

U.S. EFFORTS TO PREPARE REGULAR ASSESSMENTS OF OVERCAPACITY IN FEDERALLY-MANAGED COMMERCIAL FISHERIES

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ABSTRACT

NOAA's National Marine Fisheries Service (NMFS) was a key participant in the FAO technical and policy-level consultations of 1991-1999 that led to the FAO International Plan of Action for the Management of Fishing Capacity. The U.S. Plan of Action includes a commitment to prepare regular assessments of overcapacity in federally-managed fisheries. This paper describes recent NMFS efforts to determine and conduct the types of assessments that will be of use to the Regional Fishery Management Councils and NMFS as they continue their efforts to address the problems of overcapacity. Specifically, it discusses a variety of basic lessons learned concerning the assessment and management of fishing capacity and how NMFS plans to use those lessons to conduct the first round of regular assessments of overcapacity in federally-managed commercial fisheries.

Keywords: fishing capacity, overcapacity, excess capacity

INTRODUCTION

NOAA's National Marine Fisheries Service (NMFS) is in the process of meeting two overcapacity assessment commitments that were made in response both to the 1999 Food and Agriculture Organization of the United Nations (FAO) International Plan of Action for the Management of Fishing Capacity [1] and to NMFS stewardship responsibilities identified in the Magnuson-Stevens Fishery Conservation and Management Act and other applicable law. The two commitments, which are based on the 2004 United States National Plan of Action for the Management of Fishing Capacity [2], are as follows:

1. Determine and conduct the types of assessments that will: (a) meet the commitment to prepare regular assessments of overcapacity in federally-managed commercial fisheries and (b) be useful to the Regional Fishery Management Councils (Councils) and NMFS as they continue their efforts to address the problems of overcapacity.
2. Assist the Councils in obtaining additional information they can use to: (a) assess the need to decrease fishing capacity; (b) assess progress in addressing the problems of overcapacity; and (c) design and assess alternatives to address those problems more effectively.

In preparing to meet its commitment to prepare regular assessments of overcapacity in federally-managed commercial fisheries, NMFS conducted two overcapacity workshops. The first workshop brought together NMFS and Council staff to discuss the basic lessons learned

concerning the assessment and management of fishing capacity and other topics that needed to be addressed to determine the types of assessments that would be most informative for management. The background document that was prepared for the first workshop drew heavily on FAO and NMFS reports. The discussions at the first workshop were the basis for the proposals that were prepared before the second workshop. The second workshop, which had a more technical focus, included discussions of the following topics: (1) the proposal for what will be included in the first assessments of overcapacity; (2) the proposed cooperative process for conducting the first assessments; (3) the analytical methods that will be used; (4) the data available for the assessments; and (5) specific modeling and data issues. Although the second workshop was focused on the first round of regular assessments of overcapacity, it was agreed that the overcapacity assessment will also provide additional useful information to the Councils. In particular, the assessment will assist in developing the conceptual and analytical foundation for assessing the need to reduce fishing capacity in federally-managed commercial fisheries, and will provide data sets that will help Councils with their plans to address overcapacity. The latter is particularly important because current data deficiencies (availability and quality) limit our ability to fully assess overcapacity in some fisheries.

This paper briefly addresses the basic lessons learned concerning the assessment and management of fishing capacity and how NMFS will use those lessons to conduct the first round or regular assessments of overcapacity in federally-managed commercial fisheries.

BASIC LESSONS LEARNED CONCERNING THE ASSESSMENT AND MANAGEMENT OF FISHING CAPACITY AND NMFS' USE OF THOSE LESSONS

Basic Lesson Number 1

NMFS and the FAO have defined fishing capacity in terms of the ability of a vessel or fleet to catch fish. For example, based on the FAO Report of the Technical Consultation on the Measurement of Fishing Capacity Mexico City, December 1999 [3], Pascoe et al. [4] provide the following definition of fishing capacity.

Fishing capacity was defined as: *the amount of fish (or fishing effort) that can be produced over a period of time (e.g. a year or a fishing season) by a vessel or a fleet if fully utilized and for a given resource condition.* Full utilization in this context means normal but unrestricted use, rather than some physical or engineering maximum.

