

# Socioeconomics of Fish Traders on the Coast of Kenya

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On the coast of Kenya, fishing communities are comprised of fishers and fish traders who rely on marine resources for food and income.

The sustainable management of marine resources is essential to ensure that there will be fish in the future.

Illegal fishing gear, such as beach seines have been shown to have negative effects on the marine environment and on the livelihoods of fishermen.

How do beach seines affect fish traders?

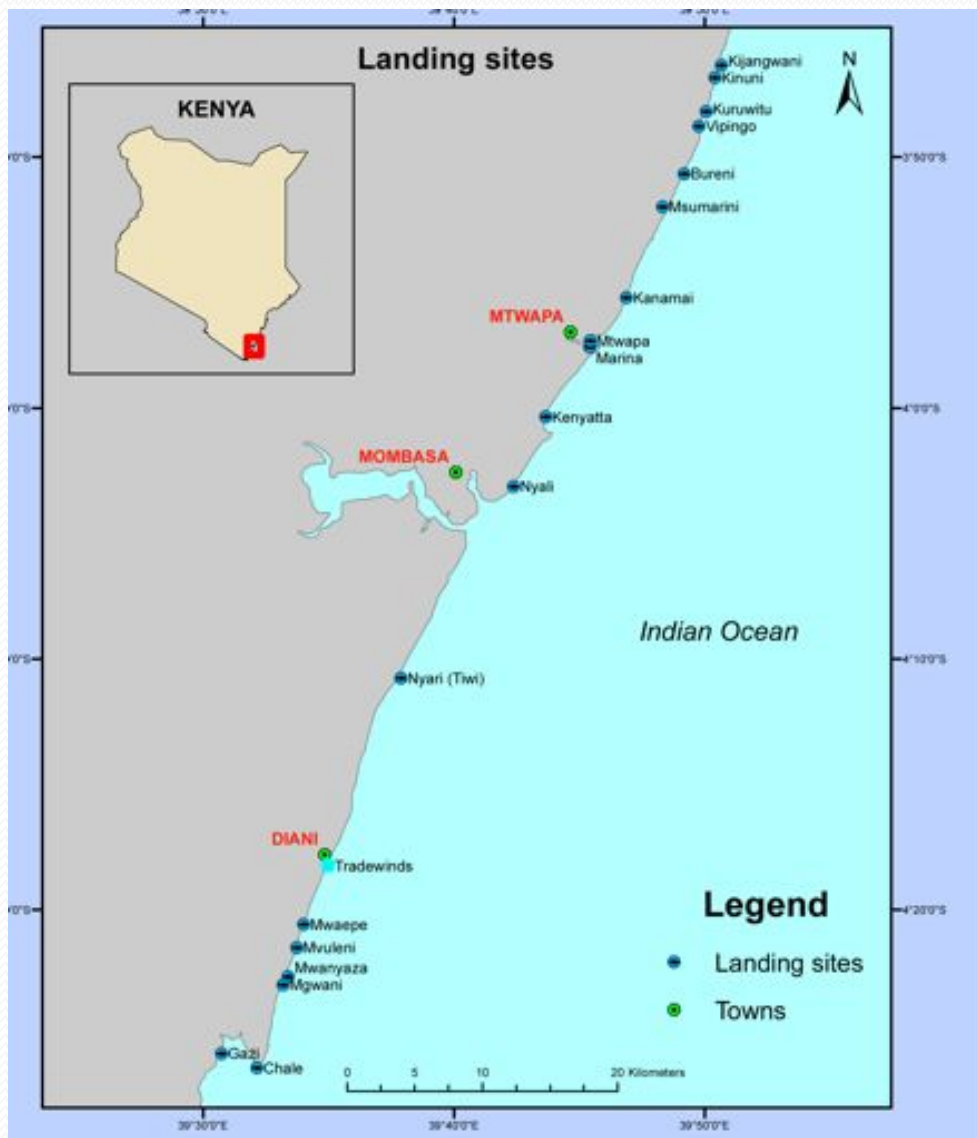




This study surveyed 142 fish traders (88 female and 54 male traders) from 19 Fish Landing Sites on the coast of Kenya. Fish Landing Sites were grouped into:

- No Seine – historically never used beach seines
- Seasonal Seine – beach seines used *seasonally*
- Seine – beach seines used year round
- Stop Seine – stopped use of beach seines

