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Herbert M. Austin
Virginia Institute of Marine Science

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By

Herbert M. Austin
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
Gloucester Point, Va.

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INTRODUCTION

Man has traditionally considered oceanic resources as infinite and common property. The philosophy supported by this concept is, "get what you can, before someone else does," the "Tragedy of the Commons." This is exploitation as opposed to management. The concept of resource management is to provide rewards, be they the social pleasure of catching or the economic profit of selling the captured resource, to as large a segment of the population as possible, over as long a period as possible.

Management of living marine and estuarine resources is still a new endeavor, in spite of the age of the agencies. The ocean was not "managed" until 1976 with the passage of the Fisheries Conservation and Management Act of 1976 which gave the United States exclusive resource jurisdiction from 3 to 200 n. miles offshore. This act was the result of foreign and domestic fishing pressure on the stocks which brought subsequent pressure on the politicians who in return reacted by passing legislation. As the finite limit of the resource was reached the less able to compete (the American fisherman) used political power to equalize the balance of power through legislation and realized a greater share of the allocation.

These problems of open ocean and shelf resource allocation, while complicated are dwarfed in comparison to the allocation

problems of coastal living resources that move freely across state boundaries, and are subjected to differing management regimes as they do so. The James River is a microcosm of the coastal Mid-Atlantic estuarine ecosystem, with all the attendent pressures on the resources.

Allocation between man and resource

The pressure on each finite resource is directly proportional to the proximity of man. In an area such as the James River the living marine resource must share with man not only its own biomass, but its resource, the water it lives in, its environment.

The allocation of this riverine environment between man's uses and the River's inhabitants is often a socio-economic judgement by regulatory agencies, but as often as not, a political decision. Man competes both for space and the water. Once through cooling, marina's sewage pathogens, chlorination, purposeful or accidental discharges of oil, herbicides, pesticides and fertilizers all reduce the quality of the resources' environment.

Allocation of resources between man

Just as he does on the ocean, man sets against man in the James for allocation of the finite resource. Competition for access to the resources, living and mineral is keen. Sand, gravel and oyster shell are three mineral resources that are vital to tidewater economy. Their stewardship, maintained

by the Virginia Marine Resources Commission, is often a difficult one as they must be allocated between those desiring to mine them from the state owned sub-aqueous lands.

Not only is access to state owned subaqueous mineral resources a growing concern; but so to is access by the public to the shore. Ownership of the lands above the highwater mark, or vegetated wetlands, presupposes control of access. It is therefore possible to predict the eventuality of no public access to the shore except where Federal, State, or local government provide and maintain it at tax payers expense. Or, as at many such "public ownerships" a fee is charged. The beach may remain free, but not so the right-of-way. Today, however, I want to focus on the shellfish, the oyster and hard clam, on ownership of state river bottom, on how to harvest the resource, and on who is permitted to harvest it.

Let us consider the three most controversial areas.

James River Seed Oyster

Currently, 75% of the seed oyster in Virginia comes from the public oyster rocks in the lower James. State law currently allows their harvest by hand tong only. The tonger sells to a "buyboat" or trucker (broker) on shore, each man tonging 50-100 bushels a day. These seed are sold to private planters to "plant" on their river leases. If the MRC wishes to obtain seed from the James to rehabitate or replete depleted

public oyster rock they must have the watermen obtain the seed. Generally they pay an agreed upon sum per bushel and have the tonged seed loaded on a leased or chartered boat (or truck) to transport to the selected public rock.

The most economic procedure would be to harvest the seed by dredge, selling some to private lease holders and planting the rest on public bottom. This would lower the cost of seed, perhaps from $2.50/Bu to .60-.70/Bu. A third alternative is to make some of the less productive rocks or those too deep to tong available to private concerns so they can produce their own seed at a considerable saving.

Studies have shown that the major loss in Virginia oyster production since 1960 has been from the private sector while public harvest, due to MRC repletion has remained essentially constant. To rebuild the Virginia oyster industry then we need to make low cost seed available to the private grower. But what will this reallocation do to the waterman, already hurt by Kepone and steady oyster prices during a period of raising operating costs.

The decision is up to the General Assembly.

Unassigned bottom

There are 27,841 acres of public oyster ground (Baylor Bottom) and about 15,000 acres of leased bottom in the James River.

In addition, there is large acrage of unassigned bottom, of this, some 20,000 acres are below the James River Bridge and produce hard clams. These higher salinity unassigned grounds with the oyster disease MSX that makes them unattractive to lease and grow out market oysters, are ideal hard clams. These unassigned grounds can be leased for hard clam harvest or even culture at $1.50/acre/year. They are currently worked by watermen using patent tongs. They are lost to the watermen when they are leased. Another alternative is to set them aside as "public clam grounds." The decision as to the allocation of these clam grounds is up to the MRC. Who will get what, and how much? Or, will the General Assembly be pressured, as it is now to stop the private leasing.

The Hydraulic Dredge

The question of leasing state bottom for clam harvest is more complex then simply who gets the use of the bottom. On Hampton Bar in the Lower James where some 1,800 acres of "unassigned ground" were leased last fall and a permit issued to use a hydraulic escalator dredge for the taking of clams. This gear, which is seven times more efficient than the patent tong, was opposed by the watermen in mass at the MRC and in the halls of the General Assembly.

Here the question of resource allocation raised a new consideration. Not who gets it, but how will he be allowed to take it. To keep the watermen competitive the lease holder

may not use his efficient dredge, he too must use the patent tong, or so Senate Bill 60 will stipulate. S. B. 60 will make illegal the use of the hydraulic dredge for the harvest of hard clams even on leased bottom. A legislative allocation from industry pressure.

The Question

The examples posed here do not answer the question of who receives the allocation nor who shall make them. It raises the larger question, how do we decide who get the resource? What shall our criterial be? Virginia's unwritten resource policy is legislation enforcing inefficiency of harvest by restricting new techniques thereby not harvesting above the maximum sustainable yield, but more importantly, not permitting efficient/effective harvest techniques to put anyone out of work. This policy insures the watermen an allocation of the finite resource. Othere states do not allocate shellfish resources among harvesters with the exception of Maryland and its sail powered Skipjack. The Skipjack, a sailboat can only, on certain days of the week, tow an oyster dredge while under sail. Can Virginia continue its policy of enforced inefficiency in an inflationary economy? Must we move to the more modern, efficient techniques, allowing increased production, but with the resultant erosion of the waterman. Can we afford not to, can we afford to.