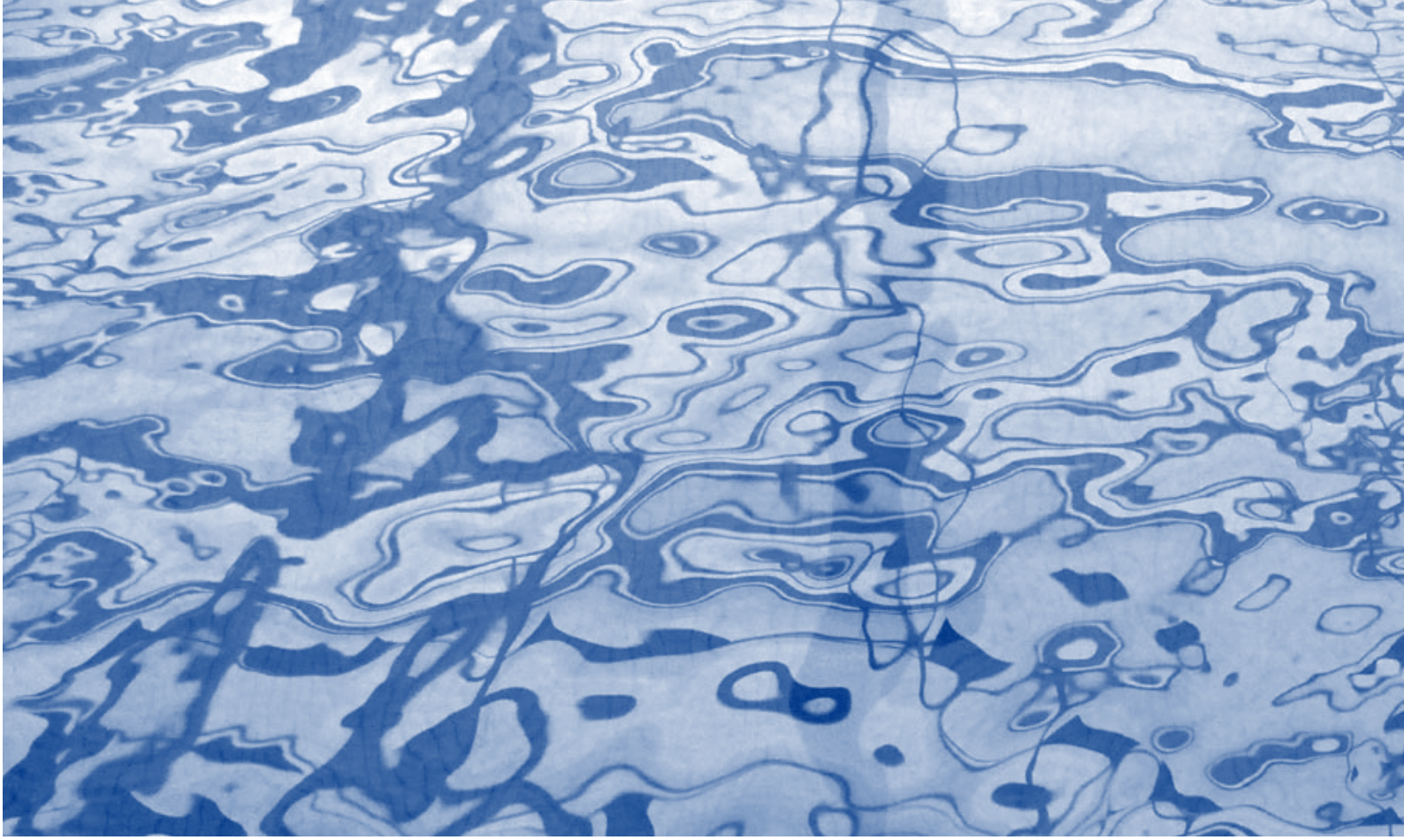
Tasmanian scallop fishery

A clean slate? Sharing the return of the Tasmanian scallop fishery



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A clean slate? Sharing the return of the Tasmanian scallop fishery

Howel Williams, Hilary Revill & Rod Pearn

Department of Primary Industries, Water and Environment, Hobart, Tasmania

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Abstract

Scallops have an iconic value in Tasmania, based on their quality and a long history of abundance from commercial and recreational fisheries. Unfortunately, collapses of significant beds started in the 1970s and continued through serial depletion up to the early 1990s. This was followed by slow and patchy rebuilding. Limited fisheries were conducted during this period; however, they only really served to demonstrate the failure of existing management strategies.

Recent developments in the management strategies for both the commercial and recreational fisheries have seen their re-establishment. For the first time in decades we need to manage the potential interactions between sectors.

The historical development of the scallop fishery and the episodes of collapse and rebuilding have provided a basis for spatial separation of the commercial and recreational fisheries. Recent developments in the commercial and recreational fisheries have seen further temporal separation based on the desire to achieve different outcomes.
In areas where there appears to be potential for conflict, non-regulatory solutions are being developed through consultation between the parties.

