

Tasmanian Danish Seine Fishery Review

January 2011

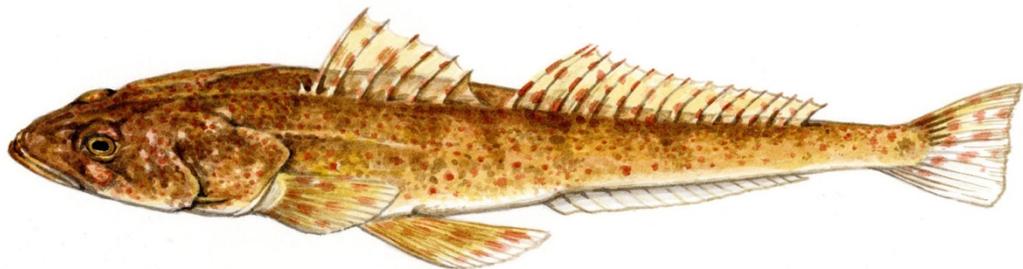
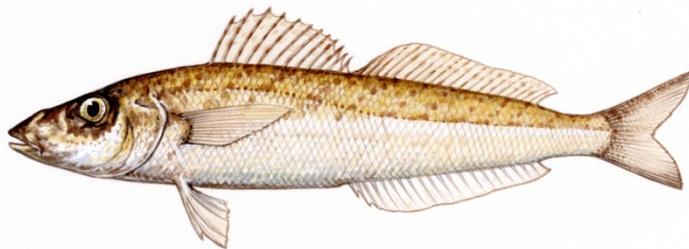


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1 Aim

In March 2009 Danish seine licence holders were formally notified that a review of the fishery would be undertaken. Licence holders were issued with an investment warning advising them that in the event of changes made as a result of the review catch and effort information may be used to determine levels of on-going access among eligible licence holders. Licence holders were advised that catch and investments made after 1 March 2009 would not be considered in the event of changes that resulted in an allocation.

The Danish seine fishery was listed as a potential issue for the 2009 review of the Scalefish Fishery. However this component was omitted and deferred for a separate review.

The aim of this review is to assess the current management measures in place for the Danish seine component of the Tasmanian Scalefish Fishery (herein referred to as the Danish seine fishery). The review covers key issues including spatial management, licence transferability and other issues related to the sustainable management of the fishery.

This document reviews the issues and provides recommendations regarding the future management directions for the fishery.

2 Fishery description

The Danish seine fishery is a small component of the Tasmanian Scalefish Fishery. Once managed under the umbrella of the Tasmanian Inshore Trawl Fishery along with demersal trawling, only Danish seines are permitted to be used following the prohibition on demersal trawling in State waters in 2001.

Danish seine vessels have been operating in Tasmania since the mid 1930's and the method used today is largely unchanged from the original. Danish seine vessels typically range between 13 to 16 metres in length.

Tiger flathead (*Neoplatycephalus richardsoni*) and school whiting (*Sillago flindersi*) are the two key target species of the fishery. A number of other non-target species are also retained.

The majority of fishing effort is concentrated in the south and south-east regions of the State, with small amounts of activity in the north east and north west.

2.1 Danish seine operation

Danish seine fishing nets look quite similar to a demersal or 'otter' trawl net; however the two gear types have quite different modes of operation. A demersal trawl utilises doors or otter boards attached near the wings of the net to spread the net as the net is towed through the water. The use of otter boards enables the net to be towed for long periods and the addition of bobbins and rollers on the ground chain enables the gear to be worked on rough bottom. Conversely a Danish seine has no otter boards providing little or no ability for the net to remain open whilst being towed. Instead, long warps (ropes) are attached and set in a diamond shape to create a herding effect when hauling of the net commences. See Figure 1 for a pictorial representation of the operation.

The nature of the fishing method means that the net is significantly lighter and smaller than a demersal trawl net and is limited to operating in areas of soft sandy bottom. Each set and retrieval of the net takes between 1 and 1.5 hours.

