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## Alternative Management Schemes for the Surf Clam Fishery

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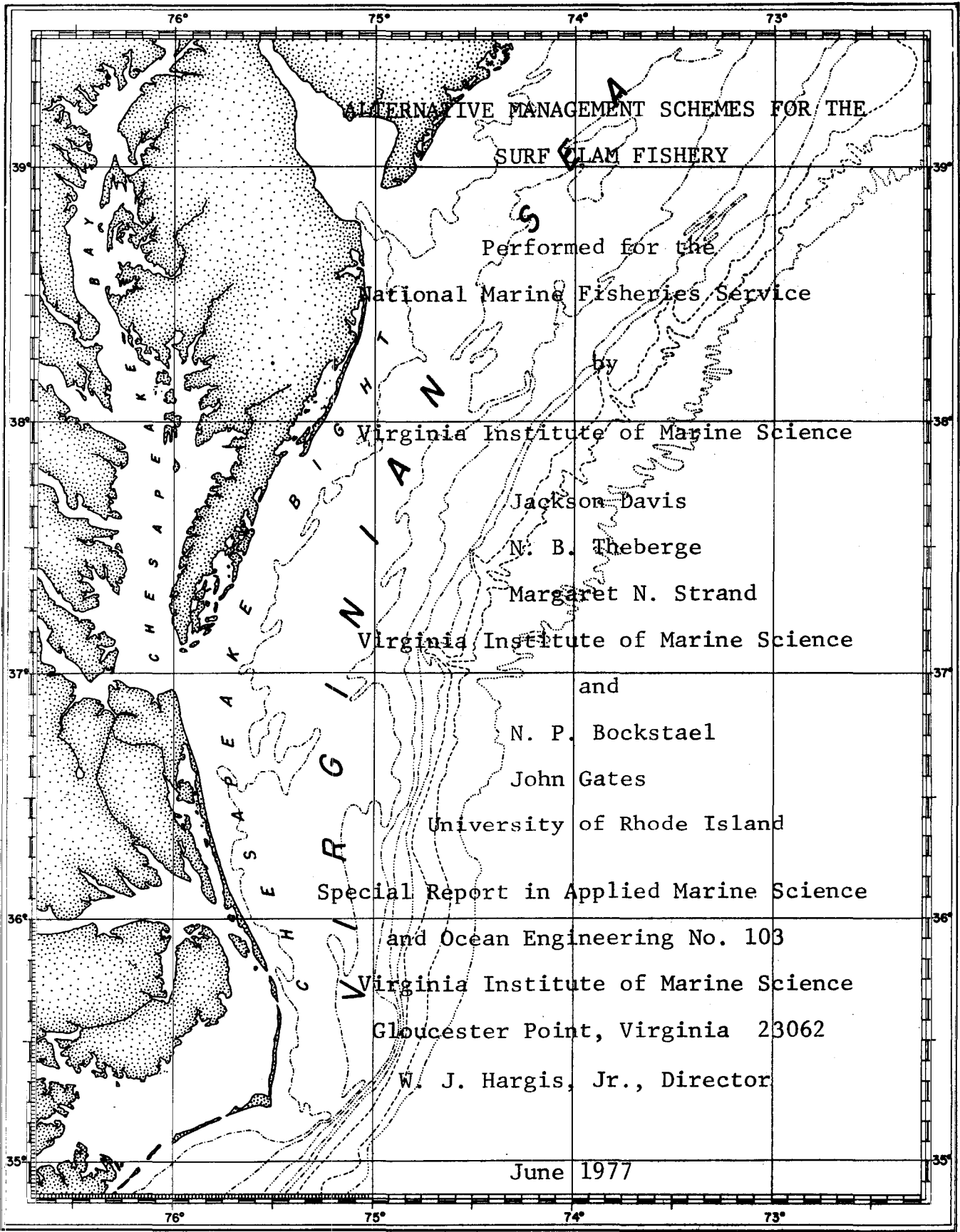
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ALTERNATIVE MANAGEMENT SCHEMES FOR THE SURF CLAM FISHERY

Performed for the National Marine Fisheries Service by

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Special Report in Applied Marine Science  
and Ocean Engineering No. 103  
Virginia Institute of Marine Science  
Gloucester Point, Virginia 23062  
W. J. Hargis, Jr., Director

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## SUMMARY

The Surf Clam Subboard of the Northeast Marine Fisheries Board asked for alternative management schemes which would protect the surf clam resource and the industry which depends upon it. In our view this dual goal can be attained only by a scheme which embodies some form of limited entry or property rights to the resource in addition to provisions which are resource-oriented.

Our choice of a suitable management program is a catch rights scheme. Second choice is a limitation on catching capacity and third choice is licensing a limited number of vessels. The catch rights program seems significantly superior to the others. There follows a brief presentation of alternative management schemes, the jurisdictional and legal basis for management, and alternative management regimes.

### Alternate Management Schemes

The catch rights scheme involves subdivision of an annual catch quota (MSY or other number) into a large number of Catch Rights units which would be issued to the industry, probably by a formula recognizing past performance, as licenses to catch an established quantity of clams. Catch Rights would become items of property being salable under stipulated conditions. The catch rights approach is effective in protecting the resource and in protecting the economic viability of the industry.

The benefits of the measure are incident on holders of catch rights. It allows a maximum of flexibility to industry in deciding how, when and where to harvest their catch. It does not preclude modifications to improve or refine the utilization of the resource. It is not prohibitively expensive to implement, monitor and enforce. There appear to be no insurmountable legal problems.

The other two schemes are similar in concept but differ in details, one focusing on the vessel, the other on the effectiveness of the fishing unit. As in the case with Catch Rights, licenses would be issued under some "grandfathering" formula. They could be salable items of property or the property rights could be retained by the management authority. Both alternative schemes would limit the total catch and limit entry into the fishery by placing a limit on the number of licenses issued. Licenses would entitle the holder to operate (in one scheme) a certain defined category of vessel or (in the other option) a certain number of complexly defined catch capacity units. Benefits of limited entry under either scheme would accrue to the industry. Administration and enforcement would be cumbersome. Legal questions, though perhaps more complex than in the catch rights scheme, do not appear insurmountable.

Each of the basic management schemes is amenable to refinement by incorporation of resource oriented provisions such as size limits to maximize yield per

recruit, and area closures to prevent harvest of small rapidly growing clams, or to provide a spawning sanctuary.

We prefer the catch capacity scheme to the vessel scheme because of its greater flexibility. It can better accommodate changing status of the resource and industry and can be more readily adjusted to allow for technological advances. Furthermore, if property rights are assigned, the catch capacity scheme provides for smaller, cheaper units and thus a larger market.



### Jurisdiction

The surf clam resource falls under the jurisdiction of several states and the federal government. Although the present management framework is a blend of the old and the new, the key to understanding present state and federal roles in fishery management is the Fishery Conservation and Management Act of 1976.

The Fishery Conservation and Management Act of 1976 (FCMA) created a fishery conservation zone (FCZ) for waters 197 nautical miles beyond the seaward boundary of each of the coastal states of the United States. FCMA became effective on March 1, 1977 and vests in the United States exclusive management authority over all fish within the fishery conservation zone, and all continental shelf fishery resources beyond the FCZ, as well as providing for United States jurisdiction over anadromous species except when they enter waters under the jurisdiction of other nations. At the international level, no claims of sovereignty in the waters in this zone are made and no interference with recognized legitimate uses of the high seas, except as are necessary to implement fishery management and conservation, are authorized by the Act. The states retain most of their traditional rights in relation to fishery regulation under the new Act.

State jurisdiction over fisheries is recognized in common law principles, court decision, and both state and federal legislation. State jurisdiction has been recognized to extend not only to internal and territorial waters of a state but also to include State vessels and citizens on the high seas operating beyond state territorial waters. Through landing regulation states have also acted to control non-resident fishing activities. It must be remembered that such state authority has been and will continue to be subject to the exercise of certain paramount federal powers.

Under FCMA state authority over internal waters is reserved completely to the states while state authority over territorial waters is reserved to the states subject to certain exceptions. State jurisdiction over its vessels and citizens beyond territorial waters remain possible only if there is no conflict with regulations within the FCA. State control over non-residents, recently an issue before the United States Supreme Court, is also questionable under FCMA. The portion of FCMA, pertinent to state jurisdiction is Section 306 and it states:

(a) In General.--Except as provided in subsection (b), nothing in this Act shall be construed as extending or diminishing the jurisdiction or authority of any State within its boundaries. No State may directly or indirectly regulate any fishing which is engaged in by any fishing vessel outside its boundaries, unless such vessel is registered under the laws of such State.

(b) Exception.--(1) If the Secretary finds... that--

(A) the fishing in a fishery, which is covered by a fishery management plan implemented under this Act, is engaged in predominantly within the fishery conservation zone and beyond such zone; and

(B) any State has taken any action, or omitted to take any action, the results of which will substantially and adversely affect the carrying out of such fishery management plan;

the Secretary shall promptly notify such State and the appropriate Council of such finding and of his intention to regulate the applicable fishery within the boundaries of such State (other than its internal waters), pursuant to such fishery management plan and the regulations promulgated to implement such plan.

(2) If the secretary...finds that the reasons for which he assumed such regulation no longer prevail, he shall promptly terminate such regulation.

The Act reaffirms the right of a state to regulate fishing even beyond its territorial waters where its own citizens or vessels are involved. However, the FCMA also seems to limit a state's control beyond the three mile waters to these instances and circumstances alone. By forbidding a state to "directly or indirectly" regulate fishing beyond its boundaries, excepting the above two instances, the FCMA renders state regulation aimed at nonresidents and effected through landing laws dubious in validity.

Furthermore, if federal regulation in the conservation zone is exercised, even permissible extended state regulation which conflicted with it would have to yield under the Supremacy Clause of the Constitution. Even without conflict, federal regulation in a particular area might pre-empt exercise of state power in the same area.

The surf clam is one of the enumerated fisheries subject to the conservation and management provisions of

the FCMA. Power granted under the FCMA will be used to regulate the surf clam fishery beyond state territorial waters within the conservation zone. Whether federal power will be used even within state waters as provided by Section 306 (b) remains to be seen. Certainly the FCMA has laid the groundwork for a vigorous federal program of fishery management.

#### Legal Basis for Management

Under FCMA it is possible for state and federal management authority to coexist. It is also clear to most observers that any effective scheme for the management and conservation of fisheries resources must include limiting the amount of fishing effort. Therefore, it is imperative to consider the legal implications of such a management policy under state and federal law before attempting to formulate or implement any specific plan.

In establishing any limited entry program, free access to the resource will be restricted. This creates the possibility that persons who were previously taking as much of the resource as they desired might challenge the program. Their challenge would most likely rest on due process and/or equal protection grounds under the fourteenth amendment to the United States Constitution, and on any similar provisions of state constitutions. It is important, therefore, to examine due process and equal protection standards in order to be able to satisfy

constitutional requirements in formulating a program.

The Constitutional standards of due process equal protection are not mathematical formulas which can be applied to a statute to give a positive yes or no answer regarding its validity. They are flexible measures of the limits of state regulation over individual activity. On the basis of past decisions it appears that the federal courts would uphold a reasonable, non-discriminatory limited entry scheme. Economic and conservation regulations in the public interest are valid areas of state concern. To help assure that an act is upheld, any limited entry scheme should be supported by the best available biological and economic data proving that such regulation is necessary and in the public interest. Careful drafting of the scheme to assure that similarly situated individuals are treated alike will also help sustain the program from constitutional attack.

A potential legal problem that must not be overlooked in evaluating the legal viability of any management scheme is that many of the decisions supportive of marine resource management have been couched in terms of biological justification. And, although the biology and economics of a fishery are closely intertwined, economic justifications for management have not been given the same weight or consideration as have biological factors. Although promoting sound economic management of a fishery has been held to be a legitimate purpose for state regulation, the

legal precedent is much less extensive than for biological regulation. If a truly enlightened management posture is to be achieved, there must be wider recognition of the fact that management is not solely for the sake of resource itself, but management is for the benefit of people--the economics of the fishery and the benefits to the people go hand-in-hand.

In addition to the Constitution of the United States and the Fishery Conservation and Management Act of 1976, the laws of Connecticut, New York, New Jersey, North Carolina, Delaware, Maryland and Virginia are analyzed. Constitutional, statutory, or regulatory language is often subject to differing interpretations. As a practical matter, the limiting factor in many cases may be interpretation and implementation at the management level. For these reasons it is important for state management authorities and their legal advisors to review their own statutes, regulations, and administrative customs in order to determine what scope of management authority exists within the statutory framework. Although other legal considerations were addressed on a state by state basis, the following is a summary of the findings regarding the status of limited entry in state law.

#### New York

The New York constitutional standards should not bar limited entry. The state ranks preservation of natural

resources very highly. The statutory grant of power would appear to give the Department of Environmental Conservation the authority to limit entry and consider economic factors in regulating a fishery.

### New Jersey

The New Jersey constitutional requirement should be easily met by a limited entry scheme. The mandate to the New Jersey management entity is broad enough to include promulgation of regulations for limited entry. The present shellfish regulations are statutory, so any limited entry program would have to either (1) meet the same standards as the existing statutes or (2) include legislative action to amend or repeal the shellfish laws.

### Delaware

The Delaware Constitution should not bar a limited entry scheme. The Commission of Shell Fisheries has a broad mandate to regulate the industry, including licensing vessels and issuing permits to persons engaged in the industry. This authority contains no restrictions as to what factors may be considered in setting management policy.

### Maryland

Under due process and equal protection, Maryland courts should uphold a limited entry scheme, but care must be taken to avoid the anti-monopoly term of the Constitution. The broad authority given to the Department of Natural

Resources should include the ability to impose a limited entry scheme.

### Virginia

The due process and equal protection standards of Virginia can be met, as long as the "special laws" standard is observed. The state has a constitutional policy of resource conservation. The management authority is broad, and surf clam management is specifically authorized, so a limited entry scheme for surf clams should be acceptable.

### Connecticut

Connecticut's constitutional law would accept limited entry, although the common law tradition of right to work will require firm proof that regulation is needed. The statutory management scheme is very tight, leaving little room for any implied powers. Connecticut would require legislation to implement limited entry. Since existing legislation allows a daily catch limit to be set for oysters, limited entry should not be foreign or repulsive to the Legislature. It would, however, be outside the statutory authority of present management agencies to initiate such a scheme.

### North Carolina

The common law supporting the right to work will have to be carefully considered in drafting limited entry legislation for North Carolina. Before fishermen can be



excluded, the need for limited entry will have to be clearly demonstrated and the allocation scheme will have to be carefully developed. However, some precedent exists for economic management of fisheries in North Carolina. Shrimp seasons, for example, are opened and closed on the basis of the commercial size of the shrimp, a factor unrelated to biological conservation. The state might be willing to accept economic criteria for fishery management.

In contrast with the state constitutional law, the management statutes are quite broad and imply a great deal of power vested in the management agencies. The agency can license vessels and clammers, and tax clams to the statutory limit.

ALTERNATIVE MECHANISMS FOR MANAGEMENT DEVELOPMENT  
AND IMPLEMENTATION

Many variations exist for development and implementation. Because jurisdiction under FCMA exists, as a general rule only in the FCZ, a species could be subject to a management plan developed and implemented under FCMA and also subject to state or interstate plans directed at management in internal and territorial waters. Management programs may be developed and implemented with varying opportunities for success, by individual states, by mutual agreement among states involved in the fishery, by mutual agreement among states and the Federal Government, or by the Federal Government alone. Since FCMA does not necessarily preclude the existence or development of other regulatory mechanisms, various alternatives for management development and implementation exists via unilateral and intergovernmental mechanisms.

## RECOMMENDATIONS

A. Adopt one of the three schemes or a modification thereof.

B. Develop a detailed management plan including a schedule of implementation. The plan and schedule should provide for the following:

1. Development and legal review of an allocation (grandfathering) plan for distributing catch rights or licenses.
2. Determination of the property attributes to be lodged in catch rights or licenses and the mechanisms for issuance, exchange, and for recording exchanges.
3. A schedule of and responsibility for data collecting, processing, analysis, interpretation and dissemination.
4. A schedule of and responsibility for review and revision of the management program.
5. A schedule of and responsibility for research to answer specific questions of managerial significance.

## INTRODUCTION

It has long been established that fisheries whose products enjoy a strong market tend to overfish the resource and to attract fishing capacity in excess of that required to take the harvestable surplus. The surf clam fishery exemplifies these unfortunate properties of common property fisheries in that the catch has risen from a brief plateau of approximately 60 million pounds in the early 70's to a peak of 96 million pounds in 1974 and then declined to 49 million in 1976. At the same time the fleet increased from approximately 100 vessels in 1970 to near 150 by the end of 1976.

It is apparent that the harvesting capacity has over-reached the reproductive capability of the stock. To harvest more from the stock than it is capable of producing is both biologically and economically wasteful. However nothing inherent in the economics of the industry prevents overharvesting. Indeed, the strong market demand for surf clams drives the industry toward overharvesting. In the absence of property rights or other inherent economic controlling mechanism, external governmental control must be exerted if the productivity of the resource is to be maintained and a climate is to be maintained in which businesses can operate with reasonable expectation of profit and reasonable predictability of amortization rates.

While the need for management is clear, the appropriate choice among the large assortment of alternative management mechanisms is not. Therefore the Surf Clam Subcouncil of the Northeast Marine Fisheries Council asked for alternative management schemes which would accomplish the goals of protecting the industry which uses it.<sup>1</sup> This paper was developed from the report submitted to the Council. It was occasioned by the passage of the Fishery Conservation and Management Act of 1976 which significantly improves the regulatory environment. The modifications to the original report are essentially those needed to make it consistent with this Act. The objective of the discussion set forth in Part I is to examine the advantages and disadvantages of a few such management schemes. The legal implications associated with the development and implementation of various management alternatives are addressed in Part II.