For the purposes of its first round of assessment of overcapacity, NMFS adapted the U.S. Census Bureau/Federal Reserve definition of full production capability (i.e., capacity) to apply to fishing vessels. The adapted definition is as follows:

The maximum level of production that this establishment (e.g., vessel) could reasonably expect to attain, under normal and realistic operating conditions, fully utilizing the machinery and equipment in place and ready to operate.

This definition has the following three important and explicit characteristics: (1) capacity is estimated at the plant or vessel level; (2) all the production of a plant or vessel is accounted for;

and (3) the product mix of a plant or the species mix of a fishing vessel is held constant (i.e., a common expansion factor is applied to the actual level of production of all products in a period to estimate capacity output for that period). The second and third characteristics are particularly important for vessels that participate in multispecies fisheries or multiple fisheries. For example, the third characteristic makes it explicit that the estimates of fishing capacity by species are based on the actual species mix for that period and not on alternative feasible species mixes.

These two definitions of fishing capacity are comparable. In both cases, fishing capacity is defined in terms of potential catch or landings given a variety of constraints (e.g., the current number and physical characteristics of the vessels, technology, normal and realistic operating conditions, and status of stock conditions). The physical characteristics include such things as the length, beam, carrying capacity, engine power, and fish-finding equipment of each vessel. Therefore, fishing capacity is determined in part by the current size and physical characteristics of a fleet and it can be controlled to some extent with regulations that limit both, but it is not measured in terms of either.

Basic Lesson Number 2

The lack of well defined terms continues to result in confusion and misunderstandings. NMFS and others have made a distinction between excess capacity and overcapacity. In the U.S. National Plan of Action, “excess capacity” is defined as the difference between fishing capacity and actual harvests, and “overcapacity” is defined as the difference between fishing capacity and a management target catch level (TCL). NMFS has defined “target catch level” as the catch level that will sustain a stock at or allow the stock to rebuild to a level that can support productive fisheries and marine ecosystems, as well as viable fishing industries and fishing communities. The total allowable catch (TAC) is an example of a short-run TCL. NMFS will use the TAC as the reference point (i.e., as the TCL) in its first round of regular assessments of overcapacity in federally-managed commercial fisheries. The potential problems of a species-specific definition of overcapacity and the additional potential problems when the TAC is used as the reference point are discussed later.

Basic Lesson Number 3

There is overcapacity in many fisheries in the U.S. and elsewhere. Addressing overcapacity is a high priority because persistently high levels of overcapacity can make it more difficult to meet a variety of fundamental conservation and management objectives including the following:

1. Sustainable levels of catch and the subsequent biological, ecological, social, and economic benefits;
2. Bycatch that is minimized to the extent practical;
3. Efficient or economically viable harvesting and processing operations;
4. Stable/viable fishing communities;
5. Fishery management programs that are not unnecessarily costly, complex and intrusive;
6. Safe fishing operations;
7. Habitat conservation; and
8. Productive and sustainable marine ecosystems

Often when there is overcapacity, it will be necessary to use management measures to restrict catch by controlling the use of the existing fishing capacity; and at any point in time, the greater the overcapacity, the harder it will be to design and enforce a program that will prevent excessive catch. There are three reasons it becomes harder to prevent excessive catch: (1) more restrictive measures will be required; (2) fishermen will have a greater incentive to circumvent any measure that increases their costs or decreases their revenue; and (3) there will be a greater incentive to use political pressure to redefine (increase) the target catch levels. An additional problem is that the management measures used to restrict catch can prevent the attainment of other objectives. Therefore, assessing fishing capacity and controlling the level and use of fishing capacity are high priorities for many countries and they are integral parts of U.S. efforts to implement ecosystem approaches to management.

Basic Lesson Number 4

Typically, it does not make sense to prevent overfishing by just controlling the level of fishing capacity. It will be better to use a combination of management measures to prevent overfishing if preventing overfishing is not the only objective and if preventing overfishing by only controlling the level of fishing capacity substantially decreases the extent to which the other objectives can be met. As noted above, there are multiple conservation and management objectives; and because many fisheries have one or more of the characteristics described below, the reduction in fishing capacity that would be required to ensure by itself that overfishing would not occur would result in catch levels substantially below the target catch levels for most if not all species. Therefore, if reducing fishing capacity is the only method used to prevent overfishing, the cost of preventing overfishing will be unnecessarily high and our ability to meet the other objectives will be decreased. The characteristics are as follows:

- a. There are multispecies fisheries and multi-fishery vessels that can readily change their fishing strategies and species composition of their annual catch.
- b. There are part-time vessels that could become full-time vessels.
- c. There is latent capacity (i.e., vessels that could have participated in a fishery but chose not to do so) that could become active capacity.
- d. The amount of fish a vessel or fleet is able to catch can be substantially greater than the amount it is willing and able to catch.
- e. There are fluctuations in the target catch levels and fishing capacity.
- f. There is uncertainty concerning the actual level of fishing capacity.

