply to the OTF, but the boat and the associated fishing business would need to be registered with DPI so that an appropriate amount of effort quota can be deducted each time the boat operates in the fishery. Shareholders who use only one boat and one business throughout a fishing period would only need to do this once.

Each time an endorsement holder goes fishing they would need to make a report (using the IVR system, FishOnline or the smart phone App under development, until such time as there is capacity to implement a VMS or other cost effective monitoring system).

Upon making a report the FishOnline system would automatically deduct an appropriate amount of quota – based on the hull units of the boat registered with DPI. For example, if using a boat with 44 hull units for one day, 44 effort quota units would be deducted from the quota held.

More information on the use of quota and how to acquire additional quota, along with how quota use will be monitored is provided in the general information paper "*General information relating to the reform program and reform options for the NSW commercial fisheries*".

Defining a 'day'

It is proposed that a day be defined as a 24 hour period from the time the fisher makes a pre-fishing report. This approach aims to cater for the diverse fishing patterns in the OTF.

Shorter periods (e.g. 8 and 12 hours) were discussed by the working groups, however, the 24 hour period is recommended so as to not add complexity, excessive burden and cost for fishers or compliance officers in terms of reporting and enforcement.

Optional extras: Catch quotas (or ITQs) for selected species

Catch quotas (or Individual Transferable Quotas - ITQs) presented here are 'optional extras' that could be implemented over and above Option 1 (i.e. stand-alone minimum shareholding program) or Option 2 (a minimum shareholding and hull unit day regime).

ITQs are an output control where shareholders are allocated a percentage share of the ITCAL. ITQs allow fishers to concentrate on catching their quota when they choose and as efficiently as they can and focus on optimising profits by value adding and working the markets, rather than maintaining a highly competitive 'race to fish'.

It is not proposed that individual species ITQs be used as the primary management framework for the OTF because of the vast number of species that are taken and the number of ITQs that would be required.

Species of interest

Some of the species proposed for ITQs stem from ongoing concern over competition among shareholders for access to particular species and, in other cases, what is perceived as the wasteful regulatory-induced discarding of marketable product that sometimes occurs. Other species have been proposed by other SLWGs, but are also taken in the OTF which is why they need to be considered here.

Table 5. Species of interest, origin of the quota proposals and objective of quota management

Species	Origin of proposal	Objective
Whiting (eastern school and stout)	NSW DPI in response to: • ongoing shareholder concern regarding high levels of competition within the fishery for access to these species; • past concern from AFMA and Commonwealth fishers regarding NSW commercial catches of species that are quota managed in the Commonwealth, including eastern school whiting; and • by weight, school whiting (both species combined) is one of the most important commercial species in NSW.	The primary objective would be to establish a market based approach to resolving current competition within the fishery and promote improved access security and profitabilty for those who rely on these species.
Flathead (bluespotted and tiger)	NSW DPI in response to: • ongoing shareholder concern regarding regulatory induced discarding of flathead in the prawn trawl sector south of Smoky Cape; • occasional shareholder concern regarding the unlawful retention of flathead taken in prawn trawl nets south of Smoky Cape; • ongoing concern regarding competition within the fishery for access to these species; • past concern expressed by AFMA and Commonwealth fishers regarding NSW commercial catches of species that are quota managed in the Commonwealth; and • a poor 'social licence' resulting in lack of support from other stakeholder groups for changes that may benefit the fishery.	The primary objective would be to establish an alternative approach to the prohibition on landing incidentally caught flathead in prawn trawl nets south of Smoky Cape and the wasteful discarding of marketable fish that sometimes occurs. It would also promote improved security and profitabilty for those who rely heavily on this species.
Silver trevally	NSW DPI in response to: • ongoing shareholder concern regarding the regulatory induced discarding of silver trevally because of the current 30 cm size limit (therefore size limit could be relaxed in the OTF or removed if ITQs are considered appropriate); • a poor 'social licence' resulting in lack of support from other	The primary objective would be to establish an alternative approach to management that addresses the status of the stock and reduces the wasteful discarding of

Species	Origin of proposal	Objective
	stakeholder groups for changes that may benefit the fishery; • competition with other stakeholder groups and no security of access; and • this species remains 'growth overfished'.	marketable fish that sometimes occurs.[4]
Gemfish	The Ocean Trap and Line Working Group (OTL SLWG) and NSW DPI in response to: • ongoing shareholder concern regarding the regulatory induced discarding of gemfish in the OT and OTL fisheries as a result of the current 50kg trip limit; • a poor 'social licence' resulting in lack of support from other stakeholder groups for changes that may benefit the fishery; and, • this species remains 'recruitment overfished'.	The primary objective would be to establish an alternative approach to management that addresses the status of the stock and reduces the wasteful discarding of marketable fish that sometimes occurs.

A range of other commercially important species that are proposed for quota management in other sectors of the NSW commercial fishing industry is provided in Appendix 4. They are provided for the information of shareholders in the OTF. Total catches of these species in the OTF are relatively small, but would need to be monitored and actively managed to ensure that the strength and value of the rights (shares/quota) held by others in other fisheries is not eroded.

Proposed ITCALs

The following table shows the industry-wide and sector-specific ITCALs proposed for the species above. They have been determined in accordance with the methodology set out in the technical paper "*Setting the Interim Total Commercial Access Levels (ITCALs)*" available on the DPI reform webpage.

Table 6. Industry, fishery and sector-specific ITCALs (tonnes)

Species	Industry-wide ITCAL	Fishery-wide ITCAL	NFT ITCAL	OPT ITCAL
Whiting	1,652.7	1,649.2	619.1	816.7
Flathead	407.3	396.7	278.0	43.3
Silver trevally	144.7	83.2	24.1	0.2
Gemfish	20.2	1.3	1.0	0.2

If economic viability needed to be improved or if total catch of a quota species were to increase beyond sustainable levels or to a point where resource sharing issues between the fishery and other stakeholder groups become evident, consideration would need to be given to adjusting the ITCAL (or in the future the TACC).

Fishing periods and annual catch quota allocations

A fishing period is the period during which a shareholder may catch his or her quota. The fishing periods proposed for the species in the table above would be a 12 month fishing period commencing 1 May each year – to line up with the commencement of the Commonwealth quota periods for the same species.

At the beginning of each fishing period, species specific quota would be issued to each shareholder proportional to the number of corresponding species shares held. If the ITCAL is

[4] 'Growth overfishing' is a term used to describe below-optimum yield. It can be addressed by increasing yield per recruit (i.e. the size at capture) or by reducing total mortality so that the stock can improve and support increased total yield. If landings in the OTF were capped at current levels, and discarding reduced by removing or relaxing the size limit, total mortality should, theoretically, decrease. Implementing an ITQ scheme together with increased monitoring of discards would also provide for improved long-term management of total mortality in the OTF.

increased or decreased in the future, the amount of quota allocated to each shareholder at the beginning of each quota period would increase or decrease proportionally.

How shareholders could use their quota and acquire additional quota

Information on the use of quota and how to acquire additional quota, along with how quota use will be monitored is provided in the general information paper "*General information relating to the reform program and reform options for the NSW commercial fisheries*".

New classes of 'species shares' would be required

Each of the ITQs proposed in this paper would require a new class of shares to be allocated to eligible shareholders – potentially in other fisheries also – which would be fully transferable and give rise to a permanent right to quota. The amount of quota issued at the beginning of each fishing period would be determined proportionally, based on the number of species shares held.

Options for allocating the 'species shares'

There are a range of options available for allocating new classes of species shares. Appendix 5 includes important information on the options and the general information paper outlines the major advantages and disadvantages. The identified options include:

- Current shareholdings;
- 'Swapping' current shares;
- Monetary tenders; and
- Combinations of shares and recent catches.

