NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
UNITED STATES DEPARTMENT OF COMMERCE

NOAA CATCH SHARE POLICY

EXECUTIVE SUMMARY

PURPOSE

President Obama is committed to creating an integrated and comprehensive national ocean policy, incorporating ecosystem-based science and management, and emphasizing transparency and participation in our public stewardship responsibilities. The Department of Commerce's and NOAA's role in this framework is to conduct and use outstanding science to seek policy and management outcomes that support healthy and resilient coastal economies and ecosystems and foster innovation. Sustainable fisheries are an essential component of that commitment, and catch share programs are proving to be powerful tools to manage fisheries sustainably and improve their economic performance.

The purpose of this policy is to encourage well-designed catch share programs to help maintain or rebuild fisheries, and sustain fishermen, communities and vibrant working waterfronts, including the cultural and resource access traditions that have been part of this country since its founding.

DEFINITION

"Catch share" is a general term for several fishery management strategies that allocate a specific portion of the total allowable fishery catch to individuals, cooperatives, communities, or other entities. Each recipient of a catch share is directly accountable to stop fishing when its exclusive allocation is reached. The term includes specific programs defined in law such as "limited access privilege" (LAP) and "individual fishing quota" (IFQ) programs, and other exclusive allocative measures such as Territorial Use Rights Fisheries (TURFs) that grant an exclusive privilege to fish in a geographically designated fishing ground.

CONTEXT

Commercial and recreational fisheries result in $162.9 billion in sales impacts in the U.S. economy each year[1]. However, a number of U.S. fisheries are under-performing biologically and economically and require consideration of additional tools to improve management effectiveness. For example, the present productivity of U.S. fishery resources is 24 percent below the long term sustainable yield of 12.4 million tons.[2] Rebuilding and effectively managing these resources could significantly increase annual commercial dockside revenues and provide additional access, fishing opportunities and satisfaction to millions more recreational anglers than at present. Given the challenges facing U.S. fishery managers, both best available science and practical experience support the conclusion that it is in the public interest to encourage and support the evaluation of catch share programs authorized under the Magnuson-Stevens Fishery Conservation and Management Act (MSA)[3]. In addition, Congress, in its 2006 amendments to

[1] NMFS, 2010. Fisheries Economics of the U.S., 2008. NOAA Tech Memo NMFS-F/SPO-109, 177 p.
[2] NMFS, 2009 Our living oceans: Report on the status of U.S. living marine resources, 6th edition. NOAA Tech Memo NMFS-F/SPO-80, 369 p.
[3] The MSA authorizes limited access privilege and individual fishing quota programs at 16 U.S.C. 1853(a).

the MSA[4], and national experts[5, 6] have recognized catch shares are a tool that should be available for use in any fishery, subject to general guidelines for their design.

Catch share programs have been used in U.S. federal fisheries since 1990 and now include 14 different programs from Alaska to Florida managed by six different Councils. Both here and in other countries catch shares programs demonstrate they can effectively achieve annual catch limits, reduce the negative biological and economic impacts of the race for fish, and when properly designed can eliminate overfishing and result in safer and more profitable fisheries while also addressing other social objectives. This policy provides a foundation for facilitating the wide-spread consideration of catch share fishery management plans (FMPs) while enabling local fishermen and communities to be part of the process.

GOALS

NOAA's goals for this policy are: to help reduce administrative or organizational impediments to the consideration and adoption of catch shares in appropriate fisheries; to inform and educate stakeholders of the different options and capabilities of catch share programs; and to help organize collaborative efforts with interested Councils, states, communities, fishermen and other fishery stakeholders on the design and implementation of catch share programs.

Catch shares may not be the best management option for every fishery or sector[7]. NOAA will not require the use of catch shares in any particular fishery or sector, but it will promote and encourage the careful consideration of catch shares as a means to achieve the conservation, social and economic goals of sustainable fishery management. To do so, NOAA is issuing this policy and guiding principles to ensure their success. NOAA will seek the program support required to assist in the design, transition period and operation of catch share management. In return, catch share programs can help transform fisheries and ensure fisheries are a prosperous and sustainable element of a national strategy for healthy and resilient ecosystems for present and future generations.

NOAA'S CATCH SHARE POLICY

To achieve long-term ecological and economic sustainability of the Nation's fishery resources and fishing communities, NOAA encourages the consideration and adoption of catch shares wherever appropriate in fishery management and ecosystem plans and their amendments, and will support the design, implementation, and monitoring of catch share programs.

[4] Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, Pub. L. 109-479.

[5] U.S. Commission on Ocean Policy, 2004. An ocean blueprint for the 21st Century. Final Report Recommendation 19-15 says in part "Every federal, interstate and state fishery management entity should consider the potential benefits of adopting such [dedicated access privilege] programs."

[6] National Academy of Sciences, 1999. Sharing the fish: Toward a national policy on individual fishing quotas. Committee to review individual fishing quotas, Ocean Studies Board, National Research Council, Washington, DC states that "IFQs can be used to address any number of social, economic and biologic issues in fisheries management. Alternative management approaches can achieve some, but not all, of the objectives that can be achieved with IFQs….Although the IFQ is no panacea, it deserves a place in the array of techniques that may be needed in any particular fishery management plan."

