

Tactical Research Fund FRDC Project 2010/229
**Empowering Industry RD&E: Easy-to-read Guide on Assisting
fishing businesses adjust to implementation of quota control
management in their fishery**

Sevaly Sen



Australian Government

**Fisheries Research and
Development Corporation**

FISHERIES ECONOMICS RESEARCH & MANAGEMENT

Project No. 2010/229

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NON-TECHNICAL SUMMARY

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OBJECTIVES:

1. Interview a range of fishers from fisheries that are moving to Individual Transferable Quotas (ITQs) management, to understand their areas of concern and what information they would require to better adapt their businesses to operate efficiently and profitably under ITQ management.
2. Produce a comprehensive but easy-to-read guide targeted particularly for use by fishers on "Understanding and adapting fishing businesses to ITQ management."
3. Examine and document the unintended consequences of ITQ implementation.

OUTCOMES ACHIEVED TO DATE

The information contained in the guide should reduce some of the initial resistance of small and medium sized operators that can occur when moving from input controls to quota management. This will be achieved by providing information targeted about what to expect in the fishery, and guidance as to how to evaluate the best choices for operators to adapt to the changed operating environment. Industry reviewers of the guide have observed that the guide would be very useful for operators new to quota management. It is anticipated that management agencies will also benefit as a better understanding by operators of ITQs would ease the transition to ITQs thus reducing transitional costs and expedite what has in the past, often been, a fairly long adjustment phase.

It is well known that fishers can take a significant amount of time to at first accept the move to ITQs and then even longer to operate efficiently and effectively within this management environment. The Western Australian Rock Lobster fishery recently moved to ITQs and the Commonwealth's Torres Strait rock lobster fishery and two fisheries in the Northern Territory have also just moved to ITQs. ITQs are also being considered for the Commonwealth Torres Strait Rock Lobster and Northern Prawn fisheries and some of the other Northern Territory fisheries.

Some operators have been resistant to this management change because they are unfamiliar with operating under ITQs and are concerned about how their businesses need to adapt under such a management regime.

The project has produced a simple but comprehensive guide to understanding ITQ management with information on how to best adjust and adapt their businesses to operate efficiently and profitably. Much of the information was gathered from interviews with operators from fisheries that have moved to ITQs as well as with operators who are in fisheries moving to ITQ management. One thousand hard copies and 50 CD-ROMs of the guide have been produced. The Guide has been sent to peak industry associations, management agencies, FRDC and the Empowering Industry RD&E project. A generic Power Point presentation has also been produced (available on the CD version of the Guide) for use by industry associations and management agencies at meetings to discuss quota management with operators.

KEYWORDS: Individual transferable quotas, quota management, output controls

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I would like to thank Ian Knuckey and Chris Calogeras of the FRDC Empowering Industry RD&E project and Jason Barratt (Board Member, Western Australia Rock Lobster Council Inc.); all of whom provided ongoing support during the project.

I would also like to thank the operators, fishery managers and other stakeholders who were interviewed during the course of this project and and/or gave their comments on the draft guide. Their time and their insights into ITQ management were very valuable.

1. Background

The issue of helping businesses adjust to the implementation of quota management¹ was raised at the Empowering Industry Small/Family Business Workshop held in Perth on 31 May 2010 with particular reference to the Western rock lobster fishery in WA.

It was observed that many small to medium sized operations whose fisheries were moving, or have recently moved to output controls, were unfamiliar with the ways their businesses may have to change to adapt to the new management regime.

Subsequently, this issue was discussed with members of other fisheries moving towards quota management including the Commonwealth's Northern Prawn Fishery and the Northern Territory's offshore tropical snapper fisheries. The project received a level of support that justified the initiation of a project to address the issue.

2. Need

It is well known that many fishers can take a significant amount of time to accept the move to Individual Transferable Quotas (ITQs) and then even longer to operate efficiently and effectively within this management environment. Whilst there is much written on the theoretical merits and practical implementation of ITQs from a regulators/managers perspective (eg. Kaufman et al. 1999), virtually nothing has been published which is specifically directed at fishers to help them understand what the implementation of ITQs means to their fishery. The few "guides" that are available, such as "The Fishermen's Guide to the Quota Management System" (Boyle 1993) explain the technical, compliance and management requirements for New Zealand fisheries. Other publications, such as Fisheries Management Paper No 138 (Donohue and Barker, 2000), have reviewed information and potential pros and cons of quota management. Importantly, none of the available material identifies how small and medium sized businesses can adapt and thrive under ITQ management.

The Northern Territory (NT) Demersal and Timor Reef Fisheries have recently implemented quota management and the Western Australian rock lobster fishery is transitioning to quota management. The NT is also considering quota management in some of its other fisheries and the Commonwealth's Torres Strait rock lobster fishery and, possibly the Northern Prawn Fishery, will be moving to quota soon. Some operators, particularly those not familiar with quota management, can be resistant to the change because they do not have a clear understanding of what ITQs will entail for their own operations or how they can adapt their businesses to the new management regime.

This project was designed to address these concerns by producing an easy to use comprehensive generic guide to understanding ITQ management which includes information on important considerations on how to best adapt their businesses to operate efficiently and profitably under a quota system.

¹ Readers unfamiliar with quota management are referred to the guide attached as Appendix 2 for further explanation.

3. Objectives

Objectives 1 and 2 were determined by the Empowering Industry RD&E project on the basis of discussions with fishing operators. Objective 3 was added at the request of the FRDC Board:

1. Interview a range of fishers from fisheries that are moving to ITQ management, to understand their areas of concern and what information they would require to better adapt their businesses to operate efficiently and profitably under ITQ management
2. Produce a comprehensive but easy-to-read guide targeted particularly for use by fishers on "Understanding and adapting fishing businesses to ITQ management."
3. Examine and document the unintended consequences of ITQ implementation.

4. Methods

As mentioned in Section 2, before quota management is introduced, there is little information available to operators which addresses the business concerns of operators running small and medium sized fishing businesses. To ensure that the relevant issues were addressed in the guide and that the content was pitched at the right audience, consultation with industry stakeholders was a critical component of project methods.

The methods used by the project were as follows:

1. A literature and internet search to find any similar guides either in fisheries or other sectors and information on the impact of ITQs.
2. Interviews with industry stakeholders. The Empowering Industry RD&E project assisted the Principal Investigator by providing contact details of small and medium sized operations in fisheries recently gone to quota (Western Australian rock lobster; Northern Territory demersal and Timor Reef fishery) or in fisheries already gone to quota management. Telephone interviews were arranged with these stakeholders and additional telephone interviews were held with other stakeholders recommended by the respondents. Telephone interviews were also held with bank managers in Victoria, Western Australia, New South Wales and Northern Territory; fisheries managers in Western Australia and Northern Territory, and; the Western Australian Small Business Development Corporation who were responsible for giving business advice to rock lobster operators in Western Australia when ITQs were implemented. The interviews covered issues that were of concern to operators of small and medium sized fishing businesses, experiences of operators in fisheries which had been under quota management for a few years, as well as any unexpected consequences of ITQs. A total of 41 people were contacted and 35 interviews were undertaken.

3. On the basis of the literature and internet search and the results of the interviews, a draft guide was prepared. To ensure that the main issues were covered and the guide was pitched at a suitable level for small and medium sized businesses, the contents and key elements of draft guide were presented at a meeting of the Demersal Fishermen's Association in NT in mid February 2012.
4. This feedback was incorporated into the draft guide that was then circulated to twenty-eight stakeholders for comment. These stakeholders were predominantly from those who participated in the interviews and expressed a willingness to comment on the guide. This included operators in the Commonwealth, Western Australia, Northern Territory, Queensland, Victoria, Tasmania and South Australia as well as fishery managers. The guide was also sent to peak industry associations in Western Australia, Queensland and Northern Territory. Comments were also requested and received from the principal investigators of the Empowering Industry RD&E project.
5. Comments were then incorporated into the finalised guide. The guide was then professionally edited, designed and printed (paper and CD) for distribution. The guide is attached as Appendix 3. A generic Power Point presentation was also prepared as an additional file on the CD.
6. Printed copies, CDs and a generic PowerPoint presentation of the guide were sent to peak industry bodies for distribution to their members and fisheries managers.

5. Results/Discussion

5.1 *Key Issues in developing an easy-to-read guide*

The key issues facing small to medium sized operators when moving to quota management were:

- the difference between an allocation based on units and the annual allocation based on weight;
- understanding what the effect of binding and non-binding TACs may have on quota values
- the need to understand business cost and revenue structures in order to make sound business decisions, including whether to stay in the fishery;
- the likely changes that a business faces as a result of quota management. This includes restricted catches, increased paperwork, greater flexibility of operation, changes in legal obligations, possible increases in management levies, and the need for greater administrative and financial management skills in the business;
- how to evaluate options available for a business once quota has been allocated such as whether to exit or stay, to sell or buy quota and whether to lease in or lease out quota. and;

- ways in which the fishery as a whole may change as a result of quota management such as a reduction in effort, changes in quota ownership (e.g. concentration; outside investors).