Potential changes to current restrictions

Each of the options presented above is coupled with potential changes to current restrictions or controls, forming overall reform packages for consideration. Once linkages are in place, a number of controls can be removed to improve operational efficiency and profitability, and to reduce red tape and associated costs.

Table 7 identifies the potential changes and the reform options that each is associated with (indicated by ticks). Stronger linkage options (catch quota) include more controls for potential removal than weaker options (minimum shareholdings). A tick associated with a proposal indicates a higher likelihood that the proposal could be implemented. Absence of a tick indicates a lower likelihood that the proposal could be implemented with the reform option indicated.

Table 7. Potential changes to current management arrangements

Potential changes to current management arrangements for consideration with relevant reform Options	Option 1	Option 2	ITQs for species
Maximum shareholdings: The current default maximum shareholding of 40% of the shares in the fishery is ineffective and proposed to be removed on the basis that there is negligible to nil risk of a monopoly in the relatively small scale fisheries in NSW.	✓	✓	✓
Foreign ownership restrictions: Remove the restrictions on foreign ownership of shares on the basis that there is negligible to nil risk of significant foreign ownership of the relatively small scale fisheries in NSW.	✓	✓	✓
Nomination process: Two changes are proposed to streamline the nomination process. These changes would also apply to the SFTF. • *Registering 'eligible fishers':* Remove the requirement to register 'eligible fishers' against fishing a business (FishOnline will automatically check that proposed nominated fishers are already licensed). • *48 hour restriction:* remove the rule preventing a subsequent nomination within a 48 hour period.	✓	✓	✓
'Rubber discs' on fish trawl ground gear: Increase the maximum diameter of rubber discs from 100 mm (four inches) to 150 mm (six inches) and lift the prohibition on rubber discs between Seal Rocks and Smoky Cape. Increasing the maximum diameter and extending rubber discs State-wide will alleviate the need for fishers working waters north and south of Seal Rocks and dual NSW/Commonwealth licensed fishers to build and maintain multiple sets of ground gear. This would also apply to the SFTF.	✓	✓	✓
Gauge of chain on prawn trawl nets: Increase the maximum gauge of the chain forming part of the 'ground gear' in the prawn trawl sector from 12 mm to 13 mm to accommodate market availability, and to minimise the risk of prosecution for being just over the maximum gauge currently permitted.	✓	✓	✓
Prawn trawl codends – square or diamond: Formally recognise in the Ocean Trawl Share Management Plan that fishers may use square- or diamond-mesh codends in the OTF, and increase the maximum mesh size for the square-mesh codend from 45 mm to 50 mm to accommodate interest in slightly larger mesh sizes – as used by some fishers in Queensland.	✓	✓	✓
Foster and Port Stephens Juvenile King Prawn (JKP) Closures: Remove the Foster and Port Stephens JKP closures given that the majority of those waters are already closed under the Port Stephens-Great Lake Marine Park Zoning arrangements.	✓	✓	✓
Lobsters for personal consumption: Provide for the taking of up to two lobsters (any species) per boat per day for personal consumption only, along the lines of the arrangements applying to recreational fishers. To minimise the risk of black marketing, commercial lobster tags would not be issued to ocean trawl fishers. This would also apply to the SFTF. Note that anecdotal information supported by past observer work indicates that lobsters are not often taken in the OTF.	✓	✓	✓

Potential changes to current management arrangements for consideration with relevant reform Options	Option 1	Option 2	ITQs for species
Fishing businesses and share transfer rules: Remove fishing businesses as a management tool (but use them for administrative purposes only) and relax, if not remove, the fishing businesses transfer rules (aka. share transfer rules). This *may* also be applied to the SFTF, noting that DPI reserves the right to keep this proposal under review and to not extend it to other sectors if there is risk of effort or catch in those sectors increasing beyond sustainable levels.	✓	✓	✓
Net length restrictions: Replace the three sets of net length restrictions applying in the prawn trawl sector with a standard maximum net length of 60 m, consistent with the net length restrictions applying to the fish trawl sector and non-unitised boats used in the DPT sector. The current rules, which some shareholders may not be fully aware of, include: • Boats authorised for use in the offshore sector (i.e. unitised boats) are subject to licence specific maximum net lengths ranging from 33 m to around 65 m. These restrictions apply regardless of which sector the boat is operating in. • Non-unitised boats operating in the inshore sector, of which there are few, are subject to a maximum net length of 33 m. • Non-unitised boats operating in the deepwater sector are subject to a maximum net length of 60 m.	✓	✓	✓
Boat capacity restrictions: A range of changes to current boat capacity restrictions are proposed to make it easier for fishers to replace boats and to streamline administration. They include: • *Engine power restrictions:* Remove the boat licence specific engine power restrictions applying to offshore prawn trawlers, making it easier for licence holders to replace boats, to enable fishers to optimise fuel and fishing efficiency, and because they cannot be cost-effectively enforced. • *Maximum* 300kW: Remove the maximum 300kw engine power restrictions applying to the offshore prawn trawlers, for the same reasons as above. • *OG1 notations:* Subject to what transpires in other fisheries, consideration would be given to removing OG1 notations from boat licences given they serve no purpose in the OTF. • Remove the "Revised interim guidelines – boat replacements in the Ocean Trawl Fishery, November 2010" to reduce administration and costs.	✓	✓	✓
Additional boat licence reforms (Option 2 and ITQs only): It is proposed that the requirement to use only licensed fishing boats in the OTF be removed. • Under a hull unit day regime any increase or decrease in boat capacity (i.e. hull units) would be automatically offset through a commensurate decrease or increase in the days available to shareholders, respectively. The ITCAL could also be actively used to manage total effort levels over time if needed. • Under an ITQ regime catch is managed directly and thus there would be little need to manage boat capacity. If the requirement to use licensed boats in the OTF is abandoned the following controls would also need to be removed: • The requirement to use only unitised boats in the offshore prawn trawl sector. • The "maximum boat lengths" set out on individual boat licences. Licence holders would be entitled to retain their boat licences (and pay the relevant fees) if they choose – including for sale or for use in other fisheries where it remains a requirement for boats to be licensed.		✓	✓
Maximum size boats in the OTF (Option 2 and ITQs only): It is proposed that the fishery-wide maximum boat length of 20 m (and the "OT exemption codes" that authorise the use of boats greater than 20 m) be replaced with a fishery-wide maximum boat length of 24.5 m, consistent with the maximum allowable length of the largest boat in the fishery. This would, amongst other things: • Provide for improved safety and profitability, including by providing for onboard processing and packaging as per some boats currently in the fishery, and in adjacent jurisdictions. • Relieve fishers with licences with OT exemption codes the need to retain those		✓	✓

Potential changes to current management arrangements for consideration with relevant reform Options	Option 1	Option 2	ITQs for species
licences and the associated costs, if they so choose. At present, there are seven licences with OT exemption codes authorising the use of boats ranging from 21.32 m to 24.5 m.			
Silver trevally size limit: it is proposed that if silver trevally was quota managed in the OTF and the ITCAL set at levels commensurate with landings since the size limit was introduced, the size limit could be relaxed in the OTF or removed from the OTF – as per the arrangements that apply in the Commonwealth Southern and Eastern Shark and Scalefish Fishery (SESSF).			✓
Prohibition on taking flathead in prawn nets south of Smoky Cape: it is proposed that if flathead (tiger and bluespotted) were quota managed across all sectors of the OTF, the prohibition on taking flathead in prawn trawl nets south of Smoky Cape could be removed from the OTF.			✓
Gemfish 50kg trip limit: it is proposed that if gemfish were quota managed in the OTF and the ITCAL set at levels commensurate with landings since the 50 kg trip limit was introduced, the trip limit could be removed.			✓

Comparison of the linkage options

To assist in considering the options and providing feedback, a number of advantages and disadvantages associated with the various forms of linkage have been identified by DPI and the SLWGs.