[7] A sector is defined here as a distinct subset of fishery participants who share similar characteristics, such as a group of commercial, recreational or subsistence fishermen and, unless further qualified, includes the allied shore-side entities they engage with. It does not equate to the use of the regulatory term sector or "sector allocation" in the New England Council groundfish management plan.

CATCH SHARE GUIDING PRINCIPLES

The MSA sets forth a number of criteria for consideration in the design and implementation of catch share programs. Councils and NOAA must follow these MSA requirements. In addition, NOAA recommends adopting the following guiding principles to ensure the best possible catch share design and program outcomes.

Specific management goals: All fishery management programs, including catch shares, should identify specific measurable goals for management.

Allocations: For all fishery management programs, including catch shares, the underlying harvest allocations to specific fishery sectors (e.g., commercial and recreational) should be revisited on a regular basis, and the basis for the allocation should include consideration of conservation, economic, and social criteria used in specifying optimum yield and in furtherance of the goals of the underlying FMP.

Transferability: Councils should thoroughly assess the net benefits of catch share transferability, including allowing inter-sector transfers to both promote future access opportunities and contribute to conservation and management goals.

Distinctions Among Sectors: No fishery or sector (e.g., commercial, recreational or subsistence) is required by the policy to adopt catch shares. Councils should consider the appropriateness of catch share programs and decide which, if any, sectors may benefit from their use. NOAA will support the design and implementation of catch share programs for the commercial and recreational charter and head boat sectors as appropriate, but does not advocate the use of individual private angler catch shares. However, NOAA will support Councils in the identification and application of innovative management measures that both promote recreational fishing access and foster sustainable fisheries.

Duration: The duration of every catch share program should be explicitly defined.

Fishing Community Sustainability: Councils should develop policies to engage with and promote the sustained participation of fishing communities and take advantage of the recently added community provisions in the MSA. NOAA will work in partnership with Councils, other federal agencies and coastal states to promote sustainable fishing communities, resource access and co-management principles, including the use of Fishing Community and Regional Fishing Association provisions of the MSA, and build fishing community capacity to develop and utilize permit banks and other sustainability tools.

Royalties: NOAA will assist Councils if and when they determine that it is in the public interest to collect royalties for the initial or subsequent allocations in a limited access privilege program.

Cost Recovery: Incremental government costs for management, data collection and analysis, and enforcement of limited access privilege programs shall be recovered from participants as required by the MSA.

Review Process: Councils should periodically review all catch share and non-catch share programs to ensure that management goals are specified, measurable, tracked and used to gauge whether a program is meeting its goals and objectives.

CATCH SHARE PROGRAM SUPPORT

Because of the effectiveness, flexibility and the potential applicability of catch shares to many fisheries, NOAA will provide leadership, technical advice, and other support for the consideration and use of catch share programs. To achieve this end, NOAA will collaborate with its many federal, state and constituency partners to support catch share programs in the following four categories:

1. **Reduce technical and administrative impediments to designing and implementing catch share programs.** NOAA will assist Councils and stakeholders that want to consider catch share programs with technical advice and administrative support to help them design and implement a catch share program, while empowering local fishermen to be part of the process. This includes assisting in research, economic analysis and evaluation of catch share applicability for their particular fishery, resolving outstanding questions on application of the MSA and other legal requirements to their proposed design, and organizing a common infrastructure and enforcement protocols where appropriate to minimize program costs and promote "best practices."

2. **Provide expertise and related support to assist development of new catch share programs.** NOAA will provide expertise and work with Councils, interested stakeholder organizations, and other partners to adopt and implement catch share programs that are cost effective and meet the Councils' objectives. This includes providing analytical capacity through staff details and access to external experts, providing analysis of the impact of alternative allocation and transfer options between sectors, providing tools for assisting fishermen to explore options and evaluate impacts of management alternatives, and facilitating access to other government and private sector programs to support the design and implementation of a catch share option.

3. **Inform and educate stakeholders so that they can best participate in the design and implementation of catch share programs.** NOAA will work with Councils, states and other partners to provide information and training to raise awareness and increase understanding about the advantages and disadvantages of catch share programs; to improve general catch share literacy in communities, including fishermen, regulators and the public; and to increase stakeholder engagement in the development and review of catch shares.

4. **Coordinate data collection, research and performance monitoring of catch share programs.** NOAA will partner with Councils, states, Interstate Commissions and other collaborators to ensure appropriate monitoring data are collected, relevant research is conducted, and catch share performance metrics are derived to support the consideration, adoption, operation and evaluation of catch share programs.

CATCH SHARE POLICY IMPLEMENTATION

Starting with FY 2011, an annual plan to implement the NOAA Catch Share Policy will be developed in association with NOAA's fiscal year budget appropriation. Based on approved spending levels, the plan will include the specific actions that NOAA believes will ensure catch share programs have the highest likelihood of success.

