

The Tasmanian

Rock Lobster Industry

May 2009

The Rock Lobster fishery is a major Tasmanian industry providing significant benefits from exports from the commercial fishery and a highly popular and iconic recreational fishery.

The State's remote location and pristine environment provide ideal conditions for the Southern Rock Lobster (*Jasus edwardsii*). Known commonly in Tasmania as crayfish, the rock lobster lives in a variety of habitats ranging from shallow rocky inshore pools out to the continental shelf. It varies in colour from the deep reddish purple of shallow water specimens to purple and creamy yellow in deeper offshore waters.

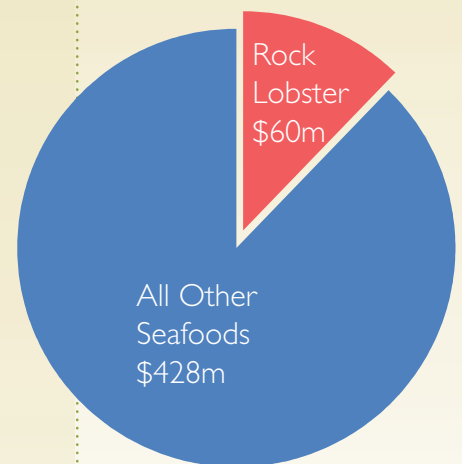
A large female rock lobster can carry up to 400,000 eggs. These 'berried' females are totally protected in Tasmanian waters and must be returned to the water immediately. This is one of many rigorous measures implemented by the State Government to ensure sustainability of this high value and highly prized crustacean.

The fishery is managed under the provisions of the Living Marine Resources Management Act 1995. The Act's objectives include

conserving resources for future generations, taking account of community needs and interests, and encouraging community participation in the planning process. Management includes a combination of input and output controls to ensure the industry's ongoing viability. These include limited entry (312 licences); restricted seasons; gear restrictions and requirements; a commercial total allowable catch (TAC) of 1471 tonnes; minimum size limits; and a comprehensive monitoring regime which requires documentation and real time reporting.

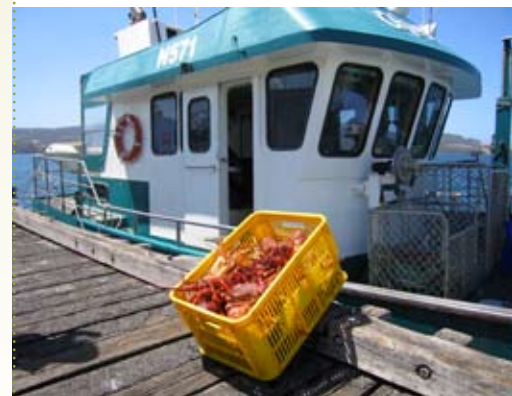
The industry is represented by the Tasmanian Rock Lobster Fishermen's Association, a peak body with a strong voice on the Ministerial Advisory Committee for crustacean fisheries. Industry members play a key role in determining research priorities and annual fishery assessments.

Value of Rock Lobster in Tasmania 2006-07



In 2006-07 rock lobster represented 12% of the value of all Tasmania's seafood, compared with 18% in 2000-01. While there has been a small decline in the gross value of rock lobster, the rising value of farmed salmon production is the main factor in the proportional decline in rock lobster contribution.

Source: ABARE Australian Fisheries Statistics 2007



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Key Markets and Exports

Rock lobster processed in Tasmania is exported to the mainland or directly overseas as live, fresh product. Export of live product has increased dramatically since the late 1980s, while exports of cooked product have declined. Tasmania, South Australia and Victoria continue to work collaboratively through Southern Rock Lobster Ltd to market their product with the aim of expanding export opportunities beyond South East Asia.