Managing endorsement numbers (minimum shareholdings)

Table 8. Advantages and disadvantages of managing endorsement numbers using minimum shareholdings

Advantages	Disadvantages
Simple and therefore administratively the cheapest way for the government to link shares to resource access	Shareholders are forced to invest from time to time, rather than when they like.
A very direct and effective tool for delivering market-based adjustment to an agreed level.	Total investment can be significant, particularly for those with diverse shareholdings if required to invest in multiple share classes.
Reduces (but does not eliminate) the risk of inactive endorsements re-entering the fishery.	No opportunity to customise shareholdings to suit preferred access levels and fee liability.
	Opportunity to remove or relax input controls will be limited as compared to Option 2.
	Cannot be used as an alternative to some of the controls currently applying to the fishery: • The size limit on silver trevally (growth overfished). • The trip limit applying to gemfish (recruitment overfished). • The prohibition on taking flathead in prawn nets and the fish trawl trip limit etc.
	Little additional security of access within the fishery and cannot be used to respond to species-specific sustainabilty or resource sharing issues: • Competition within the fishery for high profile species (e.g. whiting etc) will continue. • Competition with other stakeholder groups for high profile species will continue. • Opposition from other sectors to changes that would benefit the fishery will likely continue (e.g. removal of flathead restrictions). • Government may be required to default to crude controls (e.g. closures, size limits, trip limits etc.) that sometimes deliver perverse outcomes such as loss of access or discarding etc. • The industry may need to pursue species-specific catch quotas at a later date in any event should a serious sustainabilty or resource sharing issue arise.
	If total effort needs to be reduced for viabilty, sustainabilty or resource sharing reasons, increasing the minimum shareholding requirements would be one of the few options available to the fishery, noting: • The minimum shareholding requirements may need to be increased significantly to remove all latent effort and then some active effort. • Overall industry disruption would be greater than under a catch or effort quota because under a quota, catch and effort is addressed directly and each and every shareholder incurs a proportional reduction in quota (and has option to re-invest or not).
	Optimum asset (i.e. share) values are unlikely to be realised, because of the above disadvantages and the maintenance of other perceived ‘rights’ that have a market value such as boat licences etc.

Minimum shareholdings and hull unit days

Table 9. Advantages and disadvantages of managing fishing effort using a hull unit day regime

Advantages	Disadvantages
Enhanced security of access and harmony within the fishery. The market-based system proposed means: • Competing shareholders cannot simply increase effort by working more days or by introducing a larger licensed fishing boat to the fishery – they must also invest in shares. • Government should no longer need to field complaints or engage in disputes over the size of other fishers' boats or how hard they work.	Expected to cost more to implement than a minimum shareholding scheme – because of the initial allocation of two new classes of shares, the need to allocate quota each fishing period and monitor quota usage throughout the period.
Shareholders can tailor their shareholdings (subject to any minimum shareholdings that may apply) to suite their preferred access levels and fee liability – this will be particularly important for diversified fishers with diverse shareholdings.	Cannot be used as an alternative to some of the controls currenly applying to the fishery: • The size limit on silver trevally (growth overfished). • The trip limit applying to gemfish (recruitment overfished). • The prohibition on taking flathead in prawn nets and the fish trawl trip limit.
If an ITCAL (or in the future a TACE) is reduced for viabilty, sustainabilty or resource sharing reasons, it would: • have a more direct and immediate effect on effort levels – compared to increasing minimum shareholdings under Option 1; and • affect all shareholders proportionally, not just those at or near the minimum shareholdings.	Cannot be used to respond to species specific sustainabilty or resource sharing issues: • Competition within the fishery for high profile species (e.g. whiting etc) will continue. • Competition with other stakeholders groups for high profile species would probably continue. • Opposition from other stakeholder groups to major species specific changes that may benefit the fishery would probably continue (e.g. flathead restrictions). • Government may be forced to default to crude controls (e.g. closures, size limits, trip limits etc.) that sometimes deliver perverse outcomes such as loss of access and discarding etc. or direct controls such as species specific catch quotas.
Enhanced opportunity to remove or relax input controls (e.g. boat licences) – including opportunity to replace/upgrade boats with ease compared to under current arrangements	As the fishery transitions to the new arrangements high effort operators will likely need to invest in shares – more than low effort operators – if they are to continue to operate at current levels, and in some cases the levels of investment required may be significant.
Improved control over total catch from the fishery.	
Shareholders invest autonomously.	
Improved (but not complete) community confidence that effort can be managed, which may lead to some community and government support (i.e. an improved 'social licence') for changes that may benefit the OTF.	
Contributes towards higher (potentially optimum) asset (i.e. share) values – because of the above.	

Individual Transferable Quotas (ITQs)

Table 10. Advantages and disadvantages with ITQs

Advantages	Disadvantages
Shareholders invest autonomously and can customise their shareholdings to suite their preferred access levels and fee liability	Costs more to implement than a minimum shareholding scheme and more that the hull unit day regime – because of the initial allocation of new species shares (discussed below), modifications to FishOnline and the requirement for fishers to report catches using a mobile phone.
Eliminates the issue of latent effort impacting shareholders who rely heavily on access to a quota species.	May result in the discarding of marketable fish (including through high-grading), however, it is important to note that: • The regulatory discarding of fish already occurs under current arrangements and is one of the drivers for the proposal to quota manage some of the species above. • Allowing the transfer of quota, as proposed above, is one way to minimise the risk of excessive dumping.
Enhanced security of access and harmony within the fishery, which is important given: • Ongoing unrest over access to species such as school whiting and flathead. • Ongoing government reviews and in some cases intervention in response to industry representation over sharing and in some cases the sizes of fish harvested – ITQs deliver a market-based solution to these issues.	As the fishery transitions to the new arrangements high catch operators may need to invest in shares – more than low catch operators. This does, however, depend on the how the quota (or new classes of species shares) is allocated.
Optimum control over catches of specific species, whether for sustainability reasons or resource sharing with other stakeholder groups: • School whiting is 'fully fished' and shared with Commonwealth and Queensland commercial fishers. • Flathead is 'fully fished' and shared with Comonwealth commercial fishers and the recreational sector. • Gemfish is 'recruitment overfished' and shared with the NSW OTL F and Commonwealth commercial fishers and the recreational sector. • Silver Trevally is 'growth overfished' and shared with the NSW OTLF and Commonwealth commercial fishers and the recreational sector. • Pink ling is shared with NSW OTLF and Commonwealth commercial fishers and the recreational sector, and the Commonwealth has some concerns over the eastern stock.	Although not necessarily a disadvantage, the OTSLWG notes that some fishers may choose to acquire shares and lease the quota rather than fish it themselves.
Shareholders can concentrate on making money: by catching their quota as efficiently as they can (i.e. at least cost), focusing on quality rather than quantity, and value adding rather than the current system of racing to catch fish before someone else does.	
One of the major advantages, is that the ITQs proposed would provide for the removal of some of the crude controls currenly applying to the fishery, including: • The size limit on silver trevally. • The trip limit applying to gemfish. • The prohibition on taking flathead in prawn nets south of Smoky Cape.	

Advantages	Disadvantages
If an ITCAL is reduced for viabilty, sustainabilty or resource sharing reasons, it would: • Have a direct and immediate effect on total catch – compared to increasing minimum shareholdings or reducing an effort based ITCAL/TACE. • Affect all relevant shareholders proportionally, not only, for example, those at or near the minimum shareholding level. • Not necessarily result in shareholders being excluded from the fishery, as per the minimum shareholding scheme under Option 1.	
Improved community confidence that the fishery is operating at sustainable levels and that catches of quota species can be effectively managed if a sustainability issue were to arise. This may also lead to greater community and government support (i.e. an improved 'social licence' for changes that may benefit the fishery.	
Contributes towards optimum asset (i.e. share) values – because of the above.	
Complements Commonwealth and Queensland management arrangements for shared species.	