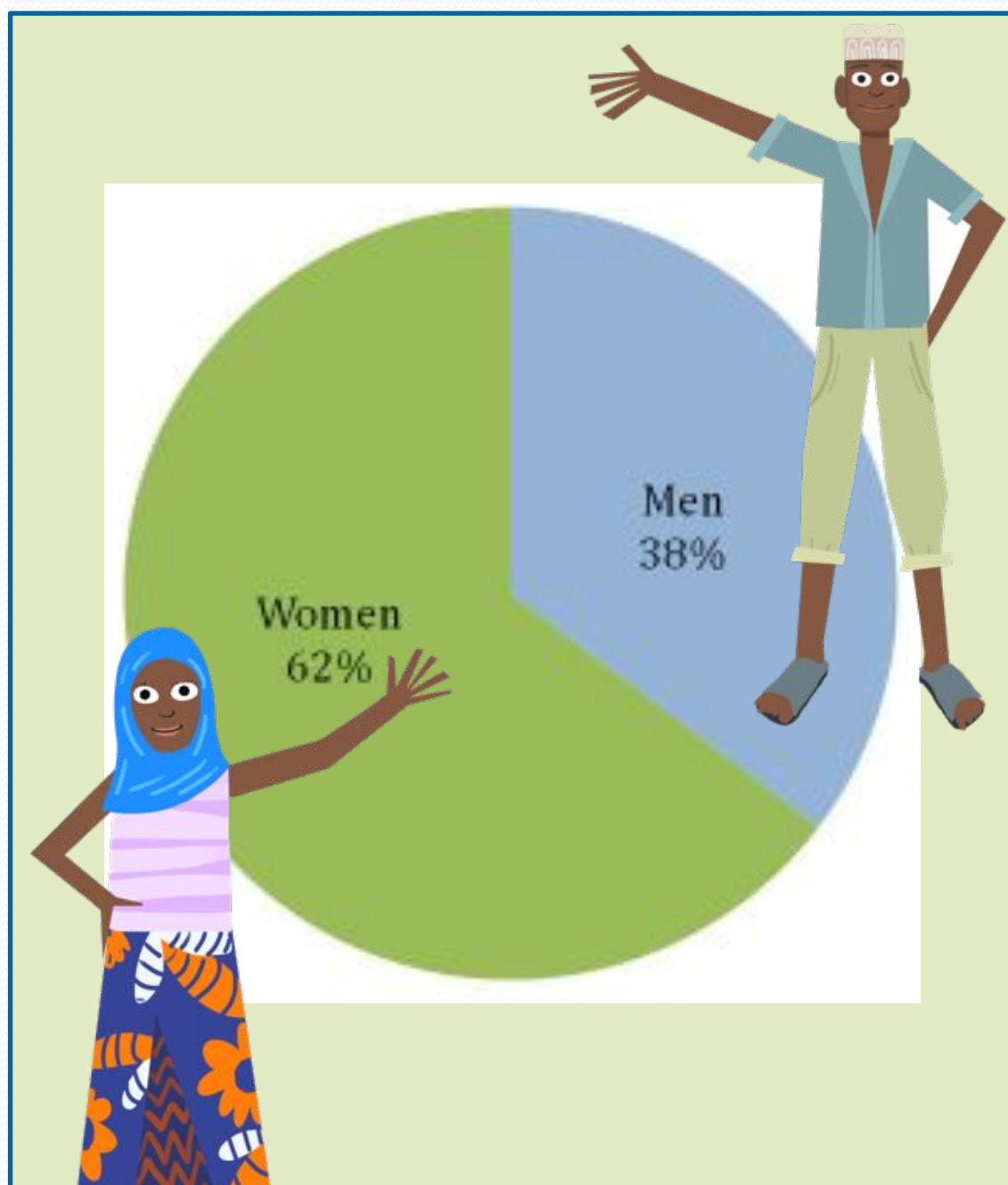
Here are some of our important findings:

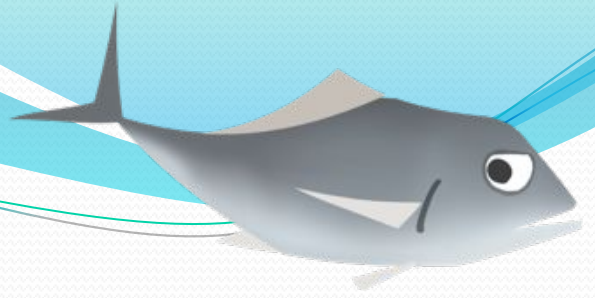


Almost 2/3 of fish traders were female.

**Fish Dealers:** 88% male, 12% female

**Fish Fryers:** 96% female, 4% male





The “average” fish trader:

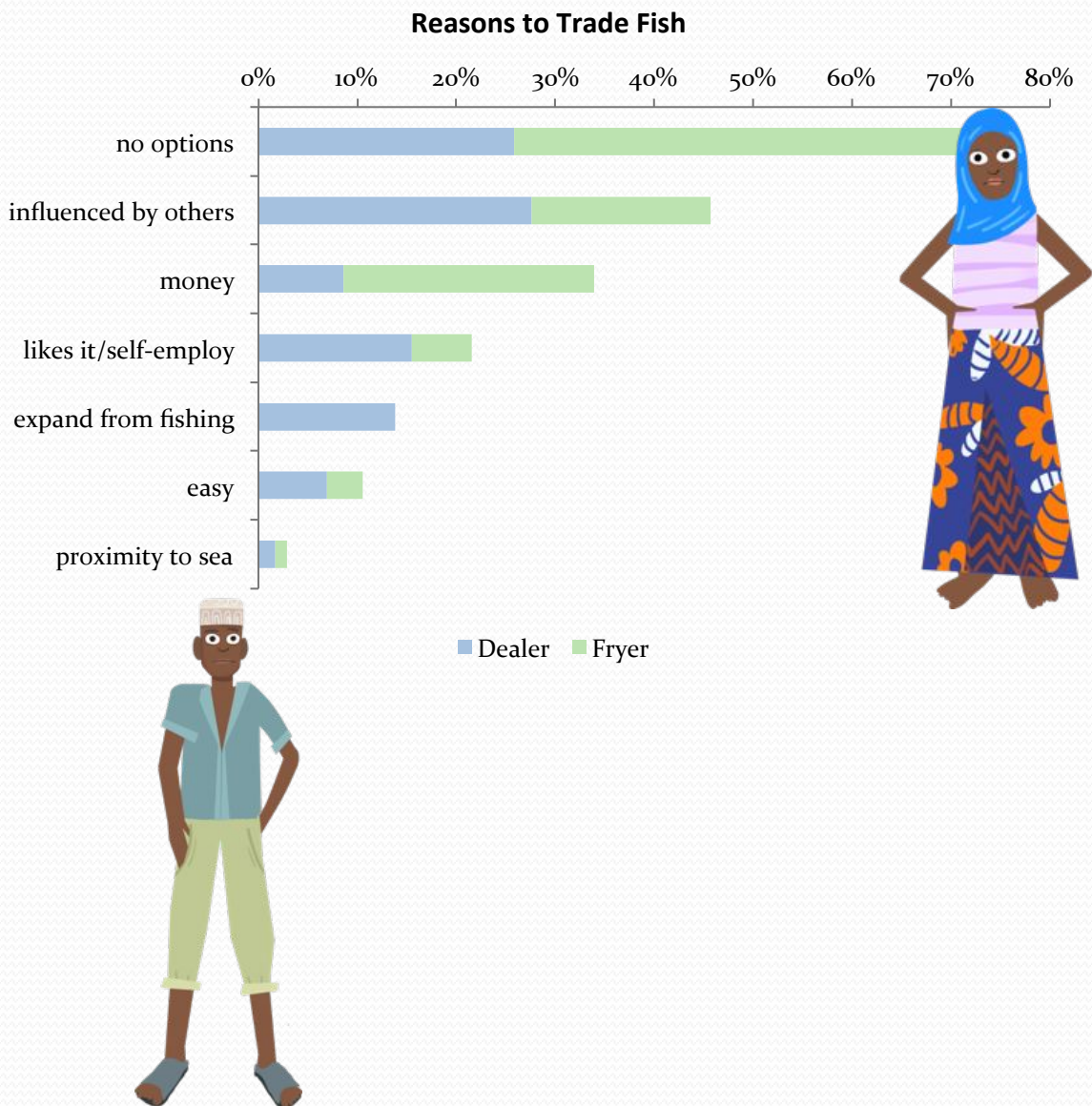
- Was 39 years old
- Had 4.25 years of formal schooling
- Was the only fish trader in a household of 7.39 members
- Worked an average of 55 hours/week trading fish
- Purchased an average of 11.5 kg of fish/day\*
- Earned an average of 3522KSH/week\*
- Spent 2784 KSH/week for household food items
- Has been in the fish trade for 10.72 years