The capital investment required for efficient plants and vessels is high in relationship to their predictable economic life in an unmanaged fishery. The lack of control of the supply of its raw material places the surf clam industry in a position of higher risk than most other industries. If overfishing occurs plants and vessels will become unprofitable before the end of their useful life. A management program should provide access to the common property resource in a fashion that gives the clamming industry a stability of supply similar to that experienced by other, non-seafood industries. That is,

the regulations should provide a framework within which clamming businesses enjoy approximately the same opportunities for success or failure as business outside of the seafood industry. History shows that without governmental regulation of harvest, businesses utilizing a common property resource cannot expect reasonable return on capital investment in the long run. Providing greater stability of the resource and greater predictability of the extent of competition for the resource (and thus a degree of stability to investment) is considered to meet the goal of protecting the industry.

The goal of protecting the resource is considered to be met by preventing average harvest from exceeding average maximum sustainable yield (MSY).

## FOOTNOTES

1. The names of these two groups subsequently were changed to Surf Clam Sub-board and Northeast Marine Fisheries Board to reduce the possibility of confusing them with the Regional Management Councils created by the Fisheries Conservation and Management Act of 1976 (PL 94-265).

**PART I**  
**MANAGEMENT SCHEMES**



## INTRODUCTION

Perhaps the most direct and specific type of management is "resource-oriented." Examples of this type of regulation include closed seasons and areas, minimum size regulations, catch limits, and spawning sanctuaries. Certain biological requirements, intra-seasonal adjustments, and fine-tuning might be accomplished with various resource-oriented regulations, e.g., area closures, size limits, etc. Appropriate use of these methods depends on an extensive understanding of the biological characteristics of the species and is beyond the scope of this discussion. However, it is important in applying these techniques to consider their complementarity with the entry limitation schemes under discussion. For example, while each scheme requires as input the total desired annual catch for the fishery, the application of aggregate quota regulations without effort limitations will elicit the inevitable race for clams which could dissipate most of the potential economic gains from management. The implications of various resource-oriented regulations should be studied carefully in conjunction with possible complementary limited entry measures.

While various resource oriented schemes may sufficiently protect the resource, some form of controlled access is recognized as necessary to accomplish the goal of protecting the industry. Controlled access

or "limited entry" schemes differ from the resource-related schemes in being explicitly cognizant of economic factors and therefore can offer substantial economic benefits to fishermen. We define limited entry schemes as those which directly or indirectly limit the amount of fishing effort to some desired level. An assumption of the discussion which follows is that some form of a limited entry scheme is desired. The degree to which benefits would be incident on fishermen, the effectiveness, and the cost of controlling effort will influence the desirability of limited entry measures, and these factors will themselves be determined to a considerable extent by the particular method employed to limit entry.

It is clear that one alternative is a continuation of a laissez-faire or "do-nothing" policy. The consequences of such policy will be dissipation of profits to fishermen; that is, the division of a diminishing resource among more and more fishermen. The analysis of Gates (1974) clearly indicated substantial benefits in excess of \$5 million annually from limited entry.<sup>1</sup>

Much remains to be learned about the biology, especially population dynamics of the surf clam. A fundamental question which urgently needs consideration is the quality of knowledge necessary to initiate management measures. Every additional boat which enters the fishery is prolonging the inevitable adjustment process and making

it more expensive. At some point a decision must be made based on the best available information. The question is, will this decision be made before or after stock depletion and bankruptcy of many fishermen in the surf clam fishery.

In the following sections, we outline alternative methods of limiting entry. Before doing so we wish to repeat that limited entry and resource-oriented schemes should be complementary rather than competitive instruments of management. There are many variations on the theme of limited entry but two broad approaches are presented: (1) an indirect approach in which property rights in the resource are assigned to the users so that the users themselves determine the level of fishing effort to deploy under the influence of the various economic constraints affecting the industry (2) a direct approach in which the governmental management agency determines the optimum number of units of gear and issues a limited number of licenses. In the second case, property rights may be lodged in the licenses, but need not be. In the discussion which follows three hypothetical "packages" are presented, one indirect scheme, and two direct schemes. They have been constructed so as to reduce the disadvantages inherent in the individual components of each package. Considering the large number of permutations possible, the number of options has necessarily been restricted. The following should, therefore, be regarded as a framework for discussion and not as an exhaustive catalogue.

## FOOTNOTES

1. Gates, J. M. 1974. The Benefits to Fishermen of Limited Entry Measures in the Surf Clam Fishery. Rhode Island Agricultural Experiment Station Contribution number 1538 Kingston, R. I.

## CATCH RIGHTS

The elements of a Catch Rights scheme are (1) selection of a quota (2) subdivision of quota into a large number of Catch Rights units (CR) (3) definition of property aspects of CR, (4) issuance of CR (5) regulating transfer of CR, if required (6) periodic adjustment of quota.

Theoretically the quota could be maximum sustainable yield, maximum economic efficiency, optimum yield, or as a last resort, an arbitrarily selected number. The number of units (sub-divisions of the quota) should be large in relation to the number of vessels operating in the fishery to facilitate their exchange and to make possible the harvest of small quantities for special or local markets, such as a seasonal bait market. The operator of an efficient stern dredger would need many CR units to operate throughout the year. Having each CR represent a relatively small proportion of the total quota would also increase a vessel operator's flexibility to adjust to changes in efficiency or changes in the amount of clams that he desires to harvest.

As an alternative to catch rights whose magnitude (in bushels of clams) might change from time to time as the population of surf clams fluctuated, we might consider two "pools" of rights. One pool, considered permanently issued, (permanent rights) would be equal to a conservative

estimate of the MSY (or other quota). The other pool would be held in reserve to adjust for fluctuations in the population. In years of great abundance, all of this reserve pool of catch rights would be issued, in years of scarcity none would be, and in most years some intermediate number would be issued.

Thus, periodically the management agency (MA) would decide whether or not to issue rights from the reserve pool, and if so, how many. The pressures to issue additional reserve rights would be great and a policy for their distribution would be needed. One method would be public auction. In effect, the winning bidder would be leasing a specific amount of reserve catch rights for a specific time period. At the end of that time period they would revert to the reserve pool. Another method would be to distribute the reserve rights equally among existing holders of permanent rights. There are other formulae which could be used but these few examples serve to illustrate that some policy would be needed on the distribution of reserve rights.

#### Implementation

Issuance of CR involves two facets, 1) the original issuance at the outset of the management program and 2) provisions for renewal, transfer and increase or retirement.

Catch rights could be issued equally to participants in the fishery as of some stipulated date of record, or alternatively, allocated unequally by some formula based on historic participation in and dependence on the fishery and the cultural, social and economic framework of the fishery<sup>1</sup>.

Treating equally all persons participating as of a certain date is administratively simple, but socially questionable in that different levels of "vested interest" are treated the same.

Distribution based on historic participation presents the administrative problem of developing an equitable formula. Determining what factors should be considered and the importance of each would be quite contentious. How does a formula treat equitably the long-time participant and the one who has just entered the fishery? Are records adequate to demonstrate the historic performance of those who have been in the fishery? Alaska's recent experience in limiting entry demonstrates that a reasonably equitable formula for recognizing various aspects of vested interest can be developed though the task is not an easy one.

As a starting point, one must decide whether the catch rights are to be divided between the processing sector and the fishing sector, or be issued only to the fishing sector. In either case among the factors to be considered in allocating catch rights to individuals

would be volume produced by each unit (plant, vessel, corporation) and length of time each has been in the clamming business (appropriate credit for replacements, changes of names, etc.). The greater the fisherman's or processor's historical volume, the greater would be his percentage share. The same might be true for length of time in the industry. These catch rights could be (but need not be) issued in return for a fee sufficient to cover administrative costs.

In the harvesting sector one might group all the vessels now operating or on the building ways into categories according to their performance or performance of similar vessels. By multiplying the annual catch of vessels of that class by the number of vessels in the class and summing for all classes, one would arrive at a total catch capacity. Each boat (class) could then be allotted as a catch limit (number of CR) a pro rata share of the quota, the basis being the ratio of total catch capacity to the quota.

The property rights which are to exist in the CR must be determined and defined before issuance. Some experience exists in the governmental leasing of mineral rights and of land rights (eg. use of publicly-owned bottoms for oyster culture) and in limited entry fisheries in Alaska, Washington, and a few other states. This experience could provide useful guidance. The primary



question seems to be the extent to which government can or should relinquish its stewardship of the resource.

Decisions must be made about the following questions.

1. Shall the CR be freely transferrable by sale or lease, or shall there be controls such as: transfers only by or through the management agency to record all terms; controls to prevent speculation, tax on transfers?
2. Shall CR be deviseable by will, shall they pass by entestate succession?
3. Shall CR be subject to tax and if so, which taxes, property, income, estate?
4. Shall CR be subject to encumbrances by creditors?
5. Are the CR securities under any security regulations?
6. Will the CR be valid as security on a debt?
7. Shall limitations be placed on the number of CR to be held by one person?
8. Shall special provisions be made for new entry into the fishery?

After the initial distribution, catch rights would be exchangeable via market transactions, thus a mechanism for their efficient redistribution would exist. Additionally these market transactions would provide significant compensation (at no cost to the management) to anyone wishing to retire from fishing. Adjustments

by the MA would be made when necessary through leasing of CR or through a scheme for buying them back or by adjusting the catch authorized by a CR.

### Analysis

A catch right (also called stock certificate by some authors) in effect is a marketable asset, the value of which depends on the magnitude of average profits per pound of catch in the harvesting sector, on the size of the catch right and on the cost of capital (i.e. the interest rate). As discussed by Gates (1974), rough estimates of these profits would be 2.7¢/lb. based on MSY regulation and 8.4¢/lb. based on MEE regulation. An examination of historical data indicates annual gross revenues per vessel of \$155 thousand in 1976 versus \$88 thousand in 1972; a 76% increase in four years. During the same period, annual catch per vessel declined by 22.5% from 63.4 thousand pounds to 49.1 thousand pounds. This decline is even more drastic than is apparent since the composition of the fleet changed significantly toward larger vessels whose annual catch is considerably above average. It is therefore difficult to convert the higher gross revenues per vessel into an estimate of profit changes since costs have changed also. It has been estimated however that the indicated profit margins are now triple those obtained earlier. This would suggest 8¢/lb. based on MSY regulation and 25¢/lb. based on MEE regulation. Assuming

a 50% tax rate, this would imply after tax profits of 4¢/lb. and 12¢/lb. based on MSY and MEE regulation respectively.

The market value of these catch rights would reflect their capitalized value which depends on the discount rate and the time horizon. Assuming a 20-year horizon, the present worth factors for discount rates 10%, 12%, and 15% are 8.51, 7.46, and 6.26 respectively. Thus, the market value of catch rights would be in the range 25-34¢ per pound if MSY regulations were attained and a 75-102¢ per pound if MEE regulation were attained. If we assume a ten-year adjustment period, these rights may be heavily discounted. Using a 15% discount and a ten-year adjustment period, the initial value of individual catch rights may be expected to be 6-8¢ per pound based on MSY regulation and 18-25¢ per pound based on MEE regulation. These values would increase over time as catch per unit effort and net returns approach stable values and eventually would approach the earlier value ranges of 25-34¢ per pound and 75-102¢ per pound.

If the management agency recovers part of its costs for research, administration and enforcement (via a landings tax, for example), the value of catch rights would be correspondingly reduced. Let us assume a 1¢ per pound levy on catch (meat weight basis). Let us abstract from the phase-in period which could require a decade or more.

The initial value of individual catch rights at MSY would then be about 5¢ per pound and would rise over time approaching 19¢ per pound eventually. These values would be windfall gains, which would accrue to owners of these rights. An owner could realize these values either as a lump sum payment or as an equivalent annuity or leasing fee when he sold or leased his rights.

These estimates assume that the fishery would be managed at a sustainable yield of 70 million pounds. In fact the fishery has not been well managed, stock depletion has occurred, catches have fallen despite increased investments in vessels, and ex-vessel prices have soared. For the period 1968-1975, ex-vessel prices rose gradually from about 10 cents per pound in 1968 to about 13 cents per pound in 1975. In 1976 however, price increases were quite remarkable, rising from 24 cents per pound in January to 36 cents in April, and peaking at 58 cents in August. After August, some decline occurred; prices in December, 1976 were 52 cents. Thus, prices have more than quadrupled as participants have sought to maintain their respective shares of a shrinking resource base. Consequently, the numbers given should be regarded only as rather crude estimates which are conditional on the implementation of limited entry measures and which can be revised as improved estimates of costs and prices become available.

The Catch Rights Plan places the incidence of benefits on fishermen; it allows for efficient vessel sizes and for technological improvements and for the efficient use of labor and capital. It can be designed to adjust to changing conditions of prices, costs and resource abundance. It allows individual units of the industry, whether a boat operator or a vertically integrated corporation some degree of latitude in optimizing yield within the context of its own goals in contrast to an externally defined optimum. Management costs can be assessed against beneficiaries by taxes on landings or a license or property tax on catch rights.

If the catch quota were based on the concept of MSY, each holder of CR would have the option of harvesting at some lower level to reduce costs or to maximize profits. This program would prevent harvest from exceeding MSY but would allow individuals to work toward MEE, if they wished to. Retirement is voluntary and sellers are compensated.

If the partial relinquishment of governmental trusteeship over the surf clam resource is viewed as undesirable, some method of governmental recall of the certificates could be prescribed. Circumstances unforeseen at this time might lead to the conclusion at some point in the future that the catch rights scheme is unsatisfactory. Catch rights might be issued for a

stipulated period of years which could be looked upon as a trial period during which procedures for continuation or termination would be formulated. One must recognize, however, that some of the potential benefits of the catch-rights scheme are dependent upon security of ownership of the rights. The MA always has the option of entering the catch rights market as a buyer of catch rights for the purpose of retiring them. In this way retirement is voluntary and sellers are compensated.

Although the concept of catch rights is not widely applied in fisheries, the private enterprise economy of the U. S. is based on private ownership of raw materials. An analogue of catch rights in a common property resource is adjudicated water rights such as exist in arid western states. When a groundwater aquifer (common property) is being depleted, a court procedure can be instituted whereby the sustainable yield of the aquifer is allocated among the users on a pro-rata basis. The quantity allocated to each user is determined by his rate of use during a stipulated base period, such as the preceding five years. Also similar in concept to catch rights is the allocation of radio communication frequencies.

The CR scheme differs from vessel licensing schemes in regard to the ease with which a fisherman can become established. Under a vessel licensing scheme, the licenses would be very valuable, indivisible assets. To maximize this value, there would be a tendency over

time to replace small vessels with the largest, most technically efficient vessels; even though, from an aggregate viewpoint, two small vessels might be more cost effective than one large vessel. For a large vessel capturing .9 million pounds per year and the earlier value of 19¢/lb. the market value of the license exclusive of the boat would be in the neighborhood of \$170 thousand. Because of the indivisibilities and capital market imperfections, it might be difficult for a young fisherman to get started. This result can be contrasted with CR which are divisible into relatively small portions of the optimum yield, as discussed earlier. Consider a young fisherman with a small vessel which can be projected to catch 200 thousand pounds. He need not purchase a \$170 thousand license for his small vessel. Instead he can purchase catch rights for \$38 thousand which entitle him to catch up to 200 thousand pounds. While this sum is not trivial it is well within the range of what family businesses such as family farms might expect to pay for location or land rights. It should also be recognized that with such a scheme, profits and hence ability to pay would be substantially better than now. In the case of father-son fishing operations, there are mechanisms for intergenerational transfers of assets, such as CR, which minimize disruptions and estate taxes. Depending on the preferences of the individuals involved, sale of CR and external financing may not be necessary.

### Monitoring and Enforcement

The basic scheme will require that holders of CR report to the MA their catches at regular intervals. There must be an independent check on the catches through buyers or processors and the MA must keep a running tally of the catch under each block of catch rights. Various of the measures discussed under Refinements would require additional enforcement measures as noted.

### Conclusion

From the preceding discussion it appears that the catch rights approach would be effective in protecting the resource, and in protecting the economic viability of the industry. The benefits of the measure are incident on holders of catch rights. It allows a maximum of flexibility to fishermen in deciding how, when and where to harvest their catch. It does not preclude modifications to improve or refine the utilization of the resource. In our opinion the catch rights scheme is one of the better of the limited entry approaches. It has substantial advantages over the approaches that license vessels and which are discussed next. A disadvantage relative to these is that catches must be carefully monitored to ensure that individuals do not catch more than their entitlement. To put this disadvantage in perspective however, it should be noted that some level of catch monitoring is required in all schemes and is required in order to evaluate the performance of any scheme.



## FOOTNOTES

1. PL 94-265, Sec. 303 (b) (6).

## LICENSING CATCH CAPACITY

Another basic approach is to match fishing effort to the aggregate quota by licensing an appropriate number of catch capacity units to operate in the fishery. In this scheme, a license would authorize deployment of a vessel for a unit of time (perhaps a week). Several options exist. Either technological improvements could be restricted in an attempt to stabilize the number of units of gear operating, or changes could be allowed without restriction, in which case the number of vessels or amount of fishing time (or both) would need be reduced over the years. Additionally, all vessels could be treated equally, or they could be grouped into categories determined by characteristics of the vessel and dredge which affect harvesting efficiency. Property rights could be assigned to the licensees or could be retained by the MA.

### Implementation

In essence, the appropriate catch level (MSY or other quota) must be associated with an appropriate number of effective catch capacity units, and thence, by arithmetic conversion to an appropriate number of licenses. Original distribution of catch capacity units to members of the fishing industry would involve the questions and alternatives as discussed under Catch Rights. Presumably some form of grandfathering formula would be involved.

The first step would be to define the catch capacity unit. We will use vessel-week in this discussion, though other units of time could be used. In the simplest and perhaps least equitable case all vessels would be treated equally. The catch target or quota would be divided by the average weekly catch of the fleet to determine the number of weeks of fishing to be allowed. Each licensee would then be authorized to deploy a stipulated number of vessel weeks. The number of vessel weeks which would approximate the catch target is less than would occupy the fleet for a full year. Fishing could either be restricted to a predetermined part of the year, or could be left to the discretion of the individual licensees. Technological improvements over the years would tend to increase the economic efficiency, and probably the profits, of the innovators, but at the cost of reducing the total amount of fishing time allowed, the number of vessels, or both.