Management costs

The costs associated with each of the options are difficult to determine given that a large number of factors will influence them. An indication has been provided of the relative costs of the options in the advantages and disadvantages tables above. Refer to the general information paper for further information about estimating management costs.

Appendix 1: Overview of the NSW Ocean Trawl Fishery

The OTF operates in NSW ocean waters between the Queensland and Victorian borders. North of Barrenjoey Head (Sydney) the fishery boundary extends east of State waters into Commonwealth waters to the 4,000 m depth contour (approx. 80 nm from the coastline), however, south of Barrenjoey Head the fishery extends only to the limit of State waters (3 nm east of the natural coastline).

The OTF produces around 3,000 tonnes of locally caught seafood annually valued at around $22M at the first point of sale making it the most valuable commercial fishery in NSW. This fishery is critical to the dynamic network of producers, wholesalers, processors and retailers that deliver high quality, fresh seafood to local, interstate and international consumers.

The fishery, like many others, is heavily regulated and subject to a vast array of closures to trawling including as a result of the comprehensive network of State Marine Parks and Commonwealth Marine Reserves off NSW. Some closures were initiated by shareholders to optimise yield and others aim to minimise the fishery's impact on biodiversity.

There are two primary sectors to the OTF: the prawn trawl sector and the fish trawl sector:

- The prawn trawl sector is further divided into the three sectors – inshore, offshore and deepwater – and uses otter trawl nets specifically designed to catch prawns.
- The fish trawl sector is divided into two sectors – north and south of Barrenjoey Head (Sydney) – and uses otter trawl nets and Danish seine nets to target a wider range of species.

That part of the fish trawl fishery operating in waters south of Barrenjoey Head is known as the Southern Fish Trawl Restricted Fishery (SFTF), and for the most part is outside the scope of the reform options set out in this paper. There are a small number of exceptions to this, as outlined throughout this paper.

The major species taken in the OTF include school whiting (comprising stout whiting and red spot whiting), eastern king, school and royal red prawns, flathead (tiger and bluespotted) and various species of sharks, rays, squid, octopus and bugs.

Since 2007 the fishery has been actively restructuring by periodically applying new minimum shareholding requirements – which are used to determine shareholders' eligibility to endorsements in the fishery. Despite this there remains a significant number of inactive endorsements (or shares), partially because of increasing input costs (e.g. fuel) and in many cases low prices received by shareholders for their product because of increased market competition.

The table below shows the current number of shareholders, endorsements and an estimate of the number of active endorsements in each share class (i.e. the number of endorsement holders that took at least 1 kg of product averaged over the three year period 2009/10 to 2011/12).

Table 11 Current numbers of shareholders and endorsements and an estimate of active endorsements

Share class	Number of shareholders	Number of endorsements	Active endorsements
Northern fish trawl	45	38	25
Inshore prawn trawl	194	161	76
Offshore prawn trawl	176	147	88
Deepwater prawn trawl	41	16	5

The following figures show the numbers of shares held by shareholders in each share class and the current minimum shareholding requirements – which must be satisfied for the shareholder to be eligible for an endorsement to participate in the relevant sector.

NB. The shareholding data below was extracted late 2013, since which time there has been additional trading and consolidation of shares. Some shareholders also own multiple fishing businesses with OTF shares.

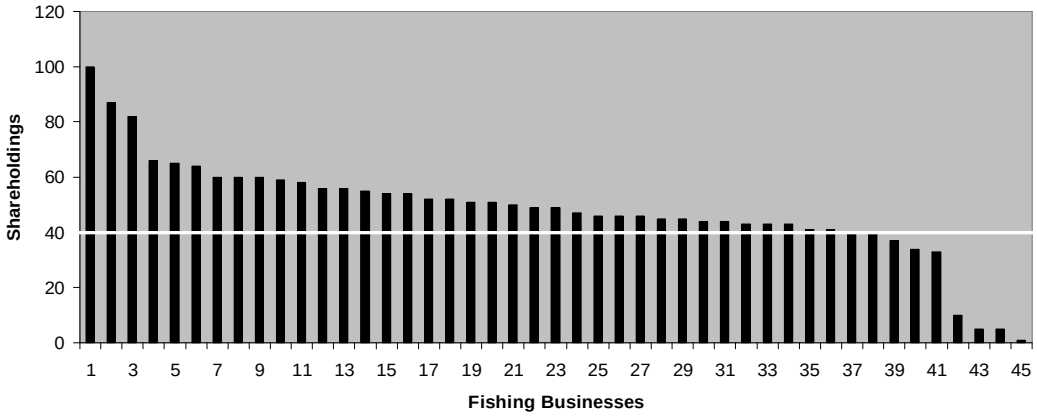


Figure 3. Northern fish trawl shareholdings and current minimum shareholding requirement (white line)

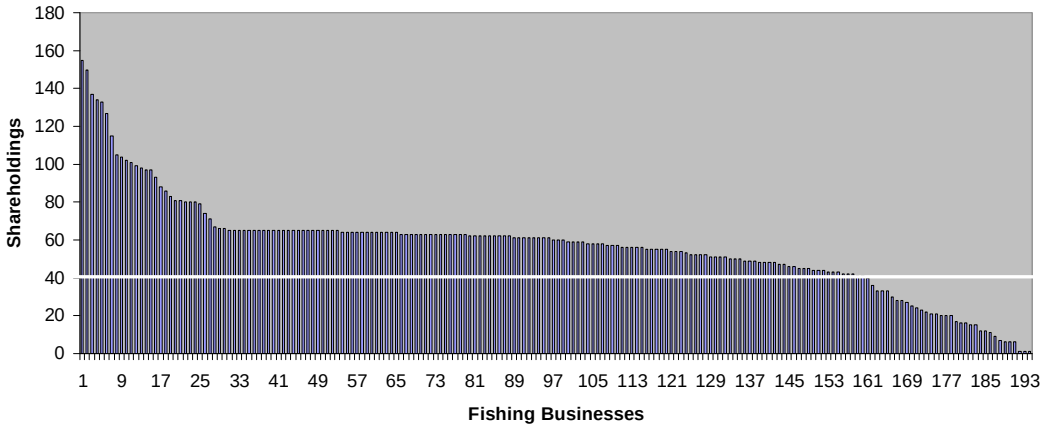


Figure 4. Inshore prawn trawl shareholdings and current minimum shareholding requirement (white line)

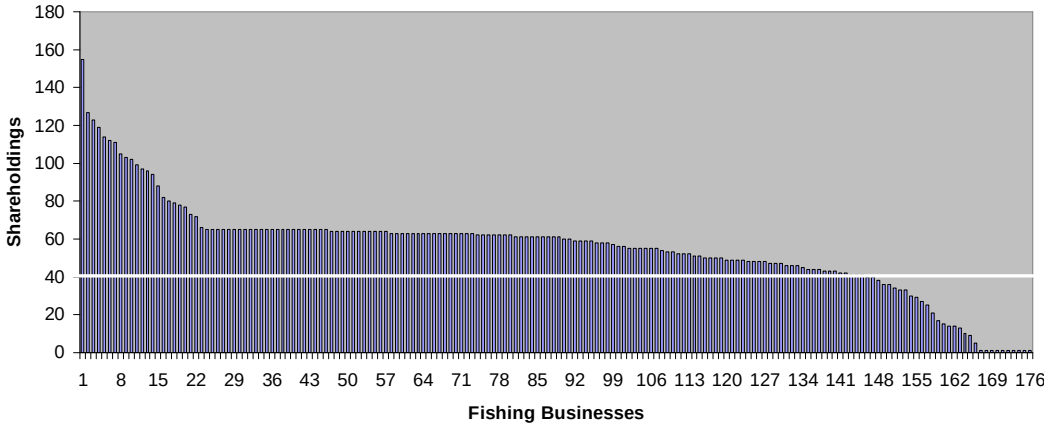


Figure 5. Offshore prawn trawl shareholdings and current minimum shareholding requirement (white line)