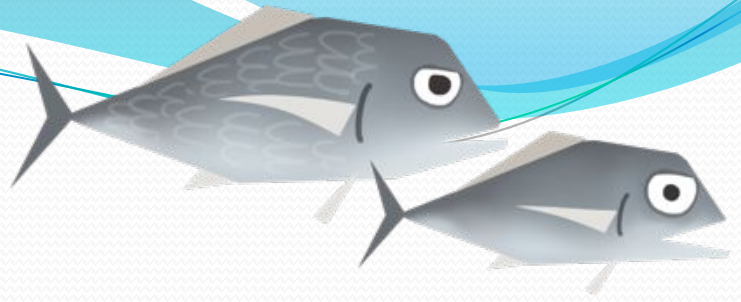
*\*excludes outliers*



Many traders (26% of **Fish Dealers** and 46% of **Fish Fryers**) traded fish because they had no other options. Only 10% of traders traded fish because it was their preferred occupation.

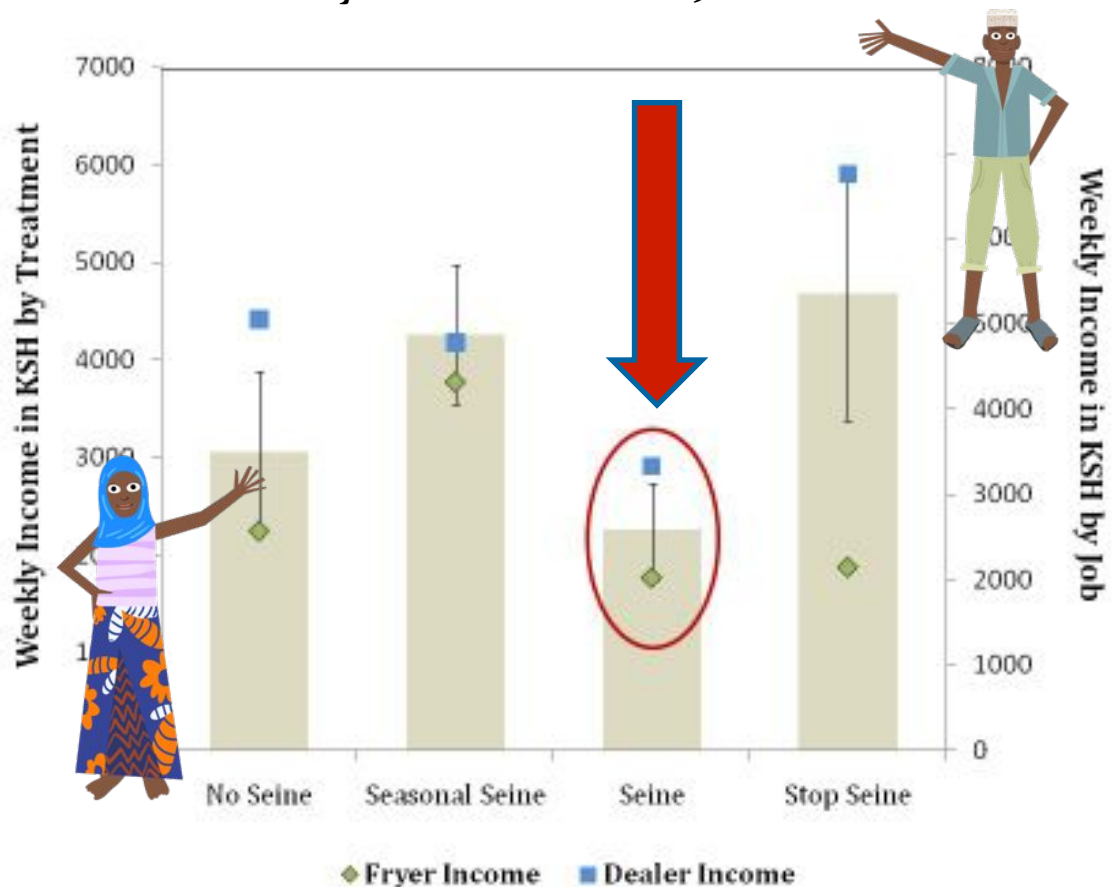
Fishing trading was the primary income for 92% of all traders.



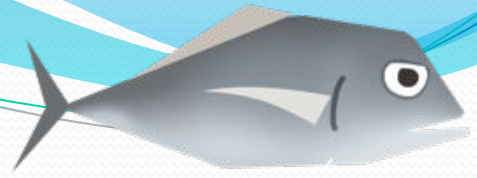


Fish Landing Sites that used beach seines continuously (all year) had the lowest mean weekly income, which was *significantly lower* than Seasonal and Stop Seine Fish Landing Sites.