5.2 *Unexpected consequences of quota*²

The FRDC Board requested the Principal Investigator, during interviews about quota management, to ask about any unexpected consequences of ITQs additional to those already identified by other research in Australia (Aslin, 2001). A number of issues were raised, that may be regarded as unexpected consequences of quota, which the guide was able to incorporate and identify clearly. These included the following:

Allocation processes strongly influence opinions about quota

Opinion of some operators who had been through an allocation process was influenced, in some cases strongly, by their views on whether the allocation process was equitable. In general, where allocation was thought to be inequitable, ITQs were thought to have resulted in few benefits in the fishery as a whole. If allocation was thought to be favourable either to the respondent or in the respondents' opinion, to the majority of operators in a fishery, ITQs were regarded more positively.

Dominance of the lease market of quota by processors to secure supply

Control of the quota lease market by processors was mentioned by operators in the Western Australian Rock Lobster fishery and the Commonwealth South East trawl fishery. The reduction in Total Allowable Catches (TAC), combined with the introduction of ITQs, has required processors to find ways to secure supplies to ensure the viability of their own operations. Processors have been doing this by leasing in quota and then sub-leasing it to operators who are then contracted to supply them. In the Western Australian Rock Lobster Fishery, this has had the effect of pushing lease prices up as, according to respondents, processors are able to outbid individual operators wanting to lease in quota. Whilst this has been good for quota owners who choose to lease out, it has increased the costs of fishing for those operators who need to lease quota and wish not to be tied to a processor.

Companies that are vertically integrated have a comparative advantage

The general view amongst respondents was that, with regard to quota leasing and general quota administration and management, companies which are vertically integrated have a comparative advantage over smaller owner operated vessels. It was argued that this is because the costs of leasing quota can be distributed throughout the supply chain; that the ability of these companies to access funds to lease or buy quota is higher, and; these companies are able to manage the whole supply chain in order to benefit from high market prices. However, whether any of these perceived benefits of vertical integration are more or less in a fishery under quota management compared to a fishery managed in a different way would require more in-depth analysis.

² Readers unfamiliar with quota management are referred to the guide attached as Appendix 2 for further explanation as well as the references in the Further Reading section of the guide.

Increase in management costs

There is a belief amongst some respondents that because output controls reduce the number of input controls required, total annual management fees/levies in the fishery should either stay the same or decrease. The surprise increase for these operators largely concerns research costs, which have, according to them, been higher with output controls. This increase has been largely due to the increased costs associated with the need for greater observer coverage and independent fishery surveys. Whilst these research requirements have been identified as a likely cost increase under quota management (Walters and Pearse, 1996), possible cost increases should be clearly spelt out to operators when quota management is being debated for the fishery.

Also, without an analysis of the changes in management and research costs between input control and output control fisheries and the changes in cost recovery policies over the same time period in State and Commonwealth fisheries, it is not possible to verify the views of these operators.

Banks and their understanding of quota

One of the benefits of ITQs has often stated is that they grant more secure property rights compared to a licence or permit and thus can be used as collateral when borrowing money from banks. Discussion with bank managers, who are guided by policy guidelines from their head office, suggest that banks tend to take a cautious view about quota as collateral – with loan to value ratios of around 30-50% in newly established quota fisheries and around 60% in state-managed rock lobster and abalone fisheries.

The main reason for this cautious approach, according to the interviews, is the banks' view of ITQs as a property right. Banks regard the quota right as less secure than other forms of property, such as a house, because the state or its management agency retain some measure of the cluster of rights that go to make up the ITQ property right. This includes discretionary intervention powers vested in fisheries managers; limits to transferability because consent and other statutory conditions are required; suspension and cancellation of entitlements for commission of offences; limited or no (Commonwealth) compensation measures and limited duration of some ITQs such e.g. the duration of the management plan (Tsamenyi & McIlgorm, 2000). Also, there are risks associated with the value of the ITQ because a TAC can be reduced to zero.

Another reason for this cautious approach appears to be limited understanding of ITQs at bank branch offices, particularly when there has been no previous experience of quota management and ITQs.

6. Benefits and Adoption

The Empowering Industry RD&E project had identified that owner-operated small to medium sized fishing businesses unfamiliar with quota management were the group most in need of an easy-to-read guide to help them adjust their businesses. Larger, often vertically integrated businesses, which work in multiple fisheries, tend to be more familiar with quotas and have the business infrastructure to manage quotas. Therefore the guide was targeted at operators of small to medium sized fishing businesses.

Table 1 shows the distribution list of the Guide. The CD version of the Guide also included the generic Power Point presentation.

Table 1: Distribution List of the Guide

Organisation	guide (number of copies sent)	CD version plus generic PowerPoint presentation
Empowering Industry RD&E program	120	2
Western Australian Fisheries Industry Council	180	2
Fisheries Western Australia: Rock Lobster Manager	15	1
Northern Territory Seafood Council	60	1
NT Fisheries: Aquatic Resource Manager	15	1
Queensland Seafood Industry Council	60	1
Northern Prawn Industry Inc.	30	2
Australian Fisheries Management Authority: Northern Fisheries Manager	15	1
Fisheries and Aquaculture : Department of Primary Industries and Resources of South Australia:	15	1
Seafood Industry Victoria	60	1
Tasmanian Seafood Industry Council	60	1
Women's Industry Network Seafood Community: President	15	1
TOTAL	645	16

Peak industry associations in each State were requested to disseminate the guide to their members in fisheries recently gone, or about to go to, quota and were requested to place a PDF version of their guide on their websites. A suggested media release for their next newsletter informing members of the guide was also attached.

It is anticipated that management agencies with plans to implement quota management in some of their fisheries will also benefit as the guide may help reduce resistance to quota management by helping operators understand the possibilities or their businesses under quota management.

7. Further Development

Industry association, Business Enterprise Centres and commercial banks based in fishing ports could be encouraged to place the guide on their website or provide copies of the guide for their clients. An information guide on ITQs as an investment opportunity targeted at

banks and potential investors would assist these investors in understanding ITQs and help inform their decision-making. However, this guide would require access to quota sale and lease price data, held mainly by brokers.

8. Planned outcomes

The information contained in the guide should reduce some of the initial resistance to ITQs by operators of small and medium sized businesses which has occurred when moving from input controls to quota management. This will be achieved by providing information about what changes to expect in the fishery, and guidance as to how to evaluate the best choices to adapt to the changed operating environment. All operators, who had an opportunity to comment on the draft guide, found the guide useful and noted that they wished the guide was in existence when their fishery had moved to quota management.

It is anticipated that management agencies will also benefit from the guide as a better understanding by operators of ITQs may contribute to easing the transition to ITQs and speed up what has in the past, often been, a fairly long adjustment phase. Potentially, this could decrease the costs of adjustment as operators will have a better understanding of what to expect, how to manage their quota holdings and evaluate options for their businesses, based on their goals.

9. Conclusion

Both objectives of the project were met. Interviews were carried out with stakeholders working in fisheries that had moved to, or were planning to move to quota management. Issues of concern were consistent across these fisheries. Operators of small to medium sized fishing businesses, which had little experience or knowledge about ITQs, required a guide which explained some key issues around quota management. These included the relationship between quota allocation and TACs, the changes to expect for their businesses and in the fishery as a whole and, how to estimate business cost and revenue structures in order to evaluate their options once a fishery has introduced quota management. These issues were comprehensively addressed in the easy-to-read guide (Appendix 3) which also incorporated observations from operators working in quota managed fisheries.

Additional information requested by the FRDC Board on the unexpected consequences of ITQs suggests that perceptions concerning the fairness of the initial allocation at both the individual and at the fishery level may influence how operators respond to quota management in the early years of implementation. Control of quota by processors to secure supply was also raised as an unexpected consequence, particularly in fisheries where TACs have been reduced. Increased research and management costs payable by industry (through research and management levies) was also of concern, but further research would need to be carried out to evaluate whether these increased costs were a direct result of a move to quota management or are attributed to other reasons, such as changes in cost-recovery policies.

REFERENCES

Aslin, H.J, Robin D. Connor and Melanie Fisher (2001). *Sharing in the catch or cashing in the share? Social impacts of Individual Transferable Quotas and the South East Fishery*. Bureau of Rural Sciences and Centre for Resource and Environmental Studies, The Australian National University

Boyle D. P. (1993). *New Zealand Commercial Fisheries: The Fishermen's Guide to the Quota Management System 1993/94*. Clement and Associates Limited. Tauranga, New Zealand.

Donohue, K. and E. Barker (2000), *Information on Quota Management of Rock Lobster Fisheries in South Australia, Tasmania and New Zealand*. Fisheries Management Paper No. 138, Fisheries Western Australia. Perth.