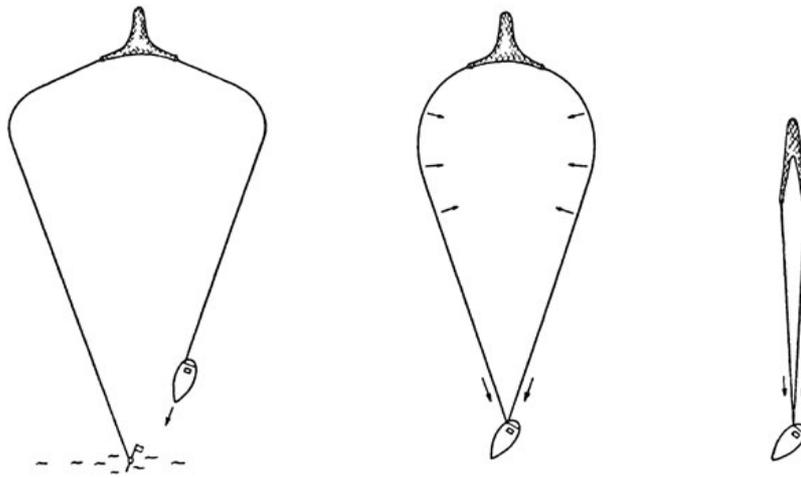


Figure 1: Pictorial representation of Danish seine operation (source: www.fao.org)

3 Historical changes in the Management of the Danish seine fishery

The Danish seine fishery has operated in Tasmania's coastal waters for many years and during that time there have been some significant changes to management.

Prior to 1992 the trawl fishery operated with minimal management controls. Fishers were required to hold a Tasmanian Fishing Boat Licence (TFBL), closed areas were specified and there were regulations relating to mesh sizes.

In 1992 the Inshore Trawl Management Plan came into effect. This plan provided for the licensing of operators whom had a history of trawling (both Danish seine and otter trawling) in State waters and prohibited the issuing of new licences, thereby limiting further uncontrolled expansion of fishing effort.

At the same time two categories of 'trawl' licences were created; the fishing licence (general trawl) (FLGT) and fishing licence (limited trawl) (FLLT). The fishery was controlled by limited entry and licences were made non-transferable, vessel size, area closures and mesh size restrictions were also implemented. Initially 14 general trawl licences and five limited trawl licences were issued.

A FLGT applied to fishers who had no involvement with the Commonwealth South East Trawl Fishery sector and allowed access to all State waters not closed to fishing. A FLLT was issued to Commonwealth south east trawl fishers that had a prior history of fishing in a defined area of Storm Bay; licences provided continued access to that area of the fishery and nowhere else.

In 1999, the fishery was managed under interim arrangements through the *Fisheries Rules 1999*. At that time there were eight FLGT and three FLLT.

Management of the Danish seine fishery was formally incorporated within the Tasmanian Scalefish Fishery in 2001 with the introduction of the *Fisheries (Scalefish) Rules 2001*. It was at this time that a prohibition of demersal trawling in State waters was introduced, thereby leaving the remaining trawl licences restricted to using a Danish seine.

To accurately reflect the nature of the fishery a new class of fishing licences was introduced in 2008, the fishing licence Class Danish Seine was created to capture both the fishing licence (general trawl) and the fishing licence (limited trawl). Despite there being no authority to use a 'trawl' these two licence types exist today.

4 Current management arrangements

There are currently six FLGT and two FLLT in the fishery. Different management measures apply to both types of licences.

The two FLLT are limited in their area of operation to a discrete area of water in southern Storm Bay. This area of operation is inherited from the days when the Commonwealth trawl fishery vessels were operating within this area.

The FLGT are permitted to fish across all state coastal waters subject to further area restrictions that are contained within the *Fisheries (Scalefish) Rules 2004* (the Scalefish Rules).

Danish seine licences are classed as non-transferable, therefore licence numbers will continue to decline as existing licence holders exit the fishery.

In addition to limited entry and non-transferability other restrictions apply including:

- Prohibition on Danish seining within 1 nautical mile of the coast,
- Additional areas are also closed to fishing minimising interactions with other commercial and recreational fishing activities e.g. Frederick Henry and Norfolk Bay,
- A minimum mesh size of 70mm,
- Two designated areas for use of whiting codends (areas where whiting are targeted),
- A minimum mesh size of 42mm applies when using a whiting codend.