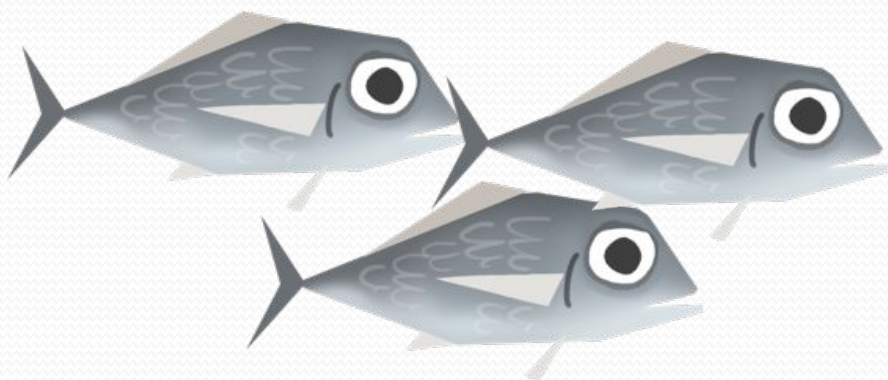
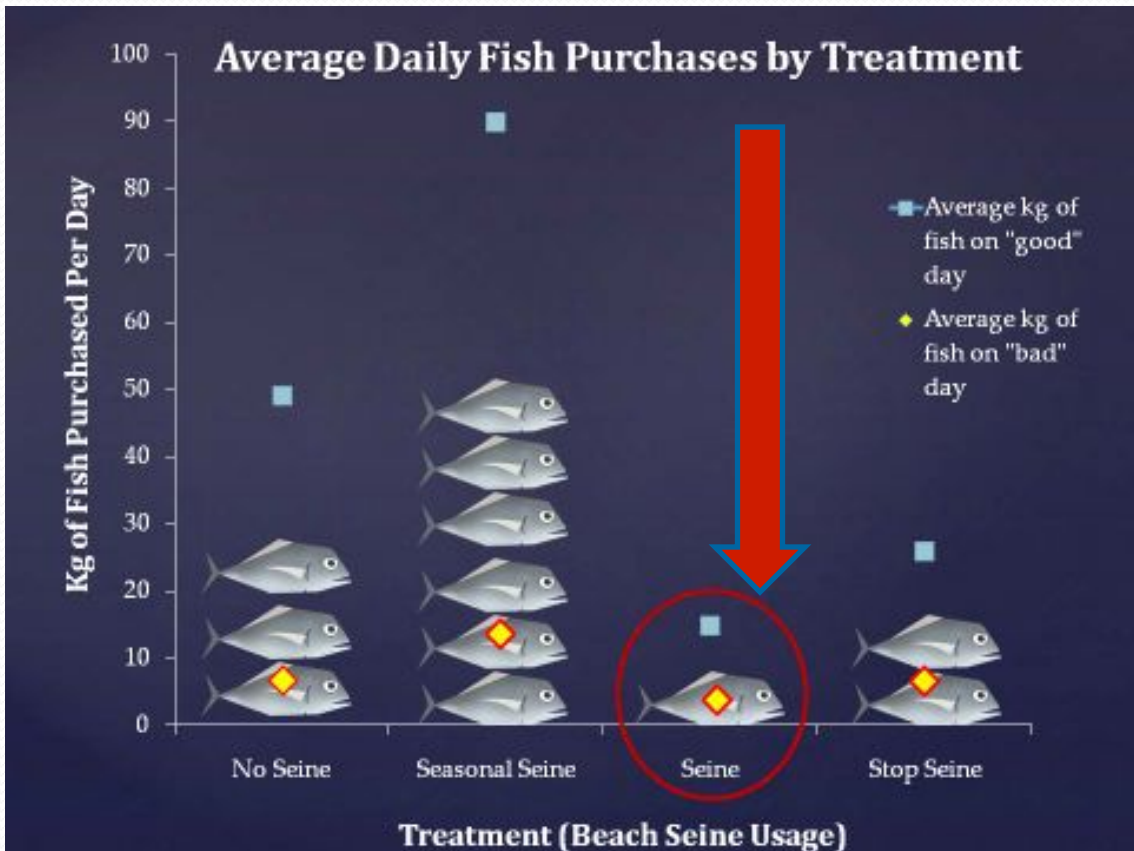
### Average Weekly Income by Treatment and Job



Fish Fryers had lower mean weekly incomes than Fish Dealers at all the Fish Landing Sites, but they had the lowest income where beach seines were used.



Fish Landing Sites that used beach seines continuously had the lowest weekly quantity of fish purchased.