Kaufmann, B., G. Geen and S. Sen (1999). *Fish Futures: Individual Transferable Quotas in Fisheries*. FRDC/FERM, Australia.

Tsamenyi, B. M. & McIlgorm, A. (2000). Enhancing Fisheries Rights Through Legislation - Australia's Experience. In R. Shotton (Eds.), *Use of Property Rights in Fisheries Management* (pp. 88-95). Rome, Italy: Food and Agriculture Organisation of the United Nations

Walters, C. and Pearse, P.H. (1996). 'Stock information requirements for quota management systems in commercial fisheries', *Reviews in Fish Biology and Fisheries*, Vol 6.

Appendix 1: Intellectual property arising from the research

Not applicable. All results are open to public dissemination.

Appendix 2: Staff that have been engaged on the project

Ms Sevaly Sen, Director, FERM.

Appendix 3: Guide (Attached)

FROM HUNTER TO HARVESTER

Adapting your fishing business
to quota management



A GUIDE

FROM HUNTER TO HARVESTER

Adapting your fishing business
to quota management

A GUIDE



Australian Government

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FRDC Project 2010/229 Empowering Industry RD&E: Assisting fishing businesses adjust to implementation of quota control management in their fishery

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1. INTRODUCTION

The purpose of this handbook is to help you, as an operator in a fishery going to or recently moved to quota, to navigate your way through the business decisions regarding Individual Transferable Quotas (ITQs), and to help you adjust your business to the new system.

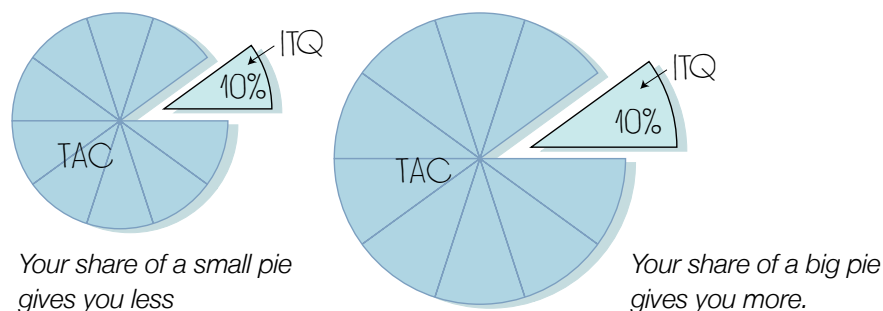
This guide does not discuss the pros and cons of ITQs or the different quota allocation methods, as it is assumed that these discussions will have already taken place. If you are interested in these issues, there are many publications on the subject – a list of some is attached at the end of this guide.

1.1 What are Individual Transferable Quotas (ITQs)?

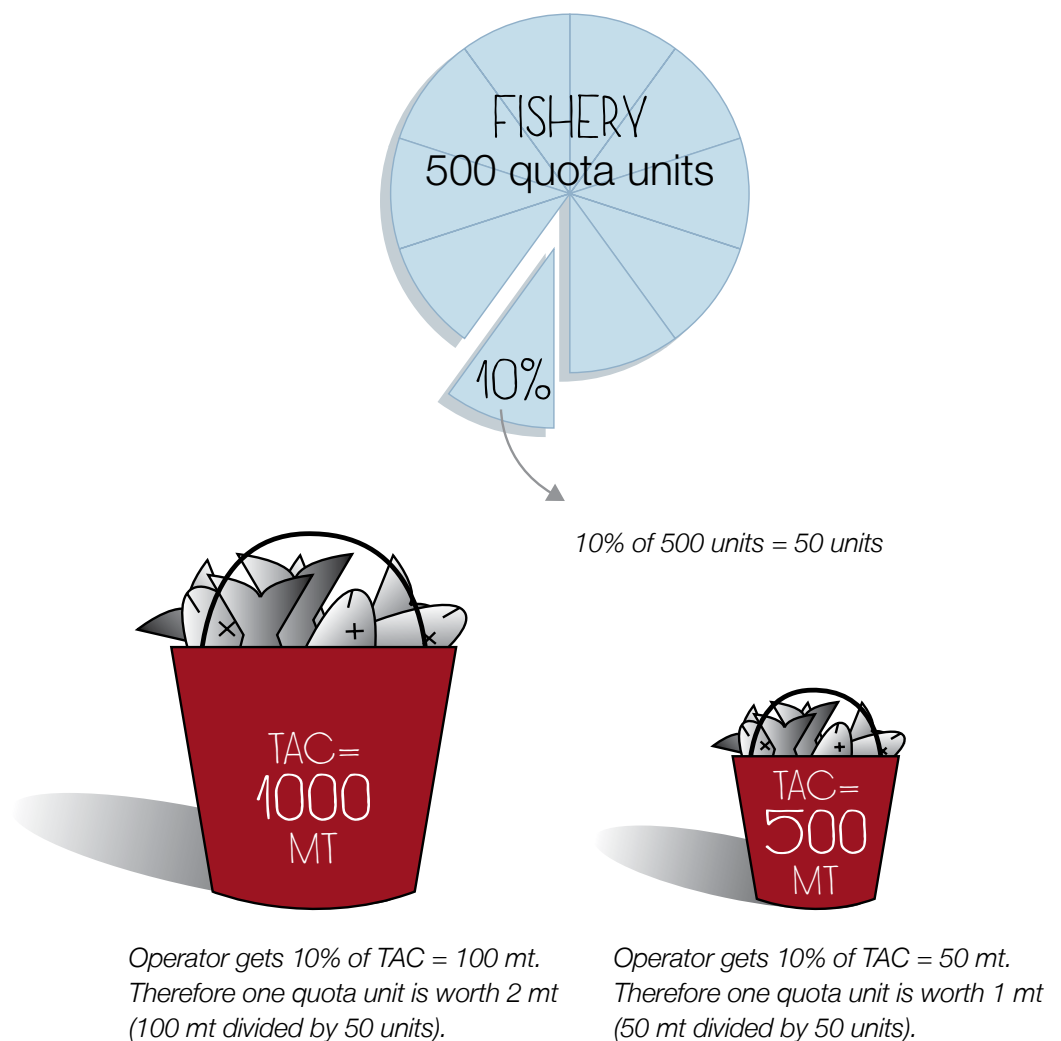
ITQs (often called “quotas”) are an output control where operators get a percentage share of the Total Allowable Catch – the TAC.

TAC (*Total Allowable Catch*) is the amount of catch that can be taken in a specified period, usually a year. It is usually based on a stock assessment which in turn is based on logbook catch and effort data, biological information, research survey data and any other relevant information.

Imagine the Total Allowable Catch being like a pie to be shared amongst several people, including you. One slice is your ITQ share. If the pie (the TAC) gets bigger or smaller, the size of each person’s slice also changes but **your proportion remains the same**.



Usually the ITQ is granted as a proportion of the Total Allowable Catch (TAC) in units, units of entitlement, shares or Statutory Fishing Rights (SFRs). As the TAC is set in metric tonnes, these units are then converted into a weight equivalent for the year – the amount you are allowed to catch. Once the TAC is set for a year you can calculate your allowed catch, as shown in the following example:



By setting the TAC and quota this way, the TAC can be varied without changing the units allocated to you every year. Quota units can generally be sold, bought or leased for a short or long time (depending on the regulations in your fishery).

Sometimes there are additional conditions attached to your quota, like only being able to sell to someone who has a licence to operate in the fishery. Or there may be restrictions on the amount of quota you can own, or the minimum amount of quota you can hold to operate in the fishery. This will vary from fishery to fishery.

1.2 Why are ITQs considered a good thing for many fisheries?

ITQs are often introduced when the fishery cannot support the number of operators, or has been over-fished. The TAC is sometimes set well below previous catches, to allow the fish stock to rebuild.

The idea behind ITQs is that by limiting the amount of fish an individual can catch (output controls) rather than limiting how they catch (effort controls), the race to fish is stopped. You get your part of the TAC no matter how or when you want to go fishing.

Under ITQs operators concentrate on catching their quota at the least cost, rather than in the old system of racing to catch fish before anyone else. This has an added advantage of preventing the flooding of markets and subsequent low beach prices. With less gear in the water and less competition at specific times each remaining vessel has the opportunity to earn more money.

As catch is limited under ITQs, many operators concentrate on improving the quality of their catch (to get a better price) in order to maximise the return from their quota.

The effect of ITQs is that once an allocation has taken place, some people will decide to stop fishing by selling or leasing their quota to those that wish to stay.

Those that stay are, according to the theory, the ones that can catch the TAC most profitably or with the lowest costs. The ones that leave do so because they can make more money doing something else or by leasing their quota out rather than fishing it themselves.

“We used to fish 260 days of the year, now we can fish 60 days of the year for the same profit and choose the days we want to fish.

