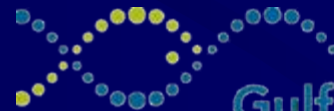


# Using Quota Trading Data to Improve Fishery Management: A New Zealand Perspective

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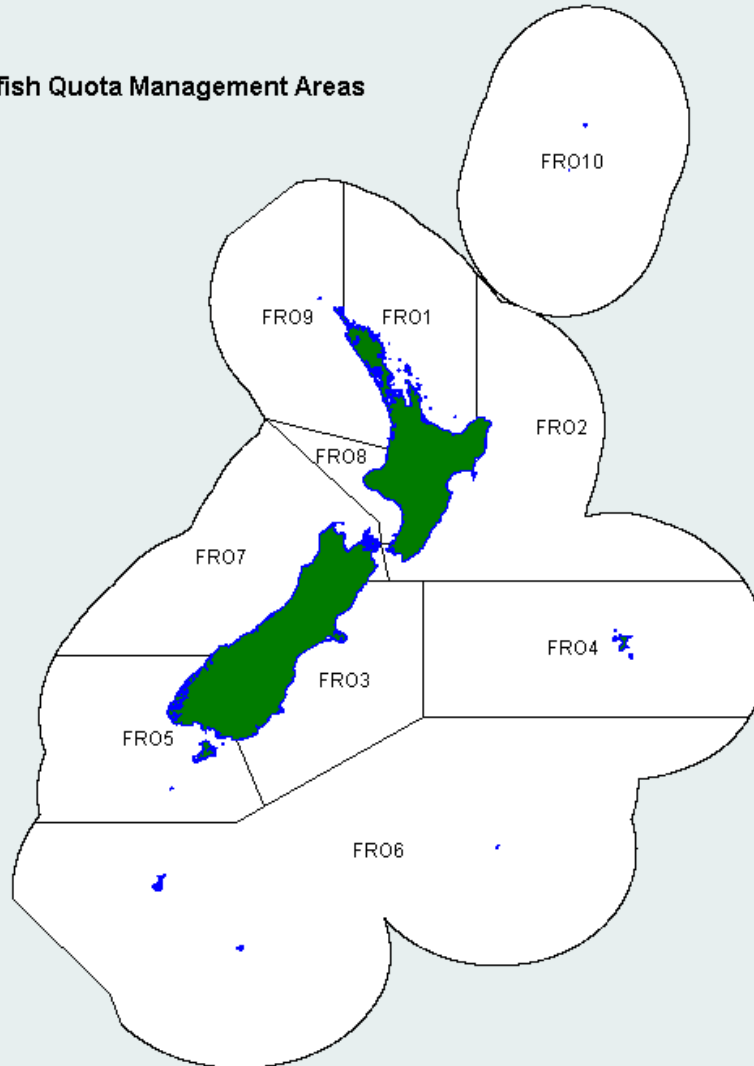
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# The New Zealand Quota Management System (QMS)