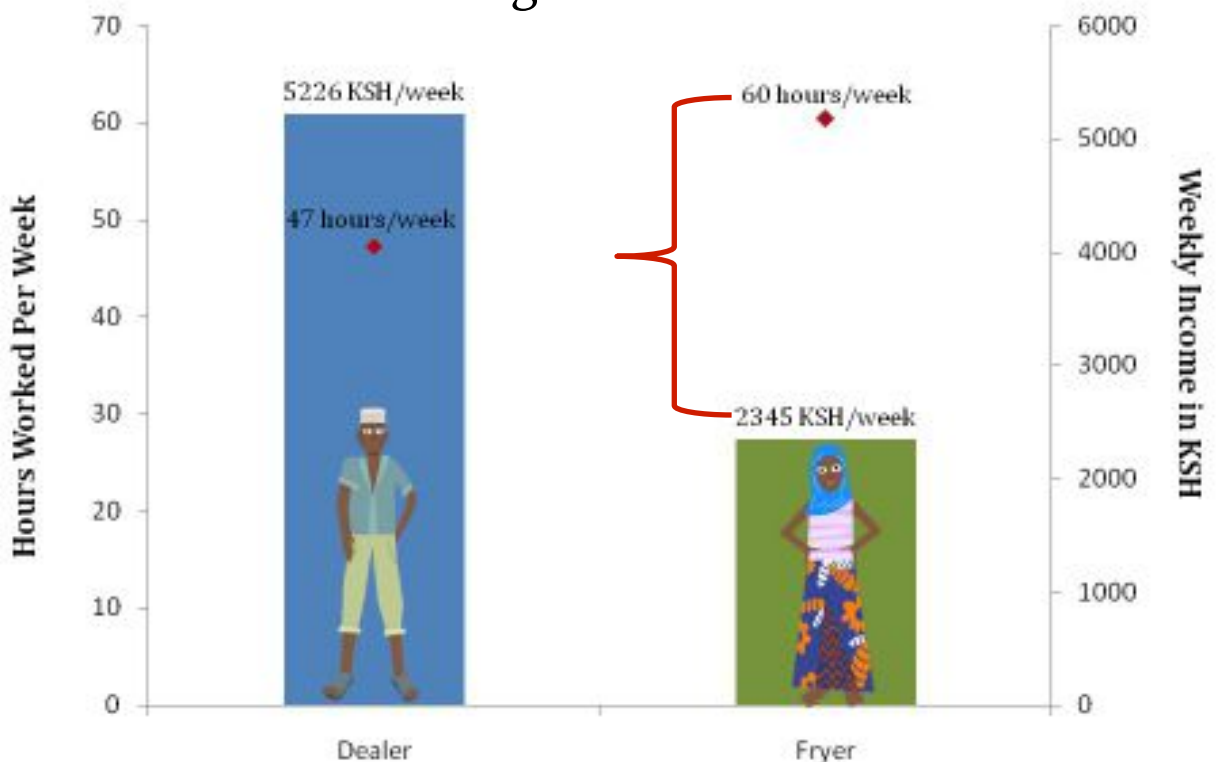


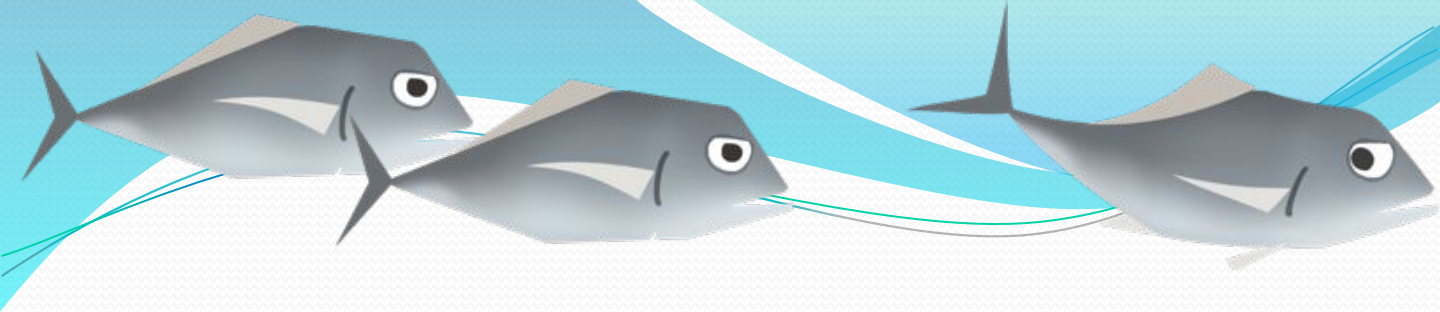
**Fish Dealers** worked an average of 47 hours/week and earned an average of 5226 KSH/week. **Fish Fryers** worked an average of 60 hours/week and earned an average of 2345 KSH/week.

**Fish Fryers** worked 13 more hours per week than **Fish Dealers**, but earned less than half of Fish Dealer incomes.

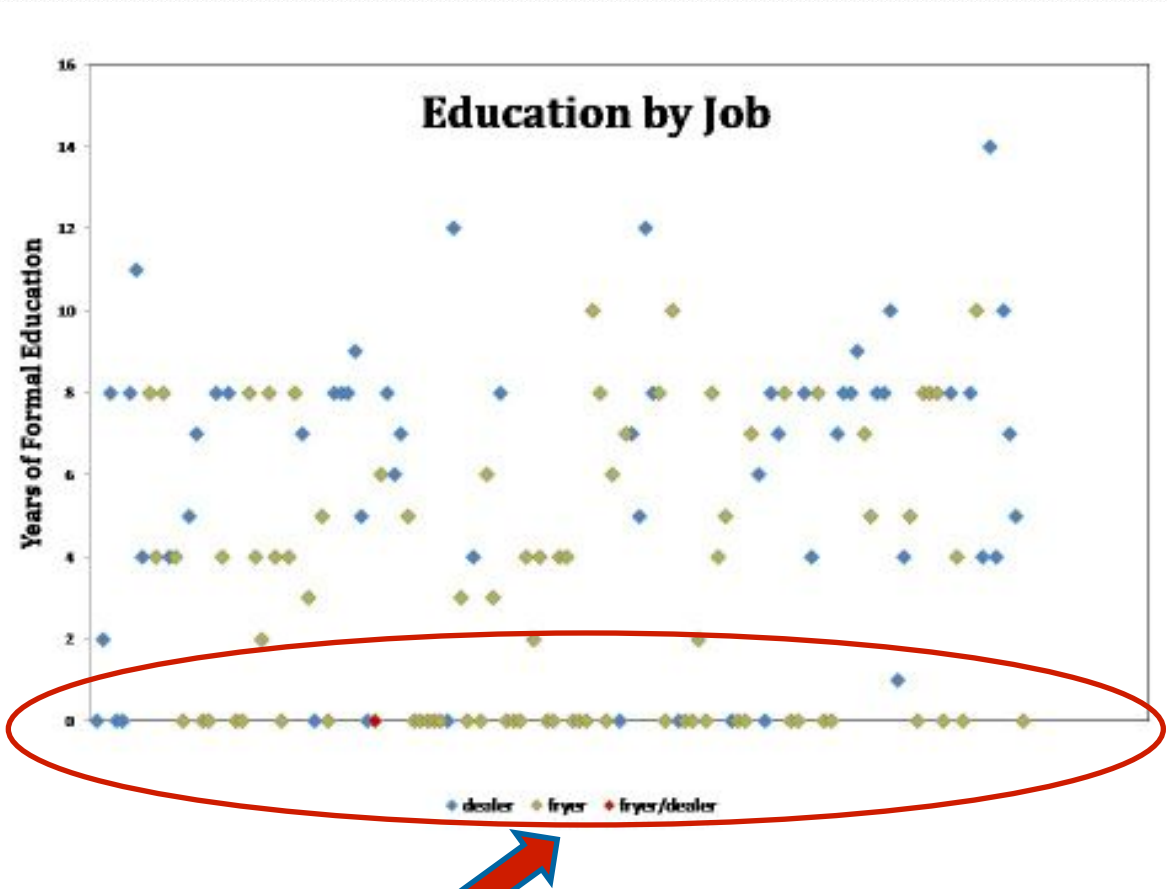
**Fish Fryers** also spent 100% or more of their average weekly income on food for the household.