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NOAA CATCH SHARE POLICY

BACKGROUND AND LEGAL AUTHORITY

President Obama is committed to creating an integrated and comprehensive national ocean policy, incorporating ecosystem-based science and management, and emphasizing transparency and participation in our public stewardship responsibilities. The Department of Commerce's and NOAA's role in this framework is to conduct and use outstanding science to seek policy and management outcomes that support healthy and resilient ecosystems and economies and foster innovation. Sustainable fisheries are an essential component of that commitment, and catch share programs have proven to be powerful tools to manage fisheries sustainably and improve their economic performance

The purpose of this policy is to encourage well-designed catch share programs to help rebuild fisheries and sustain fishermen, communities and vibrant working waterfronts, including the cultural and resource access traditions that have been part of this country since its founding.

Catch shares designed for federal fisheries are authorized by the Magnuson-Stevens Fishery Conservation and Management Act (MSA).[8] The original MSA was signed into law in 1976. The results of more than three decades of management under MSA represent a significant accomplishment. Commercial and recreational fisheries result in $162.9 billion in sales impacts in the U.S. economy each year[9]. However, a number of U.S. fisheries are under-performing biologically and economically and require consideration of additional tools to improve management effectiveness. For example, the present productivity of U.S. fishery resources is 24 percent below the long term sustainable yield of 12.4 million tons.[10] Rebuilding and effectively managing these resources could significantly increase annual commercial dockside revenues and provide additional access, fishing opportunities and satisfaction to millions more recreational anglers than at present The policy articulated in this document provides a foundation for facilitating the wide-spread consideration of catch share fishery management plans to help accomplish this improvement while enabling local fishermen and communities to be part of the process.

NOAA's goals for this policy are: to help reduce any administrative or organizational impediments to the consideration and adoption of catch shares in appropriate fisheries; to inform and educate stakeholders of the different options and capabilities of catch share programs; and to help organize collaborative efforts with interested Councils, states, communities, fishermen and other fishery stakeholders on the design and implementation of catch share programs.

[8] Magnuson-Stevens Fishery Conservation and Management Act, codified at 16 U.S.C. 1801 et seq.
[9] NMFS, 2010 Fisheries Economics of the U.S., 2008. NOAA Tech Memo NMFS-F/SPO-109, 177 p.
[10] NMFS, 2009. 2009 Our living oceans: Report on the status of U.S. living marine resources, 6th edition. NOAA Tech Memo NMFS-F/SPO-80, 369 p.

Why now?

The Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006[11] included two significant and complementary new provisions that contributed to NOAA's current focus on catch shares:

- The first provision required the establishment of a mechanism for specifying annual catch limits (ACL) in most fisheries by 2011. The ACLs place a firm cap on fisheries removals at a level such that overfishing will not occur. Accountability measures were required to accompany the ACL mechanisms.

- The second provision was the elaboration of criteria and guidance authorizing a program of limited access privileges (LAP) to help rebuild overfished stocks, reduce overcapacity if it exists, and promote safety, fishery conservation and management, and social and economic benefits.

A LAP is a means to distribute and enforce exclusive percentages of an ACL among participants. Taken together, ACLs and LAPs combine the positive biological benefits of a firm cap on fishery removals with the additional benefits of achieving important economic and social objectives necessary to support sustainable fisheries, but without the negative aspects of the race-for-fish with ACLs alone. Thus, it is an opportune time to consider the complementary use of ACLs and catch shares to meet the nation's unmet goals for fishery management.

In addition to Congress, other national experts[12,13] have recognized that catch shares are a tool that should be available for use in any fishery, subject to general guidelines for their design. Catch share programs (which include LAP and individual fishing quotas (IFQ) programs) have been used in federally-managed U.S. fisheries since 1990 by six different Councils in 14 different programs from Alaska to Florida. In addition, six states manage catch share programs. Internationally, similar programs have been used in hundreds of fisheries. Both here and in other countries catch shares have shown they can effectively achieve annual catch limits, reduce the negative biological and economic impacts of the race for fish, and when properly designed can eliminate overfishing and result in safer and more profitable fisheries while also addressing other social objectives. For example, where preserving cultural and historic use patterns in a fishing community is a high priority, a Council could design a catch share program to maintain traditional coastal fishing communities comprised of owner-operated fishing fleets.

Scientific analyses[14] show that fisheries managed with catch shares have demonstrated improved biological and economic performance relative to prior management using traditional tools. This

[11] Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, Pub. L. 109-479.

[12] U.S. Commission on Ocean Policy, 2004. An ocean blueprint for the 21st Century. Final Report Recommendation 19-15 says in part "Every federal, interstate and state fishery management entity should consider the potential benefits of adopting such [dedicated access privilege] programs."

[13] National Academy of Sciences, 1999. Sharing the fish: Toward a national policy on individual fishing quotas. Committee to review individual fishing quotas, Ocean Studies Board, National Research Council, Washington, DC states on p. 5 that "IFQs can be used to address any number of social, economic and biologic issues in fisheries management. Alternative management approaches can achieve some, but not all, of the objectives that can be achieved with IFQs ...Although the IFQ is no panacea, it deserves a place in the array of techniques that may be needed in any particular fishery management plan."