This paper explores the resource sharing arrangements that have developed from the history of the fishery, the development of new management strategies and the development of non-regulatory arrangements.

Introduction

The Tasmanian scallop fishery is based on three species of scallops: commercial scallop (*Pecten fumatus*), doughboy (*Mimachlamys asperrimus*) and the queen scallop (*Equichlamys bifrons*).

The commercial fishery has been based exclusively on dredge fishing although other options (such as diver collection) are available. The recreational fishery has traditionally used both dredge and diver collection.

The resource has been fished since the 1890s. The fishery has expanded from sheltered waters in the south east to coastal water off the east and north coasts of Tasmania. Over the last 50 years, the fishery has been characterised by collapse, development into new areas and serial depletion. Following long closures of both the commercial and recreational fisheries in the 1990s the fishery showed signs of recovery in the early 2000s.

Given the failure to establish sustainable fisheries in the past, the challenge for fisheries managers and stakeholders has been to develop new fishing strategies.

The rise and demise of the fishery

The fishery began in the 1890s in the sheltered coastal waters of the D'Entrecasteaux Channel in southeastern Tasmania in close proximity to major settlements and markets. Even at this early stage, the fishery showed signs of fishing pressure and recruitment variability. Up until the 1920s the commercial scallop was the major species however in the 1930s the doughboy scallop became the more abundant. While the overall volume of landings continued to increase, the abundance of the two species continued to oscillate until the early 1960s when both declined and the fishery was closed for a significant period. Through the 1960s catches were very much reduced from the levels seen in the 1940s.

In 1970 the D'Entrecasteaux Channel was closed and did not open for more than a decade.

During this period, the commercial fishery began to exploit coastal waters off Tasmania's east coast and waters round Flinders Island in Bass Strait. The highest catches recorded in the history of the fishery occurred in the early 1980s. By the late 1980s these grounds were also depleted.

[Insert Figure 1 here]

In the early 1980s, weak signs of recovery in the D'Entrecasteaux Channel led to passionate lobbying by both recreational and commercial fishing interests for exclusive access. This led to several short but very intense fishing episodes with access for both recreational and commercial fishers using both dredge and diver collection.

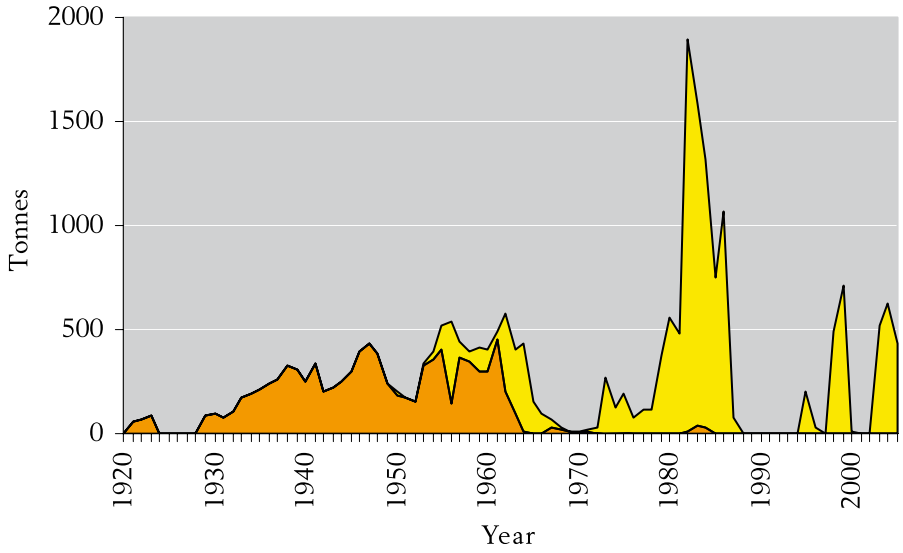
Pressure for access over-rode the findings of resource surveys resulting in short seasons with very unsatisfactory catch rates. By 1985 there was acceptance that the fishery should be closed. It remained closed until 1991.

During this time there was growing concerns that dredging was causing direct damage to the D'Entrecasteaux Channel scallop fishery and indirectly damaging it and other shellfish industries by resuspending sediments and promoting blooms of exotic toxic dinoflagellates. This led to the closure of the D'Entrecasteaux Channel and similar areas around Tasmania, to dredging. The areas identified were those that were described in separate legislation as shark refuges – typically large estuaries and enclosed sheltered coastal embayments.

In the early 1990s there was speculation that the channel stock had recovered. Despite stock surveys that indicated only weak recovery, the fishery was opened to recreational dive fishing. The fishery was not successful and the fishery remained closed until the mid 2000s.

The commercial fishery continued with fishing expanding into Bass Strait from the east to the west. While significant catches were taken at times, the fishery was finally closed in 1999.