In recognition of this lesson, the Councils and NMFS use fishery-specific combinations of management measures in an attempt to prevent excessive levels of catch and to control the level and use of fishing capacity.

Basic Lesson Number 5

It is difficult to have a long-term solution to a management problem without addressing the source of the problem. There is general agreement that the source of the problem of overcapacity is that in most fisheries the current management regimes provide incentives for

vessels owners and some States to maintain or increase fishing capacity even when there is excess fishing capacity or overcapacity. Such incentives exist when individual vessel owners or States do not bear the full cost of their investment decisions, for example when they do not pay for the fishery resources (e.g., the fish) they use. Limited access privilege programs (LAPPs), which include individual transferable quotas (ITQs), community quotas, and cooperative quotas, have been used effectively in a variety of fisheries in the U.S. and elsewhere to simultaneously address the overcapacity problem and other management problems. Note that the term “rights-based management programs”, which is often used and the term “limited access privilege programs”, which is expected to be used in the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, include similar types of management programs. Such programs address the source of the problems and can provide long-term solutions. However, the economic and political feasibility of these programs and the appropriate elements of such programs will vary by fishery. For example, the cost of adequate monitoring, control and surveillance will affect what type of LAPP is appropriate for a specific fishery or whether any LAPP is appropriate. In some cases, buyback programs have increased the feasibility of implementing a LAPP; however, LAPPs have been implemented successfully without the aid of a buyback program.

In recognition of the importance of this lesson, the Councils and NMFS have implemented a variety of LAPPs that were designed to meet fishery-specific needs and circumstances and they are in the process of developing more such programs.

Basic Lesson Number 6

Limits on the number and physical characteristics of the vessels in a fishery at best tend to be short-term fixes. The management of fishing capacity can include setting explicit limits on the number and physical characteristics of the vessels in a fishery, where the physical characteristics include such things as the length, beam, carrying capacity, engine power and fish-finding equipment of each vessel. However, without regular decreases in such limits, fishing capacity is expected to increase unless the source of the problem of overcapacity is eliminated. Technological improvements will occur and when vessel owners have an incentive to increase the fishing capacity of their vessels they can be quite creative in doing so when there are limits placed on some of the physical characteristics of their vessels. Such restrictions can result in vessels that are built or modified in response to the vessel characteristics that are limited by taking advantage of the physical or operational characteristics that are not regulated. Such vessels often are more costly, perhaps less safe to operate, and have physical or operating characteristics that have been distorted by the limits. For example, when there is a limit on the length of vessels, beamier vessels will become more popular; or when carrying capacity is limited, the use of tenders or less distant ports will tend to increase. Similarly, limits with exceptions for certain types of vessels will tend to increase the number of vessels that just meet the exception rule. For example, if the limits on the number and size of vessels in a fishery apply only to vessels at least 24 meters in length, vessels that are only 23.9 meters but have other physical characteristics that more than compensate for the length restriction will become popular.

Limits on the aggregate physical characteristics of the vessels in a fleet will be even less effective in controlling the level of fishing capacity because the fishing capacity of a fleet will

depend on both the fleet's aggregate physical characteristics and the distribution of those characteristics among the vessels in the fleet. For example, if there is a 50,000 horsepower (hp) limit for the fleet as a whole and if the fleet is limited to 100 vessels, there are many ways the 50,000 hp limit could be distributed among 100 or fewer vessels, and over time the distribution of the 50,000 hp limit would tend to change in a way that would increase fishing capacity.

Basically, it is difficult to control a fleet's fishing capacity by controlling the number and physical characteristics of the vessels in a fleet, it is more difficult to do that by controlling the aggregate levels of various physical characteristics, if such limits are used regular decreases will be necessary to prevent increases in fishing capacity, but in some cases better alternatives will not be feasible.

