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Theme: Special Sessions

Session: WeG3 - Economics and property rights 2

Title: **Rent Dissipation in Limited Entry Fisheries with Aggregate Quotas: An Experimental Analysis**

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Abstract: This paper reports on an economic experiment conducted to examine the nature of rent dissipation in limited entry fisheries with aggregate quotas, and factors affecting fishermen's political support for changing to individual quota management. The experimental subjects are □fishermen□ who participate in a series of fishing □seasons.□ The experiment assumes that (a) managers limit aggregate harvests each season to a total quota; (b) individual fishermen's shares of the total catch are positively related to their share of total fishing expenditures; (c) individual fishermen's shares of the total catch are positively related to their assigned fishing □skill,□ and (d) rents are dissipated to the extent that total expenditures exceed the minimum necessary to catch the total quota. Total quotas and fish prices□which together determine the catch value□vary between seasons.

After only a few seasons, subjects dissipate almost all potential rents by increasing expenditures to try to increase their shares of the rents. Increases in prices lead to increased rent dissipation; lower prices lead to reduced rent dissipation. Heterogeneity of fishing skill reduces the extent of rent dissipation, as fishing becomes relatively less profitable for less skilled participants. More skilled participants capture significant rents.

After gaining experience with a □fishery□ without individual quotas, subjects vote on whether to switch to individual quota (IQ) management. Subjects are more likely to vote for individual quotas the higher their quota allocations. Heterogeneity of fishing skill, by increasing the heterogeneity of catches and the rents captured by skilled fishermen without IQs, reduces the likelihood that IQ allocations based on historical catches will be supported by a majority of fishermen. Implementation of IQs quickly reduces rent dissipation to almost zero.