My dad was never able to attend any of my soccer matches when I was a kid as he was always out fishing but now I can go to my kids’ soccer games.”

— **Rock Lobster Fisher,**
Western Australia

1.3 What are ITQs worth?

When a quota system is introduced one of the biggest questions is about the price of quota. You will need to base any decisions you make on this information.

This is a very difficult question, as price will depend on demand and supply, which in turn depends on what people think are the future earning opportunities in the fishery.

Unfortunately, there is very limited information available on actual (not offered) quota sale and lease prices in Australia, as they are currently not listed publicly.

Market prices can also be distorted by government buyouts or speculative investors, who may push up prices.

The experience in some fisheries has been that the lease price can vary significantly from around 10% to 60% of the beach price, and the buy price tends to be around two to three times the beach price of fish. However, in mature and/or high value quota fisheries, the buy price can be around six times the beach price. You could use these estimates as a guide, accepting that prices may be more or less in your fishery, and will depend on demand and supply.

If you are not under any financial pressure you could wait until some trading has occurred, perhaps amongst the bigger operators. This will give you a better idea of the going price of quota.

If someone is willing to pay a greater amount for your quota than it is worth to you, you should consider either selling or leasing your quota to them, or changing your operation to become more efficient and profitable (so that the quota is then worth a lot more to you).



INSIDER'S TIP

Know the ropes

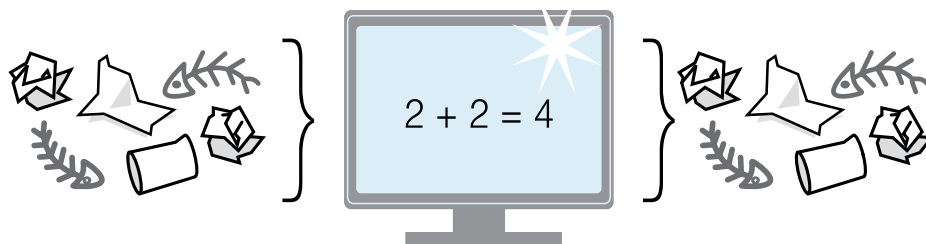
Because ITQs provide you with an asset – a share of the fishery – the value of that asset will go up and down, for the reasons other assets, such as your house or your boat, go up and down in value: demand and supply.



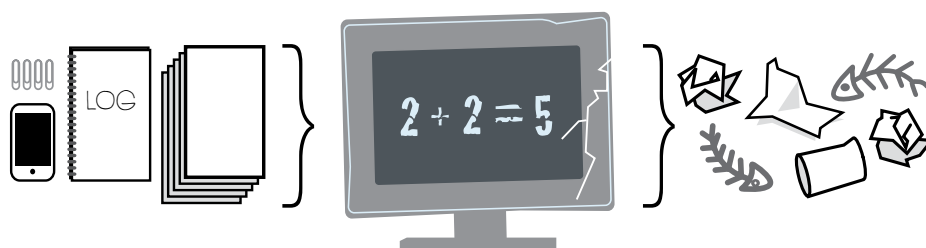
1.4 The heart of the ITQ system is setting an effective TAC

If TACs are based on faulty science, poor data or stakeholder lobbying, ITQs cannot prevent over-fishing. Setting a TAC that reflects what can be sustainably taken out of the water, and that takes into account market conditions, is therefore critical to an effective ITQ system. It ensures that this new asset keeps its value.

An effective TAC mostly depends on good logbook (catch and effort) data, data on relative abundance, and a good stock assessment model. All partners in the fishery – the fishers, the managers and the scientists – have a role in ensuring an appropriate TAC is set based on this information.



GARBAGE DATA + PERFECT STOCK ASSESSMENT MODEL = GARBAGE RESULTS



PERFECT DATA + GARBAGE STOCK ASSESSMENT MODEL = GARBAGE RESULTS

“It’s not rocket science. Fishing is like a bank account. You have to live on the interest and leave the principal intact.

The principal is the amount of fish you want to leave in the water so that your share of the fishery swims on. The interest, which can vary from year to year, comes in the form of the Total Allowable Catch, which will stay higher if fishers are good conservationists.

After the system is in place, ITQs are way more valuable than your boat, which is worthless without them.”

— Operator, Alaska, United States

1.5 The ideal TAC

The ideal situation is to have a “binding TAC”, which means that catches are pretty much equal to the TAC. That is usually an indication that the quota system is working well and that the benefits of going to ITQs are likely to be felt.

You won't be discarding fish or finding it very hard (or expensive) to catch your quota.

1.6 What happens if catches are way below the TAC?

This is known as a non-binding TAC, and is where catches do not get anywhere near the TAC.

Sometimes this may be because the stock assessment is not reflecting the situation on the water and the stock is not doing as well as the assessment says it is.

Sometimes it may be because there is little demand for the fish, or the cost of catching a fish is higher than the beach price. Sometimes, operators may be operating in more than one fishery, and are making better returns in those fisheries.

If catches are way below the TAC there will be plenty of quota for sale or lease around, so quota prices will be low.

Remember: A non-binding TAC may be a signal to potential investors and banks that the stock assessments are inaccurate or market conditions are poor. They may have doubts about the future potential of the fishery and be reluctant to lend money or invest in the fishery.



INSIDER'S TIP

*Protect the value
of your ITQ!*

To protect the value of your new asset, your quota, it is important to ensure that the TAC reflects an overall catch that is both profitable and sustainable to fish. Therefore, providing accurate catch and effort data matters!



1.7 What happens when the TAC is set too low?

When a TAC is set too low more fish are available to be caught than the TAC will allow. This can lead to discarding and highgrading (taking the best and chucking the rest). This is bad for business and bad for the resource, as dead fish are returned to the water.

Although quota sale and lease prices may be high, as people will be scrambling to get hold of quota to cover any excess catches, in the long term it may be a signal that there is something wrong with the stock assessment, and lead to doubts about the sustainability of the resource.

“Banks are slowly getting more comfortable with quota. But we keep a close eye on resource sustainability to determine whether the fishery is being overfished, as that helps to determine how we value quota.”

— *Bank Manager, Victoria*



INSIDER'S TIP

Get involved

If you have the time, contribute to the TAC setting discussions by attending relevant meetings. It will also help you better understand the process.



2. PREPARING TO GO TO QUOTA

If your fishery is about to go to quota the biggest thing on your mind is probably the allocation method. How much will I get? Understandably, until this has been finalised it's hard to picture what your business will be like once quota has been introduced.

Often, however, you have a fair idea of the likely allocation method and can make a guesstimate of what your quota will likely be. You can use this information to help guide your decision making.

There are two steps you can take to prepare yourself for making decisions before the actual allocation has been formalised:

Step 1: Understand what changes for your business when a fishery goes to quota.

Step 2: Understand your business.

2.1 Understanding what changes for your business when the fishery goes to quota

Your catch is restricted

As mentioned earlier, the reason most fisheries go to quota is to make the overall fishery more profitable and valuable.

That may be hard to understand when often TACs are restricted to a fraction of previous total catch in the fishery, but many quota systems have achieved this over the longer-term.

Therefore, the most important change for you is that you cannot land an unlimited amount of the fish species under quota. You must have quota equivalent to the weight of quota species you land. You may own that amount of quota or lease it in. In addition, your fishery may have requirements of minimum and maximum quota holdings, which could further restrict your catch.



Your paperwork increases



INSIDER'S TIP

Smooth operator

Make a real effort to familiarise yourself with the new paperwork and any additional requirements before quota comes in, to ensure that you fully understand your obligations.



Quota requires more paperwork, because there needs to be a way to monitor catch against quota. It is worth familiarising yourself with the quota monitoring paperwork even before you have received an allocation, to make sure you understand what is required and to ensure that your boat is equipped for the changes (for example, there may be a requirement for a vessel monitoring system – VMS or electronic logbooks).

Examples of additional obligations you may have are:

- Changes in lodgement of logbook returns from monthly to daily.
- Pre-departure notice (prior reporting).
- Prior landing/pre-landing notice.
- Declaration of catch/unloaded fish notices.
- Catch Disposal Records which are completed by fishers, transporters and fish receivers.

- Quota transfer forms (for selling or leasing quota).
- Quota reconciliation provisions (monthly, quarterly or annual).

You gain more flexibility in the way you fish

The good news is that there should be more flexibility in the way you fish. As the main management tool of the fishery is controlling catch, some other restrictions on your fishing inputs (input controls), which were previously used to limit catches, may be relaxed, such as gear restrictions and fishing seasons.

By keeping yourself informed of the likely changes before quota is up and running and actively participating in any discussions concerning the removal of input controls you can fully prepare your business to benefit from these changes.

Remember that some input controls will still remain. These are ones that continue to be important to the sustainability of the stock or protection of the environment, such as area closures and bycatch reduction measures.

