Written Statement of
Brian J. Rothschild
Montgomery Charter Professor of Marine Science, University of Massachusetts Dartmouth
Chair, Mayor's Ocean and Fisheries Council

Oversight Hearing "A Community Perspective on Catch Shares"

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Madam Chairwoman and members of the Committee, thank you for the opportunity to testify before you this morning. My name is Brian Rothschild. I am the Montgomery Charter Chair of Marine Science at the University of Massachusetts Dartmouth. I also Chair the Mayor's Ocean and Fisheries Council in New Bedford, Massachusetts, the largest fishing port in the Nation in terms of value. Our Council is a sounding board for much of the Massachusetts fishing industry. I bring you their greetings.

In my testimony this morning, I want to provide background on the initiation of the catch-share concept in New England and point out structural and conceptual difficulties that make the catch-share initiative an "experiment" rather than an example of implementation of a well thought out public policy. I conclude that it is necessary to 1) maximize economic survival of participants during the first year by relaxing annual catch limits (ACLs) without overfishing; 2) facilitate and accelerate an independent coherent review of the status of the stocks in New England waters; 3) establish bold new and innovative scientific programs focused directly on the needs of fishery management; 4) establish a systems engineering/inventory management approach to day-to-day fisheries management; and 5) refocus budget and programs on the needs of fishery management. We also need institutional reform, including 1) making the New England Fishery Management Council an elected body; 2) institutionalizing a systems of checks and balances in the Agency; and finally 3) "consulting with the people" on how to reform fisheries management in New England by establishing an ad hoc New England Fishery Management Reform Commission.

For over a decade, fishery management in New England has been wasteful and inefficient. Overfishing and a failure to rebuild stocks have been widely cited. A less publicized aspect of waste are the hundreds of millions of dollars of fish that could have been caught without overfishing but are not caught because of inflexible regulations. In addition, tons of valuable bycatch are thrown back in the ocean because of management regulations.

The blame for "overfishing" and failure of stocks to "rebuild" is often laid at the feet of a prevailing days-at-sea (DAS) management system. In this effort-based system—only the

"effort"—the DAS are precisely controlled. It was reasoned that instead of controlling effort, controlling catch would eliminate overfishing and result in increased stock abundance. Controlling catch is called a "quota system."

For varying reasons, the quota system morphed into a property rights system, or an individual-transferable-quota like system (ITQ). This then morphed into a sector system. The sector system, where groups of boats form sectors and each sector is allocated a "share" of the fish, is thought to be under the umbrella of "catch share" management.

The sector system in New England is being launched with a mixed reception. The facts of the matter are that property rights systems such as "sectors" reduce the open-access-like wasteful imbalance between capital and the amount of fish that can be caught. However, they also change the social structure of the industry, reduce boats, reduce jobs, negatively affect shore side businesses, as well as destroying the cultural fabric of fishing communities.

The launching of the sector system in New England has been associated with a plethora of mostly unheeded advice. This advice contains nuggets (some of which come from NOAA) that relate to equity; taking time to conduct adequate planning; thinking about buy-back programs; providing a safety net for those who are disaffected; considering the fundamental issues associated with the transfer of public property to the private sector; and, most of all, properly designing the management system.

Many in the community do not believe that the New England catch-share system is well designed and that its operation, in its present configuration, will unfairly disaffect existing fishermen and industries who otherwise would not be disaffected if it were well designed.

They cite

- Quotas are too risk averse. With anticipated quotas, 50-75% of the fleet and thousands of jobs will be lost in a relatively short time.
- There is a failure to take into account the mixed-species nature of the fishery in current management regulations. Unless this is changed, catch-share management will only propagate ongoing underfishing and bycatch waste.
- Important structural details in the exchange of quotas, shares, or allocations do not make sense.
- Stock assessments are not current. Critical assessments will not be complete before the start of the fishing year.
- There are limited mechanisms to address the needs of the disaffected.
- Mechanisms for scallop bycatch have not as yet been resolved. This is critical because the allocation of flounder bycatch to scallopers involves tens of millions of dollars, if not more.
- The intent of Congress as expressed in the language of the Magnuson-Stevens Act does not appear to have been taken into account, particularly with regard to National Standard 8.

Most telling, there appears to be no "user's manual" for fishermen newly engaged in the system—a user's manual would explain the structure of the system and the day-to-day details of

how it would operate. How in the real world would 20 sector managers control the flow of 20 different species of fish (20 x 20 = 400 possibilities) in virtual real time?

