

Long-Term Sustainable and Optimal Management of Multispecies Stochastic Fisheries

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Multispecies fisheries management is the first step towards ecosystem-based fisheries management. Multispecies management accounts for a number of species and their physical, biological, and economic interactions. These interactions increase complexity in understanding stock dynamics and optimal catch. To address the issue of identifying optimal catch of stochastically growing multi stocks, we have formulated and applied a time-continuous stochastic model. The model, applied in prey-predator ecosystem, contributes to sustainable yet optimal management of multispecies marine fisheries. The findings suggest that the optimal catch for stochastically growing stocks in a multispecies interaction ecosystem is different from the deterministic catch.

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