

Income distribution and inequality among fishers and fish traders in two small-scale Kenyan coral reef fisheries

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Introduction

Fishers' incomes tend to be low in both developed and developing countries

Due to lack of bargaining power relative to more powerful market actors in the marketing chain.

Linking fisheries to global markets can exacerbate income inequalities

Particularly in developing countries where the struggle for food security is often severe.

In spite of this, there is lack of detailed examination of how market integration affects income distribution among actors in the small-scale fisheries

Hypothesis

- Differences in global market integration of octopus and sea cucumber explains differences in income inequalities among actors, with greater inequality occurring in the sea cucumber fishery.



We:

1) mapped the structure of the value chains,

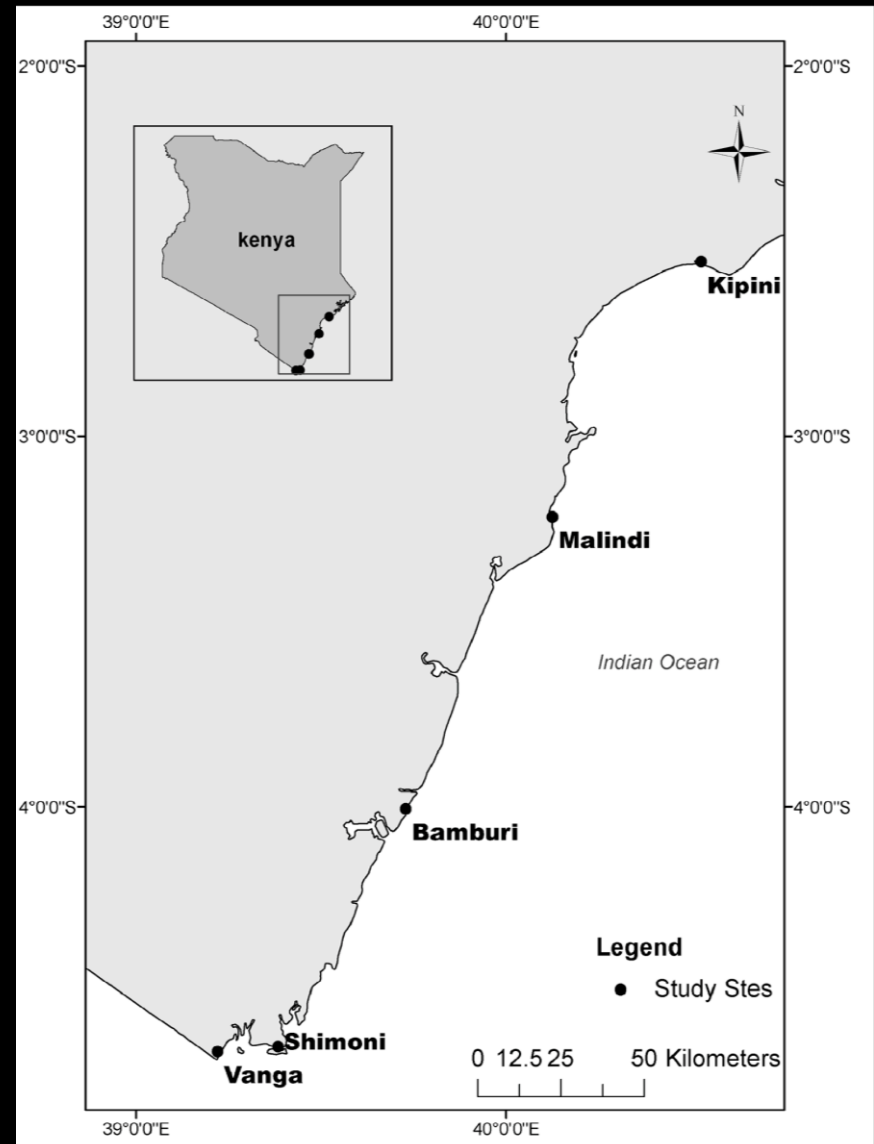


2) examined mean fisheries-related income of fishers and traders in the two fisheries, and

3) examined income inequalities among actors operating in each fishery (using Lorenz curves and Gini coefficients)

Methods

This study relied on primary data obtained from a survey of fishers and fish traders between September 2010 and April 2012 at five coastal landing sites in Kenya; Kipini, Malindi, Bamburi, Shimoni and Vanga (Figure 1).