It seems that the approach to developing catch shares in New England has transformed the "ready-aim-fire" sequence into a "fire-aim-ready" sequence—not a good way to develop public policy. We cannot minimize the importance of a "user's manual" and of conducting sufficient analysis to understand the fate and effect of this major federal action.

BACKGROUND ON THE TRANSITION FROM DAYS AT SEA TO SECTORS

Fishery management in New England has been wasteful and inefficient for over a decade. This negative view generally results from heavily publicized overfishing and failure to rebuild some groundfish stocks. This negative view would be accentuated if the public realized that in addition to overfishing and the failure to rebuild stocks, wasteful under fishing, bycatch, and unrealistic rebuilding requirements have been induced by management regulations. In addition, regulations have resulted in seemingly counterproductive ecosystem experiments (e.g., the explosion of the dogfish shark population).

Regarding Underfishing—It is generally not realized that fishery management in New England over the last several years has limited landings to c. 25% of the scientifically allowable catch. This amounts to a 75% waste of the resource amounting to an ex-vessel (ex-vessel value means price at the dock—by the time the product exits the economy, its value increases by a factor of about three) loss at the dock of $300-400 million per year (a substantial amount of the loss relates to underfishing haddock, which have become stunted). It is important to recognize that the underfishing statistics are very difficult to interpret. (For example, the Gulf of Maine cod TAC in fiscal year 2007 was 10,000 tons. But landings amounted to only 4,000 tons. In other words, 6,000 tons of cod disappeared. The 6,000 tons were either not caught, discarded, or not recorded.)

Regarding Overfishing—It is important to acknowledge that it is very difficult to explain the concept of overfishing in a multispecies setting such as that which exists in New England. Because it is difficult to explain, it is difficult to produce credible regulations.

Regarding Bycatch—Regulations in the current fishing year forced throwing overboard many species as bycatch. For example, 1.5 million pounds of yellowtail flounder were discarded at sea. This amounts to a waste of about $2.5 million ex-vessel.

Regarding Unrealistic Rebuilding Schedules—Most ecologists would agree that a rigid 10-year rebuilding schedule does not make sense, nor would they agree that the carrying capacity of ecosystems would be sufficient to bring all fish populations to their historically maximum level at the same time. This lack of flexibility should change.

Regarding Ecosystem Experiments—New England fishery management by itself has arguably modified the ecosystem and habitat to a greater degree than any other human activity by virtually eliminating fishing mortality on dogfish sharks so that this species of voracious predator is now one of the most abundant fish in the ecosystem.

Any property rights system contributes to economic efficiency by tuning the capital in the fishery to the magnitude of the stocks. So a property rights or catch-share system can eliminate the situation where there are boats that fish only a score of days per year. But the sector system was advertised as a great advance in conservation: sectors will stop overfishing, stocks will rebuild, and the race to fish will be eliminated. These are however generally false claims. What is true is that the sector system will reduce the number of boats in the fleet, employment, and reduce the quality of many fishing jobs. While in the long run most shore side businesses—a key component of local economies—would be devastated. The negative aspects of the catch-share/sector system is the reason it is being eschewed by the European Union (had quota system for many years); the United Nations; and Pew Charitable Trusts. Furthermore, for sectors to work, the structural problems that have been associated with the DAS system in New England need to be rectified. If they are not, and it does not appear that they are, then the only advantage induced by catch shares is an economic disruption of the fleet, which is specifically counter to the intent of Congress, as specified in National Standard 8.

COMMUNITY PERSPECTIVE

With regard to community perspective, there is general dissatisfaction with the sector program. It is fair to say that the sector system is viewed with almost universal angst and suspicion; allocations of fish were unfairly or illogically developed; and there are glaring issues with the operational mechanism. Many fishermen at this point in time do not understand how they will be affected by the catch-share system.

The catch share approach is insufficiently analyzed (what will be the economic effect of catch shares: fishermen say 50% reduction, but Amendment 16 refers to relatively small losses in revenue); poorly planned (no “user’s manual,” policy statement not completed, stock assessments not completed, many unanswered questions, unfair allocations, unworkable operating principles); and insufficiently budgeted (see recent requests for more funds without giving priority to needs of fishermen and root scientific issues).

Given this unhappy state, most claim that catch shares will result in a significant decline in the fleet and jobs. There appears to be a consensus that after the first of May the fleet and employment will be reduced by 50%.

