

NWFSC Review of WDFW QS Owner Scoring Method

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Thanks for the opportunity to review the QS Owner scoring method presented by Corey Niles at the August SAMTAAC analyst work session. We reviewed the code provided by Corey and do not find any errors in the calculations. Having reviewed the output of the scoring method, we have a few thoughts on topics the SAMTAAC might consider.

Treatment of unfished QP

Currently, the ranking of QS accounts is based only on the gear-switching score which treats quota the same if it is fished with trawl gear or if it is not fished at all. If the gear-switching score alone is used, the QS owner will be penalized for unfished quota. Unfished quota could occur if:

- the QS owner transfers quota into their own vessel account and does not fish it,
- the QS owner transfers quota into a gear-switching vessel account and that company does not fish it,
- the QS owner transfer quota into a non-gear-switching vessel account and that company doesn't fish it.

Unfished quota could be a result of a wide range of situations, including unplanned vessel repairs, participation in other fishing activities, unfavorable market conditions. In general, these are outside of the control of the original QS owner.

Quota use after first trade

The current method is designed to “give credit” to QS accounts based on the final disposition of quota. For example a QS owner would receive “credit” for transferring their quota to one vessel account that did not fish the quota but instead transferred the quota to a gear-switching account. However, the same accounting methods could also “harm” a QS owner if they were to transfer their quota to a vessel account with the intention that it would be fished with fixed gear, but instead the vessel account owner transferred the quota to a trawl vessel for fishing. In this case, although the QS owner had intended for the quota to be used in gear-switching, they do not get any “credit” for those quota pounds.

Variability in scores across years

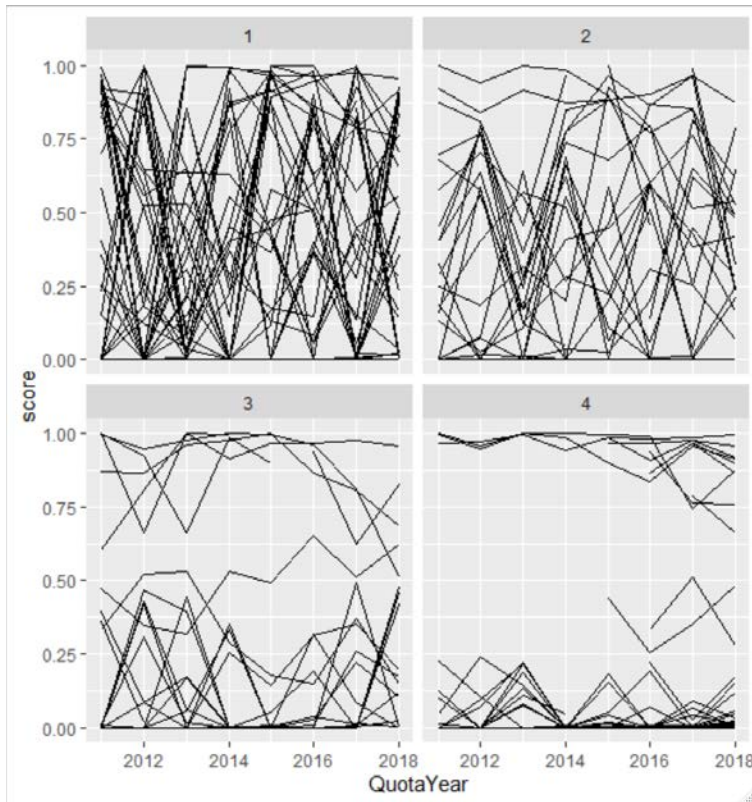
For many QS accounts, there is a large range in scores across years. These ranges are the result of trading with different types of vessels and the result of varying attainment rates for the vessels they trade with. In the figure below, each line represents the fixed gear score of each QS account through time. Since this results in a plot where all the lines are hard to distinguish we then calculated the range (maximum - minimum) for each vessel, and used that metric to separate the QS accounts into 4 groups, with 1 being those whose scores that ranged from 1 to 0.75 points across years, and 4 being those whose score fluctuated less than 0.25 points across time.

panel 1: $1.00 \geq \text{max-min} > 0.75$

panel 2: $0.75 \geq \text{max-min} > 0.50$

panel 3: $0.50 \geq \text{max-min} > 0.25$

panel 4: $0.25 \geq \text{max-min}$



Whiting operations

There are QS accounts that are associated with gear-switching operations and as expected, these accounts tend to have high scores. There are also QS accounts associated with whiting operations that have high scores. These also tend to be accounts with large swings in the annual scores indicating that maybe these QS owners do not have a specific business plan associated with gear-switching, but rather their business plan is leasing out sablefish they did not use as bycatch in their whiting operations.