### Fish Trading Effort and Income



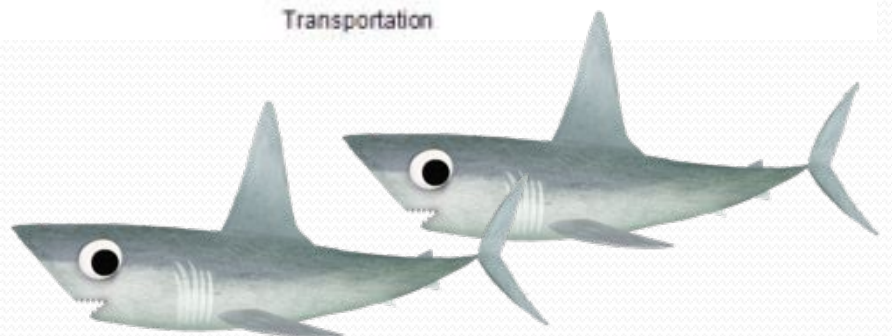
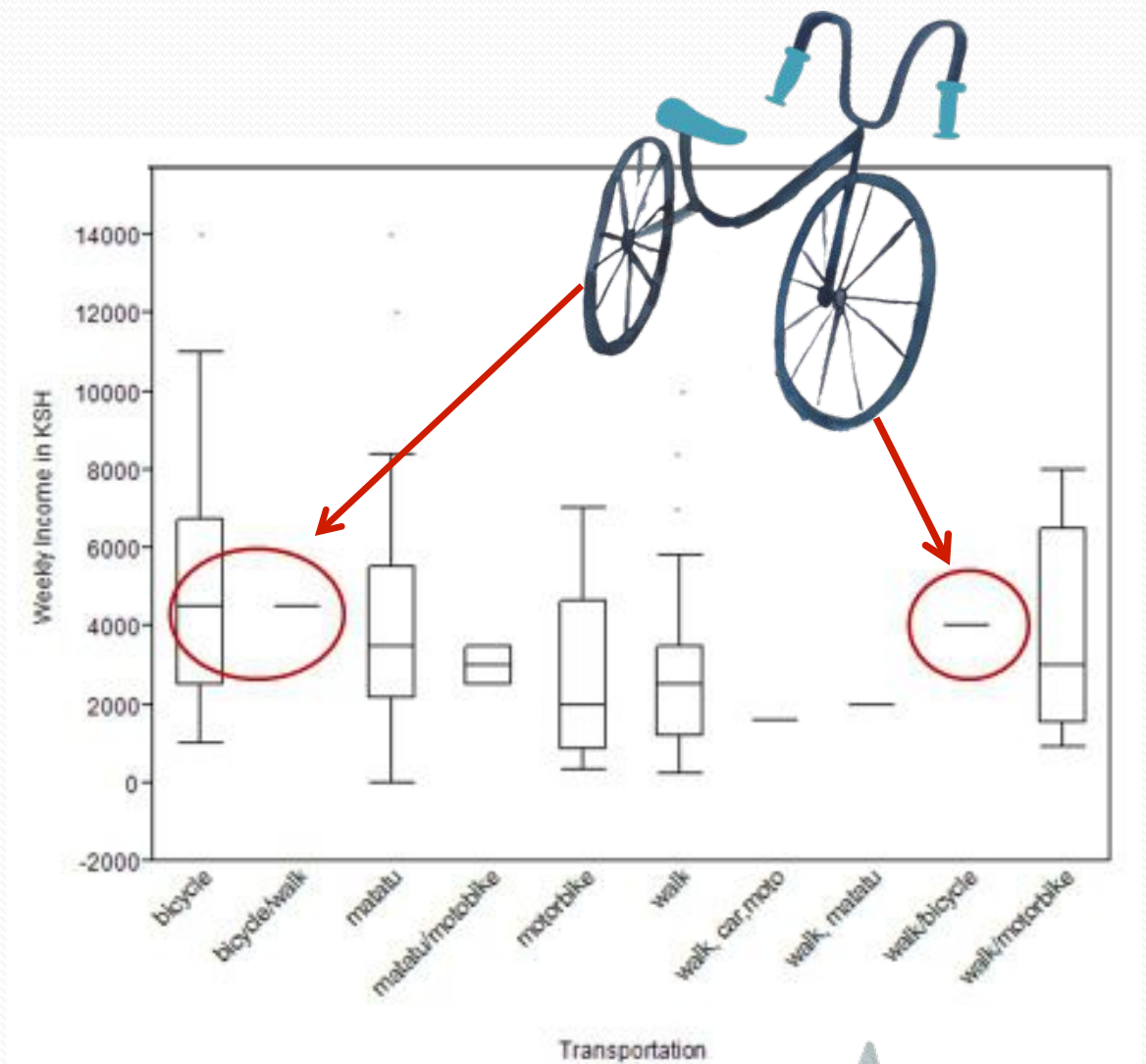


While education did not directly influence relative wealth, **Fish Dealers** had significantly higher levels of education (5.9 years) than **Fish Fryers** (3.1 years).