Methods

Systematic random sampling

Respondents were fishers and traders engaged in fishing and marketing of sea cucumber and octopus respectively

Interviewed using a structured questionnaire

A total of 155 interviews were conducted; 115 in the octopus fishery (71 fishers and 44 traders), and 40 in the sea cucumber fishery (15 fishers and 25 traders).

Results

The structure of the value chains differed between octopus and sea cucumber fisheries.

The sea cucumber value chains were linearly linked to the global market (b, d),

The octopus fishery value chain was more dispersed across a larger number of actor groups

Proportion of traded volumes also differed

Octopus fishers contributed 25% of the volumes traded

Seacucumber fishers 28%

Total value accruing to octopus fishers was 11% (c), sea cucumber fishers 8% (d).

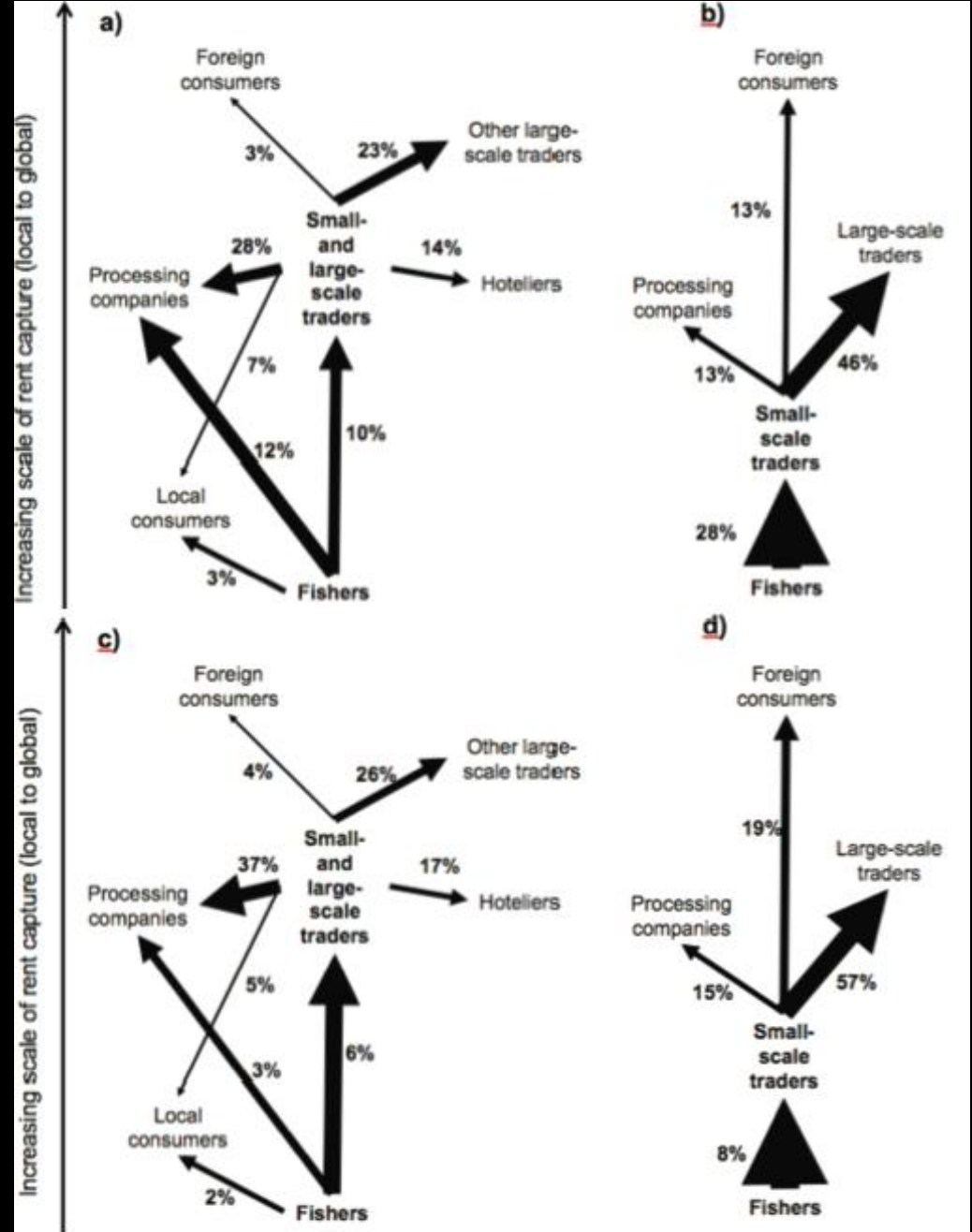


Figure 2

Results cont..

Markets and prices of different fisheries

Prices were dependent on the node.

Price octopus fishers received did not differ depending on whom they sold to

Traders who sold octopus to local consumers received a lower average price.

Sea cucumbers commanded higher prices than octopus.