One operator has been endorsed to fish in some of the areas closed to fishing however further conditions are placed on this endorsement including the use of larger minimum mesh size, and restrictions on fishing under the endorsement on week days only.

With the exception of the FLLT, there are no zones within the fishery and operators are free to fish all waters open to fishing.

It is current policy that the FLLT can only be operated by a vessel that, in addition to being listed on the Tasmanian licence package is also listed on a Commonwealth licence package that allows trawling in the south east trawl fishery. In fact Rule 54 of the *Fisheries (Scalefish) Rules 2004* states that:

“The Minister may cancel a fishing licence (limited trawl) if the fishing vessel specified in the licence is no longer specified on a Commonwealth authority in relation to the South East Trawl Fishery of the Commonwealth.”

This regulation is consistent with the non-transferable nature of the licence and the overarching policy to reduce the potential effort in the fishery by reducing licence numbers as licence holders exit the fishery.

5 Catch and effort

5.1 Target catch

The Danish seine fishery primarily targets two species, tiger flathead and whiting. Catch of tiger flathead and whiting declined significantly between 1990 and 1995, however since then catches of both species have remained relatively stable (Figure 2). It is important to note that prior to 1992 the fishery was largely unregulated with limited restrictions on access to the fishery. Catches in the 1990's also includes catches from demersal trawling activities.

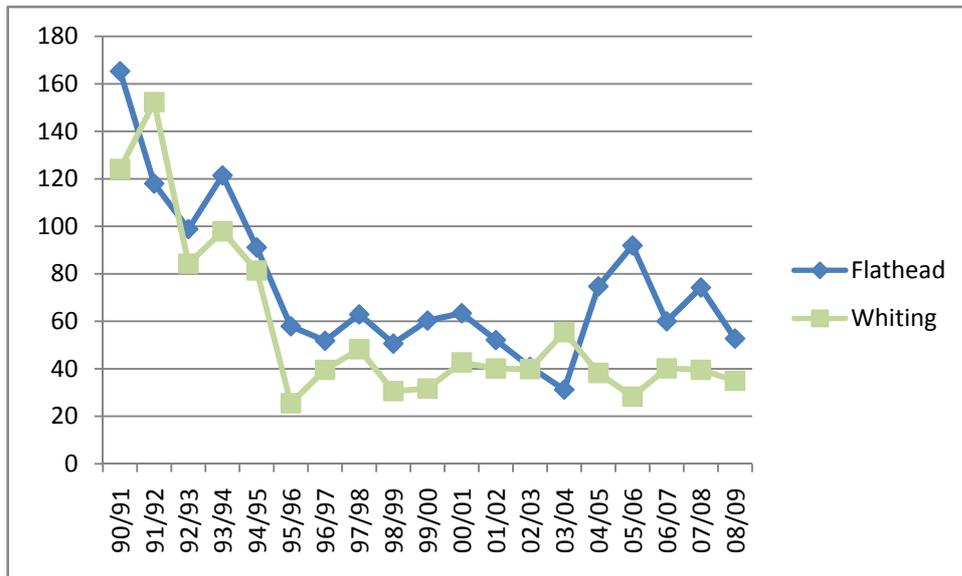


Figure 2: Total commercial flathead and whiting catch from 1 July 1990 to 30 June 2009. The majority of the catch is taken by Danish seine. Commercial catches are dominated by tiger flathead. (Data sourced from TAFI Scalefish Fishery Assessment Report 2009).

5.2 Non-target species

In addition to tiger flathead and whiting, there are a number of other species caught during Danish seine operations some retained and others returned. There are over twenty different species recorded as retained within the fishery. The most common species are; jackass morwong, latchet, gurnard, gummy shark, elephantfish and flounder. As shown in Figure 3, non-target species make up a minor component of the total retained catch.

