

Bycatch Risk Pools for the US West Coast Groundfish Fishery

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Abstract

Individual transferable quotas (ITQs) in multispecies fisheries create incentives for fishermen to avoid bycatch of species for which quota is scarce. However, when bycatch is highly uncertain, individual quota demand and prices may be volatile creating substantial financial risk for fishermen. The US Pacific Groundfish fishery recently introduced an ITQ system with low quotas for several overfished species with highly uncertain bycatch rates. Some fishery participants formed risk pools where bycatch quota is pooled and available to all pool members. Risk pools can reduce financial risk and transactions costs for individuals, but they also create moral hazard and adverse selection problems. We present an empirical analysis of bycatch risk that informs several issues of risk pool design including which bycatch species to include, pools size, and how to evaluate and mitigate adverse selection and moral hazard problems. The analysis suggests that risk pools can achieve substantial risk reduction and lower adverse selection and moral hazard issues by limiting the species included in risk pools, by keeping risk pools relatively small and by specifying monitorable practices that reduce expected bycatch.