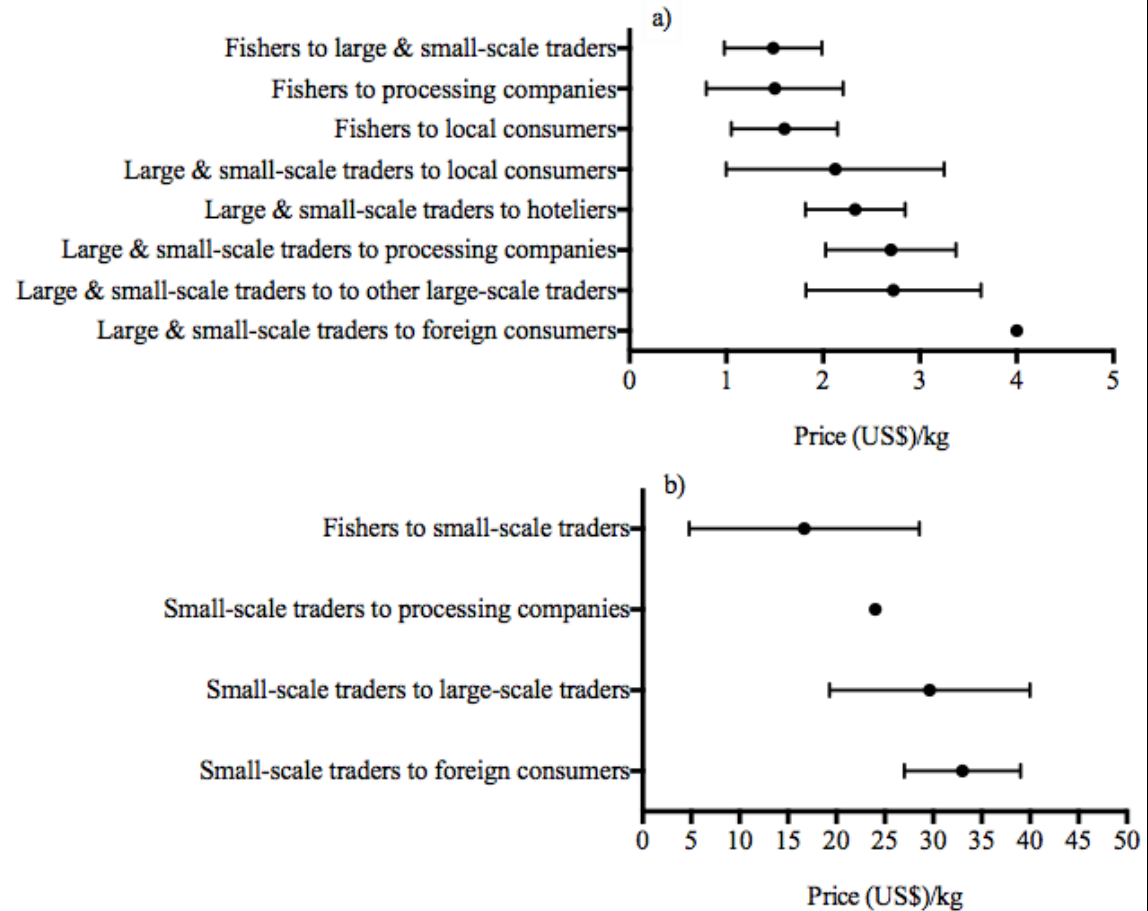


Figure 3

Results cont...

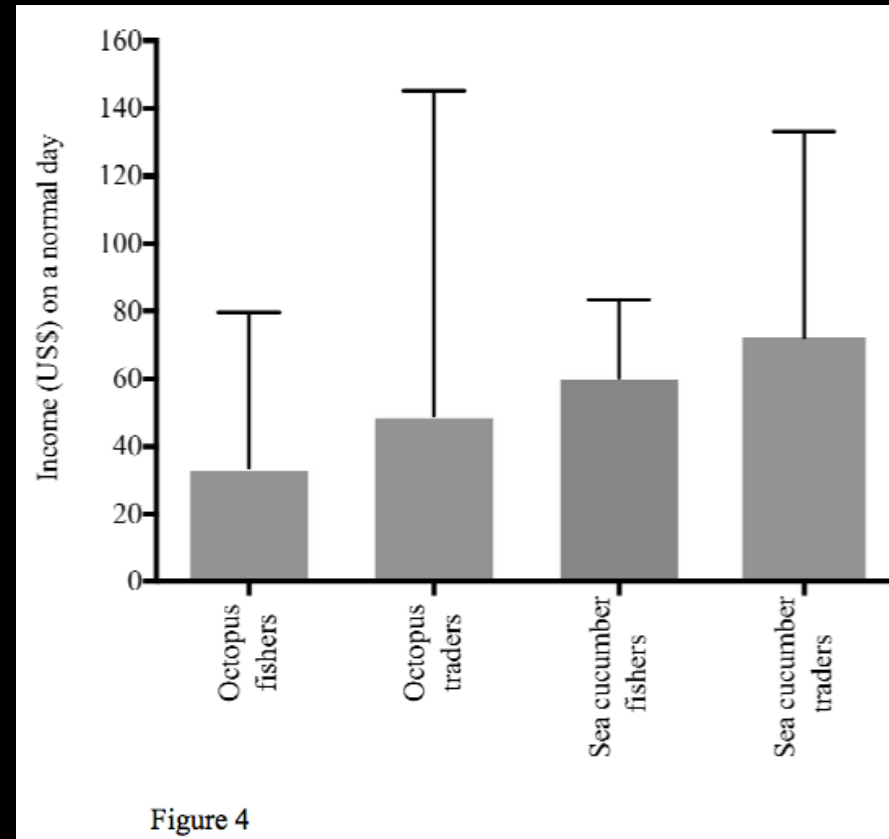
Fisher and trader incomes

Fishers had lower daily income compared to traders (Figure 4).

Sea cucumber traders received the highest incomes

A significant difference (Kruskal–Wallis test) was found between fishers and traders in both fisheries ($P < 0.05$).

