Demersal fish community biomass declines with temperature across productive shelf regions

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Theory predicts fish community biomass to decline with increasing temperature due to higher metabolic losses resulting in less efficient energy transfer in warm-water food webs. However, whether these metabolic predictions explain observed macroecological patterns in fish community biomass is unknown.

CONCLUSION

Our study supports the hypothesis that TEMPERATURE is a main driver of large-scale cross-regional variation in fish community biomass. The cross-regional pattern suggests that long-term impacts of CLIMATE WARMING will be negative on biomass.

These results provide an EMPIRICAL BASIS for predicting future changes in fish community biomass and suggest a set of explanatory variables that are most important.