Your legal obligations may change

Check to see how your legal obligations have changed. Ask the management agency if you are not sure.

Especially look at:

- “Under and over” provisions – whether and how much quota you are entitled to carry over/under into the following year(s).
- Your obligations as a quota owner when you lease out quota.
- Relaxation of gear or other effort restrictions.
- Cancellation provisions.
- Capital Gains Tax implications of selling quota.

“Sometimes it’s tempting for operators to try to get away with not doing a lot of the quota compliance stuff – as there is a lot – but what they forget is that in the end it pushes the value of the ITQ asset down for everybody.

Quota isn’t worth much if people think they can fish without it.”

– *Operator, Queensland*

“Preventative maintenance is usually the first to go when operators are trying to save costs. This creates a vicious cycle, as they end up losing fishing days and getting more into debt.

It's really important that you put aside enough money in your fixed costs for maintenance.”

— **Operator, Tasmania**



Photo courtesy of M. Barwick NPF

Your management levies/fees may increase

Experience in other Australian fisheries suggests that management levies may increase under a quota system, in particular, quota compliance, reporting and research costs.

The reason research costs may increase is that in quota fisheries there is a more pressing need for fishery independent data through scientific surveys, to determine relative abundance and set accurate TACs. This is because catch per unit effort, which is a major input into stock assessment models, is a less reliable indicator of relative abundance, as operators often change their fishing practices to target or avoid particular species, to suit quota availability or meet market demands.

Financial management and administrative skills become more necessary

Managing quota requires a considerable amount of financial management skills, to ensure that your business is optimising the flexibility of the quota system to get the most out of the system.

Understanding whether it is better for your business at any particular time to own or lease quota, being able to negotiate prices and obtain and finance quota when you need it, are all valuable skills under quota management.

Also, the paperwork obligations require that someone in your business stay fully on top of the administrative and regulatory requirements. This makes sure that you know what your quota holdings are at any particular time, so you are fully compliant with all the relevant regulations and don't get caught out.



INSIDER'S TIP

Download fishing
spreadsheets

You can download Excel spreadsheets for calculating your income statement which are especially designed for fishing businesses:

<http://seagrants.uaf.edu/map/fishbiz/pubs/spreadsheets/spreadsheet.html>



2.2 Understanding your business

Income statements

Understanding your business costs and revenues before the fishery goes to quota will help you make sound business decisions.

The best place to start is to prepare an income statement. Income statements take sales from normal operating activities and subtract expenses. You may already have this information, but if you do not, the following example describes what is included in an income statement.

An income statement has three sections. Example:

ANNUAL INCOME STATEMENT		\$
A. Gross Revenue / Fish Sales		150,000
Variable Operating Costs		
Crew Shares		
Crew Insurance		
Provisions		
Fuel & Lube		
Gear		
Bait & Ice		
Misc Operating Costs		
Sub-Total Variable Costs		
Fixed Costs		
Port & Harbor Costs		
Maintenance		
Licence Costs		
ITQ levies		
Vessel & Equipment Payments		
Vessel Insurance		
Professional Fees		
Miscellaneous Fixed Costs		
Sub-Total Fixed Costs		
B. TOTAL COSTS		
Gross Operating Profit/Loss (A minus B)		

1. This is money earned from sales of your catch.

2. Variable costs (or operating expenses) are costs directly related to catching fish, and vary based on the amount of fishing activity you do. They include fuel, bait, ice, crew share (including your share), food, marketing costs and fishing supplies.

3. Fixed costs (overheads) are those that do not change with the amount of fishing you do. They include insurance, licence fees, vessel maintenance, office expenses, accountant/lawyer fees, storage, interest payments, depreciation and some taxes. Fixed costs reduce as your catch increases.



INSIDER'S TIP

A clear advantage

It is important to prepare an income statement, even if you think that you know your business, as sometimes your cost structures can surprise you.

"In the first year of quota, your accountant will be your best friend."

— Operator, Tasmania

Preparing your income statement allows you to work out how much it costs to run your business, and provides a basis for you to estimate:

- How much quota you will need to run a profitable business.
- How to structure your quota holdings – selling, buying or leasing in/out.

How much catch do you need to continue fishing?

Once you have worked out your income statement the next steps are to estimate your contribution margin and the break-even point for your business.

The contribution margin is a measure of the ability of your business to cover variable costs with revenue. It is the difference between gross revenues/kg and variable costs/kg. You need this to calculate your break-even.

A break-even point shows you how much catch you need to keep your business going (pay all your expenses), just as it was.

If you already keep good business records it will be easy to calculate break-even!

STEP 1

Prepare a business statement for your business for at least one year.

STEP 2

Extract the following from your income statement:

Catch (quantity) and
average selling price

Variable costs

Fixed costs

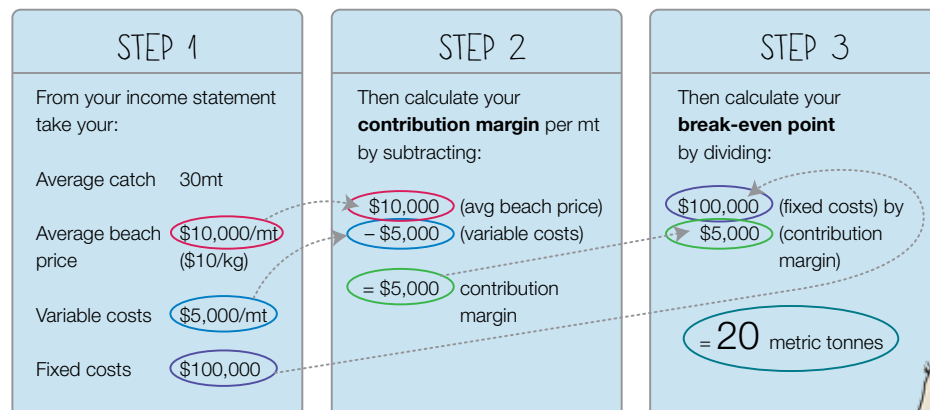
STEP 3

Calculate your contribution margin

STEP 4

Calculate your break-even point

How to calculate your break-even point. Example:



How do I work out break-even if I work in other fisheries as well?

The simplest way to work out the break-even point for a fishery going to quota is to estimate the proportion of variable and fixed costs that can be attributed to that fishery. It does not have to be perfect, but you probably have an idea of the percentage of time and money you spend in that fishery compared to other fisheries you work in.

Use that percentage to work out your break-even by this method, as shown in the example below:

STEP 1

Estimate the percentage of your costs and revenues that come from the quota (ITQ) fishery. Example:

Total business in all fisheries
Catch = 25 mt
Variable costs = \$100,000
Fixed costs = \$180,000

ITQ fishery only estimate
60%
55%
50%

STEP 2

Apply that percentage for the quota (ITQ) fishery. Estimate the average beach price. Example:

ITQ fishery only
Catch = 25 mt x 60% = 15 mt
Variable costs = \$100,000 x 55% = \$55,000
Fixed costs = \$180,000 x 50% = \$90,000
Beach price for quota fishery = \$10/kg

STEP 3

Calculate your contribution margin

STEP 4

Calculate your break-even point.

What do you do with these estimates?

Once you have done these calculations you will have a good idea of how your business is doing and what changes may be required to adapt to the new quota management system.

If you know what your likely allocation is, and what any additional costs may be, you can also add them in to see what your business will likely look like after quota comes in.



3. ADAPTING YOUR BUSINESS AFTER ALLOCATION

Allocation is often a stressful and anxious time for operators. Once you receive your formal quota allocation you can make important decisions about your business.

3.1 Decide your goals

Firstly, think about what your goals for your business are, as this will help you make the right decision for you. Goals may include:

- Maximise profits.
- Keep earning what I am currently earning.
- Earn an income and lease out my quota.
- Cash in and sell my quota.
- Expand my operations.
- Reduce my operations.



Photo courtesy of M. Barwick NPF



INSIDER'S TIP

Deep thinking

Experience has shown that quota systems take a while to settle down, and if you are able (and can afford to), try not to make a rushed decision about your future.

