INCENTIVIZING TRANSPARENCY

Evaluating drivers for vessel tracking technology adoption in small-scale fisheries

BACKGROUND

Small-scale fisheries are integral to the livelihoods and food security for millions of people worldwide. Despite their significance, there is a spatiotemporal data gap that limits our knowledge of their activities and hinders their sustainable management. Tracking technology provides a means to collect fishing activity data, which can improve transparency and other benefits to fishery management.

Motivation

Less than 0.4% of small-scale fishing vessels utilize tracking technology. This leaves potential for fishers to be connected to tracking technology through a program that is incentive-compatible to their preferences. This was the crux of our project that drove us to answer:

“How can a vessel tracking program be incentivised for small-scale fishers?”

SAFETY IS IMPORTANT

- Safety is the most important attribute
- Privacy is preferred, but not significant
- Government and fisher owned data is preferred over industry and public owned

FISHERS ARE WILLING TO PAY

89% of fishers are willing to participate and willing to pay an average of $USD 2.76/month

Willingness to pay for a vessel tracking device increased with:

- Higher levels of education
- Higher exposure to fishing technology
- Perception of corruption problems in fishery (when compared pollution, extreme weather, and illegal fishing)

FISHERS WANT TRACKING DATA

Top three benefits fishers want from a tracker:
1. On-board electrical power for charging cell phones and other electronics
2. Detailed tracking information for your vessel (e.g. drop a pin at specific location)
3. Data to help obtain sustainable seafood certification

RESEARCH QUESTIONS

- What are the fishers’ preferences on tracking technology design?
- Are fishers willing to pay for a tracking technology, or do they have to be paid?
- Do individual specific factors affect the willingness to pay?

APPROACH

We designed a survey to uncover fisher preferences for a vessel monitoring program that included a dual response choice experiment, bidding game, and questionnaire. Respondents were first asked to choose their preferred program out of two offered packages, then were given a choice to opt out. Those that kept their package were asked how much they were willing to pay for it and those that opted out were asked how much they wanted to be paid before they would accept. Responses were used to create two models to help answer our research questions.

Next steps

Continue to explore preferences for vessel tracking programs among representative samples of small-scale fishers.

Evaluate more measures and implement more surveys in a variety of villages to help create a more representative dataset that can lead to a more refined model. The new model can expand to include different variables, such as levels of trust, that were not fully analyzed in our model.

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