45.8% of Fish Fryers have no formal education

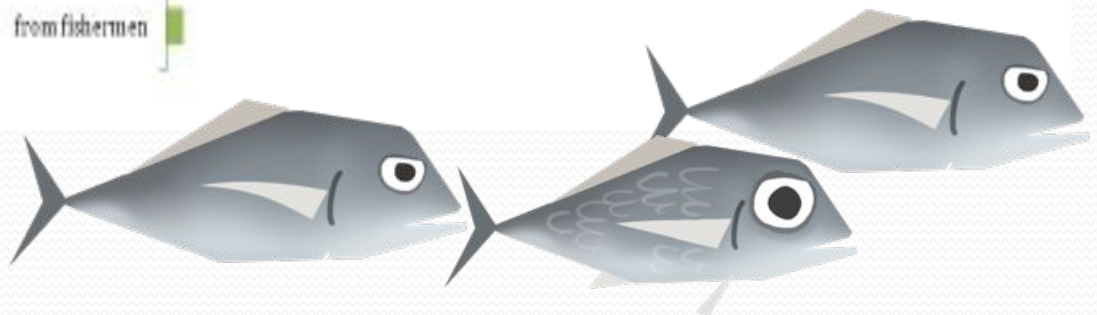
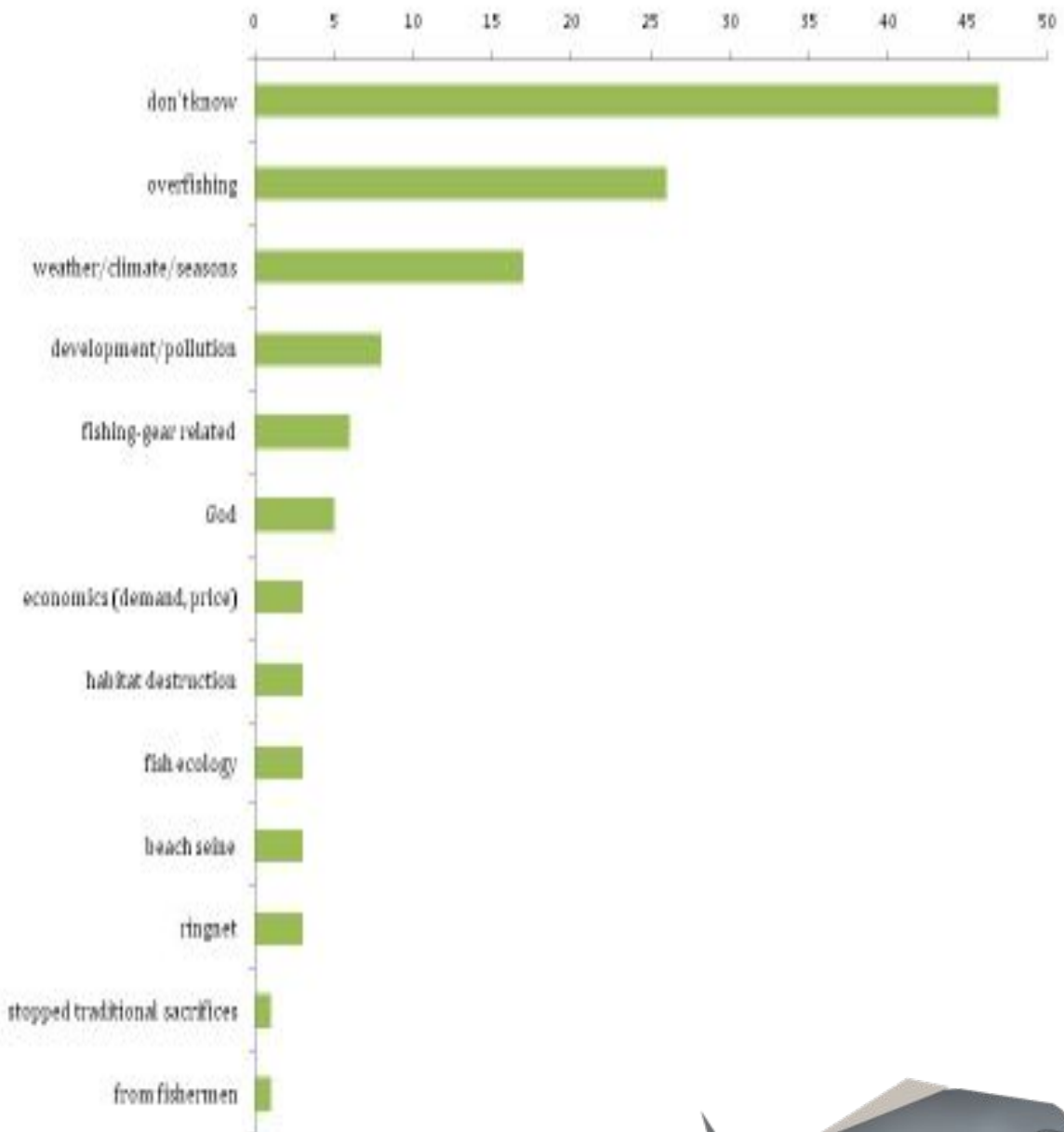
Fish traders who used bicycles had higher incomes. These traders were all **Fish Dealers**. Although 12 Fish Fryer households owned bicycles, **Fish Fryers did not use bicycles**.