A somewhat more complex, but perhaps more nearly equitable method of defining the catch capacity unit would be to group vessels of the then existing fleet into a few (3-6) performance categories so that the large stern dredgers would not be ranked with smaller, older side dredgers. Among the performance features to be considered in categorizing vessels would be vessel size, dredge size, pump capacity and other features that influence efficiency. This would be done on the basis of historic performance

of typical vessels. Vessel operators would not be allowed to significantly change their vessels or dredges. Precluding improvements would tend to stabilize the number of vessels operating and the duration of fishing season.

The question of whether the government should retain property rights in the licenses or should assign them to the licensee must be addressed. If assigned to the licensee, then conditions of exchange must be specified as in the case with catch rights. As is the case with catch rights, effort units should be reasonably small (vessel-weeks, not vessel months) to facilitate exchange and year-to-year adjustments in response to changes in population.

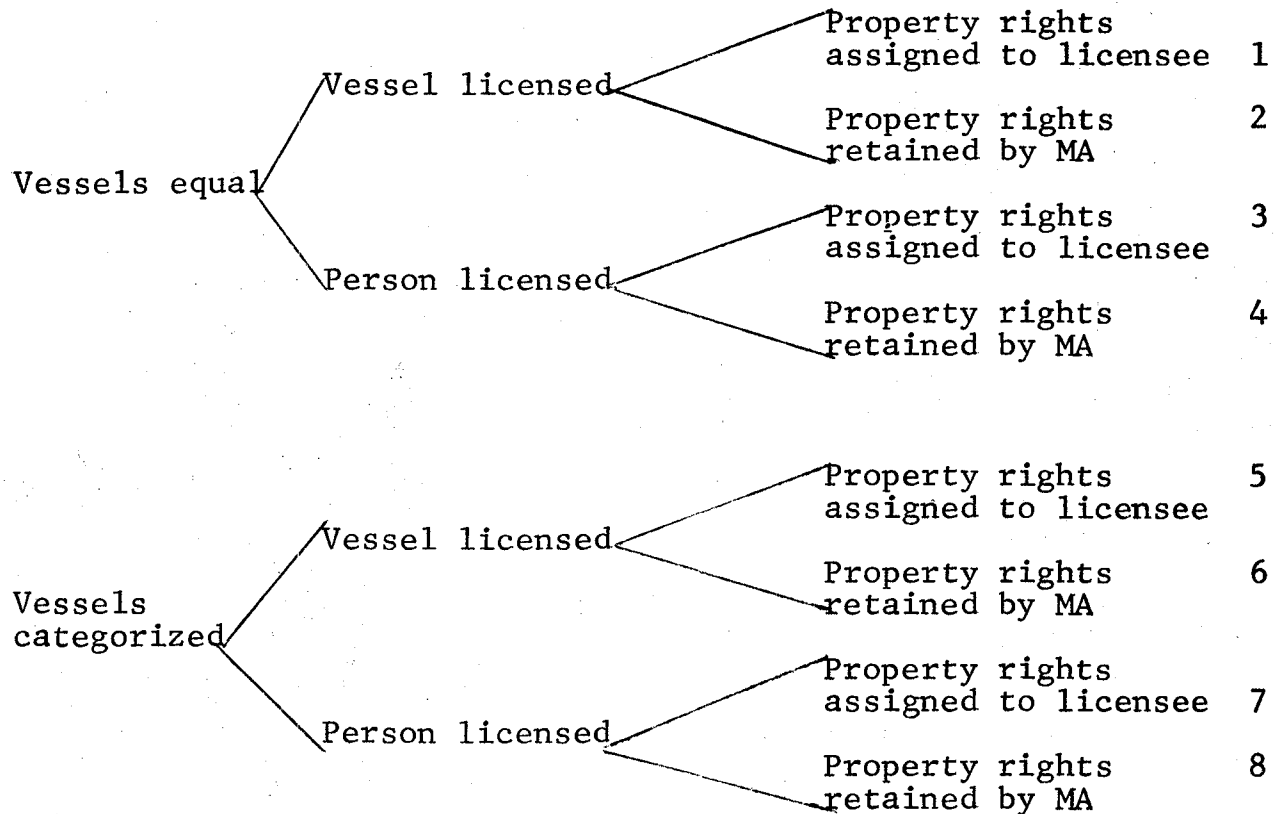
In summary, the catch target would be converted from bushels of clams to vessel weeks and licenses issued entitling holders to deploy the appropriate amount of effort. Issuance of licenses involves the same issues and could be by the same means as discussed under Catch Rights.

### Analysis

The goal of protecting the resource would be accomplished indirectly by establishing an effort quota rather than a straight-forward quota on catch.

Because of the various options and sub-options, discussion of the consequences of adopting any

one set is complicated. At least eight subsets of options are possible under this scheme as follows:



The various options would have somewhat differing impact on the business climate of the industry. Treating vessels equally irrespective of size would encourage elimination of the smaller vessels with an attendant "arms race" to substitute large vessels capable of high catch rates. In turn this increasing catch capacity of the total fleet, would require a decrease in the number of vessel weeks in order to avoid exceeding the catch target. Two effects of the option are economically questionable. Treating all vessels equally would encourage premature

replacement of some vessels and would encourage surplus fishing capacity which would be forced to lie idle part of each year unless occupied in an alternative fishery such as that for ocean quahogs.

If vessels were grouped into categories based on productivity, there would be less incentive to replace the less productive vessels. The competitive positions of the various categories would be fixed by the system. There would, however, be an incentive to increase the catching power of each vessel to the maximum extent allowed by the classification system. Therefore the MA would of necessity become involved in approving or disapproving proposed modifications of vessels and gear, thus involving itself in economic decisions of fishermen. One questions whether the level of control implicit in this scheme could be achieved without very extensive input from industry concerning the efficiency of technological improvements, including mandatory disclosure of information that normally would be deemed proprietary.

The options of licensing vessels or people also have economic ramifications which influence the business climate. Licensing vessels would tend to stabilize the number in the fishery, and also the size distribution, if categorized. The license would in effect state that the vessel John Doe could operate in the fishery for a stipulated number of weeks.

Licensing people rather than vessels appears to offer advantages. If vessels were licensed the fleet size would be stabilized, but if people were licensed, freedom would exist to readjust the number of vessels as economic conditions dictated. Licensing people would encourage attrition from an overcapitalized fleet in that the number of licensees could be greater than the number of vessels. The vessel John Doe could fish the number of vessel weeks authorized by one license, then fish another period of time under authorization of another license. A vessel owner could fish his own license, then contract with one or more additional license holders. Thus the less efficient vessels would tend to leave the fishery as licensees contracted with operators of the more efficient. However no boat operator would be forced out by the government if he started off with a license. Each license holder would make the decision, within the context of his own business, of whether to operate his own boat or to contract with another boat owner.

If the MA retains property rights, it must establish a procedure for redistribution of licenses that become inactive through forfeiture, retirement or death of the licensee, or otherwise. Although licenses presumably would be valuable, the MA is precluded by PL 94-265 from distributing them by auction. Establishment of criteria whereby a limited number of licenses could be equitably assigned among a large group of applicants

seems an insurmountable task. Lottery seems to be the best means of assignment.

If property rights are assigned to the licensees then decisions concerning expansion or contraction of each individual fishing operation would be made internally within the context of the economics of the industry rather than externally in the area of the management agency. Downward adjustment of fishing effort would be facilitated by private ownership of licenses in that not only the vessels, but also the right to fish would be salable commodities. If only the vessel were an economic asset, people would be inclined to remain in the fishery as long as possible, especially as the vessel became more antiquated (less salable), whereas if the right to fish were marketable, the owner of an old vessel might be disposed to scrap the vessel and sell or lease the license.

If property rights were assigned, then industry would have considerable degree of freedom in adjusting the number of vessels actually fishing. Depending on the constraints placed on ownership of licenses, a single vessel owner might contract to fish the licenses of several different people. Licenses need not be tied to specific vessels or, in fact, to ownership of any vessel.

#### Monitoring and Enforcement

Enforcement would involve inspection to determine that each vessel was operating under a valid



license. The MA would also need to monitor the design characteristics and catch of each vessel for the purpose of detecting changes in effective catch capacity.

Because total catch would be controlled by limiting catch capacity, the MA would need to issue licenses and the authority to prohibit improvements to technical efficiency, or to link their adoption to reductions in fleet size or fishing season.

### Conclusion

A scheme based on licensing catch capacity could, in principle, be successful in protecting the resource and the economic viability of the fishery. However, in order to implement and enforce such a scheme the MA would have to prohibit technological improvements or link their adoption to reductions in fleet size or duration of the fishing season. While this is possible in principle we suspect that in practice it would prove onerous to industry and the MA. In practice such a scheme might tend to simply prohibit innovation even when innovations are cost-saving and socially desirable.

The catch rights scheme authorizes a licensee to take a specified quantity of the resource. In contrast the catch capacity scheme authorizes licensees to deploy a specified quantity of fishing effort. Both could protect the resource, both could protect the industry, but the catch capacity scheme would be more costly to administer and might depending on the option taken, preclude or discourage innovation.

## LICENSING VESSELS

A licensing scheme based on vessels warrants some consideration. This scheme would issue licenses to a pre-determined number of standard fishing vessels. The harvest quota would be regulated indirectly through the number of vessels. The industry would be stabilized by the limitation on the number of vessels.

### Implementation

The plan would divide all existing vessels into a few ( 3 to 6 ) categories based on their capacity to catch clams. These categories would be defined and described. Only vessels fitting into one of the categories could be considered for licensing and new vessels could be licensed only upon retirement of an existing one. To accomplish the initial effort reduction, the appropriate number of licenses could be bought back and retired. A fisherman could, in general, buy out another in order to expand his total vessel capacity. Such ownership changes might however be subject to review to avoid excessive concentration. Long-term changes in the resource would be met by adjusting the number of licenses. Short term changes could be addressed by adjusting the length of the season.

Property rights in the licenses could either be retained by the management authority or be passed to the licensee. If passed to the licensee, questions and

alternatives would be the same as in the case of Catch Rights.

Mechanisms would be needed to retire vessels and to allow additional vessels into the fishery in response to long-term changes in the resource. Probably the MA would buy up licenses (and perhaps vessels) in order to retire them and would issue new licenses by lottery.

### Analysis

The degree to which total catch approximated the desired quota would depend upon the accuracy with which the fishing efficiency of various vessel-gear combinations and arrangements could be approximated. Rather detailed reviews by the MA of vessel efficiency and characteristics would be required. A stable business climate could be provided, but at the cost of constantly attempting to stabilize effort through number of licensed vessels.

An obvious difficulty in this approach is that of knowing whether a given change in gear or vessel design is merely routine maintenance or if it will increase catch capacity beyond that allocated to the particular category of vessel. If, for example, a fisherman replaces an unreliable engine with a new one, will the replacement have the same thrust as the old? Since additional licenses would have to be purchased from other fishermen, the least expensive way will frequently be to invest in technologies

and gear which increase the catch capacity of existing vessels. For example, the industry might invest in a "factory ship" for offshore processing to release more time for dredging operations by dredge boats.

This plan is similar to Licensing Catch Capacity differing only in terms of the precision with which "effort" is regulated. However this difference is important for efficient vessel and gear design, incentives for technological improvement and the costs of management. In order to closely approximate the annual catch quota, the management authority would have to hold fishing capacity at a fixed level. This would require becoming enmeshed in decisions or actions which are normally the exclusive province of private enterprise. The MA would need to authorize and monitor any proposed changes in vessels or gear which might affect fishing efficiency. This understandably would not sit well with fishermen and could be a costly management system to implement, monitor and enforce.

Exchange of licenses would be less readily accomplished in this scheme than in the preceding ones in that licenses would be more costly. The relatively high value of licenses would likely make the industry less fluid and encourage consolidation into a smaller number of larger operating units. Only well-capitalized units (corporations) would be able to participate readily in the market for licenses.

### Monitoring and Enforcement

Enforcement would consist of inspecting for valid licenses and inspecting modification of vessels or gear to monitor changes over time in catch capacity. The MA would need to monitor total catch and catch per unit of effort to ensure that the catch approximated the desired quota and to determine if adjustments in quota or class criteria were needed.

### Conclusion

Limiting the number of vessels operating in the fishery could satisfy the goal of protecting the resource, in that the catch target could be approximated within an acceptable margin of error. Margin of error could be reduced by adjusting the length of the fishing season. Monitoring and enforcement requirements would perhaps be somewhat less than in the other schemes. The value of licenses might be so great as to result in a very limited market and hence lead to major consolidation within the industry over time.

## REFINEMENTS

While a program applying to the entire fishing area from Montauk Point to Cape Hatteras without geographic sub-division or other regulation might be adopted as a starting point, refinement is desirable. Some additional provisions, such as size limits, area and seasonal closures, while of themselves inadequate as management actions, could be incorporated in any of the preceding plans to improve its efficiency. Size limits should be established to obtain the maximum yield per recruit. Benefits would likely accrue from harvesting offshore beds during seasons of relatively calm seas and retaining inshore beds for harvesting during winter. These provisions are discussed next. Additional work will be necessary to determine the feasibility of incorporating these features. The important point to recognize is that such refinements are complementary rather than mutually exclusive and need not be instituted simultaneously with other provisions.

### Size Limits

It is biologically unsound to harvest clams before they have spawned. Also it is economically unsound to harvest young, rapidly growing clams, which if left on the bottom for an additional period of growth would yield a greater quantity of meat. The most lucrative time to harvest is at the size of maximum yield per recruit. Surf clams attain sexual maturity at an age of one or two

years. Although the data are not precise, maximum yield per recruit would appear to be attained at an age of from four to eight years, when clams are from 4.5 to 5.5 inches long. In the offshore waters where growth is rapid, maximum yield probably would be attained near 5.5 inches, but in nearshore waters where growth is slower a smaller size might provide the greatest yield. Natural mortality rate is not known at this time.

Both data from research cruises and information from people familiar with the operation of vessels dredging clams commercially indicate that frequently clams in one bed are of predominately one size. Beds containing both large and small clams in appreciable numbers do exist however. Data now at hand do not indicate which type bed occurs most commonly. The size uniformity within beds is important for the effectiveness of a size regulation as discussed below. A dredge probably kills some clams washed free of the bottom in its path. Therefore a size limit seemingly could result in destruction of significant quantities of small clams if beds containing clams of all sizes were dredged. If, however, sorting proved financially infeasible, vessel operators would seek out beds of large clams, and conservation might be well served. Beds containing small clams would be left undisturbed until they grew to the legally harvestable size thus maximizing yield per recruit.

A more general question may be raised however. There are grounds for suspecting that even under the best of circumstances, size regulations, unless accompanied by limited entry measures will be of zero or trivial permanent benefit to fishermen. An intuitive statement of this result is as follows. Optimum size regulations will increase potential yield and potential economic benefits because they maximize yield for a fixed level of fishing mortality. Under open access conditions, however, this induces an effort supply response. The increase in fishing effort induces an increase in fishing mortality to the point where the potential gains are vitiated. A case study in which this result was demonstrated quantitatively is Gates and Norton (1974).<sup>1</sup>

In prospecting for clams of harvestable size, a captain would be likely to capture some small clams. The management plan should perhaps attempt to minimize the wastage of small clams taken inadvertently by allowing the landing of a small quantity of undersized clams. The desirability of avoiding waste must be balanced against the undesirability of encouraging directed fishing on beds of small clams. If an allowable tolerance of small clams per trip came to be considered as a quota or catch target, conservation would be poorly served. Probably the safest course is to start with a rather stringent tolerance limit and to relax the restriction if experience shows this to be desirable.



One problem with "knife-edged" regulations on size is that they do not recognize the probabilistic nature of the harvest. Under the best of intentions, the quota on undersized clams may be exceeded on an occasional, random chance basis. When this happens, to discard the excess makes sense only if the survival rate for discards is quite high. An alternative would be to place a tax on the excess. The level of the tax would be set so that it is in fishermen's interest to search for large clams because of a substantially higher profit margin. At the same time, given a random catch of undersized clams, the tax should be low enough that retention is preferred to discarding the excess. Such a strategy encourages fishing strategies to avoid small clams but avoids waste of inadvertent catches.

Imposition of a size limit alone would do nothing to discourage overcapitalization. Some method of limiting entry or assigning property rights would be needed to provide stability to the industry.

#### Area Closures

Prohibition of harvest in certain areas, at least during part of the year, could be used as an additional refinement. Closure would be to allow growth of undersized clams or to reserve beds in protected waters for harvest during winter when harsh weather disrupts work offshore. In the latter case the closure would be seasonal.

Area closures might complement size limits in the attempt to maximize the yield per recruit. If vessels harvest beds having populations of several sizes and the small clams are culled from the catch, wastage will be significant because survival is poor when clams are returned to the water after being dredged up. Therefore, to the extent that area closures could be enforced, it would seem desirable to prohibit harvest from beds having appreciable numbers of clams smaller than the size that gives maximum yield.

It must be recognized that enforcement would be difficult and costly especially at night and at some distance from shore.

Area closures would be ineffective as the sole management tool because overcapitalization would not be prevented. Nevertheless, area closures offer promise as a complement to other management measures. There is another important, though subtle, cost of area measures which are imperfectly enforced. If area restrictions are circumvented by misstating the grid in which harvest actually occurred then scientific analysis of catch data by area may be rendered meaningless.

At the same time, the necessity of area closures (other than possibly spawning sanctuaries) may be questioned on the grounds of redundancy. The geographic allocation of fishing effort may be viewed as a predator-prey process in which re-allocation toward areas with highest stock

abundance is an automatic, dynamic process. Thus, closure of depleted beds may be regarded by fishermen as a nice, innocuous management measure because they have no intention of fishing in such areas except for sampling purposes.