[14] Sigler., M.F. and C.R. Lunsford, 2001. Effects of individual quotas on catching efficiency and spawning potential in the Alaska sablefish fishery. Can. J. Fisheries and Aquatic Science 58**:** 1300-1312. Arnason, R. 2005. Property rights in fisheries: Iceland's experience with ITQs. Rev. Fish. Biol. Fisheries 15:(3) 243-264; Newell, R.G., J.N. Sanchirico and S. Kerr. 2005. Fishing Quota Markets, Journal of Environmental Economics and Management, vol. 49: 437-462.; Branch, Trevor, 2008. How do individual

includes greater cooperative and stewardship behavior by fishing participants, and a slower pace of fishing. In evaluating ecological indicators after implementation of catch shares, discard rate (which declined significantly in catch share fisheries) showed a significant response whereas other indicators (exploitation rate, landings, and the ratio of catch to catch quotas) were distinguished by markedly reduced inter-annual variability.

In 2009, the Joint Ocean Commission Initiative (i.e., the members of the former U.S. Commission on Ocean Policy and the Pew Oceans Commission) issued a statement [15] to President Obama that endorsed the use of innovative, science-based management approaches, including carefully considering, and where appropriate, employing innovative management techniques such as LAPs, catch share programs and Community and Regional Fishery Associations.

Catch share programs can help transform fisheries and ensure they are a prosperous and sustainable element of a national strategy for healthy and resilient ecosystems for present and future generations. One of the challenges facing NOAA is the integration of new catch share programs with existing federal and state fishery management regulatory requirements, some of which will not be using catch shares. In some cases, fisheries cross Council, state and international boundaries. Harmonization of rules across several jurisdictions will require extensive planning and communications efforts between NOAA, Councils, states, Commissions and other management bodies especially during the transition period to new catch share programs. This policy acknowledges that challenge, and provides a foundation for facilitating the wide-spread consideration of catch share fishery management policies to achieve biological sustainability and economic prosperity, while enabling local fishermen and communities to be part of the process.

POLICY

To achieve long-term ecological and economic sustainability of the Nation's fishery resources and fishing communities, NOAA encourages the consideration and adoption of catch shares wherever appropriate in fishery management and ecosystem plans and their amendments, and will support the design, implementation, and monitoring of catch share programs.

Definition: "Catch share" is a general term for several fishery management strategies that allocate a specific portion of the total allowable fishery catch to individuals, cooperatives, communities, or other entities. Each recipient of a catch share is directly accountable to stop fishing when its exclusive allocation is reached. The term includes specific programs defined in law such as "limited access privilege" (LAP) and "individual fishing quota" (IFQ) programs, and other exclusive allocative measures such as Territorial Use Rights Fisheries (TURFs) that grant an exclusive privilege to fish in a geographically designated fishing ground. Definitions of related terms are included in the attached glossary.

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transferable quotas affect marine ecosystems? Fish and Fisheries, 10: 39-57.; Essington, T. 2010. Ecological indicators display reduced variation in North American catch share fisheries. Proceedings of the National Academy of Sciences. 107(2): 754-759.

[15] Meridian Institute, 2009. Changing ocean, changing world: ocean priorities for the Obama administration and Congress. Joint Oceans Commission Initiative Report, Washington, DC.

The policy is intended to promote a future in which U.S. fisheries resources are managed for the greatest overall benefit to the Nation's current and future generations and in a manner consistent with the 10 MSA National Standards for fisheries conservation and management. NOAA does not require the use of catch shares in a particular fishery nor has NOAA made a determination that catch shares are the best management option for every fishery or sector.[16] However, it is NOAA's intent to encourage the careful consideration of catch shares as a *possible* choice to best meet the conservation, social and economic goals of fishery management.

To allow stakeholders to make an informed decision when considering a catch share option, *Councils should specify sufficient catch share design characteristics during the scoping phase for a proposed FMP or amendment such that stakeholders can understand their potential impact*. Major catch share design choices on such features as allocation and transferability will have varying consequences on their operation. However, NOAA is not advocating that every fishery management plan (FMP) or amendment submitted to the Secretary must include a catch share alternative.

Evaluating Catch Share Applicability: Studies of U.S. and foreign fisheries suggest that catch share policies have significant potential for increasing economic returns from fishing and ensuring the sustainability of fisheries. The fisheries that have seen the biggest economic gain from catch shares are those where there is the potential for high-end markets (investing in quality) and/or where there are advances in product recovery from eliminating the race-for-fish (e.g., whiting on the west coast). At the same time, not every fishery will ultimately be a suitable candidate for catch shares.[17] The following is a brief list of fishery characteristics indicating where catch shares could be particularly beneficial. The list is neither exhaustive nor prioritized, nor does it suggest that if a fishery doesn't have one or more of these indicators that it is not a good candidate for catch shares.