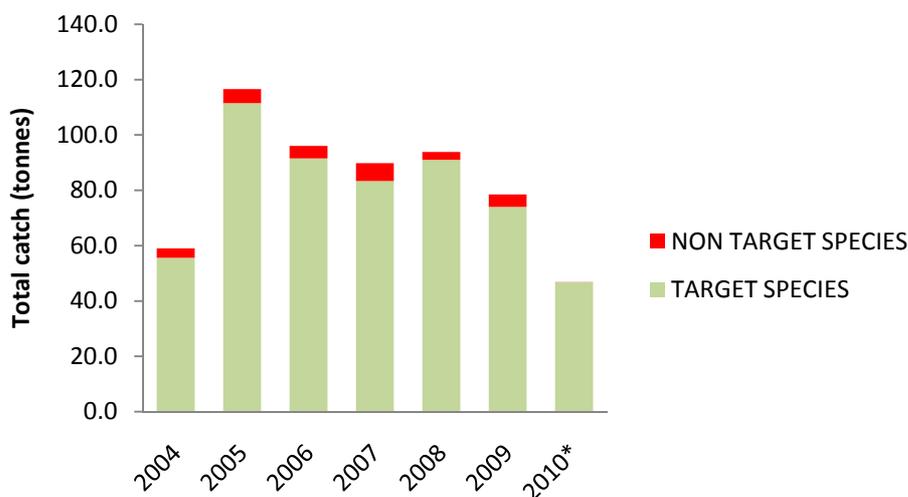


Figure 3: Proportion of targeted catch (flathead and whiting) to retained non-target catch (all other species retained) from 2004 to 2010. Please note that 2010 catch is not final and is likely to change. (Source: DPIPWE Integrated Catch and Effort [ICE] database 2010)

5.3 Effort

Effort levels in the fishery have fluctuated over time, but have shown steady increases over the last 5 years. This increase is evident in the number of days fished, number of shots and the number of vessels active in the fishery (Figure 4).

In addition to days fished and number of shots, hours fished is also recorded in the Scalefish Fishing Record Book (the logbook) but is not considered to provide any additional benefit to the measure of effort.

The other measure of effort that is recorded in the logbook is headline length. Whilst headline length is used in demersal trawl fisheries to calculate swept area and therefore a measure of effort, headline length is not considered to provide the same level of benefit to the Danish seine fishery. Of greater relevance is the length of ropes used; the greater the length of rope, the greater the fished area and therefore the higher the level of effort. Rope length is not recorded in the current logbook.