## FOOTNOTES

1. Gates, John M. and Virgil J. Norton. 1974. The Benefits of Fisheries Regulation: A Case Study of the New England Yellowtail Flounder Fishery. University of Rhode Island Marine Technical Report No. 21.

## SOME CRITERIA FOR APPRAISING MANAGEMENT SCHEMES

The many facets of limited entry schemes suggest that more than one criterion is appropriate in appraising them. Specifically, an appraisal should consider (1) the incidence of benefits and costs both economic and social, (2) implications for technological improvements, (3) flexibility to respond to changes in costs, prices and resource abundance, (4) the costs of management, and (5) efficient use of labor and capital. We will review these criteria briefly in this section and relate each to the three basic types of limited entry schemes. An overriding issue of feasibility within existing laws and institutions, is discussed in Part II.

The best scheme is one which maintains the resource in perpetuity and leaves to the private sector maximum flexibility in decisions concerning social and economic issues. The management authority must be careful to distinguish between providing the opportunity for the private sector to make social and economic decisions and ignoring social and economic issues. Too often in the past governmental managers have not left flexibility, but instead by ignoring issues, have actually forced certain social or economic consequences. Outstanding among these has been the over-capitalization forced by open access to common property fisheries resources.

### Incidence of Benefits and Costs

Benefits from entry limitation in either of the licensing approaches would accrue directly to fishermen. Some of this could, however, be appropriated by the management authority through licensing or leasing fees or through a tax on catch. It would seem judicious to impose a temporary effort moratorium before instituting these management schemes. If potential profits are deemed great enough, speculators may attempt to enter the fishery just before a licensing scheme is implemented.

Certainly the question of "fairness" of the initial distribution of access in a limited entry scheme is of great importance to fishermen. Unfortunately, perceptions of fairness will vary among people and over time. The complexities which may arise in achieving fairness are very great.

Regarding economic and social issues, a management scheme should allow and encourage decision-making by the people and companies participating in the fishery rather than by the management agency. In this regard the best plan is the one which provides to the fishermen the greatest flexibility and greatest range of options possible within the fundamental constraints of the resource. Especially to be guarded against is the resource-oriented provision which accidentally or incidentally narrows or forecloses social or economic options.

In general it is true that the power to make socio-economic decisions is greatly enhanced by property rights. Thus those schemes which assign property rights to licensees would give to the fishermen greater decision-making power than those in which the property rights are retained by the MA. Additionally the catch rights scheme would appear to require fewer restraints than the other property-rights options.

#### Implications for Technological Improvements

It seems probable that fishermen will be interested in a scheme which allows the more efficient inventive, or industrious individuals opportunity to advance their position. If so, then the regulatory scheme should allow returns to initiative and to operational improvements, as in any other industry, rather than restricting methods and technologies which could increase efficiency and lower costs.

Under the licensing of catch capacities, it would be desirable to ensure incentive for innovation. Suppose all effort were indexed, as described earlier, and an appropriate number of standardized effort units were licensed to each participating firm. Then, if one individual wishes to make an operational improvement, the management authority could require him either to retire some of his own effort or to buy out someone else's licenses to compensate for the effective effort increase

inherent in his innovation. In either case, he is potentially reducing the costs of harvesting any given quantity of clams and so it will be worth his while to make the innovation only if cost savings are sufficient to warrant buying some vessel-weeks.

Note that under a licensing of vessels scheme, the only way in which the management authority can combat the effort increases of technological change is by buying back licenses and retiring entire vessels.

Under the catch rights approach, there is always incentive to innovate, i.e., to catch one's quota at a lower cost. Consequently, operational improvements will always be sought - without altering the total amount of clams caught. The additional profits forthcoming from the improvement will accrue to those who adopt it, but such improvements will not alter total catch and hence will not diminish the catch per unit effort of other fishermen. It is possible that the initial distribution of rights will, for some fishermen, be too small to achieve the economies of size attendant in large vessel operation. A free market in catch rights could serve to mitigate this problem as well; the returns from large-scale operations may be sufficient incentive for the more enterprising to bid licenses away from others. Indeed, were this not so, there would be no basis for concern about undue concentration of rights as mentioned earlier. Thus, the conservation effects of catch rights are the same as



those of an idealized system for licensing standardized units of effort. However, the catch rights approach does not require continual assessment of factors influencing effort as is necessary in the effort licensing scheme.

### Flexibility under Changing Conditions

Changes will be introduced into the regulated fishery from various sources which suggest the need for flexibility in the various components of an overall management plan, including limited entry components. An increase in demand with fixed or shrinking supplies will increase prices. No adjustments are necessary in either the licensing of catch capacity or catch rights. Under these approaches, effort and catch do not respond to price changes in the short-run. The short-run effect of price increases is simply an increase in the profits of fishermen. If the licensing of vessels (only) approach were used, however, then each time market conditions changed, there would be an incentive for firms to increase their catch by whatever means possible. These might include larger dredge, overtime crews, offshore processing etc. As noted earlier, the only adjustment mechanism available under this plan would be the continued buy-back and retirement of vessels and/or a complementary quota scheme to stabilize catch.

Alternatively, a change in the status of the stocks or the management authority's perception of that

status will involve adjustments similar to those required in the initial phase of an effort limitation scheme. In the catch capacity licensing approach flexibility could be achieved by adjusting the length of the fishing season or by reducing the number of licensed effort units in poor years and increasing them in good years. Reductions could be achieved by refusing to renew more than the prescribed number, by purchase of excess effort units or by temporary lease (by the MA) of excess effort units. Similarly in the catch rights approach, excess rights can be handled by scaling down all rights proportionately, by purchase of excess rights, or by lease of excess rights. In either approach, reduction (or increases) in the total catch can be allocated among individuals and this allocation need not be compulsory. Use of voluntary market means are possible provided a revenue base exists which the management authority can use to buy or lease the desired excess. Presumably those fishermen most willing to sell or lease would include the less efficient at fishing, including those whose opportunity costs (non-fishing employment opportunities) are highest.

#### Cost of Management

Another criterion for appraisal of limited entry schemes is their administrative complexity and costs. The costs of management include funds designated for research and monitoring of stocks. This work would probably

be done for resource oriented management measures with or without limited entry. In addition, there are the expenses of the limited entry scheme per se, i.e., administrative, compensation, enforcement, etc. The cost of management is important in a time of scarce public funds. It is in the interest of fishermen, consumers and taxpayers to ensure that a given management measure be adopted only if the benefits exceed the costs of implementation, monitoring, and enforcement.

Resource assessment and monitoring the catch would cost nearly the same irrespective of the type of plan. The various schemes which assign property rights would be expensive to implement, but then private enterprise would take over the exchange of licenses with the management agency having only to record transfers in order to maintain an accurate record of ownership. Thus the long-term costs would not be great. Probably the least costly schemes would be Catch Rights and the simplest Catch Capacity option. Cost would increase with the need to monitor or prohibit changes in vessels and gear.

#### Efficient Use of Labor and Capital

The efficiency of limited entry schemes has already received some discussion under implications for technological improvements. In addition to these criteria, a management scheme should permit efficient use of labor and capital in both the harvesting and processing sectors.

An aggregate annual quota plan without limited entry provisions would, for example, result in overcapitalization and a race to catch as many clams as possible before the aggregate quota is exhausted. Once the quota is exhausted, vessels and processing capacity would be idle for the balance of the year. An effect of such a scheme in isolation could be excessive supplies at the beginning of the fishing season and a dearth of supplies later in the season. This would represent an inefficient use of labor and capital.

Another dimension of efficient use of labor and capital concerns the effect of limited entry measures on the choice of harvest systems. The dimension is best illustrated by considering a vessel licensing system. With a limited number of licenses, fishermen will look for methods which increase catch without requiring additional licenses. The ingenuity of private enterprise in such situation is marvelous. Unfortunately, innovations will not necessarily result in the least costly harvest system. Excessive resources (labor and capital) will be devoted to increasing the innovators catch per vessel per day. Unfortunately, the gain to the innovator is at the expense of other fishermen. Over time as imitators adopt the innovations, the gains which were initially apparent to innovators will vanish. On the other hand, innovations which permit a fisherman to harvest the same catch at lower cost are desirable for everyone since they will not diminish the total catch.

## MANAGEMENT CONCEPTS UNSUITED TO THE SURF CLAM FISHERY

For the sake of completeness, a few concepts are presented here which, although applied with greater or lesser degree of success in some other fisheries, seem inappropriate to the surf clam fishery.

### Leasing Bottom for Harvest of Clams

Under this concept the MA would lease the exclusive right to harvest shellfish from numerous defined tracts as is done with tracts for petroleum exploration and development. For those states involved in the surf clam fishery, state control over submerged lands stops at a point three miles from shore. Any management plan calling for bottom leasing would require participation by the Federal Government since a significant quantity of the resource exists in submerged land beyond the three mile limit.

Allowing each lessee to manage the harvest from the leased bottoms as he deemed to be in his best interest would have the advantage of requiring little governmental regulation once the tracts were leased. However, the surveillance system needed to hold piracy to a reasonable minimum would be so costly as to make this plan of highly doubtful value. There is the additional problem of determining what activities the lessee could conduct and what rights others would have to use the leased area.

In short, although appealing in concept leasing seems impractical in the surf clam fishery.

### Catch Limits

Although catch limits (i.e. catch per vessel per day or per week) are imposed in many fisheries, this procedure appears poorly suited to the surf clam fishery. Catch limits alone would neither control the total annual harvest nor contribute to a stable business climate in the long term.

The approach would be to establish the maximum allowable catch for each vessel for each day or other period of time (week or month). Presumably the management agency would at the outset establish the daily catch limit so that the total annual catch approximated the MSY (or other catch target). The broad range in fishing power of vessels now operating presents a problem in arriving at suitable limits. The smallest vessels are capable of taking on the order of 100 bu per day whereas the most effective stern dredgers are capable of taking up to 3000 bu/day. It would be unreasonable to apply one catch limit to all units of the fleet. The limit might be based on carrying capacity of the vessels or on width of dredge (so many bushels per inch of dredge width per day).

The weaknesses of this approach are that it fails to control total harvest, that it mitigates against

efficient harvesting techniques, and that it encourages the "arms race" climate. If any number of additional boats could be brought into the fishery, the daily limit would provide no control over total harvest. Any processor having a market for more clams could buy, build, or contract with additional vessels. Additional vessels would enter the fishery until it became unprofitable and the stock became overfished. Indeed, the need to even consider such limits implies the existence of excessive effort. Moreover, there are difficulties, as mentioned above, in establishing limits which recognize differences between vessel catch capacities in an equitable way.

#### Quotas

Establishing MSY as a total catch limitation is a regulatory mechanism that has been applied in a few fisheries, for example the Pacific halibut, and yellow-fin tuna fisheries. While a quota satisfactorily protects the resource, this type of regulation does not provide the sort of business climate in which one can make long-term investment decisions. In short, it fosters the business approach of "get all you can while you can", which in turn leads to overcapitalization and unsatisfactory profits. Thus a quota fails the objective of protecting the industry.

Dividing the quota among various geographic areas improves the biological aspect, but does not resolve the arms race problem of excessive effort. In addition,

effort tends to re-deploy from areas of low success to areas to high success. Consequently, area quotas at best will tend merely to sanction what would have taken place any way.

### Gear Regulations

The concept behind gear regulation seemingly is that if only inefficient gear is allowed, overfishing will be prevented by the high cost of harvesting. Thus a management agency might limit the size of dredge or size or type of vessel that could be used to harvest clams. This approach would not meet the goal of protecting the industry or minimizing costs and is not likely to protect the resource. It should be noted that the economics of regulated inefficiency are very similar to a user fee or tax. Profits are reduced by increasing costs instead of reducing revenues. The end effect can be to prevent over-exploitation but only if the degree of inefficiency is increased enough to remove the profit margin which attracts additional effort. The resultant "conservation by cost" is still wasteful however in that the same amount of product could have been delivered at less cost via efficient harvest technology and limited entry.



**PART II**

**LEGAL IMPLICATIONS AND ALTERNATIVE MANAGEMENT REGIMES**

## INTRODUCTION

The surf clam fishery encompasses an area off the coasts of several eastern states, primarily New York, New Jersey, Delaware, Maryland and Virginia. At the northernmost range of the fishery, surf clam beds are found close inshore. As one moves south, however, the beds are found progressively further offshore, ultimately far beyond the present United States territorial sea. Both the operation of the industry and the distribution pattern of the resource make the development of an effective management plan difficult.

In the past, there has been little effective cooperation among the states or between the states and the Federal Government in developing a management plan for the surf clam fishery. Jurisdictional authority has been fragmented among the several states and the Federal Government. Prior to the passage of the Fishery Conservation and Management Act of 1976,<sup>1</sup> the Federal Government lacked a clear mandate regarding the management and regulation of domestic fishing.

On April 13, 1976, the Fishery Conservation and Management Act was signed into law and this marked the beginning of a significant new period in the history of the United States fisheries. Now, new authority is vested in the Federal Government for management and regulation

of domestic and foreign fishing interest. This new legislation, although providing an improved management and regulatory framework, has not completely resolved previously existing problems and has created a unique set of new problems.

The goals of the legal portion of this study will be to analyze the present legal framework for management, identify potential legal impediments associated with the establishment of various management proposals, and identify possible alternative mechanisms for the development of an effective management regime.

#### THE PRESENT JURISDICTIONAL STATUS OF THE SURF CLAM FISHERY

The present management framework is a blend of the old and the new. However, the key to understanding present state and federal roles in fishery management is the Fishery Conservation and Management Act of 1976.

The surf clam fishery is less complex than other fisheries since it has never been subject to recreational or foreign fishing. Although jurisdiction is the province of the federal and state governments, more than two simple zones of jurisdiction are involved.

The surf clam fishery involves these legally defined zones of jurisdiction: the internal waters of the states; the territorial seas of the states; the high seas;

the fishery conservation zone; and the continental shelf. These zones serve different jurisdictional purposes and while some are separate and distinct, others overlap. By way of definition, the internal waters of a state are those waters landward of the innermost boundary of the territorial sea. The territorial sea runs from an internationally accepted baseline along our coast out to a distance of three miles and this three mile belt of jurisdiction parallel to the coast is divided into separate areas of state jurisdiction.

Beyond the territorial sea lies the high seas from which a special area of jurisdiction, the fishery conservation zone, has been carved. The fishery conservation zone, extending 197 miles beyond the outermost limit of the territorial sea, exist only for purposes of fishery management and conservation and leaves intact, where applicable, other freedoms associated with the high seas.<sup>2</sup>

The continental shelf, as defined under U. S. and international law, means the seabed and subsoil adjacent to the coast but outside the area of the territorial sea, to a depth of 200 meters or beyond to where the depth of the superadjacent water admits of the exploration of the natural resources of such areas.<sup>3</sup> As one might logically expect the degree of state control over any zone parallels the physical proximity of the zone to the state. States have more authority over fisheries in internal waters than in

territorial seas, and even less authority beyond the territorial sea.

The Fishery Conservation and Management Act of 1976 (FCMA) created a fishery conservation zone (FCZ) for waters 197 nautical miles beyond the seaward boundary of each of the coastal states of the United States.<sup>4</sup> FCMA became effective on March 1, 1977 and vests in the United States exclusive management authority over all fish within the fishery conservation zone, and all continental shelf fishery resources beyond the FCZ, as well as providing for United States jurisdiction over anadromous species except when they enter waters under the jurisdiction of other nations. At the international level, no claims of sovereignty in the waters in this zone are made and no interference with recognized legitimate uses of the high seas, except as are necessary to implement fishery management and conservation, are authorized by the Act.<sup>5</sup> The states retain most of their traditional rights in relation to fishery regulation under the new Act.

State jurisdiction over fisheries is recognized in common law principles, court decision, and both state and federal legislation.<sup>6</sup> State jurisdiction has been recognized to extend not only to internal and territorial waters of a state but also to include State vessels and citizens on the high seas operating beyond state territorial waters.<sup>7</sup> Through landing

regulation states have also acted to control non-resident fishing activities.<sup>8</sup> It must be remembered that such state authority has been and will continue to be subject to the exercise of certain paramount federal powers.

Under FCMA state authority over internal waters is reserved completely to the states while state authority over territorial waters is reserved to the states subject to certain exceptions. State jurisdiction over its vessels and citizens beyond territorial waters remain possible only if there is no conflict with regulations within the FCZ. State control over non-residents is now at issue before the Supreme Court and is also questionable under FCMA. The portion of FCMA, pertinent to state jurisdiction is Section 306 and it states:

(a) In General.--Except as provided in subsection (b), nothing in this Act shall be construed as extending or diminishing the jurisdiction or authority of any State within its boundaries. No State may directly or indirectly regulate any fishing which is engaged in by any fishing vessel outside its boundaries, unless such vessel is registered under the laws of such State.

(b) Exception.-- (1) If the Secretary finds... that--

(A) the fishing in a fishery, which is covered by a fishery management plan implemented under this Act, is engaged in predominantly within the fishery conservation zone and beyond such zone; and

(B) any State has taken any action, or omitted to take any action, the results of which will substantially and adversely affect the carrying out of such fishery management plan;

the Secretary shall promptly notify such State and the appropriate Council of such finding and of his intention to regulate the applicable fishery within

the boundaries of such State (other than its internal waters), pursuant to such fishery management plan and the regulations promulgated to implement such plan.

(2) If the Secretary... finds that the reasons for which he assumed such regulation no longer prevail, he shall promptly terminate such regulation.<sup>9</sup>

The Act reaffirms the right of a state to regulate fishing even beyond its territorial waters where its own citizens or vessels are involved. However, the FCMA also seems to limit a state's control beyond the three mile waters to these instances and circumstances alone. By forbidding a state to "directly or indirectly" regulate fishing beyond its boundaries, excepting the above two instances, the FCMA makes extended state regulation aimed at nonresidents and effected through landing laws dubious in validity.

Furthermore, if federal regulation in the conservation zone is exercised, even permissible extended state regulation which conflicted with it would have to yield under the Supremacy Clause of the Constitution. Even without conflict, federal regulation in a particular area might preempt exercise of state power in the same area.