The lack of planning, analysis, and budgeting; the lack of what we might call responsible management, juxtaposed with the destruction of livelihoods and the culture of our coastal way of life, has given rise to two points of view.

The first is to agree to move ahead with the seemingly flawed program on May 1 and take whatever community losses result from the program. The second is to postpone the inception of the program until the necessary planning can be executed—this approach is favored by many, including the mayors of Gloucester and New Bedford.

Fishermen who favor moving ahead with a flawed program fall into two classes. In the first, are those few fishermen who have attained very large allocations of fish and will profit immediately.

In the second, are fishermen who feel there is no legal or legislative option to halt the onset of the catch share program; they fear that any delay would return them very limited access DAS. Moving ahead at this time seems to categorize the catch-share system in New England as an "experiment."

Those who favor a delay, should it be possible, insist that a delay is *only acceptable if quantities of fish were guaranteed in the interim so that fishermen would not lose income and that there would not be a draconian reduction in DAS* until effective planning could be accomplished.

Regardless of whether one favors the muddling-through approach or the delay, there is a general concern that issues related to the plain language of law—equity—illogical operating principal—not enough fish—and no plan for failure are serious constraints on the success of the program.

THE PLAIN LANGUAGE OF THE LAW—Regarding the plain language of the law, the community does not understand the disconnect between the catch-share system and National Standard 8. It is generally agreed that the catch-share system is simply an economic reallocation of the fish stocks that in the medium and short run would completely change the economic and social fabric of fishing communities and generate huge welfare costs. Yet National Standard 8 is designed specifically to protect the economic and social welfare of the community. If National Standard 8 has no meaning, then why is it in the statute?

EQUITY AND FAIRNESS—Regarding equity and fairness, there is a belief that the initial allocations of fish have been made unfairly. Some fishermen claim that over the years they were discouraged from trying to catch certain valuable species such as cod in order to achieve conservation goals. As a result of their good efforts to reduce fishing on cod, the catch of cod was reduced. So now when allocations are based on catch history, those who took advice to catch less cod are penalized by being allocated less cod.

As another example, management regulations resulted in the industry catching only 10% of the haddock total allowable catch (TAC). So the few fishermen who caught haddock obtained a tremendous windfall of haddock allocation.

Another sticking point is that in the Council process some allocations appeared to favor certain groups over others.

Finally, what really bothers fishermen is the fact that they were given an option of either fishing in sectors or in the common pool. After they made there decision, which was not reversible for many, the Agency reduced the catch potential of the common pool, leaving fishermen stranded in an uneconomic position.

It has to be remembered that for any management system to work, the disaffected need to be accommodated. It is important to realize that existent catch-share systems are heralded because the voices of those who benefit are widely publicized, while the voices of the disaffected majority are silent.

ILLOGICAL OPERATING SYSTEM—With regard to unworkable operating principles, consider the following. The fundamental core of valuing catch versus valuing quota seems to be broken. To exemplify, a fisherman is allocated 50,000 pounds of fish by species. Suppose he is allocated 100 pounds of cod and 49,900 pounds of haddock. He fishes on the first day, and he catches 101 pounds of cod—1 pound greater than his quota. He has to return to port and buy 1 pound of cod allocation from another fishermen. If for some reason he cannot buy the 1 pound allocation, then he summarily can no longer fish during the remainder of the year. If he cannot find someone to sell him the 1 pound of cod allocation, then he must try and sell his 49,999 pounds of quota. Knowledgeable observers predict that he can only sell his quota for about 30 cents on the dollar, while the 1 pound of cod allocation will cost far more than the average price of cod. These numbers are of course exaggerated, but they convey in a clear way the disincentive of the operational scheme.

UNDERFISHING AND EXTENSIVE RISK AVERSION—With regard to not enough fish, it is clear that the ACLs have been ratcheted down substantially. Most of the knowledgeable observers of the system as it now stands predict that it will result in dire economical consequences. However, they do point out that if the Magnuson-Stevens Act could be interpreted such that ACLs were defined at the overfishing level (OFL) less 10% to account for scientific uncertainty, sufficient fish would be available to at least give the catch-share system a fighting chance. There are two aspects of the "not enough fish argument." The first is that the gross underfishing experienced in New England can be controlled; and the second is that the degree of risk aversion adopted by the Agency far exceeds that contemplated by Congress.