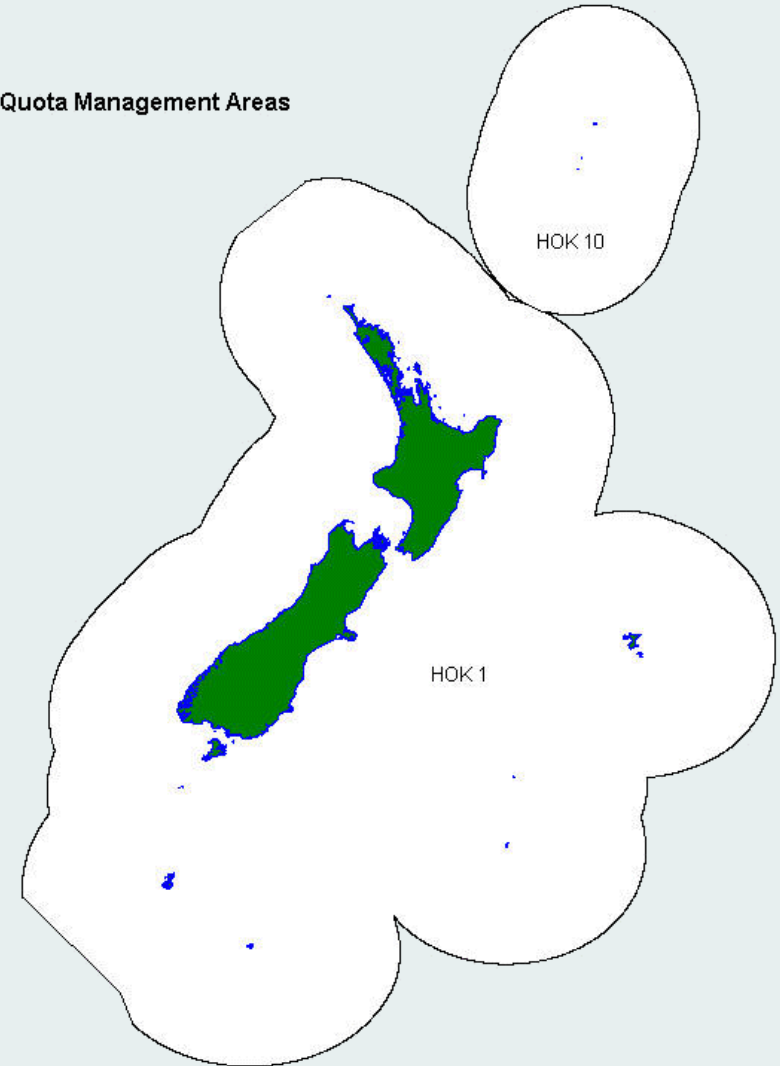
- In 1983 a deepwater enterprise allocation system created company held quotas for deepwater stocks (hake, hoki, orange roughy, etc.)
- QMS introduced in 1986. 28 species divided into 161 stocks in original QMS including several inshore species along with the deepwater species.
- Quota shares were allocated gratis in absolute tonnage based on catch histories
- Most species have several management areas, each with separate QMS stocks

# Quota Management Areas Vary by Species

Frostfish Quota Management Areas



Hoki Quota Management Areas



# The New Zealand Quota Management System (QMS)

- In 1990 quotas were redefined as a share of the total allowable commercial catch (TACC).
- In 2001 Annual Catch Entitlements (ACE) were introduced. Quota holders are issued ACE which can be used to cover catch or sold to another party
- A number of new species were introduced beginning in the late 1990s. By October 2004 there were 93 species and 550 stocks and more scheduled for introduction.
- All stocks represent distinct ACE and quota markets

# New Zealand Quota Market Data

- All quota and ACE transactions are registered with FishServe (a private company) which maintains a registry of quota and ACE ownership and manages catch information and catch-quota balancing for the government
- Prices must be reported for all ACE and quota transactions
- Fishserve produces publicly available monthly report on the volume of transactions, min-max-average quota and ACE prices, catches versus TACs, etc.
- Disaggregate quota and ACE price data available only to Ministry staff or contracted researchers

# Current Uses

- Provides information for buyers and sellers on pricing
- Used by researchers (e.g. Newell, Sanchirico and Kerr study)
- Not much else

# Future and Potential Uses

- Setting deemed values (keeping them higher than ACE prices)
- Targeting compliance (if ACE prices are near to or higher than ex-vessel prices)
- Evaluating balance of TACs in multispecies fisheries (ACE prices of bycatch (target) stocks rise (fall) as bycatch TAC becomes constraining)
- Evaluating profitability and cost in target fisheries (ACE price should reflect marginal net profits)
- Quota prices should reveal industry perceptions of future value
- Quota or ACE prices are potential basis of cost recovery charges

# Problems

- No verification of reported prices
- Incentives to miss-report
- Arbitrary pricing of multispecies trades
- In-kind trades
- Trades in vertically integrated companies
- Ace prices tied to fish prices (not truly arms-length transactions)



# Getting better ACE prices

- Categorization of trades (arms-length, vertically integrated, multispecies, etc.)
- Good business relationship data
- Median and percentile prices rather than averages
- Ground-truthing with brokers
- ACE or quota auctions including zero revenue auctions

# Conclusions

- Quota and ACE prices are potentially a very valuable information source for managers
- Getting meaningful prices in vertically integrated or multispecies fisheries can be problematic
- Will likely require cooperation from quota owners to develop appropriate data collection system
- Will always require careful analysis of data