Access Sharing Definition, Measurement And Exchange Methodology  
Case Study: The South Australian Rock Lobster Fishery

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Abstract

The South Australian rock lobster fishery is about 2,700 tonnes annual catch and is accessed by commercial, charter and amateur fishers. The commercial sector is managed in two zones, one based on input controls and the other on individual transferable quotas. The commercial sector pays 100% of the costs of research, management and compliance through an annual licence fee. Catching rights are linked to a limited number of pots (16,000), which are freely traded and/or leased within the commercial sector.

Amateurs access the fishery by diving, using nets and/or pots and are restricted to 2 pots per person and a daily bag limit of 4 lobster. The amateur fishery is in effect open access, in that any person in South Australia, from interstate and/or overseas can access it. No licence fees are charged for amateur access but people wishing to use pots pay an annual pot registration fee.

In June 2001, the then Government announced removal of the limit on total amateur pot registrations and set the amateur share of the fishery at 4.5% of the total catch. The Government also announced that should amateur catch exceed the 4.5% share, then it would enter the market place and lease catch at commercial rates, sufficient to offset the excess amateur catch. Total catch in effect would remain constrained with less being taken by the commercial sector to balance the extra being taken by the amateur sector.

An overview and evaluation of this resource sharing mechanism between sectors based on commercial transactions is presented.

The Fishery

The South Australian Rock Lobster Fishery involves the harvest of about 2,700 tonnes of Jasus edwardsii valued around $100 million in exports. It is South Australia’s most valuable seafood industry.

The fishery is managed under the Fisheries Act of 1982, which has objectives of “sustainable” and “optimal” use. The fishery operates to a five-year management plan, which sets out objectives for management and establishes monitoring plans for the fisheries.

An annual stock assessment is delivered by a contracted research provider, which covers a range of performance measures for the fishery. As well, advice is provided by the research provider on sustainable harvest strategies. All extractions from the fishery are constrained - the commercial sector is limited to an annual quota or effort controls and the amateur sector is constrained by a bag limit.

The overall responsibility for management of the fishery is vested in the Minister and advice on day-to-day management is provided by a fishery management committee appointed by the Minister, comprising commercial, amateur and government stakeholders.

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The Review Process

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Amateur Management

During the 1980s and 1990s the amateur take was restricted using bag, boat and total pot numbers. Diving and the use of nets were also allowed as methods of taking lobsters by amateurs. During the 1980s around 18,000 amateur pot registrations existed. These expired on death and the numbers contracted over time. By the mid 1990s registrations were down to about 2,000 with three pots per registration for a total of about 6,000 pot registrations each year. By the mid 1990s the amateur groups were becoming more vocal with regards to their rights to access fish stocks and specifically the contracting and restricted access to lobster pots.

In the mid 1990s amateur pots had been reduced to two per person to allow more people access and at that time some additional pots were made available by the Government. To offset any increase in effort and take, the bag limit was reduced to four per person.

The amateur catch was estimated to be around 100 tonnes from the use of pots, nets and diving and survey information showed an amateur pot averaged about 5kg each year. The amateur pot registration fee at that time was $45 a pot.

The system of applying for registrations was a written system and by 1998/99 a restricted number of about 12,000 pots were available in total.

In 1999 the system of application for amateur pots was changed to one of telephone registrations for the first time. On the day that the registrations opened, an estimated 1 million telephone calls were made by individuals seeking to access the limited number of registrations available. This lead to a shut down of the telephone exchange in the capital city of Adelaide.

In response an extra 2,000 pots were released by written application for Christmas, the main period of amateur activity. In doing so the Government announced a cap of 100 tonnes for the amateur sector.

A Parliamentary Review Committee was established to investigate the mechanism for allocating the restricted number of pot registrations.

The Review Process

Commercial Sector Management

Entry to the commercial fishery was limited in 1967 and since that time a range of management measures have been implemented to ensure sustainability. There is a minimum legal size and females bearing eggs are protected and must be returned to the water.

During the 1980s and 1990s fishing effort reductions in the form of pot reductions, licence buy back, restrictions on gear investment and a quota were implemented. All of these measures have been fully funded by the industry.

Now the fishery supports about 260 commercial licences using 16,000 pots to capture lobster. The pots are transferable and are priced around $40,000-$50,000 and can be leased on an annual basis for around $3,000.

The fishery remains the State’s largest employment and export generator from the seafood sector. It is fully exploited, sustainable, operates to a management plan, has full cost recovery and is co-managed by all stakeholders.

