Title: A Point System for Managing Multispecies Fisheries

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Abstract: An industry group has proposed a novel mechanism for management of the multispecies groundfish fishery off the northeastern United States. Under this mechanism, individual harvesters would be allocated a budget of points, to be expended landing fish. A regulatory body will set different prices, denominated in points, for landing each fish, adjusting the point prices throughout the season to shift effort to those species with greater availability under the TAC. This paper develops an algorithm for adjusting point prices during the season based on Scarf's (Int. Econ. Rev. 1960) tatonnement model of price adjustment in general equilibrium. This model is then applied in a human subject experiment to evaluate harvester behavior, species targeting and discard behavior under the resulting dynamic point price system. Empirical behavior of the price adjustment rule is characterized, and the hypothesis that return from the fishery is maximized is tested.