a. *Fishery is overcapitalized* – Overcapitalized fisheries are more likely to have lower economic returns to fishermen than could be achieved through catch shares. A fishery demonstrates excess capacity in the form of larger than necessary fishing fleet size, type or amount of fishing equipment, etc., to harvest the total allowable catch. Generally, historical open access policies lead to race-for-fish or derby conditions, and result in overfishing, overfished stocks and overcapitalized fisheries. If a fishery is overcapitalized, transferable catch shares can result in a more economically efficient fleet size.

b. *Stakeholders are receptive* – Well-informed fishermen who want to pursue consideration of catch shares will improve the likelihood of success of this fishery management option. Enabling stakeholders to evaluate their options by providing complete and unbiased information requires extensive education and outreach. Fisheries where this has taken place are good candidates for consideration. Single species or few sectors in a fishery make management less complex for any choice of strategy/approach. In the near term, catch share

[16] A sector is defined here as a distinct subset of fishery participants who share similar characteristics, such as a group of commercial, recreational or subsistence fishermen and, unless further qualified, includes the allied shore side entities they engage with. It does not equate to the use of the regulatory term sector or "sector allocation" in the New England Council groundfish management plan.

[17] Whether specific criteria are useful to determine if catch shares are applicable to a fishery was considered in the 1999 National Academy of Sciences study to evaluate individual fishing quotas (IFQs). That study favored the approach that all fisheries that can be managed using a total allowable catch are potential candidates for IFQs. See National Academy of Sciences, 1999. Op.cit. page 2.

application in a phased approach (i.e., species or sector) may be more amenable to stakeholders.

c. *Stocks are overfished* – Stocks that have a status of "overfished" or that are experiencing overfishing require a multitude of controls to regulate fishermen behavior. Such fisheries are among those now required to have annual catch limits (ACLs) and rebuilding plans under the MSA. While well–enforced ACLs will limit catches they do not address the destructive impacts of the race-for-fish, including in-season fishing closures. Combining ACLs with the allocation of exclusive privileges to stakeholders can help meet total allowable catch targets, reduce the negative impacts of the race-for-fish, promote more stable, year-round fishing, and promote greater freedom and flexibility in fisherman business decision making than when ACLs are used alone.

d. *Regional/Institutional infrastructure exists* – NOAA Fisheries Service regions with existing catch share management experience can take advantage of economies of scale in management operations for multiple catch shares in a region, thereby reducing costs to fishermen and taxpayers. The marginal costs for data collection, administration and enforcement can be spread over multiple species or fisheries. Each circumstance must be evaluated on its own merits since the flexibility inherent in catch share program design allows them to be customized to succeed under varying conditions.

e. *Bycatch is significant* – Excessive bycatch is an indicator catch shares may contribute to a solution. In its 2007 meta-analysis, the Redstone Group[18] analyzed 10 U.S. and British Columbia fisheries managed by LAPs and found seven instances where LAPs contributed to a positive environmental recovery by promoting more selective and efficient fishing practices. There is evidence that IFQs slow the pace of fishing and encourage cooperation and fishermen stewardship that result in positive ecological implications relative to overfishing, bycatch mortality and habitat disturbance.[19] Cooperatives formed under catch share programs (e.g., Gulf of Alaska rockfish pilot program and Bering Sea pollock and non-pollock cooperatives) have also experienced decreased discards as fishermen are able to become more selective and redirect their effort away from areas of undesirable bycatch to avoid prohibited and non-target species, including the use of incentive-based transferable Chinook salmon bycatch caps. Notwithstanding these benefits, care must be exercised in the design and monitoring phases to prevent or control for any highgrading of fish harvested that may occur when bycatch is counted against quota share and there is weak at-sea enforcement.

CATCH SHARE GUIDING PRINCIPLES

The MSA sets forth a number of criteria for consideration in the design and implementation of catch share programs. Councils and NOAA must follow these MSA requirements. In addition, NOAA recommends adopting the following guiding principles to ensure the best possible catch share design and program outcomes. (In the following paragraphs, reference to the Councils also includes the Secretary of Commerce with respect to FMPs or amendments for Atlantic Highly Migratory Species).

[18] Redstone Strategy Group, 2007. Assessing the potential for LAPPs in U.S. fisheries. Report prepared for Environmental Defense, 41pp., Washington, DC.

[19] Griffith, D.R., 2007. The ecological implications of individual fishing quotas and harvest cooperatives. Frontiers in Ecology and the Environment. **6**(4): 191-198.

Specific management goals: *All fishery management programs should identify specific measurable goals for management.* Councils should develop explicit goals and a specific future outcome for the fisheries under their stewardship. This is particularly important for fisheries considering catch shares because these programs have a great deal of design flexibility to accomplish a variety of goals. The consideration of a broad range of management alternatives, including catch shares, is desirable to determine which management approach is best suited for each fishery since each one is different. Examples would include eliminating overfishing and race-for-fish or derby fishing behavior; promoting more precise catch accounting to meet ACLs; identifying bycatch reduction targets and improved ecosystem functioning; improving socio-economic conditions for fishery participants and/or fishery-dependent communities (such as stabilizing employment or new job creation).