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The Review Process
The Review Committee was established to analyse pot registrations in general. The review recommended inter alia:

- unlimited pot registrations be allowed and
- that the impact be monitored.

This occurred without taking scientific advice from the government research provider and ignored the new national fisheries assessment requiring reliable estimates of all removals and management strategies to control take, minimise by-catch and environmental impact.

The Review Committee received advice speculating that under circumstances where unlimited numbers of amateur pot registrations exist, those catches remained around the same levels. This in reality, was incorrect and opposite to the information available in other States in Australia where unlimited pot registrations exist.

The “New Tragedy of the Commons”

Following the Review Committee recommendations, the amateur groups publicly called for the Fisheries Minister to implement the recommendations.

The commercial sector expressed concerns in particular, about unlimited access to the resource, given that part of the fishery had experienced an 18% decline catch and declining recruitment was evident.

The Minister of the day was faced with a conundrum – how to deal with the increasing amateur pressure for unlimited registrations in the face of the State’s largest and most important industry urging a precautionary approach and no additional pressure on the stock.

The commercial sector identified the need to establish a mechanism to constrain the total take from all users, while accommodating a potentially substantial expansion in amateur take.

The solution put forward by the commercial sector promoted the conversion of the catch from commercial pots to amateur catch within a commercial framework. At that time commercial and amateur pots were catching around 170kg and 5kgs respectively.

The New Amateur Arrangements

Subsequently in June 2001, the Minister announced unlimited registrations of amateur pots. Two pots were allowed per person, the first was charged at $45 and the second at $90. No change in bag limit was proposed.

The Minister announced that the amateur share of the resource would be set at 4.5% of the total catch with 21,000 pot registrations as the proxy for all extractions. He also announced that should the amateur lobster pot registrations exceed 21,000 pots, the Department of Primary Industry Resources would intervene in the market for commercial pots and would lease an appropriate offsetting amount of catch at market rates.

The Minister advised the commercial sector that the amateur group supported the capping and sharing arrangements as announced.

The Maths

The pricing of the 2nd amateur pot registration at $90 was a critical part of the new arrangements given the relative catches of commercial (170kgs) and amateur (5kgs) pots. At the exchange rate of 34 amateur pots for one commercial, the $90 registration would raise $3,060, which was sufficient to cover a commercial lease.

The arrangement was self-funding and commercially sound.
Outcomes From the New Arrangements

The new arrangements see several unique features, which have substantially moved the fishery to a more complete rights framework, and one, which involves a form of commercial resource sharing. These include:

- An explicit amateur share of 4.5% has been established.
- A measurement or proxy for the share has been established of 21,000 pots.
- A resource sharing trigger when amateur pot registrations exceed 21,000 or the share exceeds 4.5% has been made explicit.
- Where if more than 21,000.
- Any addition amateur catch above 4.5% is secured at commercial rates in a willing lease arrangement.

Indeed a formal, enduring, flexible, responsive and commercial resource sharing mechanism has been developed.

Concluding Comments

The allocation and resource sharing arrangements in the SA lobster fishery are unique and have progressed substantially towards a complete rights based framework with market based sharing. However the arrangements are not without the following shortcomings.

- The respective amateur and commercial shares of 4.5% and 95.5% have been arbitrarily established and have no socio-economic basis. It is likely that the arrangements are not set to maximise returns to the State from the resource - indeed as economic conditions change so the “right” shares will vary over time.

- The amateur extractions are difficult to measure and therefore, while the mechanism may see shifts in fishing effort and catch from the commercial sector to offset amateur take, the actual impacts are difficult to measure.

- This system established is all “one way” to the amateur sector in that it does not allow for any of the 4.5% amateur catch to be accessed by the commercial sector should this be the “best” use in the future.

- The price of amateur participation (pot registrations) is not determined by a free market - the $90/pot for the amateur registration was determined at a level which would be sufficient to cover the cost of the commercial lease at the time. Over time the “right price” will inevitably change. Adjustments in the pot registration price will be needed on a regular basis if sufficient revenue is to be raised to meet the cost of leasing in the commercial sector.

- Access to commercial pots for lease by the Department is not guaranteed – while the revenue may be raised should the trigger be reached, lease pots may already be committed within the commercial sector and not accessible by Department regardless of price.

- Finally, in the long term administration costs for the scheme need to be covered. Government covers the cost of administering the amateur fishery, although this may not be so in the future. Hence, pricing needs to deal with these transaction costs.