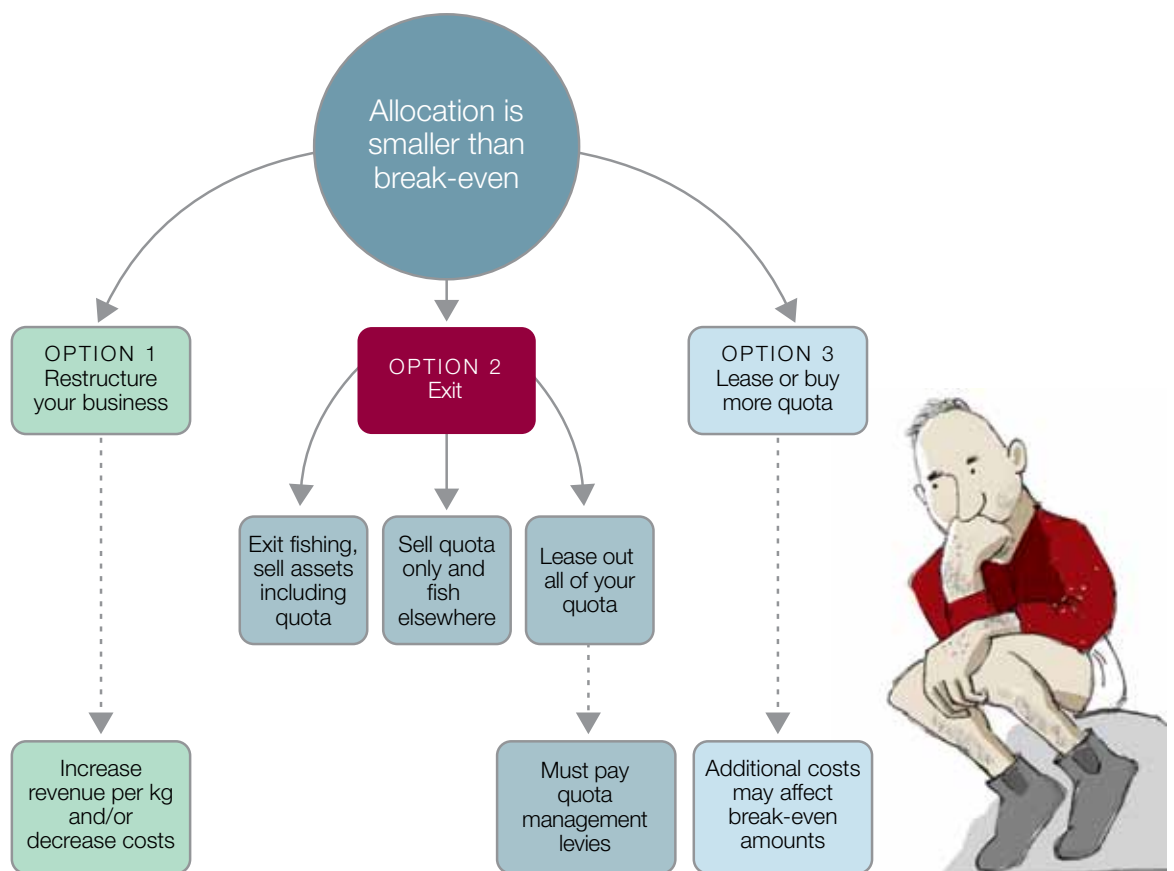


3.2 Estimate your break-even with your new allocation

If you have already worked out your break-even for your business prior to going to quota (see previous section) you will be able to tell if your allocation is enough to cover your break-even. Don't forget to add any additional costs, such as higher management levies, in your calculations.

3.3 When your allocation is below your business break-even

If your allocation is lower than your estimated break-even (which has included changes in management levy costs and any other anticipated



cost changes) you have a number of choices available to you (see chart). Also, remember that if quotas work well, the TAC may increase in later years, so your allocation (in kilos) may increase.

Exit and leave the fishery

You can take advantage of the value of your quota asset by selling or leasing it to another operator or an investor in the fishery and then exit the fishery and /or continue (or start to) fish in another fishery. Or you can stop fishing entirely (e.g. retire or change to another line of work).

If you decide to leave fishing altogether and wish to sell your boat and other gear as well, you should decide whether to sell the entire boat/gear/quota package, or split them into separate items.

Understandably, some operators are deeply attached to their vessels and you might find that the boat you love is not worth as much to potential buyers who may be mainly interested in buying quota. It is important to try and see the attractiveness from the purchaser's point of view as well as your own when deciding whether to sell quota separately or when deciding on asking prices.

The potential buyer may prefer a walk-in/walk-out package including your boat and gear. Or they might only be interested in buying your quota and you may have to find other buyers for your boat and gear.

How do I sell or lease my quota?

While many quota sales and leases are made direct to people you already know, there are also other avenues for selling quota. Your accountant, adviser, or bank manager may know potential buyers who do not currently operate in the fishery.

Ship-brokers deal in quota sales and leases, as do some real-estate agents and business brokers in and around big fishing ports. Generally, you can list your quota for sale or lease at little to no cost, and the broker gets paid a percentage once a sale or lease happens. You should negotiate the commission percentage and additional expenses

“The huge advantage of quota is that the smaller operator can fish to the market and cherry pick the times, compared to the larger operator who requires greater volumes.

Sometimes the smaller operator has a cost advantage, as he doesn't have to lease in quota to be viable. There is also some crew sharing going on, which was not possible before.”

— Operator, Western Australia

(such as advertising) before agreeing to give the broker your sale, and be clear about whether you want the broker to be an exclusive agent (which means the broker may be more active in promoting your quota, but may lock you into only using that broker for a period of time). You should also be clear whether the sales commission has to be paid if you find the buyer rather than the broker.

Prices of quota are often given per kilo of quota rather than on the quota unit itself.

Restructure your business

You can restructure your business without having to buy or lease additional quota by reducing costs or increasing revenues. You should, therefore, probably plan to fish less trips or shorter trips. Other possible cost savings are to:

- Fish closer to port or shore.
- Reduce the number of crew you use/look at crew sharing with another operator.
- Reduce the size (and running costs) of the vessel you use.
- Increase the value of your product (this will depend on the species but could include better on-board sorting and icing, shorter transfer times, or timing catches to avoid oversupply. You should examine your fishery and its customers more broadly and strategically than you would normally (perhaps with the aid of a business advisor) to determine what market segment you should target, what the specific needs are of that market segment, and what assets and business methods would be required to service that market segment).

In some ITQ fisheries these product/price effects are so pronounced that many operators have radically changed their operations and equipment, and have been rewarded with high and consistent profits as a result.

Buy or lease more quota

This may involve accessing finance to buy or lease additional quota which would mean higher costs for your business. You will need to look at ways to reduce your other costs or increase your revenues to cover these additional expenses.

Buying quota provides you with greater security but costs more.

Pros and cons of buying quota

- Quota can be expensive. This may need financing (possibly bank loans or equity from professional or other types of investors).
- You would be buying an asset that may hold or even increase its value (of course, asset values can also decrease). Selling it at a later date may give you a capital gain (or loss).
- Quota may be hard to find. Often fisheries have few operators and it may be difficult to find those that are willing to sell their quota.
- Owning quota may not suit your business. If your catches are unpredictable (due to weather, breakdowns, illness, etc.) then you may run the risk of not fully fishing your quota for the year (and so “wasting” a portion of it).
- Changes in the TAC may also leave you with not enough, or too much quota later on.

Leasing quota has a lower initial cost to your business (it is not a capital item, but an operating item) and may be easier to find and arrange (much more quota is leased than sold). Leasing may offer you more flexibility if you anticipate that the TAC will increase in coming years and your initial allocation will eventually be sufficient.

There are two ways you may be able to lease in quota, depending on the regulations:



Photo courtesy of M. Barwick NPF



- Pay as you catch, where quota is only transferred when you catch the fish.
- Up front, before the start of the fishing season.

If you decide to lease quota, you have to decide what is the best option for you, taking into account the expectations you and others have about what the lease price will do over the fishing season and whether any quota will be available over the season. For example, you may be in a fishery where all quota is leased out at the beginning of the season. You don't want to end up in a situation where you don't have enough quota to cover your catches at the end of the season/fishing period.



INSIDER'S TIP

Management levies

Remember: If you lease out, you may still be liable for management levies. Also, check to see whether you have any other legal liabilities.

Pros and cons of leasing in quota

- Leasing in quota requires increases in your variable costs.
- No capital expenditure (and associated financing) is needed. Leases are comparatively cheap compared to buying quota.
- Leases have greater flexibility. If your catch is trending higher than planned, you can simply lease-in more; if the catch trend is lower than expected then you can halt leases until it recovers.

If you need more quota to stay viable, you could consider topping up your quota holding by either purchasing or leasing additional quota, using the inherent flexibility of quota to help your business run better.

You may also be able to use quota under and over provisions to help you match volumes, bearing in mind that this reduces your flexibility for that year (as your over/under-catch is used to adjust your quota). In general though, it is better not to run your business relying on unders and overs, as some management agencies are considering the removal of these provisions.

Sometimes you may find that you receive an allocation for a quota species in a zone you are no longer fishing in. This is usually when an allocation has some component of catch history in it and you were fishing those fish in that area during the qualifying period. You may decide to swap quota with another operator who wants that quota and has quota that you want. Don't forget that, although no money may change hands, you may be liable for Capital Gains Tax. Check with your accountant.