With regard to underfishing, the root cause of underfishing and bycatch is the Agency's failure to adopt flexibility measures such as the mixed stock exception. It appears that the mixed stock exception is permitted under the plain language of the Magnuson-Stevens Act.

The Magnuson-Stevens Act simply states that ACLs should be set at a level that overfishing does not occur. However, this is interpreted in National Standard 1 guidelines as setting the ACL to be sufficiently less than maximum sustainable yield (MSY) so that the MSY level is not exceeded. The guidelines advise that this is to account for *scientific uncertainty*. Guidelines further advise the Council to reduce the catch limits even further to account for management uncertainty.

This degree of risk aversion is unnecessary, counterproductive, and not required by law. First, many of the stocks are managed not by MSY, but by MSY proxy. These proxies produce calculations that are already 25% less than MSY. Second, while it is easy to define the probability of overfishing, methods for estimating the probability of overfishing are not well developed. Third, the reduction by 25% (this 25% is in addition to the 25% cited in the previous sentence) that is used for many of the New England fisheries is essentially arbitrary. Finally, because this regulation like other regulations does not have the force and effect of law and its application results in not obtaining the optimum yield, as specified in the plain language of National Standard 1, it should be abandoned so that any management system could function. It is important to recognize that while "overfishing" is relatively easy to define on a species-by-species basis, it is difficult to define in a multiple species complex such as the New England groundfish fishery.

WHAT DO WE DO NOW?

The haste in which the catch-share system was propagated in New England has caused a serious dilemma for the community. The community is cognizant that the Council is reported to be not working effectively, and it has also read the admonishments of experts in the conservation community that successful catch share programs need to be properly designed, need time to develop, and often require vessel buy-back programs. The transition and early implementation appears to be a work in progress; there are suspicions that the operational mechanisms and motivations are not sound; the quantitative extent of vessel financial defaults along with concomitant job losses and shore side bankruptcies have not been calculated. What is the magnitude of costs in lost taxes and increases in welfare payments to communities like New Bedford, Gloucester, or Scituate?

On one hand the community places high priority on any management system working properly and resulting in the greatest economic good while maintaining the social and economic fabric of the community. Putting the greater good as its highest priority, the community is led to an ineluctable conclusion that the best option is to postpone May 1 start date and engage in the necessary planning, analysis, and budgeting to make the system work!

On the other hand, an option to postpone the May 1 start date until adequate planning could be undertaken appears to have been foreclosed. Surprisingly, there appears to be little, if any, political will to postpone and engage in seemingly requisite analysis, planning, and the public discourse that is the American way of life.

So with a lack of political support to properly design the catch-share system, the community has no recourse but to choose the experimental muddling-through approach, under which a substantial fraction of the fleet will be lost without any plans, as far as we can see, to provide a safety net to the fishing industry and businesses that support the industry, let alone the communities that derive taxes from profitable fishing and are subject to welfare costs generated from unprofitable fishing and loss of jobs.

Perhaps worst of all, is the lot of individuals who will be economically harmed or disadvantaged and who otherwise would not be harmed or disadvantaged if the Agency undertook the appropriate analysis that would guide it to more satisfactory solutions.

While this is obviously a problem for New England, it is evidently also a problem for the rest of the Nation as evidenced by the March 16 hearings held by your Subcommittee. While concerns need to focus on the folks most directly affected, they must also relate to the general public interest in public management and regulation of a privatized public natural resource. (Imagine an equivalent scenario where we wake up one morning to learn that the Secretary of the Interior has unilaterally privatized the National Park System without the sound analysis, planning, and debate that usually accompanies major federal environmentally related actions.)

It appears that your Subcommittee is hearing a balanced view of the intent of Congress expressed in the plain language of the Magnuson-Stevens Act and how it relates to the evolution of catch

shares. It is realizing that catch shares are simply economic instruments that reallocate the wealth accrued from a public resource. They have by themselves little, if any, conservation impact. It is also learning that efficiency at the producing level may not be overall optimal. And a reorganization of the producing sector is likely to dissipate the centuries of cultural values associated with the fishery. (Do not forget the sacred cod that hangs from the ceiling of the statehouse in the commonwealth of Massachusetts.) It is also learning that the great success stories of catch shares emanate from the few that won allocations while the voices of the disaffected many are silent.