Figure 2. Commercial landings from the Tasmanian scallop fishery.



The recovery of the fishery

In 2002, resource surveys in coastal waters found significant beds of scallops in offshore waters in Bass Strait. In 2003 resource surveys conducted in the D'Entrecasteaux Channel also established that scallop stocks had recovered.

Despite the periods for which the fishery had been closed due to low stock levels, there was little recognition by many Tasmanians that the fishery was sensitive to fishing, had a history of collapse and that recovery was sporadic and slow.

A common belief was that scallop fisheries are boom and bust with fishing playing no part in this but rather the scallops themselves are to blame. This belief also led to the notion that fishers should get what they can while they can as the scallops would only die and recruitment would replenish the fishery.

The dilemma facing fisheries managers was that the history of the fishery demonstrated that management had failed to achieve a sustainable fishery. The fishery management regimes themselves promoted or entrenched behaviours toward the resource that were not responsible. Clearly different approaches were needed.

During the 1990s Tasmania, as with other jurisdictions in Australia, developed strong co-management forums. Working with our stakeholders we have developed management strategies that were unthinkable in the past. These forums have also demonstrated that they are able to deal with the inter-sectoral issues in a robust and positive way.

A NEW APPROACH

The previous commercial fisheries were based on the principal of allowing fishers access to all coastal waters with areas being closed once threshold levels of catch rate or size composition were reached. This management regime led to competitive fishing with little sharing of fishery intelligence.

A new regime was developed in which all waters were closed and on the basis of collaborative industry surveys, likely candidate areas were opened for fishing. This led to a more orderly and collaborative fishery with fishers able to plan and reserve fishing in promising areas for subsequent seasons. The 'paddock' fishery has been in operation since 2003 and with the support of the fishing industry has developed new regulatory and non-regulatory measures to support it.

The previous recreational fisheries were based on high daily bag limits (2000 scallops in the 1960s and 500 scallops by the 1980s). The later seasons were also very short and only permitted in small areas. This led to frantic free-for-alls with fishers trying to maximise their share. Several deaths by drowning were attributed to the style of the fishery. The high bag limits led to spoilage and wastage and the opportunity for illicit commercial fishing.

The new approach was based on trying to promote the value and the fragility of the fishery to recreational fishers while also relieving the pressure to fish. Only dive fishing has been permitted. Low daily bag limits (of 40 scallops) promote the value of the catch while limiting illicit commercial fishing. High size limits are intended to preserve adequate spawning stocks. Seasons are long and all waters are open to fishing to spread opportunities for participation. The season is in the warmer months to coincide with the period when most recreational divers are active.

Post fishing surveys of recreational fishers after the first new season in 2005 demonstrated a very high level of satisfaction with their experience and support for the new management regime.

Resource sharing

Fishing methods

The commercial fishery is based on dredge fishing. Decisions on areas opened to dredging are now based on habitat assessments and only those areas that are resilient to disturbance are open.

The recreational fishery has only had the opportunity for hand collection (by divers).

Spatial

The historical regulations prohibiting dredging in sheltered bays and estuaries have been preserved. These areas are only accessible to recreational divers.

In areas where commercial fishing is permitted, the depth limitations of diving and of dredge operations provides a natural separation. This is now being formalised by a code of conduct being developed by the commercial fishery that will stipulate a minimum depth and a minimum distance for operations from shore.

Commercial fishing is now conducted through 'paddock' fishing with single areas opened to fishing rather than all waters.

Season

The commercial fishing season is timed to take advantage of the period in which the scallops are at best market quality. This is typically in winter and spring.

The recreational fishing season is timed to occur at periods of warmer water temperature to improve enjoyment for divers. This is in the summer and autumn months.

Quantities/access

The commercial fishery is regulated by limited entry and quota. The objectives for fishing is to concentrate dredging on proscribed beds leaving other beds undisturbed to provide recruitment and beds that can be fished in subsequent seasons.

The recreational fishery is open access but subject to a licence. The objective for fishing is to allow fishers access to a fair number of large scallops providing adequate quantities for recreational use. Fishing is by hand collection and so does not have the ecological and physical impact of dredging. This ensures that smaller cohorts within fished beds remain undisturbed.

Conclusion

The Tasmanian scallop fishery is sensitive to fishing and it has proved difficult to establish a sustainable fishery. Access to the resource has been keenly sought by both commercial and recreational fishers.

The long closure of the fishery due to collapse and slow rebuilding has provided an opportunity to establish new approaches to the fishery that promote a sustainable fishery and address the key issues of interaction and sharing between the commercial and recreational fisheries. Did we start with a clean slate? No we did not. As with all of these issues, the history, culture and context of the fishery set the ground.

We arrived at our resource sharing, without the need for formal negotiation and conflict over allocation (as we saw in earlier fishery). Radically new approaches and recognition of the issues facing the fishery were possible due to effective co-management groups and the ability for the interest groups to engage.