Banks and quota

If you need to borrow from the bank, check your bank's policy on lending on quota – some banks do not have a good understanding of quota as an asset class. The amount the bank is willing to lend as a percentage of the total worth of your quota is known as a Loan to Value Ratio. For example, if the quota is valued at \$100, 000 and the bank lends you \$80, 000 against it, your Loan to Value Ratio is 80%. Current Loan to Value Ratios for quota range from 60% (in well-established quota fisheries where banks understand the asset) to 25% – 30% in new quota fisheries. Loan to Value Ratios depend on the bank's view of how risky the quota is. Informed bank managers keep an eye on trends in TACs to help value the asset and determine Loan to Value Ratios.

If you do want to borrow money to buy or lease quota, it is likely you will need to provide extra collateral (real estate is often preferred). Also, shop around if your bank gives you a poor Loan to Value Ratio for quota.



INSIDER'S TIP

Think outside the square

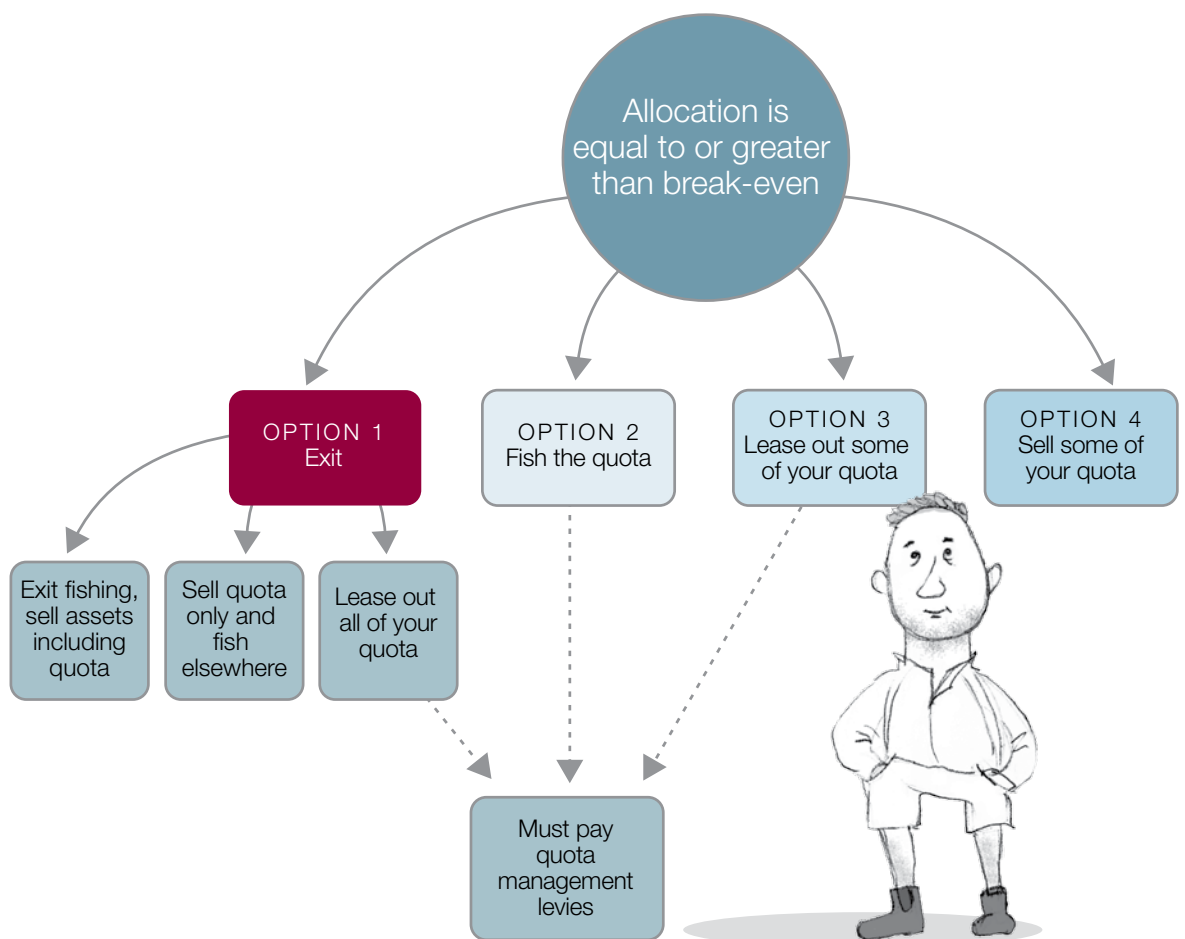
Some operators in other fisheries have chosen to sell their entire allocation, but continue fishing using leased quota. They have found this a more profitable way to run their businesses.



Some bank managers do not understand what quotas are. If this is the case, try other banks or lobby your industry association/management agency to prepare a fact sheet about quota.

3.4 If your allocation is greater than your current break-even

If your allocation is greater than your current break-even point you are in a much better position and have more options (as shown in the following chart). Of course, you could choose to exit the fishery anyway (see section 3.3 on exiting and leaving the fishery), or if you find your allocation is greater than what you think you will need, you could either sell or lease out some of your quota.



If you think the TAC may be further reduced in subsequent years, leasing out quota may be a better option than selling, in case you need to fish this quota in subsequent years.

3.5 Using quota to give your business flexibility

One big difference (and a big benefit) of a quota system is that you have greater flexibility if you can manage your business to suit the quota system. Previously, you could only sell, lease or buy a licence (and this was usually subject to restrictions). In a quota system you can sell, lease or buy small or large amounts of quota and do this from year to year as your circumstances change.

Learn to manage your quota

Although there are many circumstances which can affect your fishing business, managing your quota should be a vital part of adapting to the change and managing to get the best business outcome.

As a guide, you should estimate whether the changed circumstance is likely to be short-term (a year or thereabouts), medium-term (several years), or permanent, and take actions with your quota to match.

Generally a permanent change will result in the sale or purchase of quota, a short-term change should result in the single-year lease in or out of quota, and a medium-term change may need a medium-term arrangement. For example:

- A multi-year lease-in or -out of quota; or
- The sale of quota with an option to repurchase within a period of time for an agreed price (this option may cause the sale price to be reduced); or
- The sale of your vessel and associated permits and gear, but retaining the quota with the intention to lease it out for a number of years and then re-enter the fishery with a new vessel later.

When personal circumstances affect how much you can fish

Changing personal circumstances such as injury, illness, retirement, family problems or similar can force fishing operators to reduce the intensity of their operations. You may decide, in this case, to downsize your vessel or gear or reduce the number or duration of fishing trips. You should also consider whether, as a result, you will hold quota allocation that you likely will not be able to fish completely, and in this case, take action to sell a portion of your quota, or lease-out quota that you are unlikely to catch.

Selling part of your quota would give you a lump-sum. Alternatively, leasing out quota would enable you to have an additional income, and retain the benefit of any increase in quota values.

Generating a retirement income

If you intend to retire, you may be ceasing fishing operations. You could either sell your quota outright to generate a lump-sum, or lease out your quota to generate an on-going income.

The choice between the two options is a personal one, however, it has some complications. If selling quota here are some things you need to consider:

- Is your vessel/gear/quota package attractive enough to potential buyers that it would attract a reasonable price? Or would the quota separate from the vessel/gear be more likely to attract buyers? Would the vessel and/or gear be useable or saleable to a different market than other fishing operators (for instance leisure users, charter operators, etc.)?
- You may need to pay Capital Gains Tax (CGT) on the sale amount, or you may be eligible for CGT relief as a small-business owner, if you have held the assets for long enough and fulfil all the other conditions of the exemption. You will need to check with the Australian Taxation Office, your accountant or a tax advisor.

- If the business or quota is owned by a self-managed superannuation fund then you should seek tax advice, as the rules are complex.
- What do you intend to do with the lump-sum you obtain? There may be implications for taxation, pension assets tests and other means-tests. You should obtain expert advice for such a crucial and complex decision. It may be preferable to roll over the assets or lump sum into a superannuation scheme.





If instead you intend to generate an income by leasing-out the quota, you should consider the following:

- Leasing-out quota will take some amount of time, expense and attention, including selling efforts (even if you offer the quota leases via a broker), registration and other paperwork. You should be confident you can handle the burden.
- Quota owners must pay the fishery management levies. You should factor this cost into your income calculations.
- Lease income will be variable. For example, if the TACs reduce or increase, the market demand changes or the export market collapses, lease income will be affected.

4. WHAT CHANGES TO EXPECT IN THE FISHERY AS A WHOLE?

Experience in other quota fisheries show that there are likely to be significant changes in your fishery as operators adjust to the new output controls.

4.1 Improved economic performance

Improved economic performance has been reported in virtually all ITQ fisheries. This does not mean that all operators are better off than before, but that the fishery as a whole is performing better. This results from a combination of factors, including reduced vessel numbers and capitalisation, higher catches per boat, better prices due to quality and timing of supply improvements, and better planning and use of capacity by fishing operators.