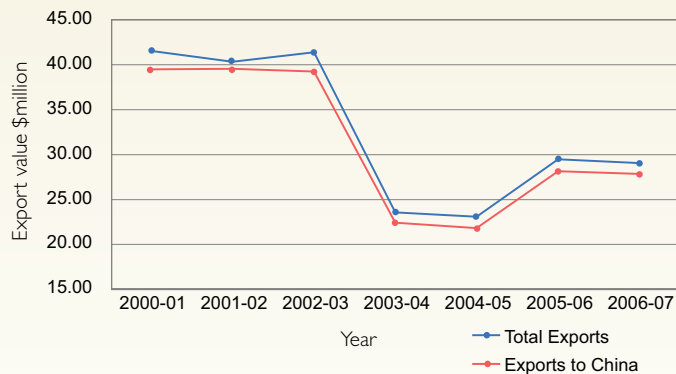
In 2006/07, rock lobster was Australia's top export by value (\$463 million) and Hong Kong the top export market. Other primary markets for rock lobster include Japan, the United States, China and Chinese Taipei.¹ Prices in overseas markets have risen recently because of a decline in supply from competing producers and increased marketing and promotion, resulting in stronger international demand for Australian product.

Higher unit prices in 2006-07 for Tasmanian rock lobster realised a \$6.5 million increase in production value for the State industry. This is in contrast to the decline on the gross value of Western Australian rock lobster (Australia's largest supplier). The WA industry was affected by prevailing El Niño conditions and as a consequence, the volume harvested was reduced by 12 per cent.²

In 2006-07, 1506 tonne of rock lobster was harvested in Tasmanian waters at a production value of a little over \$59 million. Of this amount, 554 tonne was exported at a value of approximately \$29 million.³

In March 2002, the industry gained export exemptions under the *Environment Protection and Biodiversity Conservation Act 1999* in recognition that the industry is being managed in a sustainable manner. This status has been maintained by periodic review by the Australian Government.

Rock Lobster Exports



In the chart it appears that since 2002-03 exports of rock lobster have fallen significantly. While overseas exports from Tasmania have declined from around 60% of the catch to 40% over the last three years, Victorian based exporters are now buying more rock lobster in Tasmania, most of which is subsequently exported and reported as an export from that State.

Source: ABS Trade data





Trade and Investment Opportunities

While rock lobster ranked fourth in the nation's top 5 fisheries production by volume in 2006-07, it was the top performer in terms of value (\$441 million). The economic impact of the Tasmanian rock lobster fishery is significantly greater than that depicted in simple comparisons of total annual revenue or gross value of product. The rock lobster is a resource derived from a wild fishery with production constrained by numerous factors (weather; access, available biomass, operating costs etc) that determine a very high "scarcity rent". Scarcity rent means that the return on the resource is far greater than that achieved by other primary industries.⁴

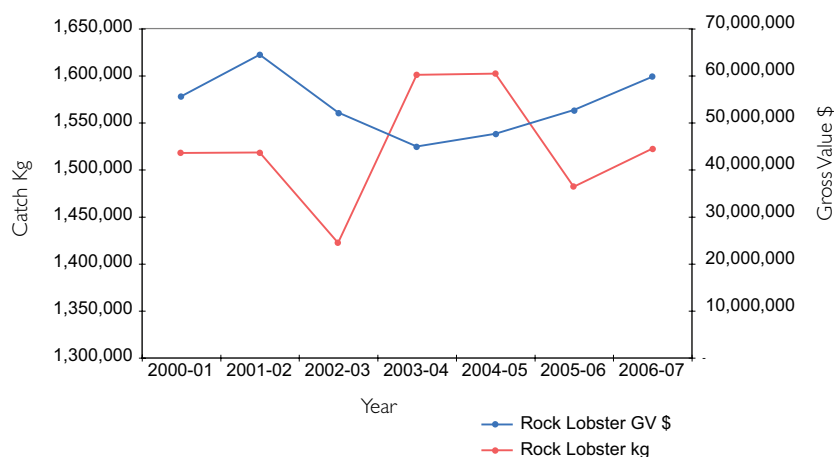
With continued stock rebuilding, the industry now has opportunities to consider how to maximise economic gains to the community and to improve beach prices for the fishing sector. Research into the cost and benefits of translocating rock lobsters from areas of slow growth to areas of more rapid growth is just one example of several new opportunities with potential to increase productivity.