With respect to improved ecosystem functioning, historically most U.S. FMPs have focused on single species or fishery-specific goals rather than a broader ecosystem approach to management. The traditional tools used have been incapable of addressing broader ecological stewardship and policy goals for healthy and resilient ecosystems. The 1999 NRC report included ITQs in this category, suggesting that catch shares are not a conservation tool, but are merely an economic allocation tool. Recent experience with catch shares in U.S. fisheries has shown both improved fishery conservation and economics by placing a firm fixed cap on harvests and eliminating the race-for-fish. Because catch shares change the incentives and resulting behavior of fishermen, it is possible to design and structure programs that can directly and indirectly promote broader environmental and ecological goals. For example, the allocation of privileges could be weighted to individuals or entities with lower bycatch rates or who utilize fishing gear less destructive to habitat. Councils could also design catch shares using set-asides for "green" fishing behavior (giving preference to ecologically-friendly gear, fishing locations, and energy use), or use differential royalty pricing for catch shares of critical bycatch or overfished species. These catch share design features create economic incentives or disincentives to ensure rebuilding of overfished stocks or protection of essential forage, prohibited species, and critical habitat. The resulting outcomes are consistent with an ecosystem approach to management.

Councils should develop these explicit management goals early in the management plan development process. Based on these goals, a uniquely tailored catch share program or alternative can be designed as the Council moves from scoping to preparation of management alternatives. All FMPs must be consistent with the MSA National Standards for conservation and management. By adopting this additional principle of identifying specific, clear, biological, economic and social objectives and outcomes for their fishery, a Council can design appropriate catch share management measures and controls and avoid unintended consequences. For example, in considering a Council's catch share design option, fishermen will need to know how their share of the privileges to be allocated will change under various designs, so early identification of the program goals and associated design features is important. By specifying its future vision for a fishery a Council can then adopt tailored allocation, transferability and adaptive management design elements to promote goals such as sustained community participation, allowance for new entrants, and preservation of owner-operated fleets, rather than leave such potential desired outcomes to chance.

Allocations: *NOAA recommends Councils periodically revisit the underlying total allocation to each sector of a fishery (e.g., commercial and recreational) on a regular basis, regardless of whether catch shares are the management tool of choice for one or more sectors.* Determining how much fish individuals or groups have access to is among the most challenging policy decisions for the Councils. The MSA National Standards require that all management actions achieve the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, and that any allocation of fishing privileges be fair and equitable and reasonably calculated to promote conservation. All Councils currently make allocation decisions that underlie management, whether to recreational, commercial, tribal, indigenous and subsistence sectors; among gear types within a sector; or to reserve allocation for reasons of research, conservation, forage and/or scientific and management uncertainty.

Once a Council has allocated portions of the overall ACL to the various sectors of the fishery, it can consider separately whether to manage one or more of those sectors using catch shares. By itself, the implementation of a catch share plan does not modify or alter the allocation of catch between sectors. Rather, a catch share program subdivides and distributes privileges to individuals or groups within a given sector, usually in the form of a privilege to harvest a percentage of the sector's allocation. The approval of a new catch share plan does not impede or preclude a subsequent adjustment in the underlying allocation to the various sectors in the fishery. Thus, the underlying allocation to a sector can increase or decrease over time, while leaving the distribution of catch shares within that sector stable.

NOAA will work with Councils and stakeholders to review guidance to ensure allocations result in the greatest overall benefit to the Nation, including the evaluation of biological, economic and social criteria in such decision making. In existing catch share programs this evaluation of allocations should be part of the MSA-mandated 5-year review. For new catch share programs this evaluation of allocations should precede the final design and distribution of catch shares to ensure the requirements of the MSA and the objectives expressed by the Council in its FMP are met.

The MSA takes a broad view on participation in LAP programs. Specifically, through the designation of new catch share entities called Fishing Communities (FCs) and Regional Fishery Associations (RFAs), people and entities who are substantially dependent on or substantially engaged in the harvest or processing of fishery resources are authorized to use the harvest privileges distributed by the catch share program. For example, seafood dealers and processors are an integral part of every fishery. Their investments produce significant social and economic benefits to the nation, and provide a source of jobs in coastal communities. However, except for the Alaska crab program, Congress has not authorized the allocation of separate processing privileges (called "processor shares"). The use of FCs and RFAs is one means that fishing dependent businesses besides harvesters can benefit from catch shares.

These same MSA authorities can also be used to design catch share programs with features that satisfy new consumer demands for local, direct marketing arrangements of fresh minimally processed product. Specific guiding principles on FCs and RFAs are included below in the Fishing Community section. However, with respect to initial allocations, catch share designs under the reauthorized MSA can fulfill a broader range of Council and stakeholder biological, economic and social objectives, and these objectives can be reinforced by specifying complementary transferability provisions.