“Usually there is not an immediate change in economic efficiency in fisheries that have gone to quota. This only happens once the number of operators and boats have been reduced. In the early years there is more pain than gains as vessels leave the fishery. After this time the efficiency gains come through.”

— **Operator, Victoria**

4.2 Fishing effort reduction

Most quota fisheries experience a reduction in the number of operators over time, as those operators who find it less profitable to fish, don't like the new system, are fed up with the increased paperwork, or are ready for retirement, decide to exit.

You can expect a reduction in fishing intensity, partly from fewer operators, and partly from less time spent fishing.

These changes may not happen immediately, but can be expected over time.

4.3 Market needs become more important

Experience in other fisheries has shown that operators become much more driven by the market when operating under quota, as they want to obtain the highest possible price for their product to maximise the value of their quota.

The result has generally been a concentration on higher-priced specialist/niche market segments (such as specific-size fish, premium fish to the restaurant trade, live fish to premium-price buyers) or a focus on consistency of supply (such as a guaranteed supply of fish to a buyer). Changes that take place include:

- Freshness enhancements such as live-holding tanks.
- Faster catch transit times from closer fishing grounds.
- Cold-chain improvements such as on-vessel and/or on-shore chilling.
- Targeting markets with a preference for smaller sizes.
- Quality-assurance e.g. traceability.

“Everyone works much more closely with their processor, changing their fishing practices to meet market demand.”

— Operator, Victoria

“There are now half the number of operators and half the number of pots fishing on the grounds, leading to less competition, and catch rates have gone through the roof and my catching costs have gone down.”

— Rock Lobster Operator, Western Australia

The Tasmanian Rock Lobster Fishery rock lobster fishers responded to catch limits under ITQs by moving their effort inshore to target higher-priced red rock lobster, rather than paler and lower valued lobster from deep-water.

Operators lobbied for a change in the quota year dates, then changed the pattern and nature of effort, with a greater effort over autumn/winter, targeting live lobster for the export market after installing live holding tanks. (from van Putten, I. and Gardner, C. (2010) “Lease quota fishing in a changing rocklobster industry”. Marine Policy, 34: 859-867.)



4.4 Concentration of quota owners

Ownership of quota is likely to become more concentrated as operators leave the fishery and their quota is sold or leased. Experience has shown that quota concentration is likely to be greatest in fisheries where the capital requirements are high and where there was already quite a lot of concentration before. Some quota fisheries have maximum quota holdings to prevent too much consolidation.

4.5 Processors become quota owners

In fisheries where the TAC has been cut considerably, processors buy or lease quota to ensure that they have the security of supply to maintain their own business viability.

Whilst this makes sense from a processor point of view, in some fisheries those operators who need to lease or buy quota may find it difficult or expensive to do so, because they do not have the buying power of processors.

4.6 Increased costs for non-quota owners

In some fisheries, operators who previously leased a licence have found that quota leasing costs are higher. This has made it much harder to make a profit and in some cases they have had to exit the fishery.

“Even if quota is owned by ‘armchair owners’ there will always be a demand for good people to catch the fish. Leasing provides an opportunity for good skippers who don’t own quota.”

— *Operator, Victoria*

However, in some fisheries where quota prices have been falling over time, operators have found it more profitable to lease and not own, quota.

4.7 Entry costs may be higher

In some fisheries that have gone to quota, the cost of entering the fishery by buying or leasing quota has increased dramatically, as previously licence costs were low. In these cases attracting new entrants has been difficult and has led to an ageing of the fleet and operators without any obvious succession.

In other fisheries, such as some rock lobster fisheries where pots were trading at high prices before quota, the costs of entry has not changed that much.



5. WHERE CAN I GO FOR FURTHER ADVICE?

If you need more free advice and assistance on preparing your business to going to quota, there are a number of places you can seek help.

5.1 Small Business Centres Australia

This is a national network of business centres whose services are partially funded by the Australian Government to support and develop small business. Contact their Head Office or check the website for a centre near you.

BEC Australia Head Office
Level 19 Central Square
323 Castlereagh Street
SYDNEY NSW 2000
Phone: 02 9089 7648
<http://www.becaustralia.org.au>

Small Business Development Corporation (for WA only)
Level 2, Gordon Stephenson House
140 William Street, WA 6000
(above the Perth underground train station)
Phone: 131 BIZ (131 249)
Email: info@smallbusiness.wa.gov.au
<http://www.smallbusiness.wa.gov.au/>

5.2 Web resources

The Alaska Sea Grant Program produces some useful publications which, although tailored for the US, provide some useful advice. The following publications can be downloaded from:

<http://seagrant.uaf.edu/bookstore/category.php?category=Fishing%20Business>

Basic Startup Guide for the Direct Market Fisherman. Information for fishermen on how to get started in direct marketing.

Tips for Managing Yearly Fishing Income. Publication on organising your year-end financial management and saving for the future, 4 pp.

Fishermen's Direct Marketing Manual. Manual on how fishermen can direct-market their seafood catch.

Calculating Profitability for a Direct Marketing Operation.
How to calculate whether directing marketing would be profitable

The Business of Fishing: Managing Finances. Publication on bookkeeping and accounting for fishermen.



5.3 Industry Associations

Your industry association may also be able to help you deal with the impacts a quota management system may have on your business. Contact the associations below or check their websites to see if there is any information that may help you. They should be able to also put you in touch with more fishery specific associations.

Queensland Seafood
Industry Association
Phone: (07) 3262 6855
Fax: (07) 3262 7650
Email: qsia@qsia.com.au
<http://www.qsia.com.au/>

Commonwealth Fisheries
Association
Phone: 02 61621283
Email: ceo@comfish.com.au
<http://comfish.com.au>

WA Fishing Industry Council
Phone: +61 08 9432 7777
Fax: +61 08 9432 7700
Email: reception@wafic.org.au
<http://www.wafic.com.au/>

Seafood Industry Council
New Zealand
Phone: +64 4 385 4005
Fax: +64 4 385 2727
E-mail: info@seafood.co.nz
<http://www.seafoodindustry.co.nz/>

Northern Territory
Seafood Council
Phone: 08 8981 5194
Fax : 08 8981 5063
Email : ntsc@ntsc.com.au
<http://www.ntsc.com.au>

National Federation of
Fishermen's Organisations (UK)
Phone: +44 1904 635430
Fax: +44 1904
Email: nffo@nffo.org.uk
<http://www.nffo.org.uk/>

Tasmanian Fisheries
Industry Council
Phone : 03 6224 2332
Fax: 03 6224 2321
Email: tsic@tsic.org.au
<http://www.tfic.com.au>

Canada Council of Professional
Fish Harvesters
Phone: +1613 235-3474
Fax: +1 613 231-4313
<http://www.ccpfh-ccpp.org>

Seafood Industry Victoria
Phone: 03 9329 5660
Fax: 0 3 9328 2533
Email: admin@siv.com.au
<http://www.siv.com.au>

FURTHER READING

Aslin, H.J, Robin D. Connor and Melanie Fisher (2001). *Sharing in the catch or cashing in the share? Social impacts of Individual Transferable Quotas and the South East Fishery*. Bureau of Rural Sciences and Centre for Resource and Environmental Studies, The Australian National University. Available online: adl.brs.gov.au/brsShop/data/12918_itq_fisheries.pdf

Bonzon, K., McIlwain, K., Strauss, C.K. and Van Leuvan, T. (2010). *Catch Share Design Manual: A Guide for Managers and Fishermen*. Environmental Defense Fund. Available online: <http://www.edf.org/sites/default/files/catch-share-design-manual.pdf>

Boyle D. P. 1993. *New Zealand Commercial Fisheries: The Fishermen's Guide to the Quota Management System*. Clement and Associates Limited. Tauranga, New Zealand.

Donohue, K. and E. Barker (2000), *Information on Quota Management of Rock Lobster Fisheries in South Australia, Tasmania and New Zealand*. Fisheries Management Paper No. 138, Fisheries Western Australia. Perth. Available online: www.fish.wa.gov.au/docs/mp/mp138/fmp138.pdf

Kaufmann, B, G. Geen and S. Sen. 1999. *Fish Futures: Individual Transferable Quotas in Fisheries*. Fisheries Research and Development Corporation and Fisheries Economics Research and Management Pty Ltd.

Shotton, R. (ed). 2000. *Use of Property Rights in Fisheries Management*. FAO Fisheries Technical Papers 404/1 and 404/2. Rome, FAO. Available online: <http://www.fao.org/docrep/003/X7579E/X7579E00.HTM>; <http://www.fao.org/docrep/003/X8985E/X8985E00.HTM>

Shotton, R. (ed.) *Case studies on the allocation of transferable quota rights in fisheries*. FAO Fisheries Technical Paper. No. 411. Rome, FAO. 2001. Available online: <http://www.fao.org/DOCREP/005/Y2684E/Y2684E00.HTM>

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