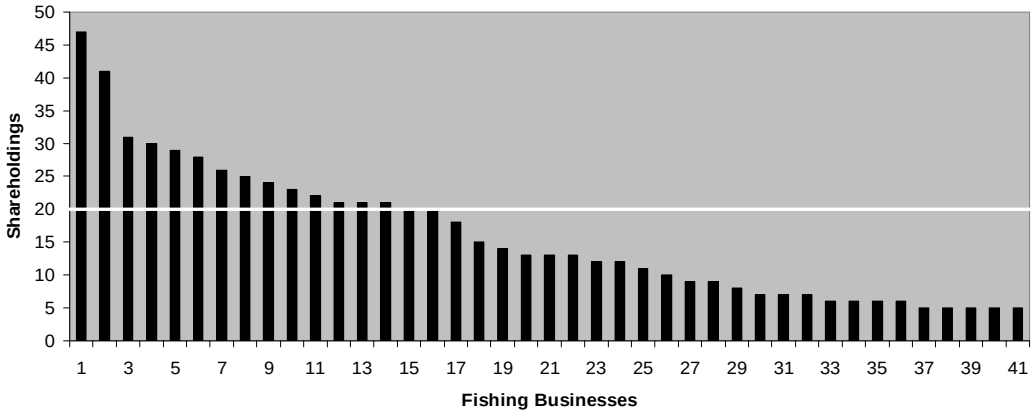


Figure 6. Deepwater prawn trawl shareholdings and current minimum shareholding requirement (white line)

Some of the major issues facing the NSW Ocean Trawl Fishery that can be addressed through the linking of shares to resource access in this reform program include:

All sectors

- Diminishing asset values – shares and boat licences.
- Diminished viability as a result of strong competition for market access within and between the local, other domestic and international fisheries.
    - For example; competition for access to particular species including eastern school whiting between the prawn trawl and fish trawl sectors as well as the Commonwealth Southern and Eastern Scalefish and Shark Fishery.
- A range of negative public perception issues, including lack of public understanding of the fishery and confidence that catches can be effectively managed.
- Perceived and actual surplus fishing capacity that could be activated and poses a risk to the viability of active participants in the fishery. There is significant surplus capacity in all sectors of the fishery that could be activated, particularly if profitability in the fishery were to increase.
- Complex input controls that indirectly manage access to catch and the limiting impact those control rules have on fishers' ability to improve their fishing efficiency.
    - For example; a range of issues with the current boat capacity/replacement rules resulting in ongoing costly government intervention, angst within the fishery and a major impediment to improved fishery-wide viability through, for example, the use of safe and efficient boats suitable for value adding via improved product handling and onboard processing, etc:
        - Difficulty replacing boats – matching boat licences to boats
        - Difficulty upgrading boats – limited availability of larger boat licences
        - Inconsistent boat replacement rules across sectors.

Prawn trawl sector

- Loss of access to trawl grounds as a result of short-term closures to protect overfished species such as mulloway and the impact that this can have on the viability of shareholders given slim profit margins.
- The regulatory induced dumping of product that sometimes occurs and the impact that this can have on the viability of the fishery, in particular species such as bluespotted flathead taken incidentally in waters south of Smoky Cape. The ITQs presented in this paper may be

a feasible alternative to such restrictions, and could potential result in reduced discarding and improved profits.

- Competition for access to king and school prawns within the fishery, sometimes resulting in representation to DPI.
- Competition for access to prawns between the fishery and other sectors including the Estuary Prawn Trawl and Estuary General fisheries.
- Complex and occasionally inconsistent or unenforceable input controls, including:
  - net length restrictions – boat specific net lengths applying to offshore prawn trawlers and for all other trawlers a maximum of 33 m in the inshore sector and 60 m in the deepwater sector;
  - engine power restrictions applying to offshore prawn trawlers only; and
  - multiple controls applying to the capacity of some boats – hull units in the offshore prawn trawl sector and length restrictions that apply to all sectors.

Fish trawl sector

- The regulatory induced dumping of product that sometimes occurs and the impact that this can have on the viability of the fishery, in particular species subject to trip limits such as flathead and species requiring protection and subject to crude management approach such as trevally (size limits that result in dumping) and gemfish (a conservative but crude trip limit approach that can also result in dumping with no real benefit to the stock).
- Competition within the fishery and between the fishery and other sectors including the Commonwealth Southern and Eastern Scalefish and Shark Fishery and the recreational sector.
- Reliance on or interaction with more overfished species than other commercial sectors in NSW:
  - gemfish (recruitment overfished);
  - silver trevally (growth overfished);
  - redfish (growth overfished);
  - jackass morwong (overfished); and
  - various species of sharks and rays subject to a range of concerning exploitation/conservation statuses.

Appendix 2: Variations considered

Variations considered for Option 1 (that did not go forward into the final options)

While developing Option 1, DPI and the OTSLWG explored a range of variations to the approach presented here, including:

Scaling minimum shareholdings based on boat size: The working group considered scaling the minimum shareholdings such that shareholders with larger boats are subject to higher minimum shareholdings than smaller boats. This variation was discarded on the basis that it would require boats/boat licences to be linked to fishing businesses – so that the scaled minimum shareholdings cannot be circumvented – which would impact shareholders' ability to swap boats from time to time and transfer boat licences separate to fishing businesses.

Extended adjustment time-lines: The working group considered extended timelines for adjustment – along the lines of the 10 year minimum shareholding program pursued by the former Management Advisory Committee (MAC) – but noted that this was contrary to advice provided by the SARC and that financial assistance, via exit grants, will only be available in the short-term and that if the reforms deliver the outcomes expected shares may cost significantly more to buy in the future.

A 'monitor and respond' type approach: DPI has considered a suggestion by the working group to review the rate of adjustment following the initial increase before deciding whether the minimum shareholdings should be increased further. DPI is concerned that this would not deliver the certainty that many shareholders seek – some of whom may also prefer to capitalise on the exit grant process to accumulate a complete complement of shares.

A three-stage approach: DPI has also considered a suggestion by the working group for a possible three-stage approach, but is concerned that the issues above relating to extended adjustment timelines also preclude this as a feasible proposition.

Variations considered for Option 2 (that did not go forward into the final options)

While developing Option 2, DPI and the OTSLWG explored a range of variations to the approach presented here, including:

Fundamentally different approaches relating to boats: The OTSLWG considered the following different approaches and resolved to pursue the third (Option 2 above) – which takes into account shareholdings *and* boat capacity and operates along the lines of the day regime applying to the Queensland East Coast Trawl Fishery:

- Allocating days proportional to shareholdings and allowing shareholders to acquire and use any size boat.
- Allocating days proportional to shareholdings and maintaining separate rules that govern the transfer, upgrading and use of boats.
- Allocating shares in a new share class taking account of current shareholdings and a factor that represents the capacity of boats owned by shareholders (while incorporating days).

Scope of the prawn trawl day regime: The OTSLWG considered a single day regime that spans all three sectors of the prawn trawl fishery and a day regime applying to each sector, however, resolved to set both of these aside and pursue a day regime that spans the inshore and offshore sectors only.

Boat capacity factor: The OTSLWG considered 'boat length' and 'hull units' and resolved that hull units be used on the basis that hull units is a much stronger indicator of the capacity [or catching capacity] of the boats used in this fishery.