The Act is to be administered by eight regional councils: New England, Mid-Atlantic, South Atlantic, Caribbean, Gulf, Pacific, North Pacific, and Western Pacific.<sup>10</sup> Each council will be composed of voting and non-voting members. Voting members will include: the chief state official with marine fishery management responsibility and

expertise in each constituent state, designated as such by the Governor; the regional director of the National Marine Fisheries Service for the geographic area concerned, or his designee, except that if two such regional directors exist for one council area, the Secretary of Commerce shall designate which of the two shall be the voting member; and at least one qualified individual appointed by the Secretary from each state, selected from lists submitted by the Governor of each State.<sup>11</sup> Non-voting members will include: the regional or area director of the United States Fish and Wildlife Service for the geographical area, or his designee; the commander for the Coast Guard district involved, or his designee, except that if two Coast Guard districts are within the area the person designated by the commandant of the Coast Guard shall serve; the executive director of the Marine Fisheries Commission for the area concerned, or his designee; one representative of the Department of State, designated by the Secretary of State, or his designee.<sup>12</sup>

Each Council is to reflect the expertise and interest of the various constituent states (or territories) in the ocean area over which such Council is granted authority.<sup>13</sup> Management plans for the fisheries subject to FCMA regulation can be initiated by the Regional Councils or by the Secretary of Commerce,<sup>14</sup> but in either case the plans must meet certain prescribed national standards and aims listed in the Act.<sup>15</sup> The enumerated standards concern prevention of overfishing, achieving the optimum yield, relying on the



best scientific and academic information available, management of fish throughout their migratory range, treatment of interrelated stocks as a single unit where possible and convenient, non-discrimination between residents of different states or territories, promotion of efficiency, recognition and allowance for the contingencies involved in fishery resources and catches, and the minimization of costs with reference to the other goals.<sup>16</sup>

Where a regional council prepares a fishery plan, it must be submitted to the Secretary of Commerce who is required to review it within sixty days and notify the council of approval, disapproval, or partial disapproval. If the Secretary objects to all or part of a management scheme, he must state his grounds for objection, suggest improvements, and request that the council make the necessary modifications. If the council fails to prepare a plan or to alter a faulty one, the Secretary may prepare a fishery management plan. The Secretary should then submit his plan to the council for suggestions, but he is not bound to alter his plan should the council receive it with criticism. Again, the Secretary's plan must conform with the same national standards enumerated for the regional councils.<sup>17</sup>

The surf clam is one of the enumerated fisheries subject to the conservation and management provisions of the FCMA.<sup>18</sup> Power granted under the FCMA will be used to regulate the surf clam fishery beyond state territorial

waters within the conservation zone. Whether federal power will be used even within state waters as provided by Section 306 (b) remains to be seen.<sup>19</sup> Certainly the FCMA has laid the groundwork for a vigorous federal program of fishery management.

## FOOTNOTES

1. Pub. L. 94-265 Sections 2-406, 16 U.S.C. 1801-1882, popularly referred to as FCMA.
2. FCMA Section 101, 16 U.S.C. 1811.
3. Id. Section 101, 16 U.S.C. 1802.
4. Id. Section 101, 16 U.S.C., 1811.
5. Id. Section 2, 16 U.S.C. 1801.
6. McCready v. Virginia, 94 U.S. 391(1876),  
Manchester v. Massachusetts, 139 U.S. 240 (1890).  
Shively v. Bowlby, 152 U.S. 1 (1893),  
C. J. Hendry Co. v. Moore, 318 U.S. 133 (1942),  
Toomer v. Witsell, 334 U.S. 385 (1947) and  
Alaska v. Artic Maid, 366 U.S. 199 (1961).
7. Skiriotes v. Florida, 313 U.S. 69, reh. den. 313  
U. S. 509 (1941),  
207 U.S. 398 (1907) Old Dominion Steamship Co., v.  
Primus Gilmore, and  
313 U. S. 69, at 78  
A potential conflict of jurisdiction could arise where  
the vessel may be from state X and the crew member  
from state Y.
8. Bayside Fish Co. v. Gentry, 297 U. S. 422 (1936) and  
Hjelle v. Brooks, 377 F. Supp. 430 (1974).
9. Fishery Conservation and Management Act of 1976, Pub.  
L. No. 94-265 Section 306 (April 13, 1976), 16 U.S.C.  
1801.
10. Id. Section 302 (a), 16 U.S.C. 1852.
11. Id. Section 302 (b), 16 U.S.C. 1852.
12. Id. Section 302 (c), 16 U.S.C. 1852.
13. Id. Section 302 (a), 16 U.S.C. 1852.
14. Id. Section 304 (c), 16 U.S.C. 1854.
15. Id. Section 301, 16 U.S.C. 1851.
16. Ibid.
17. Id. Section 304 (a) (b) and (c), 16 U.S.C. 1854.

18. Id. Section 3, 16 U.S.C. 1802.
19. Id. Section 306 (b), 16 U.S.C. 1856.

## SPECIFIC LEGAL IMPLICATIONS OF RESOURCE MANAGEMENT

United States ConstitutionIntroduction

It is clear to most observers that any effective scheme for the management and conservation of fisheries resources must include limiting the amount of fishing effort. It is imperative to consider the legal implications of such a management policy before attempting to formulate or implement any specific plan.

In establishing any limited entry program, free access to the resource will be restricted. This creates the possibility that persons who were previously taking as much of the resource as they desired might challenge the program. Their challenge would most likely rest on due process and/or equal protection grounds under the fourteenth amendment to the United States Constitution, and on any similar provisions of state constitutions. It is important, therefore, to examine due process and equal protection standards in order to be able to satisfy constitutional requirements in formulating a program.

In brief, a person who feels aggrieved by a limited entry scheme would claim (1) that he was deprived of property (the fish, or the right to catch the fish and make a living) without due process of law; and (2) that the program, because of the standards it used in

deciding what quantities could be taken and which participants would be allowed to take them, discriminated against him, violating his right to equal protection under the law. Thus any restriction on access to the resource might trigger the due process claim while the charge of violation of equal protection will be directed at the classifications and standards for allocating the restricted amount of resource. With this as background, the way these two provisions are interpreted and applied by the United States Supreme Court will be summarized.

#### Due Process

The clause reads: ". . . nor shall any state deprive any person of life, liberty, or property without due process of law . . ." To satisfy this provision, (1) legislation must be aimed at a legitimate object of state regulation, and (2) the method chosen to achieve the legitimate end must bear a reasonable relationship to that end. Put in limited entry terms, the key questions would be (1) is economic regulation or conservation of the fishery a legitimate object of state regulation, and (2) does a limited entry program bear a reasonable relationship to conservation of the fishery?

With respect to the first question, conservation of resources has been established as a legitimate object for state regulation.<sup>1</sup> Promoting sound economic management of a fishery has also been held to be a legitimate purpose for state regulation.<sup>2</sup>

The second question cannot be answered by simply showing that reducing access to the resource will conserve it, although careful biological and economic proof will help sustain any limited entry legislation. The problem is the extent to which government regulation may interfere with the right to engage in a particular economic activity. To decide this, the Court will balance the hardship to some individuals against the public benefit. Where the public benefit is clearly and positively served, the Court will tolerate severe restrictions on individual activities. For example, the federal courts upheld a Maryland statute which, in effect, eliminated the commercial menhaden fishery in state waters by prohibiting the use of purse nets in Maryland waters.<sup>3</sup> Maryland had enacted the prohibition to promote sport fishing, and the Court respected the State's judgements that (a) sport fishing should be encouraged, and (b) that the most efficient way to achieve this end was prohibition of purse nets. Interference with an economic activity will not of itself bar state regulation as long as the regulation is clearly for the public benefit.

#### Equal Protection

The clause reads: ". . . nor shall any state deny to any person within its jurisdiction the equal protection of the laws." As with due process, this clause breaks down into two aspects: (1) is there a legitimate

public purpose involved, and (2) is the classification within the statute reasonably related to the purpose of the statute. As discussed above, conservation of fisheries is a legitimate public purpose.

The federal courts have two standards for equal protection, the strict scrutiny test and the rational relationship test. When a statute involves a fundamental right (e.g., speech, vote, religion) or the basis of the classification is inherently suspect (e.g., race, religion), the statute will be strictly scrutinized and will be upheld only if there is a compelling state reason for making the classification. This is a very hard test to satisfy. Limited entry should not trigger the strict scrutiny test, however, since it will not involve a fundamental right nor should it involve a suspect classification.

The standard which will be applied is the rational relationship test, where a classification will be held valid if it has some relevance to the purpose of the act. Put in limited entry terms, since the aim of the program is conservation and economic regulation of a fishery, any standards and classifications must relate to that end. For example, restricting access only to red-headed fishermen would be unreasonable and not related to the aim of the statute. On the other hand, a lottery system where all those with the same qualifications had an equal chance to gain entry would probably be upheld.



The key to equal protection is that similarly situated individuals must be treated the same. The Supreme Court grants legislatures great discretion in classifying groups for equal protection purposes.<sup>4</sup> In addition, legislation carries a presumption of constitutionality, so the federal courts will try to avoid overturning legislation if reasonable justification can support it. As a general proposition, the federal courts will tolerate fishery regulation that is not arbitrary, unreasonable or clearly discriminatory.

In formulating a particular limited entry statute it would be useful to consider the present Alaska limited entry act.<sup>5</sup> This act carefully set standards for deciding which fishermen would get permits, setting classifications on the basis of economic dependence on the fishery, past participation in the fishery, and ability and intent to participate in the fishery. Well planned classifications which consider the needs of the industry as well as the fishery will satisfy equal protection.

#### Summary

The constitutional standards of due process and equal protection are not mathematical formulas which can be applied to a statute to give a positive yes or no answer regarding its validity. They are flexible measures of the limits of state regulation over individual activity. On the basis of past decisions it appears that the federal

courts would uphold a reasonable, non-discriminatory limited entry scheme. Economic and conservation regulations in the public interest are valid areas of state concern. To help assure that an act is upheld, any limited entry scheme should be supported by firm biological and economic data proving that such regulation is necessary and in the public interest. Careful drafting of the scheme to assure that similarly situated individuals are treated alike will also help sustain the program from constitutional attack.

## FOOTNOTES

1. Lawton v. Steele, 152 U.S. 133 (1894).
2. Nebbia v. New York, 291 U.S. 502 (1934).
3. Corsa v. Tawes, 149 F. Supp. 771 (1957), aff'd 355 U.S. 37 (1957).
4. Dandridge v. Williams, 397 U.S. 471 (1969).
5. A. S. Section 16.43.010 et. seg.

## STATE LAW AND RESOURCE MANAGEMENT

Introduction

Management alternatives under FCMA range from federal regulation within the FCZ with individual state or interstate regulation of territorial seas to federal regulation of the FCZ and territorial seas by preemption. Under FCMA federal preemption of state authority may be triggered by state action or inaction causing management conflict. Although the great majority of the surf clam resource is harvested within the FCZ and subject to federal regulation under FCMA, state laws affecting resource management, may prove important in developing an effective and comprehensive management scheme.

In this section, the laws of New York, New Jersey, Delaware, Maryland and Virginia, states with significant participation in the surf clam fishery, are analyzed, as are the laws of the two bordering states of Connecticut and North Carolina. Constitutional, statutory, or regulatory language is often subject to differing interpretations. As a practical matter, the limiting factor in many cases may be interpretation and implementation at the management level. For these reasons it is important for state management authorities and their legal advisors to review their own statutes, regulations, and administrative customs in order to determine what scope of management authority exist within the statutory framework and also

to identify possible areas of conflict with federal regulation under FCMA.

The categories considered are as follows:

Constitution. The state constitution provisions on due process and equal protection are considered. In most cases the state courts, which are the final authority in construing the state constitution, use standards similar to those used by the federal courts interpreting the federal constitution. In addition, some states have other constitutional provisions relevant to limited entry, and these provisions are considered. The purpose of this subsection is to explain the constitutional limits of limited entry legislation in the various states.

Protection of Marine Resources. In some states, the state court has specifically addressed the problem of protecting marine resources, and the attitude of the state towards such conservation is analyzed in this subsection. As a general rule, a state owns the marine resources within its waters, but that ownership is deemed to be for the public benefit. The state ownership is for the purpose of regulation, but that regulation is subject to any recognized constitutional restraints. Thus, to say that a state owns its marine resources does not avoid the limitations on regulation derived from constitutional rights.

Present Fishery/Shellfish Management Structure. The existing fishery or shellfish management statutes in each state are presented in this subsection. This section

identifies the entity having authority over shellfish management and the extent of that authority.

Criteria for Management. In this subsection, statements of management policy and statutory standards for management are presented.

Ability to Enter Interstate Compacts. Certain states grant their management agency the authority to enter into management agreements with other states. This subsection considers that grant of power.

Existing Surf Clam Regulations. Certain states have current regulations or statutes in effect which regulate the surf clam fishery. These are itemized. It is important to know what regulations exist, and whether they derive from a statute (in which case an act of the legislature would be necessary to alter them) or from a regulation of the management agency (in which case the procedures for changing regulations would have to be followed).

Summary. In this subsection the impediments to limited entry in each state are itemized. The constitutional dangers and the scope of existing management structures and criteria are analyzed as is the necessity for amending existing surf clam regulations.

### Connecticut

Constitution. Connecticut follows the federal standards in applying the equal protection and due process

clauses of the state constitution.<sup>1</sup> Persons may be classified as long as the classifications are fair and are reasonably related to the purpose of the legislation.<sup>2</sup>

The Connecticut courts recognize the right of the state to regulate property and pursuits of trade, with the limitation that all persons in the same situation be treated similarly.<sup>3</sup> Regulation of business must not be unreasonably in excess of what is necessary to accomplish the legislative end.<sup>4</sup> In addition, "right to work" language in Connecticut common law resulted in a court holding that the principle of equality of rights must be observed in regulating a business in which all citizens have an equal right to participate.<sup>5</sup> It may be argued that a fishery is a business in which everyone has a right to work. In order to exclude participants by means of a limited entry scheme, the need for limiting access may undergo strict judicial scrutiny. Connecticut has a tradition of acknowledging the right to work in businesses not "clothed with the public interest." Usually regulated businesses are those with great potential for damage to the public by way of fraud or health hazard. In order to qualify as an industry requiring regulation (and therefore requiring limited entry), it would be necessary to prove the damage to the general welfare in having an unregulated fishery. In states where business regulation is readily accepted, there would be a lesser burden of proof than in Connecticut, which traditionally has supported the freedom to work without

restriction. This does automatically bar limited entry in Connecticut, but rather requires careful planning and drafting of a program to qualify in that state.

Protection of Marine Resources. Connecticut does not have a body of case law recognizing the power of the state to protect its fishery resources. Connecticut has relied on tight statutory language in resource protection, and the courts have generally recognized only the statutory powers to protect these resources. Therefore, it will be difficult to imply the power to initiate a limited entry plan within the present legal framework of the state.

Present Fishery/Shell Fishery Management Structure.

The Commissioner of Environmental Protection administers all fish and wildlife laws in Connecticut.<sup>6</sup> The authorization is not to manage or protect the resources, but rather to carry out certain enumerated administrative duties.

Licenses are required of all persons over 16 who want to fish.<sup>7</sup> Vessels are also licensed.<sup>8</sup> Shell fish grounds are taxed,<sup>9</sup> and speculation in shellfish grounds is prohibited.<sup>10</sup> Any license holder may be required to report to the Commissioner data concerning vessel size, gear, catch or any other information requested.<sup>11</sup>

Criteria for Management. Since the Department of Environmental Protection has little discretion in managing shell fisheries, there is no statutory statement of criteria to be used. The broad language authorizing protection and



conservation familiar to other state statutes is absent from Connecticut statutory law. Where discretion in management is allowed by statute, it is only a specific grant for a specific fishery. For example, Connecticut allows regulation of anadromous trout, salmon and charr, but specifies by statute what goals and means are to be observed in management.<sup>12</sup> Thus criteria for management are not readily ascertainable.

Ability to Enter Interstate Compacts. The Commissioner of Environmental Protection is authorized to cooperate with agencies of the Federal Government and of other state governments.<sup>13</sup> Connecticut is a member of the Atlantic States Marine Fisheries Compact and has ratified amendment I of this compact.

Existing Surf Clam Regulations. Connecticut prohibits taking of clams by non-residents,<sup>14</sup> and as stated above, requires residents to obtain a license.

Summary. Connecticut's constitutional law would accept limited entry, although the common law tradition of right to work will require firm proof that regulation is needed. The statutory management scheme is very tight, leaving little room for any implied powers. Connecticut would require legislation to implement limited entry. Since existing legislation allows a daily catch limit to be set for oysters,<sup>15</sup> limited entry should not be foreign or repulsive to the Legislature. It would, however,

be outside the statutory authority of present management agencies to initiate such a scheme.

### Delaware

Constitution. The Delaware Court uses the formula and interpretation employed by the United States Supreme Court when examining the validity of economic regulation under the state due process and equal protection clause.<sup>16</sup>

For due process, the Court looks first to see if the objective of the statute or regulation is a legitimate one. For example, is conservation of the fishery resource or economic management of the fishery a legitimate purpose? Second, is there a rational relationship between the means used to achieve the objective and the objective itself? For example, is limiting the number of fishermen a rational method to achieve the objective of conservation or economic efficiency? The Delaware Court would answer both of these questions in the affirmative.<sup>17</sup>

For equal protection, the Court will examine the classification to determine whether it bears some relation to the purpose for which the classification was made.<sup>18</sup> A statute carries a presumption of constitutionality, and the Legislature has a wide discretion in matters of classification. The legislative judgement will not be disturbed unless the act (classification) is clearly arbitrary.<sup>19</sup>

There are no other constitutional provisions which might relate to limited entry.

Protection of Marine Resources. No significant body of case law was discovered on this subject.