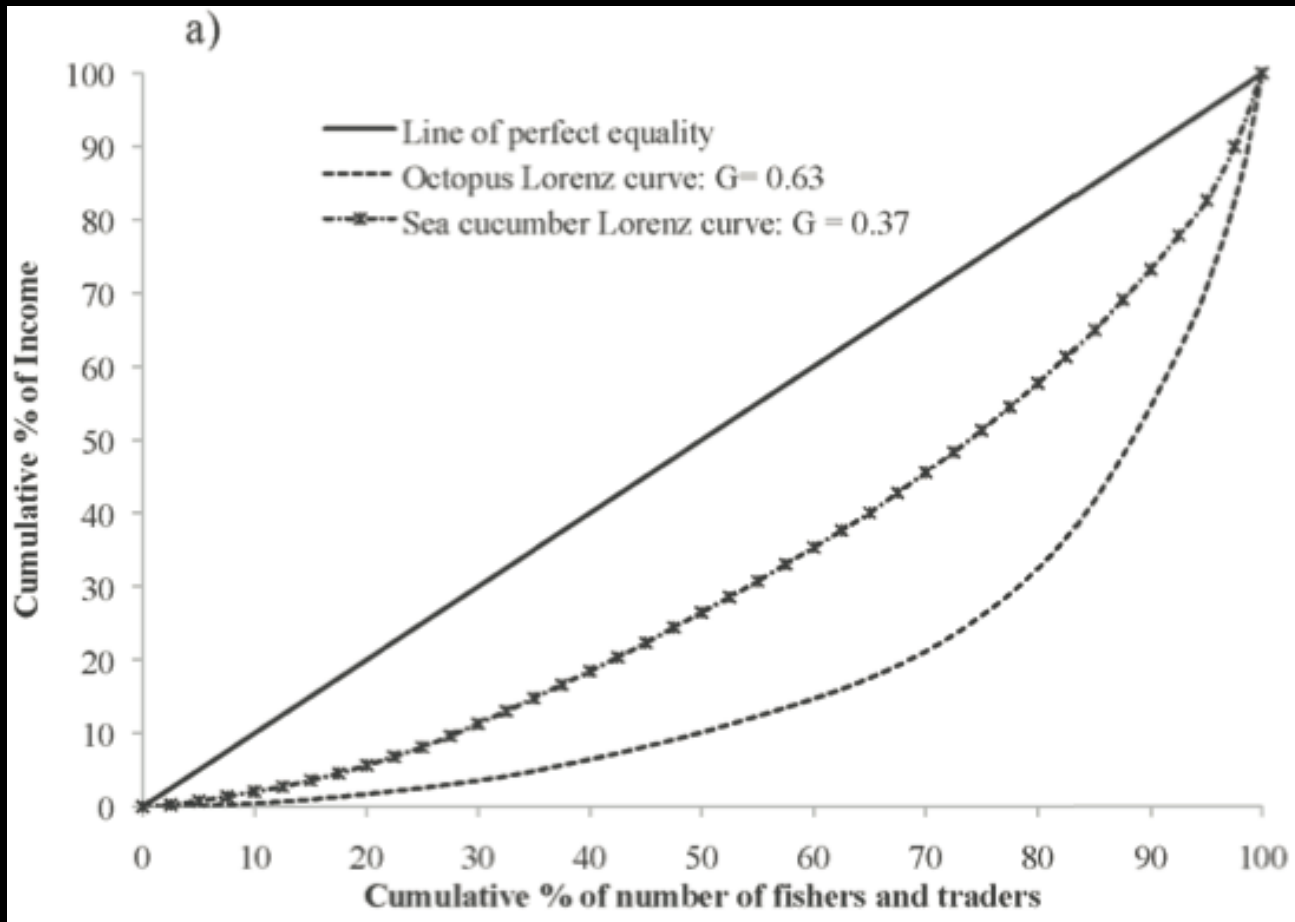
This difference was due to higher incomes of large-scale traders as incomes between fishers and respective small-scale traders were not statistically significant ($P > 0.05$).