'Fishing power' and hull units: The OTSLWG suggested and DPI has since investigated the relationship between hull units and 'fishing power' (not engine power). Previous work in Queensland indicates an almost linear relationship between hull units and fishing power.

Defining a 'day': The OTSLWG considered defining a day as a 24 hour period from (a) midnight, (b) midday, (c) 6am, (d) 6pm and (e) from the time the boat leaves port. The working group resolved that the latter is the only possible approach given that few fishers' work the same hours and some fishers also change their fishing patterns from time to time.

Hours trawling: The OTSLWG considered 'hours trawling' as a means of addressing the following issues. It resolved that trawl time could not be enforced without winch monitors and cameras etc. and that the NSW trawl fishery cannot afford that type of technology at this stage. Hours trawling, if pursued could mean that fishers:

- are pressured to change their ways to maximise the use of their days;
- who steam a long way to their fishing grounds are disadvantaged; and
- who return to port because of bad weather, tide or misadventure (e.g. breakdown etc) are disadvantaged.

Monitoring days at sea: The OTSLWG considered paper-based logbooks, VMS and the IVR system recently developed by DPI. It was resolved that the IVR system would be most cost effective way to monitor days at sea:

Steaming and reimbursing days lost: The OTSLWG considered an approach that involves shareholders applying to be reimbursed days lost due to changing weather or misadventure, such as a breakdown or gear failure etc. (similar to the approach that applies to the Queensland trawl fishery) but resolved that this would add cost and complexity and rejected it. DPI prefers the OTSLWGs preferred approach that all shareholders are allocated additional days to offset future loss of access due to misadventure etc. and to cover the extended steaming time incurred by some fishers in some ports. DPI also supports the OTSLWG's advice that these additional days should be allocated proportional to shareholdings rather than, for example, equally. Refer to the technical paper "*Setting the Interim Total Commercial Access Levels (ITCALs)*" which details the approach adopted in response to this issue.

Variations considered for ITQs

The OTSLWG did not examine specific variations to the implementation of ITQs or discuss in details the different allocation options – because some industry members were fundamentally opposed to ITQs.

Other share linkage options considered by the OTSLWG

The OTSLWG considered but did not pursue for the purpose of public consultation a proposal to require all inshore/offshore prawn trawl shareholders to hold a small number of northern fish trawl shares (e.g. 4 shares) that authorise the landing of fish other than prawns taken in prawn trawl nets – other than fish subject to a size limits taken in prawn trawl nets from waters south Smoky Cape. The full proposal and the outcome of the OTSLWGs discussions (Meeting 2) are available on the DPI website at:
www.dpi.nsw.gov.au/fisheries/commercial/consultation/commercial-fisheries-working-groups/ocean-trawl-share-linkage-working-group

Appendix 3: Issuing new classes of shares: important information

Following is a summary of issues raised by the SARC relating to new share classes and advice relating specifically to the proposal to allocate two new classes of effort shares in the OTF.

SARC advice: New species or effort shares should be considered in exceptional cases only.

DPI is of the view that there are a number of exceptional circumstances supporting two new classes of 'effort shares' in the OTF (under Option 2), including:

- The capacity of a trawler can have a significant effect on catch, so it would be logical to incorporate it into any new access right to be used to manage effort in the fishery.
- By offsetting any increase in boat capacity through a commensurate reduction in the number of days allocated to the shareholder, the proposed approach will address long standing issues with the current licensing arrangements including, difficulty replacing boats. It will also provide for the controlled upgrading of boats for improved safety and viability.
- The hull units and lengths set out on licences are treated by some fishers as a second layer of rights, which is having an adverse effect on the market values of shares – so again it would be logical to incorporate these into any new property right used to manage effort in the fishery particular given that, unlike licences (and the restrictions attached to them), shares may be legally mortgaged and are compensable if a fishery is terminated and shares are cancelled.
- A hull unit day regime, which involves the integration of multiple current access rights and the permanent transfer of rights across sectors (e.g. inshore and offshore prawn trawl), cannot be cost effectively administered by DPI unless a new class of shares is created. The proposed approach will also ensure that the full capabilities of the new FishOnline system are realised.
- Although not an exceptional circumstance, incorporating the capacity of a trawler into a new access right will facilitate the removal of boat licences and help minimise management costs.

SARC advice: The creation of a new share class will require a new allocation process, the complexities of which should not be taken lightly. Allocation processes are sometimes difficult, costly, time consuming and it is of utmost importance that the structural adjustment sought under the reform process is not unnecessarily delayed.

The general reform information paper outlines the six major steps required for allocating share in a new share class. It also provides other important information relating to new share classes.

The SARC's concerns are well known to DPI, which has administered many processes like the one that would be required here. There are, however, a number of fundamental issues to note:

- If not for the issue of weighting share or hull units, the criteria would be reasonably easy to negotiate in a timely manner given that it would involve current shareholdings and the hull units of boats only (i.e. not catch records etc.). The negotiations would occur through the current public consultation phase – via submissions from shareholders – and subsequent discussions between the OTSLWG, DPI and the SARC before recommendations are made the Minister.
- The criteria could be included in regulation later this year or early next year along with other changes to regulation expected to be required around that time (e.g. small to moderate increases to various minimum shareholdings). The necessary amendments would not be complex, noting that the appeal rights would most likely reflect the existing

share appeal panel provisions set out in Part 3 Division 9 of the *Fisheries Management Act 1994*.

- Aside from the time required to unitise some boats, which would require licence holders to provide copies of survey certificates, the share allocation process could otherwise be automated along with the letters advising the results of the assessments.
- The number of appeals would be expected to be minimal. The number of shares each shareholder holds is detailed in the share register and is not disputable and unitising boats is simply a matter of applying a standard formulae. The grounds for appeal would be limited.

DPI is of the view that subject to other fisheries/sectors seeking similar, it would be able to allocate the two new classes of shares and complete all appeals by early 2016. The risk of subsequent litigation is considered low.

SARC advice: The creation of new share classes, particularly if recent participation is to be taken into account, has the potential to cause significant delays, as evidenced in the Commonwealth shark fishery where catch quotas were delayed by years due to appeals over the allocation process, resulting in considerable uncertainty and stymied autonomous adjustment because fishers were unable to transfer quota.

It is not proposed that the criteria for allocating effort shares in the OTF take account of recent participation.

SARC advice: The SARC recommends that new share classes should only be considered under certain criteria. Such criteria may include:

- **a small number of shareholdings in the existing share class account for the bulk of the catch potentially placing an unacceptable and unintended financial burden on these fishing businesses which would be required to purchase a large amount of shares to continue their fishing operation having significant impacts on their economic viability;**
- **no other suitable linkage options and associated measures are available or feasible for the existing share class (e.g. staged implementation or delaying the commencement of the ITCAL) to minimise the financial burden on those operators;**
- **the benefits of moving to a new share class clearly outweigh the costs; and**
- **the proposed new share class must have the strongest form of share linkage feasible (i.e. a catch quota or if that is not feasible, a very tight effort quota).**

The first and second criteria relate to the use of recent participation, which is not proposed. With respect to the third criteria, the advantages and cons are outlined above. With respect to the fourth criteria, the proposed linkage is considered by DPI to be the tightest effort quota possible for the OTF.

Appendix 4: Species proposed for quota management in other sectors

Listed below are other commercially important species that are proposed for quota management in other sectors of the NSW commercial fishing industry. They are provided for the information of shareholders in the OTF. Total catches of these species in the OTF are relatively small (except in the case of gummy shark and to a lesser extent pink ling), but would need to be monitored and actively managed to ensure that the strength and value of the rights (shares) held by fishers in other fisheries where quotas apply are not eroded.