Present Fishery/Shellfish Management Structure. Shellfish in Delaware are managed by the Delaware Commission of Shell Fisheries. This is a five member Commission, appointed by the Governor, with at least two members who are engaged in the shellfish industry.<sup>20</sup> The Commission may issue permits to persons engaged in the shellfish industry and may set fees not to exceed \$.05 per bushel.<sup>21</sup>

The basic authority of the Commission is as follows:

"The Commission shall have full control and direction of the shellfish industry and the protection of shellfish throughout this state."

Regulations of the Commission carry the force of law.<sup>22</sup>

Criteria for Management. The Commission is to regulate for the following purposes:

- "(1) To preserve and improve the shellfish industry in this State.
- (2) To operate, cultivate, and replenish on the oyster or clam grounds or beds in waters within the jurisdiction of this State.
- (3) To regulate, inspect and approve any boat or vessel or equipment used in the shellfish industry in this State.
- (4) To provide regulations for the replacement of any boat or vessel lost or destroyed which was licensed in the shellfish industry of this State.

- (5) When deemed necessary to provide for the issuance of permits to persons engaged in the shellfish industry in this State and for the revocation for cause of such permits.
- (6) To provide for the preservation and improvement of the oyster and clam beds and grounds of this State."<sup>23</sup>

Ability to Enter Interstate Compacts. The Delaware Commission of Shell Fisheries has no authority to enter interstate agreements. An act of the Delaware Legislature is required to bind the state to an interstate compact. Delaware is a member of the Atlantic States Marine Fisheries Compact, but has not consented to amendment I of this compact.<sup>24</sup>

In a compact with New Jersey on fishing in the Delaware River and Bay, each state expressly reserved jurisdiction over shell fishing. The pertinent portion reads as follows:

"Nothing contained in this chapter shall affect the territorial limits, rights or jurisdiction of the States of Delaware or New Jersey of, in, or over the Delaware River, or in the ownership of the subaqueous soil thereof, except as is expressly set forth in the compact between the two States; nor shall anything contained in this chapter affect in any way the planting, catching or taking of oysters, clams or other shellfish or interfere with the oyster industry, as carried on under the laws of either of the States."<sup>25</sup>

Although this is not a general reservation of power, it is possible that Delaware would not be willing to agree by compact to give up any of its power over shell fisheries.

Existing Surf Clam Regulations. The present license requirements derive from the statute, as follows:

A permit is required from the Commission, and a tax of \$.05 per bushel may be levied.<sup>26</sup>

Other regulations derive from the Commission, as follows:

From June through September surf clams can be taken no closer than two miles from any part of the shoreline. From October through May, surf clams can be taken only within two miles of any portions of the shoreline of the State.<sup>27</sup>

Summary. The Delaware Constitution should not bar a limited entry scheme. The Commission of Shell Fisheries has a broad mandate to regulate the industry, including licensing vessels and issuing permits to persons engaged in the industry. This authority contains no restriction as to what factors may be considered in setting management policy.

### Maryland

Constitution. The Maryland Supreme Court follows the standards for decision of the United States Supreme Court in construing the due process and equal protection clause of the state constitution.<sup>28</sup>

For example, the 1971 Maryland wetlands statute prohibiting dredging of any tidal waters or marshlands withstood attack on due process grounds.<sup>29</sup> The

preservation of natural resources was held to be a valid exercise of the police power. This case indicates that the Maryland court would be very inclined to accept the legislative determination that limited entry was necessary for conservation of a fishery resource.<sup>30</sup>

One other Maryland constitutional provision that must be dealt with is the prohibition of monopolies. The article states that:

monopolies are odious, contrary to the spirit of a free government and the principles of commerce, and ought not be suffered.<sup>31</sup>

The Maryland court has said that a monopoly must be more than a mere privilege to carry on a trade or business; it must be an exclusive privilege which prevents all others from participating. A limited entry plan is not confined to one entity as the monopoly clause envisions, but involves a number of units participating in the fishery. In addition, if the grant of privileges is necessary for the protection of some public interest (justified under the police power) it will not fall within the ban on monopolies.<sup>32</sup> Thus a limited entry scheme should be able to avoid this provision.

The anti-monopoly provision must be kept in mind when planning the future operations of the limited entry scheme. For example, if licenses or stock certificates are used, the subsequent transferability of the instruments and rights must be controlled to prevent creation of a monopoly situation.

Protection of Marine Resources. Maryland recognizes protection of natural resources as a valid exercise of the state police power (see above, Maryland wetlands statute). Even when fish are taken and reduced to possession by an individual, ownership of a fish species may be regulated and restrained by appropriate legislation for the benefit of the public.<sup>33</sup> In addition, Maryland allows its Department of Natural Resources to maintain its own list of endangered species, and the catching, processing or selling of any such listed species is totally prohibited.<sup>34</sup> In Corsa v. Tawes<sup>35</sup> the District Court for Maryland held that in the practical management of its resources such as fish and game, the state may conclude that the time for action is long before the destruction has gone so far that the extinction of the species is imminent, and the protective hand of the state may be extended before the danger is unmistakably imminent. Thus, anticipatory planning and management are accepted concepts in Maryland law.

Present Fishery/Shellfish Management Structure.

The Department of Natural Resources is responsible for all natural resource policies and plans in the state.<sup>36</sup> The Fisheries Administration of the Department is charged with the conservation management of fish within the state.<sup>37</sup> The Fisheries Administration can promulgate regulations relating to all living natural resources of the tidal

waters.<sup>38</sup> These regulations may include, but are not limited to, provisions enlarging, extending, restricting or prohibiting the taking or catching of these resources.<sup>39</sup>

Licenses are required for taking clams and oysters, with a residency requirement of one year and set statutory fees based on type of gear used.<sup>40</sup>

Criteria for Management. The authority for management is found in the enumeration of responsibilities and duties of the Secretary of Natural Resources, as follows:

The Secretary is responsible for the development of coordinated policies for the preservation, conservation, wise use, and perpetuation of the natural resources of the state.<sup>41</sup>

Under this broad grant of authority, the Secretary may regulate by considering any legitimate, relevant factors.

Ability to Enter Interstate Compacts. The Secretary of the Department of Natural Resources has the authority to recommend legislation.<sup>42</sup> The Department has the power to negotiate interstate agreements, as follows:

The Department may negotiate any agreement with any other state concerning catching fish, the size of fish, and opening and closing fishing seasons.<sup>43</sup>

Maryland is a member of the Atlantic States Marine Fisheries Compact and not a party to amendment I of that compact.<sup>44</sup>

Existing Surf Clam Regulations. Regulations relating to surf clams are limited to license, fee, and residence requirements.<sup>45</sup>



Summary. Under due process and equal protection, Maryland courts should uphold a limited entry scheme, but care must be taken to avoid the anti-monopoly term of the Constitution. The broad authority given to the Department of Natural Resources should include the ability to impose a limited entry scheme.

### New Jersey

Constitution. To satisfy due process,<sup>46</sup> the New Jersey Court must be convinced that the interests of the community as a whole are being served by the regulation, and that the means selected bear a substantial relationship to the object of the statute. In upholding an economic regulation, the court stated:

"(U)nder the police power the legislature may make provisions for the economic welfare of the people... When conditions in a business become such that the welfare of the public will not be adequately protected by unrestricted competition, or if it be shown that ruinous and chaotic conditions are otherwise about to be brought about by the business, or that the economic existence of large numbers of people is being threatened, then the law may step in and prescribe regulations to correct the alleged or threatened abuse."<sup>47</sup>

Limited entry legislation could probably sustain a due process challenge in New Jersey.

New Jersey follows the United States Supreme Court on equal protection interpretation,<sup>48</sup> where the classification is not based upon suspect criteria, such as race or wealth, and the violation of a fundamental right is not involved.

If the limited entry scheme would not trigger strict scrutiny under equal protection, New Jersey would follow the federal "rational relationship" test.

Under this equal protection test, wide discretion is given to the Legislature in classifying, so that any limited entry scheme that is not blatantly discriminatory will meet New Jersey standards.<sup>49</sup>

Protection of Marine Resources. The power to regulate fisheries is recognized,<sup>50</sup> and regulations for the preservation of shell fisheries have been held valid and constitutional.<sup>51</sup>

Present Fishery/Shellfish Management Structure. The Department of Environmental Protection, through the Division of Fish, Game, and Shell Fisheries, manages fishery resources.<sup>52</sup> Shellfish are managed by a nine member Shell Fisheries Council, appointed by the Governor.<sup>53</sup>

Criteria for Management. The authority granted is as follows:

The Shell Fisheries Council shall, subject to the approval of the Commissioner, formulate comprehensive policies for the preservation and improvement of the shellfish industry of the state.<sup>54</sup>

There are no other enumerated limitations on the power or standards for management.

Ability to Enter Interstate Compacts. The Division of Natural Resources of the Department of Environmental Protection has the following power:

"(d) Cooperate with other State agencies and departments and with interstate and Federal departments and agencies, and with interested individuals and groups in the promotion and development of plans, policies, and programs for the study, beneficial use, conservation and protection of natural resources within the State."<sup>55</sup>

In addition, New Jersey maintains an Intergovernmental Relations Commission, whose function is defined as:

"to carry forward the participation of this State as a member of the Council of State Governments, both regionally and nationally, to confer with officials of other states and of Federal Governments, to formulate proposals for cooperation between this State and the other States, and with the Federal Government, to maintain liaison with the Advisory Commission on Intergovernmental Relations established by Federal law, and to organize and maintain governmental machinery for such purposes."<sup>56</sup>

It appears that interstate agreements are the province of both organizations, with the Division of Natural Resources having special authority over natural resources alone.

New Jersey is a member of the Atlantic States Marine Fisheries Compact and a party to amendment I of this compact. <sup>57</sup>

Existing Surf Clam Regulations. New Jersey law sets forth a system encompassing a limited number of licenses, overall weekly quotas, area and season closures, gear restrictions, data requirements and fees based on resource harvest. <sup>58</sup>

Summary. The New Jersey constitutional requirements should be easily met by a limited entry scheme. The mandate

to the New Jersey management entity is broad enough to include promulgation of regulations for limited entry. The present shellfish regulations are statutory, so any limited entry program would have to either (1) meet the same standards as the existing statutes or (2) include legislative action to amend or repeal the shellfish laws.

#### New York

Constitution. To satisfy due process<sup>59</sup> in New York, legislation must promote the health, safety or welfare of the public in general, rather than give a special benefit to a particular class, and the means used must be reasonably related to the accomplishment of the "public" objective.<sup>60</sup> A particular class of people may be incidentally benefited by legislation, as long as the legislation also benefits the public as a whole. If it does promote the public welfare, it will meet due process requirements, even if it inflicts a hardship on certain people.<sup>61</sup>

Under New York equal protection<sup>62</sup> standards it is necessary to prove that the classification has a relation to a public purpose. The Legislature has broad discretionary powers of classification, and a classification will be struck down only if it is clearly arbitrary.<sup>63</sup> A reasonable classification of fishermen or vessels under a limited entry scheme would not be arbitrary and would bear a rational relation to the objective of the statute and therefore would withstand equal protection attack.

Protection of Marine Resources. Conservation and regulation of fish and animals have been held to be the responsibility of the state, as a matter of public interest.<sup>64</sup> The New York Court, in Grossman v. Hotel Astor,<sup>65</sup> accorded great deference to the legislative judgement in regulating natural resources, and acknowledged great discretion in the legislature in the formulation of conservation plans.<sup>66</sup>

New York treats natural marine resources as the property of the state, held in its sovereign capacity for the benefit of all people, and the court recognizes great power in the state to regulate fisheries.<sup>67</sup>

Under the Environmental Conservation, Fish and Wildlife Act, the state owns all fish, wildlife and shellfish, so that even upon possession, title remains in "the state for the purpose of regulating and controlling their use and disposition."<sup>68</sup>

Present Fishery/Shellfish Management Structure.

Fishery management duties belong to the Department of Environmental Conservation, whose powers and duties include: promotion and coordination of water, land and air resources, and providing for the protection and management of marine and coastal resources.<sup>69</sup>

In addition, the Department has the power:

"To issue licenses and permits provided for by law, to fix their terms, and the fees therefor, when no statutory provision is made, and to revoke licenses and permits as provided by law."<sup>70</sup>

"To regulate the taking of fish in any manner other than angling, except as to migratory fish of the sea within the marine district."<sup>71</sup>

"To control, manage, propagate and distribute, and to regulate the transportation, importation and exportation of shellfish and crustacea."<sup>72</sup>

"To regulate the examination and inspection of shellfish grounds, boats used in taking and buildings used for storage of shellfish, the handling and shipment of shellfish, the floating of shellfish, the removal of shellfish from unsanitary beds and their deposit on unpolluted grounds."<sup>73</sup>

"To enforce all laws relating to lands under water which have been or shall be designated, surveyed and mapped out pursuant to law as oyster beds or shellfish grounds and to grant leases of such lands, belonging to the state, for shellfish culture, according to law."<sup>74</sup>

Criteria for Management. The purpose of the New York Fish and Wildlife Law is to effect the "efficient management of the fish and wildlife resources of the state."<sup>75</sup> The statutory guidelines for management are as follows:

"To such extent as it shall deem feasible without prejudice to other functions in the management of fish and wildlife resources of the state and the execution of other duties imposed by law, the department is directed, in the exercise of the powers conferred upon it, to develop and carry out programs and procedures which will in its judgment, (a) promote natural propagation and maintenance of desirable species in ecological balance, and (b) lead to the observance of sound management practices for such propagation and maintenance on lands and waters of the state, whether owned by the private ownership, having regard to (1) ecological factors, habitat and the importance of ecological balance in maintaining natural resources; (2) the compatibility of production and desirable land uses; (3) the importance of fish and wildlife premises and of the

persons and property of occupants thereof against abuse of privileges of access to such premises for hunting, fishing or trapping."<sup>76</sup>

Ability to Enter Interstate Compacts. The

Department of Environmental Conservation has the following power:

(To effect efficient management it) "shall include, to the extent authorized by law, the undertaking and execution of reciprocal and cooperative arrangements with the government of the United States, with other states, and with other departments and agencies of this state, political subdivisions and public corporations of this state and owners and lessees of privately owned lands and waters and shall also include continuation of research and educational programs."<sup>77</sup>

Thus, the power to enter interstate agreements is granted. New York, although a member of the Atlantic States Marine Fisheries Compact, is not a party to amendment I of that compact.

Existing Surf Clam Regulations. New York requires that persons engaged in shellfishing carry a digger's permit; there is a six month residency requirement for a digger's permit.<sup>77a</sup>

Shippers and processors must have a permit, and there is a one year residency requirement to market shellfish. No clams less than 3 inches in longest diameter may be exported from the state. The penalty for violation of the regulation is loss of permit.<sup>77b</sup>

Summary. The New York constitutional standards should not bar limited entry. The state ranks preservation

of natural resources very highly. The statutory grant of power would appear to give the Department of Environmental Conservation the authority to limit entry and consider economic factors in regulating a fishery.

### North Carolina

Constitution. The North Carolina equal protection and due process clauses<sup>78</sup> have been interpreted according to the standard federal tests.<sup>79</sup> Legislation satisfies due process requirements if it is not unreasonable, arbitrary or capricious and the means selected have a substantial relation to the objects sought to be attained.<sup>80</sup> Statutory classifications must be reasonable and must be related to the public health.<sup>81</sup>

North Carolina has a strong "right to work" tradition under its constitution.<sup>82</sup> When the state sought to license dry cleaners, the statute was struck down with strong language:

The right of a citizen to pursue any of the ordinary vocations, on his own property and with his own means, can neither be denied nor unduly abridged by the Legislature for the preservation of such right is the principle purpose of the Constitution itself. In such cases, the limit of legislative power is regulation, unless the business is of such character as places it within the category of social and economic ills.<sup>83</sup>

The court felt that there was no public interest to be protected in the regulation of dry cleaning that would justify invading the right of a citizen to choose his occupation.



Limited entry would have to be clearly justified to satisfy a North Carolina court. Because of the common law pattern of protecting the right to work, the public benefit to be derived by limiting entry must be clear and convincing to persuade the court that the legislature may invade this private right.

Recently the North Carolina court reiterated its position on the right to work. A North Carolina statute had permitted a licensing commission to deny permits to build hospitals if the commission felt there was no need for an additional hospital in the area. The court held this to be unconstitutional under equal protection and due process.<sup>84</sup> Regulation of totally private enterprise on the basis of economic need for that enterprise in the community was held to be beyond the police power of the state.

Any exercise by the State of its police power is, of course, a deprivation of liberty. Whether it is a violation of the (due process) clause or a valid exercise of the police power is a question of degree and of reasonableness in relation to the public good likely to result from it. To deny a person, association, or corporation the right to engage in a business, otherwise lawful, is a far greater restriction upon his or its liberty than to deny the right to charge in that business whatever prices the owner sees fit to charge for the service.<sup>85</sup>

Limited entry may be justified on economic as well as other criteria. North Carolina, however, has shown reluctance to allow infringement on the right to work solely on the

basis of economic criteria. Limited entry can be distinguished, however, since the fishery resources are subject to public regulation, whereas in In Re Certificate of Need for Aston Park Hospital the state was attempting to regulate a totally private industry. The court was in essence saying, if private industry wants to take the risk, the state can't interfere. With fishery resources, however, the state has an interest as custodian of the resource.

Additional constitutional considerations revolve around the anti-monopoly clauses.<sup>86</sup> Exclusive franchises are unconstitutional,<sup>87</sup> but legitimate classifications that can withstand equal protection tests will not fall under the monopoly or exclusive privilege clauses. A grandfather clause, entitling a person to a present right only if he had participated in the industry at some time in the past, is also unconstitutional.<sup>88</sup> The North Carolina constitution would probably bar a limited entry program in which rights could be inherited.

Preservation of Marine Resources. North Carolina has a strong common law tradition of recognizing the power of the state to protect its fishery resources.<sup>89</sup> Conservation is viewed in terms of state ownership of the fishing resources, with all rights of access and harvest left to the discretion of the state.<sup>90</sup>

By statute as well as common law, the power of the state to protect its resources is acknowledged.