The increased use of LAPPs in federally-managed commercial fisheries and the fishery-specific details of those programs indicate that this lesson is being used to improve the management of fishing capacity and fishery management in general.

Basic Lesson Number 7

Even a very good estimate of the level of fishing capacity or overcapacity will not indicate either how much capacity should be reduced or how to reduce it. For example, when there is overcapacity, a variety of factors should be considered to determine if and by how much fishing capacity should be decreased. The factors include the following: (1) the objectives for fishery management; (2) how a specific capacity reduction measure will affect the attainment of those objectives; and (3) the availability of better methods for addressing specific fishery management problems and attaining the management objectives.

Basically, the appropriate changes in the level of fishing capacity, fleet size and vessel characteristics, as well as the appropriate methods for attaining these changes will depend on the very broadly defined costs and benefits of these changes for each feasible method for accomplishing these changes. The level of fishing capacity or overcapacity is just one of many types of information that can aid in effectively addressing the problems of overcapacity.

This lesson is reflected in the distinction that NMFS made between its commitment to prepare regular assessment of overcapacity and its commitment to assist the Councils in obtaining additional information they can use to: (a) assess the need to decrease fishing capacity; (b) assess progress in addressing the problems of overcapacity; and (c) design and assess alternatives to address those problems more effectively.

Basic Lesson Number 8

Actions to reduce fishing capacity can be implemented in the absence of good estimates of either fishing capacity or overcapacity. As noted above, overcapacity is a concern because it can prevent the attainment of the fundamental conservation and management objectives. For example, it can make it more difficult to prevent overfishing and to have economically viable fisheries. If overfishing is occurring, there currently is too much fishing capacity or insufficient control on the use of that fishing capacity and the usual fishery management decision making

process can be used to determine whether to reduce fishing capacity or further constrain its use. Better assessments of fishing capacity, overcapacity and the effects of alternative management actions will allow more informed and, therefore, better management decisions to be made. However, an incremental and adaptive approach can be used for the management of fishing capacity just as it is used to address other fishery management issues.

In recognition of this lesson, the Councils and NMFS have implemented a variety of management measures to control the level and use of fishing capacity; and they have generally done so in the absence of quantitative estimates of fishing capacity or overcapacity. But they have also initiated an effort to provide assessments of overcapacity and additional information that will be useful in improving the management of fishing capacity.

Basic Lesson Number 9

Because allocation issues are at the heart of many management problems and because most management measures will have allocation effects, it will be very difficult to solve those problems without addressing the allocation issues. There are a variety of examples in which making the difficult allocation decisions led to substantial improvements in fishery management and the management of fishing capacity. Some of these improvements resulted from the acceptance of more effective regulations; however, other improvements were the result of industry initiatives and cooperative actions that would not have been possible if the allocation issues had not already been addressed.

For the tuna regional fishery management organizations (RFMOs), there are competing and diverse interests for the States with the distant water tuna fleets that historically accounted for most of the tuna catch, the States with developing or more recently developed distant water fleets and the coastal States with the EEZs in which much of the fishing for tuna occurs. The first group of States would like to maintain its historical share of the catch. The second group would like to maintain or increase its recent share of the catch. The third group of States, which includes States that have had very limited participation in tuna fisheries, would like to increase its participation in the tuna fisheries or in other ways increase the benefits it receives from at least the tuna fisheries that occur in its EEZs. It will be difficult to effectively manage fishing capacity without addressing these competing interests by dealing with the underlying allocation issues.

In response to this lesson, the Councils and NMFS have implemented a variety of management measures that explicitly apportion TACs among competing user groups or among individual fishing operations.

Basic Lesson Number 10

Fishing capacity is basically the ability of a fleet to catch fish, given a variety of constraints and fishery regulations can affect the ability of a fleet to catch fish and the extent to which that ability is used. Therefore, if fishing capacity is to be assessed, it is important to clarify what regulations are not included as constraints in defining and assessing fishing capacity. The regulations that are included as constraints for both purposes will affect the level of fishing capacity; the other

fishery regulations can indirectly affect the level of fishing capacity and directly affect the utilization of the existing fishing capacity.