The number in brackets is an estimate of the percentage of catch taken in the OTF – based on commercial catch record data over the 15 year period 1997/98 to 2011/12:

- Australian salmon (OPT: 0%; FT: <1%)
- Australian sardine (OPT: <1%; FT: <1%)
- Bass groper (OPT: 0%; FT: 2%)
- Blue swimmer crab (OPT: 6%; FT: <1%)
- Blue mackerel (OPT: <1%; FT: <1%)
- Blue-eye trevalla (OPT: <1%; FT: <1%)
- Eels, longfinned and shortfinned (OPT: <1%; FT: <1%)
- Garfish, Sea (OPT: <1%; FT: <1%)
- Gummy shark (OTF 19.1 tonne; 36%)
- Hapuku (OPT: <1%; FT: 2%)
- Mud crab (OPT: <1%; FT: 0%)
- Pink ling (OTF 1.3 tonne; 3%)
- Sea mullet (OPT: <1%; FT: 0%)
- Spanner crabs (OPT: <1%; FT: 0%)
- Tailor (OPT: <1%; FT: 2%)
- Yellowtail kingfish (OPT: <1%; FT: <1%)
- Yellow scad (OPT: 4%; FT: 5%)

Appendix 5: Options for allocating new share classes in the OTF

There are a number of options for allocating shares in new share classes. The general information paper provides an explanation of the option and an outline of the advantages and disadvantages associated with each. The options are included below and, where practical, additional information is provided on their application in the OTF.

Using current shareholdings: In the OTF, this could involve allocating new school whiting catch quota shares based on the number of existing northern fish trawl shares or inshore and offshore prawn trawl shares held by a current shareholder. Following is an indication of the number of species shares that would be made available to relevant sectors of the OTF (based on the ITCALs set out in the technical paper "Interim Total Commercial Access Levels") and the number of species shares each shareholder would receive for each share currently held.

Table 13 Numbers of species shares that would be made available and allocations for each current share

	Northern fish trawl		Ocean prawn trawl	
Species	**ITCAL**	**Species shares per NFT share**	**ITCAL**	**Species shares per relevant OPT shares**
Whiting	619,051.7 kg	285.4 kg	816,711.4 kg	39.2 kg
Flathead	227,995.8 kg	105.1 kg	43,253.1 kg	2.1 kg
Silver trevally	24,101.5 kg	11.1 kg	1,066 kg	N/a
Gemfish	1037.6 kg	0.5 kg	214.3 kg	N/a

If shares were surrendered for cancellation or forfeited because of offences or failure to pay fees prior to an ITQ scheme being implemented, the amount of quota per share would be greater than the estimates above.

'Swapping' current shares: This approach cannot be modelled across the various fisheries because DPI cannot predict who may swap shares or how many they would swap.

Monetary tenders (note this is different to the exit grant tender process): This approach cannot be modelled because DPI cannot predict who would submit a tender and for what amount.

Using recent participation (catch history): The following tables provide an indication of the number of species shares of each class that would be set aside based on an allocation model of 20% for existing shares and 80% for recent participation.

Table 14 Northern fish trawl sector: quota (or species shares) and potential allocations

Species	**Total species shares (northern fish trawl)**	**20% of the total species shares: allocated based on current shares**		**80% of the total species shares: for allocation based on recent catch**
		No. species shares	**Per NFT share**	
Whiting	619,051.7 kg	123,810.3 kg	57.1 kg	495,241.3 kg
Flathead	277,995.8 kg	55,599.2 kg	25.6 kg	222,396.6 kg
Silver trevally	24,101.5 kg	4,820.3 kg	2.2 kg	19,281.2kg
Gemfish	1,037.6 kg	207.5 kg	0.1 kg	830.1 kg

Table 15. Ocean prawn trawl sector: quota (or species shares) and potential allocations

Species	Total species shares (relevant sectors of ocean prawn trawl)	20% of the total species shares: allocated based on current shares		80% of the total species shares: for allocation based on recent catch
		No. species shares	Per relevant share	
Whiting	816,711.4 kg	163,342.3 kg	7.8 kg	653,369.1 kg
Flathead	43,253.1 kg	8,650.6 kg	0.4 kg	34,602.5 kg

The 20/80% split approach above has also been modelled (see figures below) for whiting, flathead in the northern fish and ocean prawn trawl. In addition, silver trevally and gemfish were modelled for northern fish trawl. This modelling was completed to see how the resulting share/quota allocations would compare with shareholders' recent reported catches.

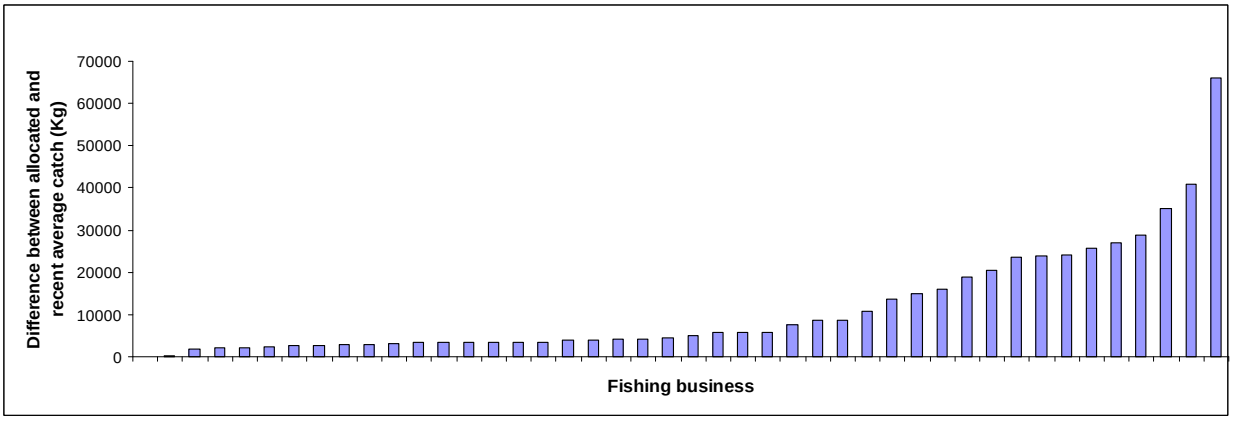


Figure 9. Projected allocations versus recent catches by shareholders: whiting in the NFT

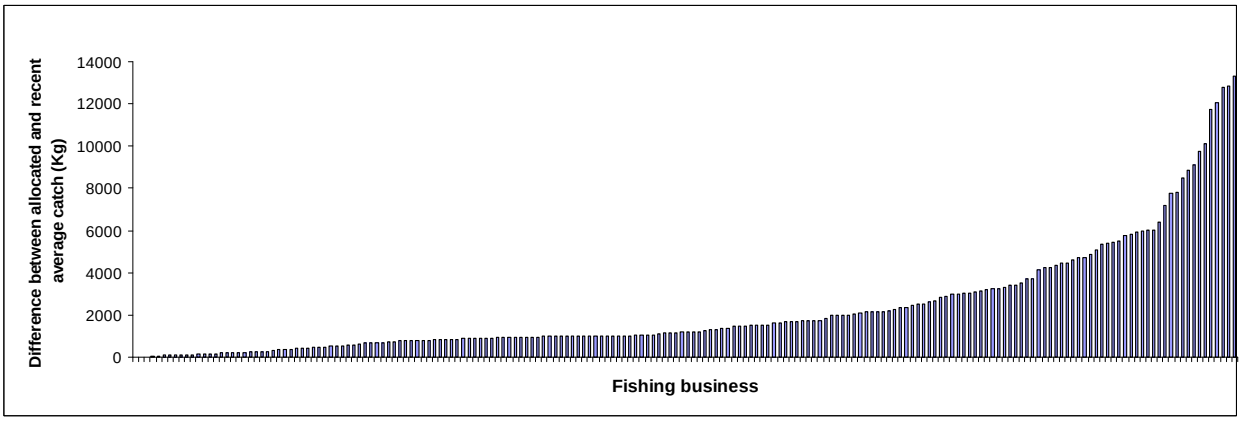


Figure 10. Projected allocations versus recent catches by shareholders: whiting in the OPT