Many catch share programs use a control date to identify the eligibility of participants and apply a time period of historical landings to establish the percentage of catch share an entity will receive. *Councils are advised to consider a broad range of participation criteria to ensure the most fair and equitable catch share distribution for their given circumstances.* For example, Councils will decide how to deal with a variety of contingencies that affect historical catch patterns, from skipper illness or vessel disrepair, to voluntary conservation efforts beyond requirements of law to conserve certain species that reduced their catch histories. In addition to a historical landings criterion, some part of the allowable catch could be allocated equally among participants, some part may be auctioned, and/or some part may be reserved or set aside for special purposes. In some of Australia's catch share programs an independent third-party derives the allocation formula for the fishery to promote fairness. In the U.S., an appeals process for administrative review of initial allocations is required for every LAPP.

Councils also should link their allocation decisions to the attainment of their goals for new entrants, adaptive management, and the desired distribution of future benefits, especially if their fisheries are undergoing rebuilding. The hurdles for new entrants will be quite steep if all available catch shares are initially distributed without any set-asides or policy for redistribution. The availability of programs assisting new entry such as loans, set asides and permit banks for future generations must be considered at the outset. Set-asides, whether for communities, anticipating the possibility of unintended negative impacts during the transition to catch shares, providing incentives for conservation and innovation/gear research, or for new entrants must also be factored into the initial allocation analysis.

Transferability: *Councils should thoroughly assess the range of options and net benefits of allowing transferability of catch shares.* The MSA requires Councils to establish a policy and criteria for the transferability of limited access privileges through sale or lease. The choice of whether, when and to whom to allow transfers of catch shares by initial recipients is one of the many design options the Councils must evaluate and decide. After the Council's decision regarding the underlying allocation of ACL to the different sectors, its decision on transferability is one of their most significant and far-reaching policy choices. The majority of catch share programs in place allow at least some degree of transferability. Transferability of shares can serve multiple purposes, and any decision to allow transfers can vary in degree. In all circumstances a Council must decide how fast and how much they are willing to allow their initial distribution decisions to be changed by sales and leases. There is likely a middle-ground that Councils will choose between complete transferability and prohibitions on any transferability. The following paragraphs look at some of the objectives served by transferability, some of the possible risks involved, and some guidance to mitigate these risks.

Transferability is the key element of the goal to improve the economic performance of a commercial fishery. Transfers allow privilege holders to produce the allowable harvest as efficiently as possible by acquiring or disposing of privileges to match their desired vessel activity and capacity. This allows fishermen to harvest their assigned quota at the least cost, and provides fishermen with a valuable asset and compensation if they choose to leave the fishery.

However, having too few rules or restrictions on sales and leases of catch shares could have undesirable consequences. Carefully constructed initial distributions of privileges to achieve certain biological, economic or social objectives could be undone by allowing unrestrained

transfers. For example, a Council may have chosen to distribute shares between different groups based on their ability to stay within established ACLs (management uncertainty), or to forgo some economic efficiency to support important goals for preserving existing geographic, vessel size or gear distributions, or important fishing community or employment-based objectives. These objectives could be undone by an unrestricted marketplace.

Moreover, the MSA legislative history indicates Congress did not intend for LAPPs to be used as a mechanism to further reduce harvests through acquisition of catch quota by those who are not fishery participants (i.e., to allow non-fishing interests to acquire shares and not fish them). Congress indicated the total quota available for harvest is established separately under the conservation requirements of the Act. Unrestricted transfers to non-participants could change the likelihood of meeting the Council's objectives, and suggests certain transfer criteria as allowed by the MSA may be desirable.

Transferability decisions also control future entry to and exit from the fishery. Councils should anticipate and evaluate many future circumstances and develop a comprehensive transfer policy. The range of questions include whether to allow inter-generational transfers of privileges within a fishing family, or to allow inter-sector transfers to account for changes in demand for fishery resources, such as recreational fisheries where population growth and participation rates are expected to increase over time (see further discussion below in the section on distinctions among sectors). The MSA states that privileges are not issued in perpetuity. *Councils are thus advised to develop written redistribution policies, including what happens to these privileges upon the retirement or death of the initial recipient,* or subsequent lessee or holder if so allowed. If all privileges revert back to the Council at some point then a redistribution process should be incorporated into the program design. If the privileges do not revert back for redistribution then opportunities for new entrants are more dependent on the marketplace. In the absence of specific Council guidance, courts will make individual determinations on the future disposition of catch share privileges that may not be consistent with the objectives of the Councils.

In determining a transferability policy, Councils should establish eligibility and participation criteria much as they do for the initial distribution of privileges. While the MSA provides some exceptions to who can acquire and hold privileges, Councils have wide latitude in specifying who is eligible and can participate in a program. For example, to support management goals seeking to preserve traditional fishing patterns, a Council could establish criteria to limit transfers: only among active fishermen; to fishermen groups or broader community associations; or among particular gear regions or vessel types. Depending on the status of the managed fishery, the maintenance of the status quo may be contradictory to other Council and MSA goals and objectives for rebuilding overfished stocks or achieving the greatest overall benefit to the nation.

To determine the appropriate transferability option for their fishery, Councils should ensure frequent consultation with fishermen and promote transparent public participation in the crafting of their participation criteria, analysis of the trade-offs, and evaluation of the outcomes.