Determining what fishery regulations to exclude as constraints in defining and assessing fishing capacity and then estimating what fishing capacity would have been in the absence of those regulations will be among the major challenges for implementing any proposal for assessing fishing capacity and overcapacity. For example, if TACs, days at sea limits or other fishing regulations have decreased the operating days for a fleet from 150 days per year to 50 days, it probably would be inappropriate to assume that 50 days constitute the full utilization of the fleet under either “normal and realistic operating conditions” or “normal but unrestricted use”. However, determining what the full utilization number of operating days is and what the associated catch would have been will be a challenge. This problem is exacerbated either if the “normal and realistic operating conditions” are not the same for all the vessels with similar physical characteristics or if the full utilization number of days has not been observed for many years. In deciding what regulation to exclude, there are likely to be tradeoffs between what is desirable and what is possible.

In response to this lesson, NMFS will estimate fishing capacity for 2004 given the regulations that were in place in 2004 and then adjust those estimates upward to approximate what fishing capacity would have been in 2004 in the absence of the 2004 regulations that were used to constrain the level of effort. TACs, days at sea limits and season closures are examples of such regulations.

Basic Lesson Number 11

It is very difficult to assess fishing capacity for future stock conditions that differ substantially from those in recent years and such an assessment can be of limited use. If current/recent fishing capacity is less than the long-run TCL, we would need more information to determine if there would be overcapacity after the stock recovers to the desired long-run level. Specifically we would need information concerning the expected percentage changes in fishing capacity and the TCL from their current/recent levels to those associated with the rebuilt stock conditions. We also would want to address: (1) the expected rate of technical progress that would occur while the stock rebuilds; (2) what species mix(s) should be used; and (3) other expected changes to the fleet while the stock rebuilds. Determining the relative rates of change in fishing capacity and a TCL that would result from rebuilding a stock and addressing the other three issues listed above will require additional stock and fleet-specific research.

In response to this lesson, NMFS will limit its first round of assessments of overcapacity to comparisons between estimates of fishing capacity for 2004 and the 2004 TACs. An assessment in terms of fishing capacity and a TAC, where both are for a future set of stock conditions, will not be made until the types of research mentioned above have been completed.

Basic Lesson Number 12

There are a number of potential problems with applying a species-specific definition of overcapacity that uses a target catch level (e.g., a TAC) as the reference point. They include the

following: (1) a fleet can catch various combinations of the species of interest and most assessment methods provide an estimate of just one of those combinations; (2) the TAC has not been specified; (3) a fleet or fishery specific TAC has not been specified; (4) the TAC is in terms of total catch but the estimate of fishing capacity is in terms of landed catch and there is a substantial difference between the two; and (5) there is incomplete or inaccurate data for some fishing vessels, which prevents fishing capacity from being estimated well for the entire fleet.

In conducting the assessments of overcapacity, NMFS will do a variety of things in response to this lesson or set of problems. First, it will use a definition of fishing capacity that explicitly assumes a constant species mix. Second, it will use a TAC proxy if a TAC was not established for a species or species group in 2004. Third, it will apportion the TAC to the commercial fisheries based on the historical catch distribution between the commercial and other fisheries if the TAC was not apportioned by regulations in 2004. Fourth, it will add an estimate of the discards associated with the capacity level of landings to the estimate of capacity landings to generate an estimate of the capacity level of catch that can be compared to the TAC, if the TAC is in terms of total catch and if there is a significant difference between total catch and landed catch. Fifth, an effort will be made to improve the data used in the assessments and as necessary expand the estimates that are generated from the fishing activities with adequate data to all fishing activity in the fisheries for which overcapacity is assessed. Finally, auxiliary information that is not specific to a particular TAC species will augment the species-specific or species group-specific estimates of overcapacity. The auxiliary information will include estimates of capacity utilization by fleet but not by species and estimates of the actual and capacity levels of effort (e.g., days fished and fisherman days at sea).

Basic Lesson Number 13

If fishing capacity is to be assessed, it is important to: (1) realize that there are several factors that will tend to limit comparability across fisheries, regions or fleets and (2) determine what types of comparability are desirable and how they can be attained. Comparability will be decreased by variability among fisheries in terms of the fishery regulations and other fishery-specific characteristics and data availability and quality. In addition, it will be decreased by differences in the type and details of the assessment methods used. As in most empirical assessment, the analyst is required to make many decisions concerning how to address various modeling and data issues, and these decisions will affect the results and they will differ by analyst.