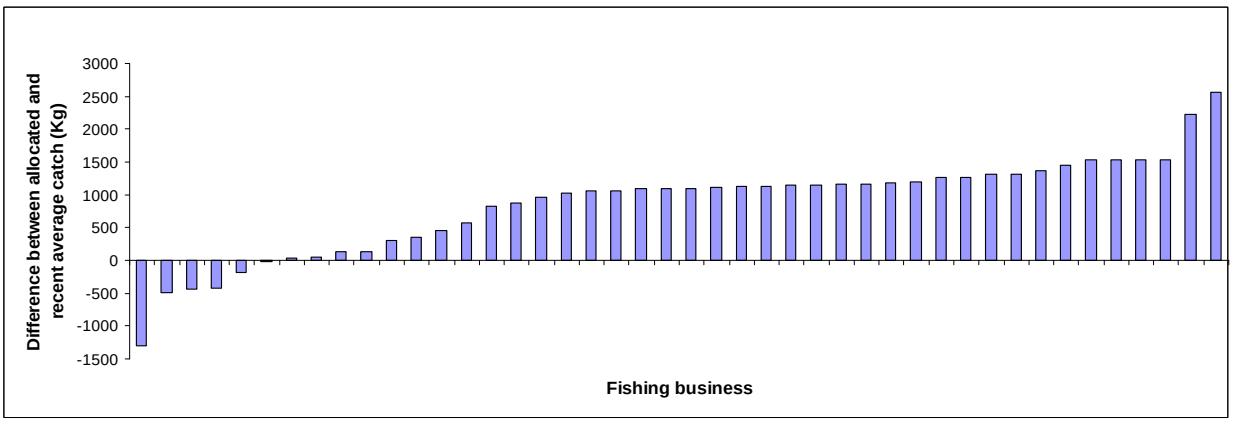


Figure 11. Projected allocations versus recent catches by shareholders: flathead in the NFT

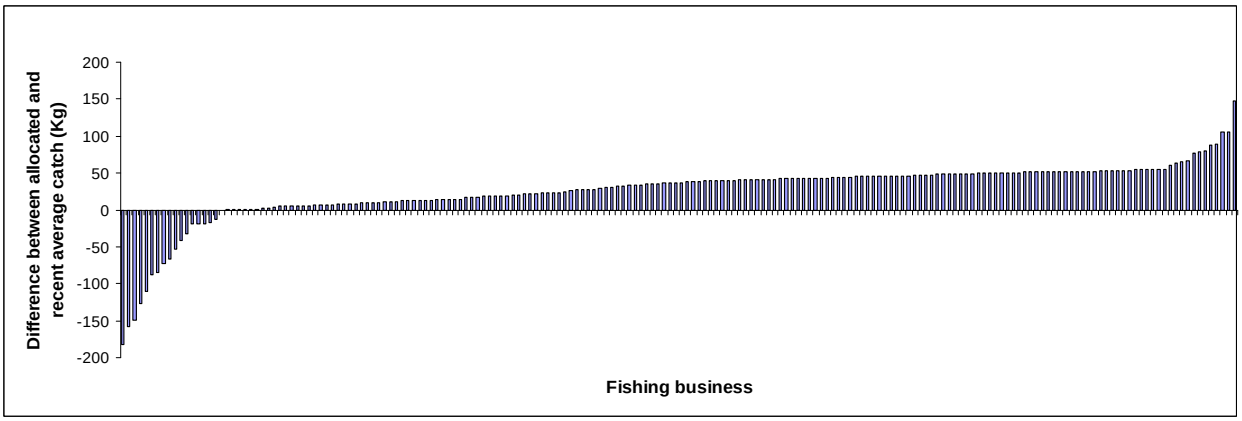


Figure 12. Projected allocations versus recent catches by shareholders: flathead in the OPT

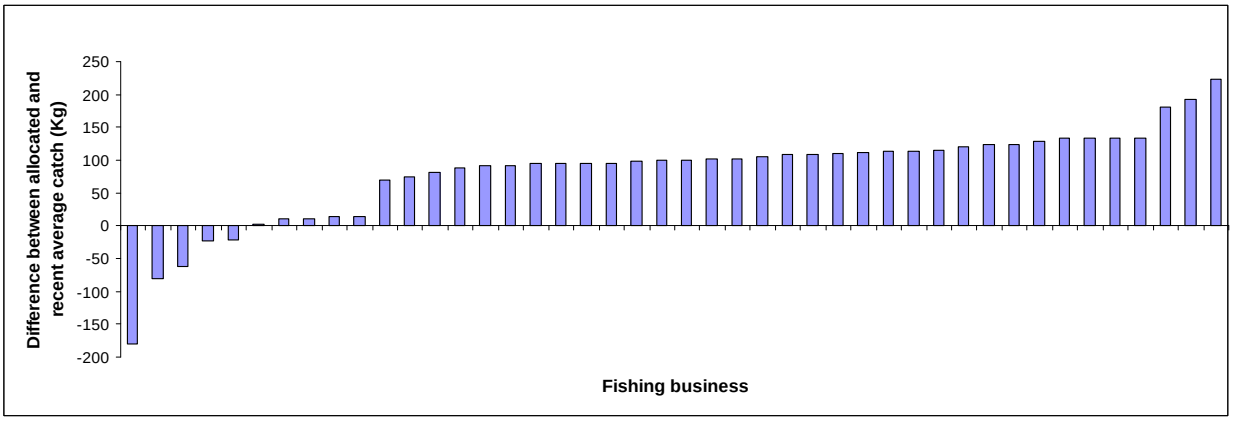


Figure 13. Projected allocations versus recent catches by shareholders: silver trevally in the NFT

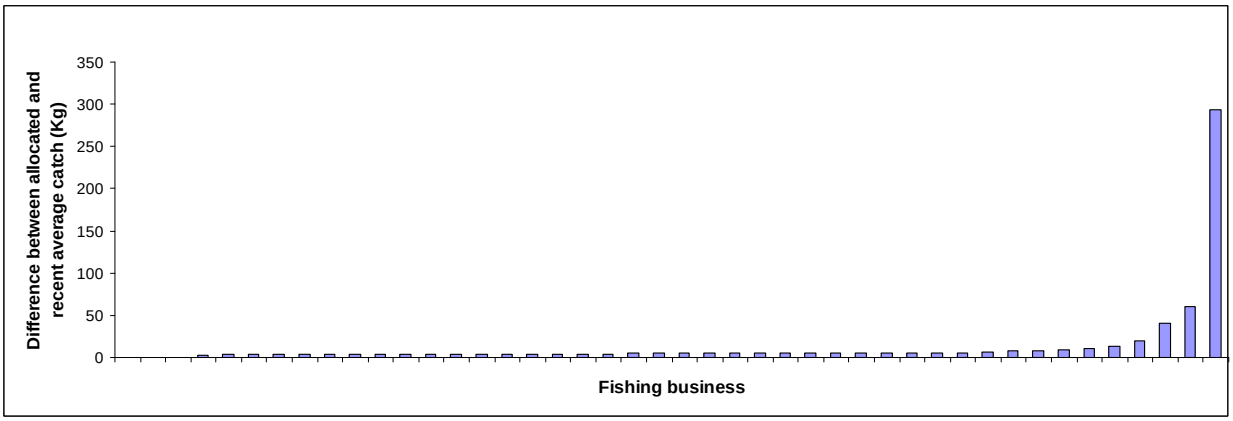


Figure 14. Projected allocations versus recent catches by shareholders: Gemfish in the NFT