The marine and estuarine and wildlife resources of the State belong to the people of the State as a whole. The Department and the Commission are charged with stewardship of these resources.<sup>91</sup>

Present Fishery/Shellfish Management Structure.

The Department of Natural and Economic Resources is charged with the duty of promoting the conservation and development of the natural resources of the state.<sup>92</sup> The Marine Fisheries Commission of the Department is empowered "to make regulations and take all steps necessary to develop and improve the cultivation, harvesting and marketing of oysters and clams in North Carolina both from public grounds and private beds."<sup>93</sup> All vessels must be licensed,<sup>94</sup> with maximum license fees set by statute,<sup>95</sup> and clammers must also have licenses.<sup>96</sup> Clams are taxed at 6 cents per bushel.<sup>97</sup> License holders can be required to keep certain records on demand of the Department.<sup>98</sup>

Criteria for Management. The Department of Natural and Economic Resources is authorized to promote "conservation and development of natural resources" and "development of commerce and industry."<sup>99</sup> In addition, there is a state policy to promote coastal fisheries and the seafood industry.<sup>100</sup> There is also the stewardship provision mentioned above.

In addition to the broad general powers written into the statute, the Marine Fisheries Commission is

authorized to authorize, license, regulate, prohibit, prescribe, or restrict all forms of marine and estuarine resources in coastal fishing waters with respect to:

(1) Time, place, character or dimensions of any methods or equipment that may be employed in taking fish;

(2) Seasons for taking fish;

(3) Size limits on and maximum quantities of fish that may be taken, possessed, bailed to another, transported, sold or given away.

(b) The Marine Fisheries Commission is authorized to authorize, regulate, prohibit, prescribe, or restrict and the Department is authorized to license:

(1) The opening and closing of coastal fishing waters, except as to inland game fish, whether entirely or only as to the taking of particular classes or fish, use of particular equipment, or as to other activities within the jurisdiction of the Department; and

(2) The possession, cultivation, transportation, importation, exportation, sale, purchase, acquisition, and disposition of all marine and estuarine resources and all related equipment, implements, vessels, and conveyances as necessary to implement the work of the Department in carrying out its duties.<sup>101</sup>

Ability to Enter Interstate Compacts. The Department of Natural and Economic Resources is authorized to cooperate with agencies of the Federal Government and of other states.<sup>102</sup> North Carolina is a party to the Atlantic State Marine Fisheries Compact and Amendment I of that compact.

Existing Surf Clam Regulations. There is licensing of vessels and clammers, and a tax per bushel, as mentioned above.

Summary. The common law supporting the right to work will have to be carefully considered in drafting limited entry legislation for North Carolina. Before fishermen can be excluded, the need for limited entry will have to be clearly demonstrated and the allocation scheme

will have to be carefully developed. However, some precedent exists for economic management of fisheries in North Carolina. Shrimp seasons, for example, are opened and closed on the basis of the commercial size of the shrimp, a factor unrelated to biological conservation.<sup>103</sup> The state might be willing to accept economic criteria for fishery management.

In contrast with the state constitutional law, the management statutes are quite broad and imply a great deal of power vested in the management agencies. The agency can license vessels and clammers, and tax clams to the statutory limit.

### Virginia

Constitution. The Virginia Court applies the same test and interpretation to the State due process clause<sup>104</sup> as the United States Supreme Court applies to the federal due process provision: does the statute promote public welfare and does it employ reasonable means to accomplish that end.<sup>105</sup>

The equal protection provision is as follows:

The General Assembly shall not enact any local, special, or private law in the following cases:

(12) Regulating labor, trade, mining, or manufacturing, or the rate of interest on money.

(18) Granting to any private corporation, association, or individual any special or exclusive right, privilege, or immunity.<sup>106</sup>

The construction of this provision turns on the phrase

"special laws," and the fact that a law benefits only some of the people does not of itself make it a special law; the classification of persons in the statute must be reasonably related to the purpose of the act, meaning that the clause is interpreted in the same way as the equal protection clause of the Federal Constitution.<sup>107</sup> The Legislature is given wide discretion in classifying, and legislative judgment will be overturned only when it is clearly arbitrary.

The other relevant portion of the Virginia Constitution is Article XI, which makes conservation of natural resources a state constitutional policy,<sup>108</sup> and directs the state to cooperate with other states, the Federal Government, units of the Virginia government, and persons interested in the conservation of natural resources.<sup>109</sup>

Protection of Marine Resources. Virginia treats fisheries as the common property of its citizens - a property over which the State is entitled to legislate.<sup>110</sup> The Constitutional provision for protection of natural resources discussed above also reflects the State attitude toward protection of resources.

Present Fishery/Shellfish Management Structure. The Marine Resources Commission manages fisheries in Virginia. It is a seven member Commission, with members representing a variety of users of marine resources in the

state.<sup>111</sup> The Commission can enact regulations. Violation of regulations is a misdemeanor, punishable by a fine of not more than \$1,000 or imprisonment of not more than 12 months, or both.<sup>112</sup>

In 1973 this additional power was granted to the Commission:

The Commission is authorized and empowered to promulgate such regulations as it deems necessary and appropriate to promote the conservation and wise use of the surf-clam resource.<sup>113</sup>

Criteria for Management. The Commission's power to make regulations is modified by the standard:

"to promote the general welfare of the seafood industry and to conserve and promote the seafood and marine resources of the State, including regulations as to the taking of seafood, which regulations do not conflict with the provisions of statutory law."<sup>114</sup>

Ability to Enter Interstate Compacts. The Marine Resources Commission has not specifically been granted the power to negotiate interstate agreements on marine resources. Virginia is, however, a party to the Atlantic States Marine Fisheries Compact and Amendment I of that compact.

Current Surf Clam Regulations. There are at the present no surf clam regulations in Virginia. However, any purchaser of shellfish must obtain a \$25.00 license for each place of business, and a \$15.00 license for each boat or motor vehicle used.<sup>115</sup>

Summary. The due process and equal protection standards of Virginia can be met, as long as the "Special

laws" standard is observed. The state has a constitutional policy of resource conservation. The management authority is broad, and surf clam management is specifically authorized, so a limited entry scheme for surf clams should be acceptable.



## FOOTNOTES

1. Conn. Const., Art. I., Sections 1, 8, 11, 20.
2. Wolf v. Fuller, 30 Conn. Supp. 527, 298 A. 2d 244 (1972).  
State v. Anonymous, 29 Conn. Supp. 333, 287 A 2d 111 (1972).
3. State v. Kierman, 116 Conn. 458, 165 A. 601 (1933).
4. Leach v. Florkosky, 145 Conn. 490, 144 A. 2d 334 (1950).
5. Ibid.
6. C.G.S. Section 26-3
7. C.G.S. Section 26-27.
8. C.G.S. Section 26-212, 26-193a.
9. C.G.S. Sections 26-207 to 26-211.
10. C.G.S. Section 26-230.
11. C.G.S. Section 26-157(b)
12. C.G.S. Section 26-159a
13. C.G.S. Section 26-3.
14. C.G.S. Section 26-235.
15. C.G.S. Section 26-234a.
16. Del. Code Ann., Const., Art. 1, Section 7.
17. F. Cameron, State and Federal Constitutional Impediments to State Limited Entry Fisheries Legislation: States Maine to Virginia, National Marine Fisheries Service, at 38, State v. Hobson, 83 A 2d 846 (1951).
18. Mills v. State, 256 A. 2d 752 (1969).
19. Aetna Casualty and Security Company v. Smith, 31 A 2d 168 (1959); State v. Robinson, 251 A. 2d 552 (1969).
20. Del. Code Ann., Tit. 7, Section 1901.
21. Del. Code Ann., Tit. 7, Section 1906.
22. Del. Code Ann., Tit. 7, Section 1904.
23. Ibid.

24. Del. Code Ann., Tit. 7, Section 1501 to 1505.
25. Del. Code Ann., Tit. 7, Section 903.
26. Del. Code Ann., Tit. 7, Section 1906.
27. Surf Clam Regulations, effective Sept. 14, 1970.
28. Maryland Const., Decl. of Rights, Art. 23; Sanner v. Trustees of Shepard and Enoch Pratt Hospital, 278 F. Supp. 138 (1968).
29. Potomac Sand and Gravel Co. v. Governor of Maryland, 293 A. 2d 241 (1972).
30. Cameron, at 53.
31. Maryland Const., Decl. of Rights, Art. 41.
32. Cameron, at 52; Levin v. Sinai Hospital, 46 A. 2d 298 (1940) Gempler v. Multiple Listing Bureau, 266 A. 2d 1 (1970).
33. 149 F. Supp. 771 (D.C., Md. 1957), aff'd 355 U.S. 37, 78 S. Ct. 116, 2 L.Ed. 2d 70.
34. Clark v. Todd, 192 Md. 487, 64 A. 2d 547 (1949).
35. Md. N.R. Section 4-210.
36. Md. N.R. Section 1-101(a), (b).
37. Md. N.R. Section 4-202.
38. Md. N. R. Section 1-102.
39. Cameron, at 54.
40. Md. N.R. Section 4-1004.
41. Md. N.R. Section 1-104.
42. Md. N.R. Section 1-104 (a) (2).
43. Md. N.R. Section 4-205 (f).
44. Md. N.R. Section 4-301.
45. Md. N.R. Section 4-1004.

46. N.J.S.A., Const., Art. 1, para. 1.
47. Lane Distributors v. Tilton, 81 A. 2d 786, 794 (1951).
48. N.J.S.A. Const., Art. 1, para 5; Art. IV, Section 7, para. 9; Blair v. Erie Lackawanna Railway Company, 305 A. 2d 446 (1973).
49. Cameron, at 72.
50. Weller v. Snover, 42 N.J.L. 341 (1880).
51. Haney v. Compton, 36 N.J.L. 507 (1873); State v. Price, N.J.L. 249, 58 A. 1015 (1904).
52. The Department of Conservation and Economic Development was reorganized, continued and designated as the Department of Environmental Protection in 1970. N.J. S.A. 13:1B (Amended by L. 1970 c, 33, Section 5, eff. Apr. 22, 1970).
53. N.J.S.A., 13:1B-44.
54. N.J.S.A., 13:1B-45.
55. N.J.S.A., 13:1B-9.
56. N.J.S.A., 59:9B-1.
57. N.J.S.A., 32:21-1 to :21-11.
58. N.J.S.A., 7:25-12.1
59. New York Const., Art. 1, Section 6.
60. Cameron, at 76; Cowan v. City of Buffalo, 288 N.Y.S. 239 (1936); Good Humor Corporation v. City of New York, 36 N.Y.S. 2d 85 (1942).
61. Cameron, at 77; College Barn Inc. v. State, 303 N.Y.S. 2d 984 (1969) Gail Turner Nurses Agency, Inc., v. State 190 N.Y.S. 2d 720 (1959).
62. New York Const., Art. 1, Section 11.
63. Cameron, at 78; Stracquadone v. Dept. of Health of City of New York, 32 N.E. 2d 806 (1941).

64. A.E. Nettleton Co. v. Diamond, 313 N.Y.S. 2d 893, motion granted conditionally, 314 N.Y.S. 2d 995, 263 N.E. 2d 392, reversed 315 N.Y.S. 2d 625, 264 N.E. 2d 118, 44 A.L.R. 3d 994 (1970), reargument denied 319 N.Y.S. 2d 440, 268 N.E. 2d 122, appeal dismissed Reptile Products Ass'n v. Diamond, 401 U.S. 969; People v. Clair, 116 N.E. 868 (1917).
65. 1 N.Y.S. 2d 307, 166 Misc. 80 (1938)
66. Id., at 309.
67. Grossman v. Hotel Astor, 1 N.Y.S. 2d 307, 166 Misc., 80 (1938), Sloup v. Town of Islip, 356 N.Y.S. 2d 749 (1974).
68. N.Y.E.C.L. Section 11-0105.
69. N.Y.E.C.L. Section 3-0301.
70. N.Y.E.C.L. Section 11-0305(2)
71. N.Y.E.C.L. Section 11-0305(3)
72. N.Y.E.C.L. Section 11-0305(6)
73. N.Y.E.C.L. Section 11-0305(7)
74. N.Y.E.C.L. Id.
75. N.Y.E.C.L. Section 11-0303(1)
76. N.Y.E.C.L. Section 11-0303(2)
77. N.Y.E.C.L. Section 11-0303(1)
- 77a. N.Y.E.C.L. Section 13-0311.
- 77b. N.Y.E.C.L. Section 13-0315, 13-0325
78. N.C. Const., Decl. of Rights, Section 1, 19, 32, 34.
79. Motley v. State Bd. of Barber Examiners, 228 N.C. 337, 45 S.E. 2d 550, 175 ALR 253 (1947). Raleigh Mobile Home Sales, Inc. v. Tomlinson, 276 N.C. 661, 175 S.E. 2nd 542 (1970).
80. State v. Whitaker 228 N.C. 352, 45 S.E. 2d 860 (1947), aff'd 335 U.S. 525 (1949).
81. State v. Anderson, 275 N.C. 168, 166 S.E. 2d 49 (1969).
82. N.C. Const., Decl. of Rights, Section 1.
83. State v. Harris, 6 S.E. 2d 854, 863 (1940).

84. In Re Certificate of Need for Aston Park Hospital  
193 S. E. 2nd 729 (1973).
85. Id., at 735.
86. N.C. Const., Decl. of Rights, Section 32, 33, 34.
87. State ex. rel Taylor v. Carolina Racing Ass'n.,  
241 N.C. 80, 84 S.E. 2nd 390 (1954).
88. Whaley v. Lenoir County, 5 N.C. App. 319, 168 S.E. 2d  
411 (1969).
89. Brooks and Taylor v. Tripp, 135 N.C. 159, 47 S.E. 401  
(1904).
90. Moore v. Bell, 191 N.C. 305, 131 S.E. 724 (1926).  
State v. Sermons, 169 N.C. 285, 84 S.E. 337 (1915).  
Daniels v. Homer, 139 N.C. 219, 51 S.E. 992 (1905).
91. N.C.G.S. Section 113-131.
92. N.C.G.S. Section 113-3.
93. N.C.G.S. Section 113-201.
94. N.C.G.S. Section 113-152.
95. N.C.G.S. Section 113-152(c).
96. N.C.G.S. Section 113-154.
97. N.C.G.S. Section 113-157.
98. N.C.G.S. Section 113-163.
99. N.C.G.S. Section 113-3.
100. N.C.G.S. Section 113-309 to 113-315.
101. N.C.G.S. Section 113-182.
102. N.C.G.S. Section 113-16, 113-17
103. Knight and Jackson, p. 72-73.
104. Va. Const., Art. I, Section 1, 11.
105. Cameron, at 90.
106. Va. Const., Art. IV, Section 14(12), (18).

107. Cameron, at 93.
108. Va. Const., Art. XI, Section 1.
109. Va. Const., Art. XI, Section 2.
110. McCready v. State of Virginia, 94 U.S. 391 (1876),  
affirming McCready v. Commonwealth<sup>68</sup> Va. 985.
111. Code of Va., Section 28.1-4.
112. Code of Va., Section 28.1-23.
113. Code of Va., Section 28.1-120.1 (1973, ch. 411).
114. Code of Va., Section 28.1-23.
115. Code of Va., Section 28.1-119.1.

## ALTERNATIVE MANAGEMENT SCHEMES

Introduction

In this section several alternative systems of limiting entry are presented. For each alternative (a) the legal problems associated with the proposal will be itemized; (b) the ability of each of the states to enact the proposal will be summarized and (c) the status of the proposal under FCMA will be examined.

## I. QUOTAS

(A) This alternative involves setting a maximum limit on the total harvest, and usually refers to an annual quota. The legal problems are twofold; first, do existing management statutes authorize agencies to set quotas, and second, how shall this allotted catch be divided among the participants in a fishery? Since setting a maximum permissible catch is a crucial part of any limited entry program, this is a key threshold issue. Quotas as an alternative in themselves usually represent a simple system of deciding how much of a stock can be harvested, ignoring allocation, and declaring the fishery closed when the maximum has been taken. This is economically inefficient and subject to a due process attack.

(B) Each of the states has the following powers with respect to setting an annual quota:

Connecticut - no implied power

Delaware - implied, under Del. Code Ann. Tit.7,  
sec. 1904

Maryland - implied, under Md. N. R. 4-202,1-104

New Jersey - implied, under N.J.S.A. 13:1B-45

New York - implied, under N.Y.E.C.L. sec. 11-0305

North Carolina - express, under N.C.G.S. 113-182.

Virginia - implied, under Code of Va. 28.1-23

(C) FCMA Section 903 (b) (3) allows a Regional Management Council the discretion of instituting quotas.<sup>1</sup>

## II. AREA CLOSURES

(A) A program may seek to limit entry by closing certain areas to fishing. To do this, a state must have the authority to close areas and the power to declare such closures on the basis of economic as well as biological criteria.

(B) The present management structures offer the following powers with respect to area closures:

Connecticut - no implied power

Delaware - implied under preservation of clam beds, Del. Code Ann. Titl. 7, sec. 1904

Maryland - implied, under "preservation," Md. N. R. Sec. 1-104

New Jersey - implied, N.J.S.A. 13:1B-45

New York - implied from power to regulate the taking N.Y.E.C.L. sec. 11-0305(3) and power to preserve the grounds, N.Y.E.C.L. sec. 11-0305(7)

North Carolina - implied from power to restrict place of taking fish N.C.G.S. 113-182.



Virginia - implied under regulation of taking of seafood, Code of Virginia 28.1-23.

### III. SHORT TERM CATCH LIMITS

(A) This program involves having the management agency set a daily, weekly or monthly limit on how much can be harvested. The authority to set limits on catch is express for some species in some states (e.g., oysters in Connecticut), but it might also be implied from the power to manage the resource.

(B) Only New Jersey has specific authorization to set short term catch limits for surf clams.<sup>2</sup> In other states it is implied from the same provisions as is the power to impose a quota. (I, (B)). Where the power to manage has been used to impose catch limits on other species (e.g., Connecticut oyster catch limits) there should be no statutory bar to imposition of a catch limit on surf clams.