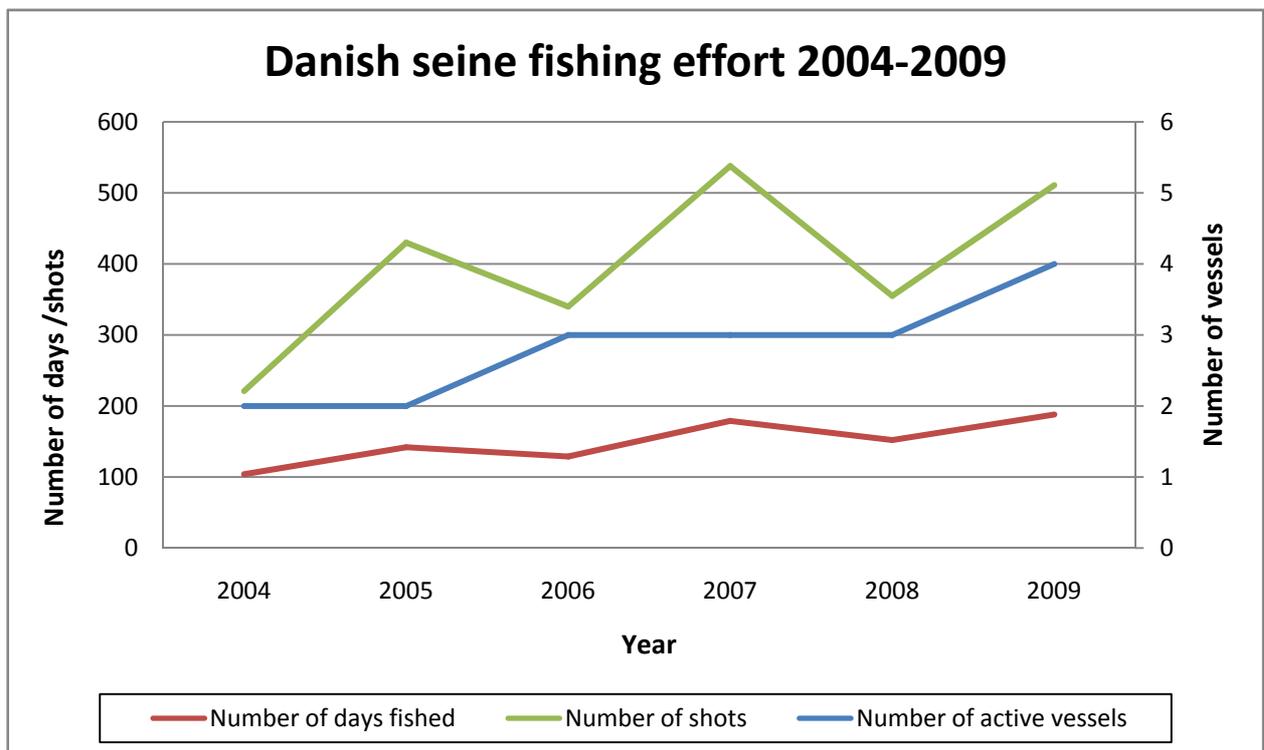


Figure 4: Danish seine effort trends from 2004 - 2009 (Source: DPIPWE Integrated Catch and Effort [ICE] database 2010)

6 Issues

6.1 Spatial management

There are concerns from some industry operators that the current management measures do not have the ability to prevent the concentration of fishing effort. The concerns are that if the current inactive or rarely used licences are activated and operated in areas where current fishing operations are centred then this will lead to conflict and potentially pose sustainability concerns.

In the most recent fishery assessment report for the fishery the Tasmanian Aquaculture and Fisheries Institute warn that “it would be prudent to consider spatial management options that avoids the regional concentration of effort and operators”.

In 2009 a licence was activated in the sector taking the total number of active vessels in the fishery to four. During the previous six years active vessel numbers had remained stable at two or three, with only two operators consistently fishing 20 days or more in a calendar year.

6.2 Effort management

Effort management is largely based upon limited entry and non-transferability of licences. These measures have removed the opportunity for new entrants to enter the fishery. The drivers behind fishing effort within the sector are not clear however overall effort levels have remained relatively low, with the average number of days fished being just over 50 days per year, per active fisher. However as described in Figure 4, there has been an increase in effort in recent years and potential does exist for further increases in effort under the current management arrangements.

6.3 Community concerns

General community attitudes towards commercial fishing and commercial fishing techniques are inherently difficult to measure. Individual opinions are often based upon limited information and are based on a poor understanding of methods particularly with specialised activities such as Danish seining.

The Department is aware of concerns from some sectors of the community and recreational fishers regarding the practice of Danish seining. However, the concerns are primarily based upon the assumption that the Danish seine operation is the same as, or is trawling. There is also an assumption that these 'trawlers' take large quantities of recreationally important sand flathead as well as significant amounts of bycatch and cause irreparable damage to habitat and ecosystems.

The Department considers that the concerns regarding the take of sand flathead and other key recreational species are based on a misunderstanding of the area and seasonality of the operation and the target species of a Danish seine. The predominant species targeted and taken by Danish seines are tiger flathead and school whiting; two species that are not a major target species of the recreational fishery. Furthermore catches are relatively low and have remained constant in recent years, with no signs of stock stress.

In regard to bycatch, licence holders are not required to maintain records of fish released, only those retained. Department officers have observed one licence holder's operation on a number of occasions, and have been satisfied that the level of bycatch is acceptable and is not considered a high risk. In addition, the areas Danish seines are fished (sand and soft bottom) provides a reduced risk of habitat damage. However there has been no formal risk assessment across the fishery and levels of bycatch in other areas of the state and among different operators is not known or recorded.

6.4 Transferability

All Danish seine licences are currently non-transferable, that is the licence cannot be sold or transferred to another party. Furthermore the licence can only be used by the holder of the licence and a person who was a supervisor of the licence when it was endorsed as non-transferable licence.

