

Allocating Harvests Between Competing Users in Fishery Management Decisions: Appropriate Economic Measures for Valuation. Discussion

JAMES L. ANDERSON

The evaluation of appropriate economic measures for analyzing the allocation of harvests between user groups is difficult. There appears to be no universal principle for guiding management's allocation decisions and most of the decisions depend on political and social realities of individual situations. As such, discussions on this topic usually consist of anecdotal observations complemented with some economic intuition which conclude that more careful economic analysis can help in assisting managers in their allocation decisions. The paper by Easley and Prochaska uses this approach to make some solid observations which highlight the issues and the limitations of current economic research. Most of my comments will focus on underscoring the issues and scope of the problems and will reemphasize the limitations of the current economic research which I feel Easley and Prochaska tended to understate.

Although Easley and Prochaska discuss allocation problems other than the commercial/recreation problem, the authors could have expanded upon the full range and magnitude of allocation problems. In the case of Pacific salmon, for example, the user conflicts include allocation questions involving commercial fishing, recreational fishing, aquaculture interests, Native American fisheries, Canadian users, allocation between gear types within commercial fisheries, and

regional distribution of salmon resources. Although allocation and optimal stock levels cannot truly be separated, the dominant issue in the Pacific salmon fishery is probably the allocation issue, but not just recreation/commercial fishery distribution.

In a more general sense, fisheries allocation problems include gear conflicts (between and within fisheries), part-time versus full-time operations, inshore versus offshore fishermen, foreign versus domestic allocations, and distribution of domestic catch regionally and over time. In addition, further along the market chain, allocation questions involving fishery resources include import/export allocation and how the resource is to be processed (domestically on shore, by domestic vessels at sea, by foreign vessels at sea, or in foreign plants). This last resource allocation question has been the pivotal element in recent disputes over joint ventures.

I feel that it is important to underscore the range of user group conflicts in order to clearly illustrate the magnitude of the allocation problem. When those familiar with the fisheries economics literature consider these allocation issues, they will notice the remarkable lack of research on most of these problems.

As Easley and Prochaska indicate, more modeling which attempts to capture the manager's objective function is needed. To say the least, fisheries economists have barely scratched the surface. Fisheries economists need to attempt to understand not only the objec-

tive functions of managers, but also the strategic behavior of the user groups when faced with use conflict in a regulated environment. Until we have a better understanding of the latter, allocation rules and regulation will fall short. In the area of user behavior, fisheries economists could probably gain much by considering the work in the fields of industrial organization and game theory. In terms of modeling manager's politically oriented objective functions, as Easley and Prochaska suggest, I would expect fisheries economists will have only limited success.

An alternative approach to directly modeling the manager's objective might be the development of goal (goals may be employment, income distribution goals, efficiency, fish stock and harvest goals) frontiers as a function of policy mixes and budget constraints. Once the frontier is developed, the manager could then choose among the feasible frontier options. This approach avoids imposing the view that efficiency is all that matters. These goal frontiers could be constructed by various mathematical programming techniques.

Other aspects of the Easley and Prochaska paper that need additional consideration are their comments on property rights schemes. They suggest that individual transferable quotas may solve the allocation problem while moving toward efficiency. First the question of workability of such schemes is in doubt unless, as in the case of New Zealand fisheries, the resource is relatively well defined and separated from other species, the fishermen are basically in agreement with the concept, and there exists a monitoring system which is much more invasive than any that presently exist in the U.S. food-related industries. Workability aside, property rights schemes really do not necessarily help in solving allocational and distributional questions. Initial conditions of wealth and entrenchment of certain users will influence allocation of rights (leading to possible inequitable initial distribution). There is no reason to expect the market for rights to be anywhere near perfect, especially if nonfishermen are excluded from the market. This will result in inefficient allocations. The inability to define

James L. Anderson is Assistant Professor, Department of Resource Economics, Lippitt Hall, University of Rhode Island, Kingston, RI 02881.

precisely the resource also leads to inefficient allocation. The rents captured from the property rights scheme and rent redistribution is another area where inefficient and inequitable allocations may result. Easley and Prochaska mention some of

these as "practical" problems; however, I feel they are critical distribution/allocation problems.

In conclusion, the Easley and Prochaska paper points out many of the issues relevant to analysis of allocating of

fishery resources between user groups. However, after reading this paper one is disheartened by the lack of research by fisheries economists which could actually be useful to fishery managers in their allocation decisions.