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TITLE: Projected change in global fisheries revenues under climate change

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ABSTRACT:

Previous studies highlight the winners and losers in fisheries under climate change based on shifts in biomass, species composition and potential catches. Understanding how climate change is likely to alter the fisheries revenues of maritime countries is a crucial next step towards the development of effective socio-economic policy and food sustainability strategies to mitigate and adapt to climate change. Particularly, fish prices and cross-oceans connections through distant water fishing operations may largely modify the projected climate change impacts on fisheries revenues. However, these factors have not formally been considered in global studies. Here, using climate-living marine resources simulation models, we show that global fisheries revenues could drop by 35% more than the projected decrease in catches by the 2050 s under high CO₂ emission scenarios. Regionally, the projected increases in fish catch in high latitudes may not translate into increases in revenues because of the increasing dominance of low value fish, and the decrease in catches by these countries' vessels operating in more severely impacted distant waters. Also, we find that developing countries with high fisheries dependency are negatively impacted. Our results suggest the need to conduct full-fledged economic analyses of the potential economic effects of climate change on global marine fisheries.

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