The requirements for comparability depend on the purpose of the assessments. For example, inter-temporal comparability is important for tracking progress in decreasing overcapacity. Intra-temporal comparability is important for tracking progress in decreasing overcapacity for a group of fisheries or fleets as a whole. In addition, intra-temporal comparability would be important for setting priorities if the principal determinant of the prioritization is the level of overcapacity. However, the level of overcapacity will not necessarily be the only or principal determinant of priorities for addressing the problems of overcapacity. The degree of comparability can be evaluated and if necessary adjusted for only if there is sufficient information on the estimation processes that were used. That would include information on how the fundamental data and modeling issues were addressed in a specific assessment.

NMFS will respond to this lesson or set of problems in a variety of ways. First, a cooperative process with specific responsibilities for various participants was designed to ensure adequate consistency in assessments across fisheries while taking advantage of the expertise within each NMFS Fishery Science Center, NMFS Regional Office and Council concerning specific fisheries and the data for those fisheries. Although the six NMFS Science Centers will provide the data for the assessments, assistance with data and modeling issues and review the assessments, one person will be responsible for developing and using the assessment models for all of the fisheries for which the Science Centers provide data. Second, comparisons will be made between the more data limited assessment models that will be used for some fisheries and the data rich models that can be used for some fisheries by using both types of models for the data rich fisheries. Third, a well established definition of capacity with a set of instructions associated with that definition will be used.

Basic Lesson Number 14

If fishing capacity is to be assessed, it is useful to determine the criteria for useful assessments. NMFS developed the following criteria for useful assessments of fishing capacity and overcapacity: (1) disaggregated, vessel level data should be used in the assessment models; (2) to the extent practical, the assessment of capacity should reflect the fact that many fishing vessels participate in multispecies fisheries or multiple fisheries and account for all of the fishing activities of the fishing vessels; (3) to the extent practical, the assessments should recognize the ability and propensity of vessels to change the species/stock composition of their annual catch; (4) latent capacity should be addressed; (5) the assessments should be feasible given the data and resources that are expected to be available; and (6) steps should be taken to ensure adequate comparability of the assessments given the purposes of the assessments.

Items 2 and 3 are also important to consider when one is attempting to control fishing capacity in one fishery when the vessels in that fishery participate in other fisheries. Consider the simple example of two fisheries with 100 vessels that participate in both fisheries. If the number of vessels is limited to 100 in each fishery and if vessel replacements are allowed, the total number of vessels could increase to 200 with each vessel participating in only one of the fisheries. This would substantially increase, but not necessarily double, the fishing capacity in each fishery. This example also demonstrates the importance of communication and coordination among the RFMOs as they impose measures to control fishing capacity.

Basic Lesson Number 15

There are good reasons to limit the assessment of fishing capacity to the commercial fisheries at this time. Excess demand in recreational fisheries is similar to overcapacity in the commercial fisheries in that it can make it more difficult to meet the conservation and management objectives for living marine resources. However, due to the important differences in the motivations of commercial and recreational fishermen, more research is required to determine what concepts and analytical methods should be used to assess the recreational fisheries' counterparts to fishing capacity, excess capacity and overcapacity in the commercial fisheries. The need for additional research should not prevent fishery management entities from improving

the management of recreational fisheries in a variety of ways when it is appropriate to do so. Based on this lesson, NMFS will limit its initial round of assessments of overcapacity to federally-managed commercial fisheries.

Basic Lesson Number 16

The requirements for the successful management of fishing capacity include the authority, technical capability, resources, and political will to design, implement, and enforce effective management measures. Meeting these requirements often has been difficult for fisheries that are within a single EEZ, but typically it has been more difficult to do so for fisheries that are in more than one EEZ (i.e., multi-EEZ fisheries) and most difficult to do so for fisheries that are partially or entirely on the high seas. The additional difficulties for multi-EEZ fisheries include the potential for more diverse interests and the need for bilateral or multilateral agreements among the relevant EEZ States. For high seas fisheries, even more diverse interests often occur, more States are involved in the international negotiations and until recently the authority of a regional fishery management organization (RFMO) to enforce its fishery regulation on the high seas had not been established.

In recognition of this lesson, the Councils and NMFS are increasing their capability to design, implement, and enforce effective management measures. In addition, the U.S. Senate recently approved by unanimous consent S. 2012, the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006. This bill includes provisions to strengthen the ability of international fishery management organizations and the United States to ensure appropriate enforcement and compliance with conservation and management measures in high seas fisheries.

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