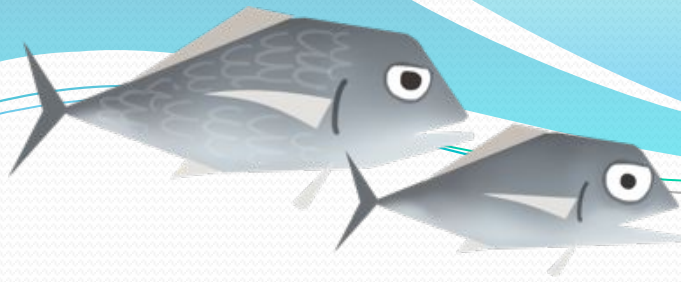




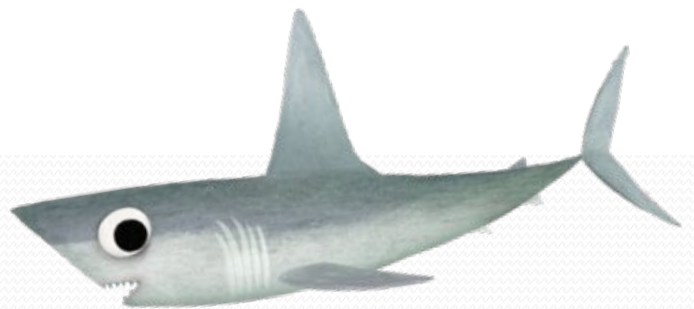
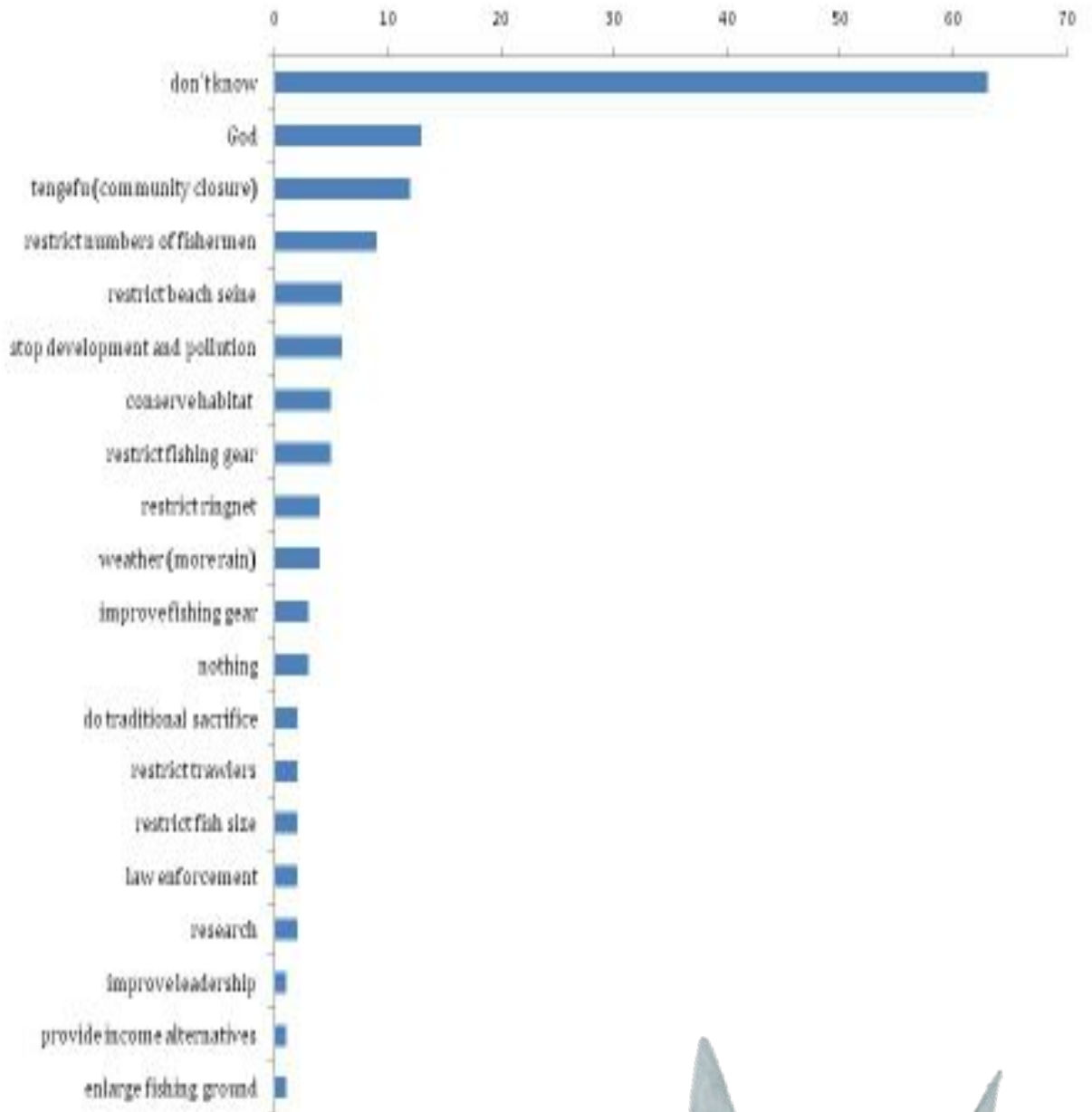
Although 83% of fish traders were aware of decreased catches compared to five years ago, most traders did not know why or what could be done to increase fish.

Reasons Given for Decreased Fish





### Responses on How to Increase Fish





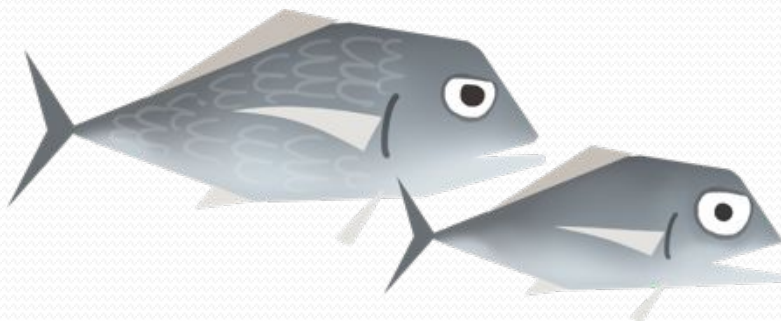
When asked to rank six management practices, fish traders chose fish size restriction as their first choice, which showed that traders preferred larger fish.

Marine Protected Areas were the least preferred of the six management practices.

If there is 50% less fish:	66% of traders will continue 31% of traders will exit
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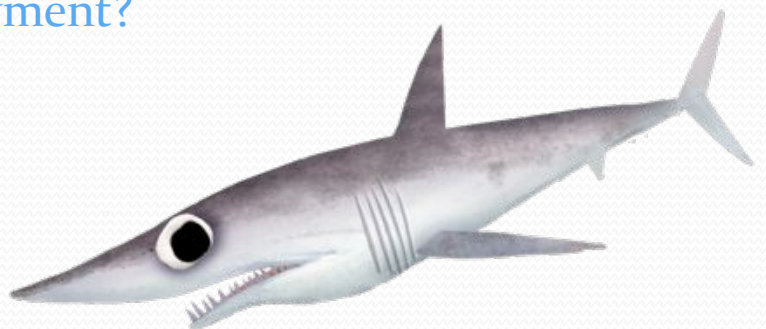
If there is no more fish:	82% would sell non-fish products or farm
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In 5 years:	80% anticipated they will still be trading fish
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## Conclusions from study:

- The poorest fish traders were associated with Fish Landing Sites that used beach seines continuously. Fish traders at beach seine sites earned 26% less than sites that don't use beach seines, 47% less than sites that use beach seines seasonally, and 52% less than sites that stopped using beach seines. *Will stopping or controlling the use of beach seines benefit everyone?*
- Fish Dealers had higher average weekly incomes than Fish Fryers. Most female fish traders were Fish Fryers. *Are there other opportunities for Fish Fryers to improve their socioeconomic status?*
- Most fish traders were aware of decreased fish catches, but did not know why or how to improve fish catches. *Will increased ecological knowledge improve natural resource management?*
- Most traders would continue trading fish even if there is a 50% decline. *At what point will fish traders seek alternative employment?*



# Acknowledgements:

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**Asanteni!**