The analysis that I have given you paints a picture of moving ahead at any cost. My personal view is associated with the need to slow down or postpone the May 1 implementation date until a reasonably proper design of the system can be certified. As this seems unlikely, we need to take steps to get fishery management back on track.

Applying our experience with the New England "experiment" to the National good, it would seem that it would make sense to put a halt on the drive to new catch share approaches so that specifics can be analyzed and vetted and debated. It is important to remember that these discussions need to be related to real fisheries and need to take account of those who are disaffected as well as those that are winners. We cannot afford to have a massive transition of passing public property into private hands without requisite analysis, planning, and debate. Consider the New England experiment in the national analysis and debate. The New England experiment study would inform those in New England and the Nation on how to move ahead with fisheries management. It will be a real world, not theoretical, demonstration.

SUBSTANTIVE REFORMS

1. **To develop the New England catch-share experiment, it is necessary to maximize the survival of participants in order to minimize economic loss. This will require relaxing ACLs, but not overfishing.** For the experiment to work in a fair and equitable way, those that are most affected need to be protected. We need to protect individuals from economic collapse generated by the lack of analysis, planning, and debate. The Secretary needs to relax the overzealous precautionary approach limiting the catch of fish. We believe that this can provide enough fish to sustain the system until the requisite planning can be executed. This approach could be obtained without overfishing in the sense that the overfishing level would not be exceeded.

2. **Facilitate and accelerate an independent coherent overview of the status of the stocks in New England**. As we embark upon this experiment, the magnitude of the individual stocks and their "condition" is not understood by the public in a comprehensive way. Some stock assessments are based upon 2007 analyses. Others are pending (e.g., pollack). Some do not make sense (e.g., skate). The public needs to have an overview of the status of stocks as they presently exist in order to move ahead with a management program.

3. **Establish bold new and innovative scientific programs.** Many of the contentious arguments that surround the fishing debate result from stock assessments. Many believe that there is little consistency between the abundance of fish predicted by science and the

abundance observed by fishermen. Actually, the problem with stock assessments relates to the assumptions and knowledge underlying the assessments, rather than the assessments themselves. We need to establish a bold new program that engages in more realistic stock assessments (i.e., includes the ocean environment, the interaction among fish species, and develops a better understanding of the interaction of fishing boats and fish), develops a comprehensive understanding of the ocean ecosystem and fishing, and understands the role of climate and fishing. Cooperative research needs to be intensified to a considerable degree. While some of these activities are pursued, they are not at a critical-mass level

4. **Establish a systems engineering/inventory management approach to day-to-day fisheries management.** This is the most efficient way to systematize the flow of management information and to use modern technology in fisheries management.

5. **Engage in programmatic analysis.** We need to focus budget allocations. Emergency funds need to be provided to disaffected fishermen and municipalities. Buy-back programs need to be considered. These may amount to c. $150 million. Retraining and permit banks need to be considered. It is necessary to understand how reprogramming of existing funds can result in programs that do a better job of managing contemporary problems associated without ocean resources.

INSTITUTIONAL REFORMS

1. **Make the New England Fishery Management Council an elected body.** The New England Fishery Management Council is not working well. It is disenfranchised from those that it serves. It is not always clear that decisions made by the Council are consistent with the intent of Congress. A Council member's job is a full time commitment. We should consider electing Council members to full time positions so they can optimize their performance. A smaller and more focused council of five to seven members might be about right.

2. **Develop checks and balances in the Agency.** A second institutional problem is that there are no checks and balances in the Agency. Because of this, there is no safety valve to deal with contentious issues; bold and innovative plans need to come from within the agency, and major initiatives like catch shares careen between a seeming common sense and infeasibility. For these reasons, it is important to establish institutional checks and balances in a model similar to the relationship between the Federal Aviation Administration (FAA) and the Civil Aeronautics Board (CAB).

3. **Establish an ad hoc New England Fishery Management Reform Commission.** A reasonable premise is that reform of fishery management in New England cannot be accomplished without considerable stakeholder input. Accordingly, a New England Fishery Management Reform Commission needs to be appointed by the Administration or Congress to take stock of the present state of management, determine how management should be reshaped, and provide advice on resources required to implement the plan. The Commission needs to comprise highly qualified stake holders—leaders in the fishing industry,

environmental representatives, and scientists. The Commission should have an 18-month life.

Madam Chairwoman, I have tried to share with you the community perspective centered in New Bedford. I have attempted to provide some background on where we are and steps that we think bear important consideration as we move into the future.