There has been some speculation that Danish seine licences will become transferable, however this is not Department policy. In order to prevent further speculation and to stop a 'race to fish' mentality amongst industry the Minister for Primary Industries and Water issued an investment warning in 2009 stating that in the event of an allocation decision resulting from the review, catch and investments made after 1 March 2009 would not be considered during such a process.

7 Management options

7.1 Spatial management

As described in 6.1, potential exists for further activation and concentration of effort within a defined area, which is not desirable. The likelihood of effort levels exceeding what is considered appropriate or sustainable is difficult to measure, however considering the non-transferable nature of the fishery and the ageing fleet, the likelihood is probably low. A number of voluntary and legislated options are available to address this potential issue.

Legislated measures: Legislative measures include undertaking a re-allocation of water/area to individual licence holders based on catch and/or effort history in the fishery. For example those fishers who have historically fished in the North East would retain access to this region, to the exclusion of others that have not fished this area.

The key to pursuing a legislated outcome is developing suitable and equitable criteria to determine access. The options are infinite and each individual licence holder is likely to have different views. Introducing a legislated allocation of access rights is complex and resource intensive.

Voluntary measures: Voluntary measures may provide a simpler, cost effective and potentially a much quicker method of achieving similar outcomes to legislated process. Voluntary measures would need to be agreed to by all licence holders. If an agreement can be reached there is potential for spatial restrictions to be written into a licence condition providing enforcement capabilities and penalties for breaches.

7.2 Effort management

The current levels of effort within the fishery are deemed acceptable and appear to be sustainable. However without mechanisms to keep effort within current levels, there is potential for effort to exceed what is deemed sustainable. Without further restricting access spatially as described in section 7.1, alternative management tools may achieve a similar result.

Restrictions on the total amount of effort in the form of days fished could be put in place for specific regions and/or operators in those regions. A move to such a management system will require changes to the current reporting and monitoring systems in place to ensure compliance with either individual or area limits on effort. Such changes would be complex and would be an added reporting burden/cost to fishers and to the Department to administer.

7.3 Community concerns

Community concerns and community opposition to Danish seining is considered a significant risk to the future of this fishery. It is therefore recognised that in order to provide continued access to the states fisheries resources steps should be taken to quantify and demonstrate the sustainability and relatively low impact of this fishery. The key areas that require action are:

1. Quantification of non-retained bycatch.
2. Examine potential of increasing minimum codend mesh size.

7.4 Transferability

The Department does not support commencing a process to review the transferability of licences at this time. The current management framework is greatly reliant upon the effort restrictions in place, including non-transferability. At present approximately half the fleet is inactive. The reasons behind inactivity are likely to be based upon individual circumstances for each licence holder rather than as result of resource or market limitations.

The non-transferable provision currently in place is considered as relevant today as it was when first introduced, albeit that the number of operators has significantly reduced.

8 Recommendations

8.1 Spatial management

The Department does not support entering into a formal management/allocation process to introduce spatial management changes in the Danish seine fishery at this time. However the Department may support voluntary measures if industry can demonstrate unanimous support for such changes.

It is acknowledged that some individual operators may be impacted upon in the event of activation of and concentration of effort in certain regions. However, stock assessment and monitoring measures that are already in place will be used to determine the need for management action in the future if voluntary measures aren't adopted.

8.2 Effort management

The Department does not support implementing an individual or finer spatial scale effort management system for the Danish seine fishery at this time. An effort management system will require significant changes to the management and monitoring systems currently in place, is likely to result in higher ongoing costs to industry and government.

The additional administrative costs associated are not considered warranted for the potential benefit they may provide. Current effort levels are considered acceptable and appear sustainable and the risk of effort activation to the level where the sustainability of the resources is compromised is considered low at this point in time.

Stock assessment and monitoring measures that are already in place will be used to determine the need for management action in the future if voluntary measures aren't adopted.

8.3 Monitoring and data collection

A number of issues regarding the current monitoring and data collection requirements have been identified during this review. The Department recommends the following:

- Alter the logbook to record length of rope (warp) used.
- Quantify levels of bycatch within the fishery.
- Investigate options for increasing the minimum codend mesh size.

8.4 Transferability

As previously stated transferability is not supported. However the adoption of the recommendations in 8.3 along with further reductions in licence numbers may provide the impetus for a review of this issue in the future.