Results

Income inequality

Higher income inequalities in the octopus fishery

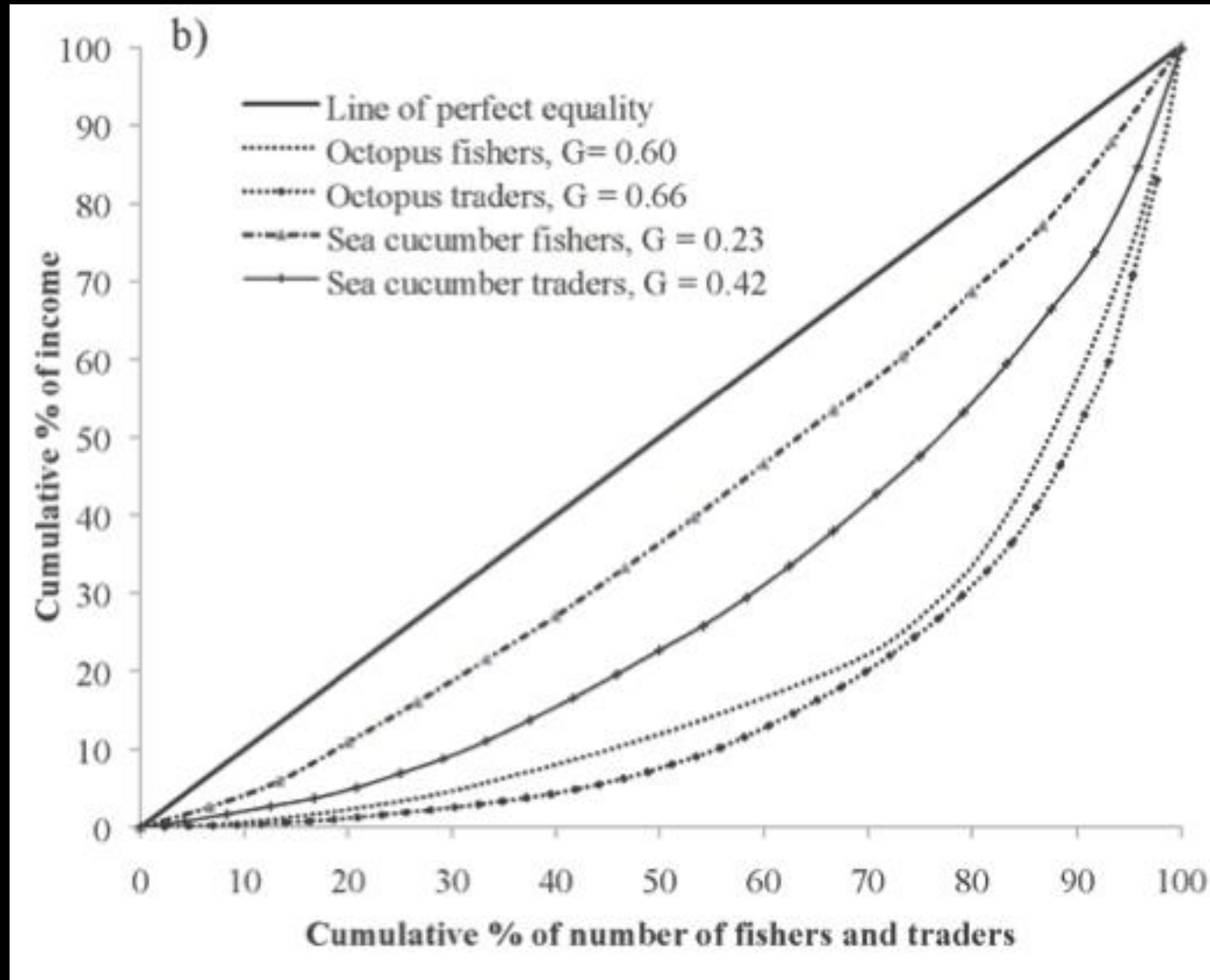


Results cont..

Comparing actor groups across the two fisheries indicated that incomes were more equally distributed among sea cucumber fishers

Incomes of sea cucumber traders were more equally distributed than for octopus traders.

The greatest difference in income inequality was in the sea cucumber fishery



Conclusion

A full value chain analysis encompass mapping of all actors

This study is limited to actors proximal to the exploitation end of the chains

Also, data used is not representative of annual fluctuations

Nevertheless, greater market integration did not enhance income inequality

The often cited relationship between increasing market integration and income inequality may require a reevaluation and a more nuanced treatment.

There is need to further disaggregate analyses of actor groups in future studies of fishery income distribution.

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Thank you