(C) Under FCMA short term catch limits appear to be possible under Section 303 (b) (3).<sup>3</sup>

### IV. LICENSES OR PERMITS

(A) This program limits entry by licensing only a limited number of participating units. The licenses might run to vessels, fishermen or gear, depending on which unit was best suited to serve as an avenue for control of exploitation of the stocks. Limited entry licensing differs from present licensing patterns since there would only be a certain number of licenses available,

and the management entity would have to decide who would receive them. The legal problems, therefore, do not stop at the power to issue licenses, which all the states have. The criteria for issuing the licenses are most important.

Where the access will be restricted and some participants may be excluded, the constitutionality of the limited entry program will turn on how the licenses are allocated among applicants. In the Alaska limited entry program, allocation priorities are set by considering the degree of economic dependence on the fishery, the extent of past participation in the fishery, and the present ability and intent to participate in the fishery. (A.S. sec. 16.43.200). Such a system should satisfy due process and equal protection. Although lotteries or auctions of licenses are fair, they are also arbitrary and bear no relation to the purpose of the statute and would probably not be satisfactory allocation methods for equal protection.

In addition, if a limited number of licenses is issued the license itself will have a value, representing the value of the right to fish. The program should clearly address the issue of this value. The program must specify two things. The first is whether and how the license can be transferred. The license should not be available to non-participants in the fishery since this would lead to speculation in obtaining licenses. It is also not related to the legislative purpose of the program. Additionally,

there should be limits on how many licenses any single person or business could hold, to protect against monopoly (several states have anti-monopoly provisions). Licenses should be transferred, if at all, only through the management agency, with specific standards and controls clearly outlined as to the number of licenses any one participant could hold. The second point which the program must specify is whether the license can be attached by creditors of the holder. Most states exempt the tools of a debtor's trade from attachment. This is in keeping with a policy of limited alienability and with a legislative purpose of protecting the fishing industry and the fishermen.

(B) All the states authorize the issuance of licenses for vessels. Only New Jersey has express authorization to limit the number of licenses,<sup>4</sup> although this could be implied in other states from the power to manage [as in I (B)]. However, limiting the number of licenses creates a property value, the nature of which is unclear, and it may, therefore, be unwise to attempt to initiate a limited entry licensing program by administrative regulation alone. It would be beyond the administrative power to define the property attributes of these new licenses. Such a program would require legislative action.

(C) FCMA allows the use of permits or licenses under Section 303 b (1) and limited entry under Section 303 b (6).<sup>5</sup>

## V. STOCK CERTIFICATES OR FISHERMEN QUOTAS

(A) The stock certificate program, rather than licensing vessels or persons, divides the available harvest into shares and distributes the shares to the fishermen. Each fisherman gets his own quota, or stock certificate, representing the percentage of the harvest to which he is entitled. The management agency must have authority to set an overall quota, and devise an equitable system for allocating the shares among competing participants.

The problem in allocating quotas is similar to that in the licensing scheme. Equal protection must be satisfied in creating standards for deciding what allocations will be permitted to which participants. A system based on participation in or dependence upon the fishery to determine the class of eligible entrants would be appropriate. Shares would have to be divided on the basis of size of vessel, or possibly average catch over a certain number of years in the past. The allocation method must not only be reasonable and treat all applicants fairly and equitably, but it must also be related to the preservation of the fishery and the industry, which rules out the auction and lottery.

Transfer characteristics and status of the certificate with respect to debt must be assigned. This is a new form of property being created by the program, and the traits of the property must be defined.

(B) Because this is a departure from traditional management practices, it is not within the scope of

existing management authority. It would require legislation in all the states.

The legal aspects of the instrument deal with policy choices, not with straightforward legalities or illegalities. It is within the legislative power of each of the states and the Federal Government to enact a stock certificate plan. The plan is similar to leasing resource access rights to mineral resources but because it is unusual to fisheries the power to implement such a plan would not be implied in the management authority of any of the states. Additionally, because of the complexity of jurisdiction, legislation concordant with other states and the Federal Government would be necessary.

(C) Although FCMA does not specifically mention this concept, Section 303 b (6) could appear to be worded broadly enough to incorporate such a concept.<sup>6</sup>

## VI. TAXES OR USER FEES

(A) This program limits entry by charging a fee to use the resource which is high enough to discourage economically inefficient fishermen. While present management often involves paying a fee for license or a tax on catch, all of these fees have statutory limits set at a very low level. The user fee limited entry program would have the management agency set and vary the fee to encourage or discourage participation in the fishery.

This alternative involves two levels of legal problems. The first concerns the validity of using the

taxing power for the purpose of limiting entry. If the Federal Government imposed such a tax, it would have to be uniformly applied throughout the United States.<sup>7</sup>

In addition to geographical uniformity, federal taxation must have uniformity of subject matter. The tax would have to describe the surf clam fishery in a manner to satisfy this requirement.<sup>8</sup> The federal taxing power is intended to raise revenues, but taxes with highly regulatory motives and little revenue raising ends have been upheld.<sup>9</sup> A limited entry tax with the revenue raising purpose of supporting fishery management could probably stand.

If a state should impose this kind of tax, it might be struck down as too great an imposition on interstate commerce.<sup>10</sup> However, state taxes with predominately regulatory motives have been upheld (where the commerce question was not involved). Recently the Supreme Court upheld a city tax which had the effect of putting private parking lot operators out of business.<sup>11</sup> The Court said it was within the power of the city to impose "a discouraging tax rate," and there was no constitutional bar to the city putting "the automobile parker to the choice of using other transportation or paying the increased tax." Thus, if the subject matter is within the state's police power, it appears that the state can impose a high regulatory tax.

There are two potential legal theories for challenging a limited entry tax. The first alleges a

deprivation of due process because the tax effectively destroys property by making it economically impossible to stay in business. The Supreme Court has consistently rejected attacks on taxes on this theory.<sup>12</sup>

The second theory alleges discrimination on the basis of ability to pay in violation of the equal protection clause. Under this theory a claimant asserts that the effect of the tax is to exclude fishing units unable to pay and that distinguishing in allocation of government benefits on the wealth of the recipients violates the Constitution. There is some authority for saying that classification based on wealth is inherently suspect<sup>13</sup> and requires strict judicial scrutiny. This would mean the statute would be valid only if necessary to further a compelling state interest and if it was the least drastic means of achieving the goal. The limited entry tax, however, is unlike prior wealth classification cases, for the prior cases all dealt with express Constitutional guarantees such as suffrage, and right to counsel. Where these fundamental rights were limited on the basis of wealth, the Court was willing to say equal protection was violated. The right to fish is not a right of the magnitude of these expressed Constitutional guarantees. So far the Court has declined to extend the concept that discrimination by wealth violates equal protection beyond areas where fundamental rights were infringed. It has allowed wealth-based discrimination in the funding of public schools,<sup>14</sup>

in distribution of welfare benefits,<sup>15</sup> and in housing.<sup>16</sup>  
The Court's record indicates that, although an equal protection theory could be formulated, absent holding that the right to fish was a fundamental right under the Constitution, it is unlikely that a limited entry tax scheme would be struck down under the equal protection clause.<sup>17</sup>



## FOOTNOTES

1. FCMA, PL 94-265 Section 303 (b) (3), 16 U.S.C. 1853.
2. N.J.A.C. 7:25-12.1(b).
3. FCMA, PL 94-265 Section 303 (b) (3), 16 U.S.C. 1853.
4. N.J.A.C. 7:25-12.1(a).
5. FCMA, PL 94-265 Section 303 (b)(1), 16 U.S.C. 1853.
6. Id. Section 303(b) (6), 16 U.S.C. 1853.
7. U.S. Constitution, Art. 1, Section 8, clause 1. In Re Bomask's Estate, 432 F. 2d 308 (1970).
8. U. S. Constitution, Art. I, Section 8, clause 1.
9. U. S. v. Sanchez, 340 U.S. 42 (1950). U.S. v. Ross, 458 F. 2d 1144 (1972), cert. denied 409 U.S. 868.
10. Robbins v. Shelley County Taxing District, 120 U.S. 489 (1887).
11. Pittsburgh v. Alco Parking Corp, 94 S. Ct. 2291 (1974).
12. Magnane Co. v. Hamilton, 292 U.S. 40 (1934) United States v. Ross, 458 F. 2d 1144, cert. denied 409 U.S. 868 (1972); Pittsburgh v Alco Parking Corp., 94 S. Ct. 2291 (1974).
13. Harper v. Virginia Board of Electors, 383 U.S. 663 (1966); Douglas v. California, 372 U.S. 353 (1963); Griffin v. Illinois, 351 U. S. 12 (1956).
14. San Antonio Ind. School Dist. v Redriguez, 411 U.S. 1 (1973).
15. Dandridge v. Williams, 397 U.S. 471 (1970).
16. Lindsey v. Normet, 405 U. S. 518 (1972).
17. Comment, The Evolution of Equal Protection 7 Harv. Civil Rights L. J. 105, 106 (Ja 1972).

ALTERNATIVE MECHANISMS FOR MANAGEMENT DEVELOPMENT  
AND IMPLEMENTATION

Management programs may be developed and implemented with varying opportunities for success, by individual states, by mutual agreement among states involved in the fishery, by mutual agreement among states and the Federal Government, or by the Federal Government alone. Many variations exist for development and implementation. For example, it is possible to develop management plans through one mechanism (state, interstate, state-federal or federal) and implement the management plan by an entirely different mechanism.

Under FCMA, management plans are developed through a state-federal mechanism and implemented by federal regulation. State jurisdiction in internal water are not subject to preemption under Section 306 (b) (1) (B) of FCMA. Section 306 (b) (1) and (b) (2) of FCMA allows preemption of state jurisdiction in territorial seas only under limited circumstances.<sup>1</sup>

Because jurisdiction under FCMA exist, as a general rule only in the FCZ, a species could be subject to a management plan developed and implemented under FCMA and also subject to state or interstate plans directed at management in internal and territorial waters. Since FCMA does not preclude the existence or development of other regulatory

mechanisms, the implications of various alternatives for management development and implementation will be examined in the following sections.

Unilateral Governmental Development and Implementation. Unilateral development and implementation of a management program could occur at the state level or at the federal level.

#### State Development and Implementation

Each state may develop and implement its own individual management program. However, jurisdiction would exist only in state internal waters and territorial seas and over state citizens and vessels on the high seas. Jurisdiction over nonresident fishing effort beyond state territorial waters would be nonexistent. In a situation where each state implements a different management program (or implements no program), effective comprehensive management of the surf clam resource would be impossible.

#### Federal Development and Implementation

A Constitutional basis exists for complete federal regulation of resources such as the surf clam. Although exclusive federal jurisdiction would solve problems of uniformity and enforcement associated with individual or cooperative multi-state attempts at management or limited federal jurisdiction under FCMA, the total preemption of traditional state authority in this area would be politically unpalatable in the states and questionable in

terms of being the best possible approach to management.

Intergovernmental Cooperation. By definition, intergovernmental cooperation involves at least two states or a state and the Federal Government. (Effective surf clam management would, however, require considerably more than cooperation between two states or one state and the Federal Government). Intergovernmental cooperation can be categorized as interstate (i.e., cooperation between two or more states) or state-federal (i.e., cooperation between a state or states and the Federal Government - the plan development process under FCMA). Cooperation can range from casual consultation or agreement to formal compacts requiring the approval of State and Federal Governments. Federal taxing and spending powers can also serve to facilitate intergovernmental cooperation. The development and implementation of a management program requires a consideration of the effectiveness and ramifications of varying degrees of intergovernmental cooperation.

#### The Law of Interstate Agreements

Federal Law. Article I, Section 10, Clause 3 of the United States Constitution states that any agreement between states is subject to congressional consent. In spite of what appears to be the clear intent of the language, the law at the present time is unclear as to when states must obtain congressional consent. In fact, many basic legal issues pertaining to interstate agreements are unsettled.<sup>2</sup>

Judicial pronouncements on the necessity of congressional consent have ranged from a broad interpretation covering any agreement --written, verbal, formal or informal<sup>3</sup>--to a restricted interpretation requiring consent only when the agreement affects the balance of political power between the states and the Federal Government.<sup>4</sup> It has also been argued that the modern cooperative form of agreement is entirely outside the meaning of the compact clause of the constitution as it was originally intended and, accordingly, no congressional consent is necessary for agreements of this nature.<sup>5</sup>

The necessity of consent can raise many procedural and substantive problems. Congressional consent may cause a delay of months or possibly of a year or more. Congress may impose conditions on the giving of consent. It should also be noted that although congressional consent is usually given in a provision of an act or by joint resolution, it may be inferred.<sup>6</sup> Congress, in an attempt to encourage interstate cooperation, has enacted into law provisions granting advance consent for agreements concerning certain subjects.

Also unclear are the legal implications of congressional consent. It has been held that the construction or interpretation of a compact or agreement sanctioned by Congress under the compact clause would be a federal question.<sup>7</sup> The primary issue is whether congressional consent raises

the status of the compact or agreement to the status of a federal law. Recent court decisions seem to endorse this concept although most authorities hold the "Law of the Union Doctrine," as it is called, in contempt. Under this doctrine it has been held that congressional consent raised the status of the compact or agreement to that of federal law and the compact or agreement would be binding on a state in spite of state constitutional restriction or other state law to the contrary.<sup>8</sup> It has also been held that a compact could be interpreted contrary to the intention of the states and the state would be bound by this interpretation.<sup>9</sup> If a compact or agreement has the status of a federal statute, this may affect rights of amendment, repeal, and withdrawal. It should also be noted that a state-federal agreement or compact almost certainly necessitates congressional consent or legislation. Such a compact or agreement would, in all probability, be considered to have the status of federal law.

State Law. As a general rule state legislatures are vested with the authority to enter into interstate compacts or agreements on behalf of the state. When this power is vested solely within the legislature, many of the same procedural and substantive problems associated with the necessity for Congressional consent can be found at the state level. Depending on constitutional and statutory

construction, it may or may not be possible for the legislature to delegate the power to enter into interstate agreement to governmental entities at the department or agency level. In many cases where delegation of authority has been made, the extent of the power granted has been clouded by ambiguous language, conflicting practice, or agency reluctance to act to the full extent of the power granted.

#### Interstate Cooperation

Two or more states can cooperate on a formal or informal basis ranging from casual consultation to binding compacts. Effective management would require a binding agreement between states to commit themselves to the adoption and enforcement of a uniform management plan.

Existing Management Vehicles. A vehicle for interstate cooperation already exists in the form of the Atlantic States Marine Fisheries Compact. Under Amendment I to this interstate compact, states may delegate regulatory authority to the ASMFC. The limits of such authority, however, are open to question and, of the five states involved in the surf clam fishery only two, Virginia and New Jersey have ratified Amendment I enabling the ASMFC to act as a regulatory body. Absent the powers granted by Amendment I, the ASMFC can only function in a recommendatory capacity.

If no existing interstate agreement is suitable as a management vehicle, then another mechanism for cooperation must be developed. Entry into any such agreement calling for interstate cooperation would, in most instances, require dealing with problems of state legislative consent and almost certainly Congressional consent. (Unfortunately conclusive statements regarding requirement of Congressional consent and its implications are impossible to make at the present time due to the unsettled nature of the law on those points.

#### State-Federal Cooperation

Another alternative means of development and implementation, in addition to unilateral or interstate action, is state-federal cooperation. This can be of a formal or informal nature. Many avenues for such an approach already exist. The State-Federal Program, ASMFC, and most recently FCMA are major examples of existing institution providing means for state-federal cooperation.

Perhaps the most significant alternative for state-federal cooperation is direct federal participation in agreements of an interstate nature. However, other means of state-federal cooperation exist in addition to direct federal participation in interstate compacts or agreements and some are more feasible than others in the context of fisheries management. For example, state-federal



cooperation can be fostered through federal exercise of the spending power specifically enumerated in the constitution. Under authority of the spending power, grants to states could be conditioned on state compliance with certain policy goals. Although not as attractive as federal grants, another alternative would be the use of the federal taxing power to induce state cooperation and to achieve policy goals. Given the appropriate legislative structure, management goals could be fostered by delegations of federal power to the state, state adoption of federal regulatory criteria or federal implementation of state or state-federal plans.

## FOOTNOTES

1. PL 94-265 Section 306, 16 U.S.C. 1856.
2. Engdahl, "Interstate Urban Areas and Interstate Agreements and Compacts, Unclear Possibilities." 58 Geo L. J. 799 (1970).
3. Holmes v. Jennison, 39 U.S. (14 Pet.) 539 (1840).
4. Virginia v. Tennessee, 148 U.S. 503 (1893).
5. Engdahl, "Characterization of Interstate Arrangements: When is a Compact no Compact?" 64 Mich. L. Rev. 63, (1965).
6. Virginia v. Tennessee, SUPRA note 3.
7. Delaware River Joint Toll Bridge Commission v. Colburn, 310 U.S. 419 (1940) but see Perce Henderson, et. al. v. Delaware Joint Toll Bridge Commission, 338 U.S. 850 (1949).
8. West Virginia ex rel Dyer v. Sims, 341 U.S. 22 (1951).
9. Petty v. Tennessee-Missouri Bridge Commission, 359 U.S. 275 (1959).

## CONCLUSIONS

### Management Development and Implementation

FCMA provides for state-federal cooperation in the development of management plans and federal implementation of the plan. Plans developed under FCMA are generally limited to the FCZ. State authority in internal waters is not subject to federal preemption under FCMA. Preemption of state jurisdiction in territorial seas is possible under limited circumstances. Within internal waters and territorial seas state, interstate, or state-federal alternatives for management development and implementation remain possible. If however, lack of an effective management mechanism in state waters thwarts overall resource management, federal preemption is possible.

### Alternative Management Schemes

Only the user tax, of all the proposed schemes, would be impermissible under FCMA. In the context of state regulation in internal waters and territorial seas, each scheme must be independently evaluated according to the current status of the law in question in each state.