The industry is looking to broaden its export horizons in the longer term. The premium restaurant sector in Europe and the USA are the focus of marketing initiatives, and this, coupled with rising living standards in China and demand for high-end fresh produce, will provide significant opportunities for further growth in the State's rock lobster industry.

^{1,2,3} ABARE and FRDC: Australian Fisheries Statistics 2007

⁴ Tasmanian Aquaculture and Fisheries Institute (2009): Fishery Assessment Report: Tasmanian Rock Lobster Fishery 2007/08

Rock Lobster Production



Source: ABARE Australian Fisheries Statistics 2007

Trends and Development

Tasmania's rock lobster fishery is managed as a single zone with commercial catch currently harvested from all areas around the State at an annual rate of approximately 1.6 million animals. During the 2007-08 season, 203 licensed vessels reported catches of rock lobster, a significant decline from the 314 vessels operating during the 1994-05 period when rock lobster biomass reached its lowest point.⁵

In March 1998, a quota system was implemented which sharpened fishers' focus on profit rather than maximising catch and revenue. Stocks have rebuilt considerably since this time, resulting in a rise in catch rates. The level of rebuilding is reflected in the reduced number of potlifts and vessels required to capture the total allowable commercial catch, a significant trend given that there has also been a shift to winter fishing and lower catch rates. Since the introduction of quotas, approximately 64 per cent of rock lobster catch has been taken off the exposed West Coast of Tasmania.⁶

^{5,6} Tasmanian Aquaculture and Fisheries Institute (2009): Fishery Assessment Report: Tasmanian Rock Lobster Fishery 2007/08





Challenges

Biological factors and fishing effort vary dramatically in Tasmania's fishing regions, and this presents major challenges for fishery assessment and management. The use of a spatially explicit stock assessment model that distinguishes eight different areas in State waters has proved a valuable tool in addressing these challenges.⁷

The decline in value of key export species, including rock lobster, since 2000-01 is largely the result of declining unit prices because of the strong appreciation of the Australian dollar against the currencies of major trading partners.⁸ Other challenges to industry include rising input costs, variability in the Australian dollar and demand in overseas markets.

Changes in the fishery dynamics are also a challenge for management. In recent years the fishery has moved more into inshore waters and is also gravitating more toward the south of the State. Climate change may also pose challenges to the industry although these are yet to be quantified.

Research, Development & Extension

Tasmanian Aquaculture and Fisheries Institute (TAFI) research covers a broad range of issues including improved understanding of the biology of exploited species, ecological effects of fishing, size of stocks, effects of different management strategies and improving the economic yield from the resource.

The Rock Lobster Stock Assessments provides regular estimates of the size of the stock and trends in populations. Rock Lobster Pre-Recruit Monitoring studies predict future abundances of legal sized lobsters that can be refined with information on the abundance of pre-recruits. There are also several projects examining ways of improving our processes for estimating lobster stock sizes.

Research has been undertaken on the grading of lobsters, live holding techniques, and transforming low-value pale lobsters into dark red lobsters in order to improve export quality and prices.

In deep water rock lobster research, spatial management aims to improve yield, value and sustainability through translocation of lobsters from deep water to inshore, and bioeconomic modelling of rock lobster stock.

The Zoology Department of the University of Tasmania is exploring ways of rebuilding ecosystem resilience by assessing management options to minimise formation of 'barrens' habitats by the long-spined sea urchin in state waters, and the role large rock lobsters play in minimising the formation of urchin barrens.

⁷Tasmanian Aquaculture and Fisheries Institute (2009): Fishery Assessment Report: Tasmanian Rock Lobster Fishery 2007/08

⁸ ABARE and FRDC: Australian Fisheries Statistics 2007

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For further information on industry sectors - Tasmanian Food Industry Scorecard
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