A Council could adopt various eligibility and participation criteria to discourage privileges from being held by non-fishing interests. Both the MSA National Standards and the LAPP provisions affirm the purpose of the MSA is the conservation and management of the nation's fishery resources, not the development of speculative financial instruments or investment opportunities

for individuals or businesses not substantially participating in the fishery. The Senate Committee report on MSA[20] cited that "*Determinations of substantial participation and substantial dependence shall be established by the Secretary upon recommendation by the Council*." Thus, Councils should design programs that are consistent with the MSA requirements and Council objectives. *Councils are advised to establish a clear administrative record linking their management goals and objectives to any provisions limiting transferability such as "owner-on-board" "use it or lose it" or "active fishing entities" criteria.*

One of the risks associated with allowing transferability is the potential accumulation of excessive shares. The MSA requires Councils to establish appropriate caps to prevent excessive accumulation of privileges. The actions of fishermen regarding harvest privilege accumulation and the effects on competition are further governed under federal antitrust laws. In addition, Councils are required to consider additional procedures to address concerns over excessive geographic or other consolidation in the harvesting or processing sectors of the fishery as part of their consideration of the basic cultural and social framework of the fishery. Specification of excessive shares must consider the specific circumstances of each fishery, and experience has shown a wide range of concentration exists in many fisheries without the use of catch shares. Fishermen already take advantage of economies of scale in their business decisions on the number of permits held and vessels owned, and make other business–driven choices on fishery entry and exit, home port and gear. *Councils therefore should be mindful of imposing too many constraints on transferability that would stifle the innovation and flexibility fishermen need for competitive cost-efficient business decision making.*

Another risk associated with transferability is that participants may not immediately understand the benefits and costs of leasing or selling their privileges and thus may be prone to make uninformed decisions in these newly developed markets for privileges. *Councils may design programs that help protect fishermen during this transition period, such as prohibiting sales or limiting transactions to leases in the initial year(s), as well as providing extensive outreach and training materials to the industry on the means of conducting business in transferable privilege markets.* NOAA can contribute to this effort by establishing a source of authoritative market transaction information on leases and sales and establishing an exclusive central registry system for limited access system permits and privileges.

Councils can use their transferability options to address important distribution-related objectives in catch share design as well as provide for management flexibility. For example, the underlying characteristics of a sector can improve or deteriorate over time in any fishery. Councils can improve management flexibility in responding to these changes by setting aside a fraction of all privileges and then allocating them each year (or some other period) to account for changing short-term needs.

Transferability can also be important in multisector fisheries when the Council's goals for different sectors may vary over time. Allowing inter-sector transferability of privileges in multisector catch share programs would allow fishermen to trade in the benefits arising from a successful catch share program. This inter-sector trading could also be helpful in accounting for uncertainty, or for forecasted changes in the biology and socio-economic characteristics of a fishery sector, without requiring a Council action to reallocate the entire quota or redistribute

[20] Report of the Committee on Commerce, Science, and Transportation on S. 2012. Report 109-229, April 4, 2006, page 27.

shares by plan amendment. *Councils should consider allowing the inter-sector transferability of catch share privileges to respond to changes in demand and promote future access opportunities wherever catch share privileges are used in multisector fisheries.*

In summary, transferability can help achieve goals for reducing overcapacity and improving economic efficiency; and can control the achievement of many other biological, economic and social objectives the Councils may have established. Councils have some significant transferability decisions to make as either too few or too many transferability rules may have undesirable effects. NOAA is committed to providing advice and support to the Councils and affected stakeholders in evaluating transferability options.

Distinctions Among Sectors: *No fishery or sector (e.g., commercial, recreational or subsistence) is required by the policy to adopt catch shares* . Councils should evaluate the pros and cons and consider the appropriateness of catch share programs to decide which, if any, sectors may benefit from their use. Under their MSA authority, Councils have a range of options to consider. They include the immediate adoption of catch shares for all fishery sectors; for only some sectors; phasing-in their adoption over time; or not adopting catch shares for any sector. Historically, the application of catch shares has focused on the commercial sector of a fishery. When a Council recommends a catch share program for the commercial sector, the MSA does not require catch shares to be adopted in the recreational or any other sector of a fishery. The Councils may also encounter fisheries where catch shares cannot provide positive net biological, social or economic benefits to all sectors of the fishery, thus *Councils may decide where and when to recommend a catch share program.*

The following paragraphs describe guiding principles associated with applying catch shares to different sectors. Special attention is given to application of catch shares to the recreational component.

The simplest application of a catch share program is in a single-sector fishery. Even with variations in gear, fisherman experience or geography, a single-sector will still have the greatest homogeneity in the fishery's biological, economic and social characteristics, which tend to make program design choices easier. However, a plan for catch shares for just one species in a multispecies fishery, or one sector in a multi-sector fishery, may have effects on other species or sectors of the fishery that should be accounted for. In these cases, *Councils should evaluate the effects of management in all segments of the fishery.* This should be done at the earliest stage of consideration of catch shares as a management option to allow adaptation in both the catch share and non-catch share program elements.

Recreational anglers – A successful recreational angling experience is not as dependent on harvest as in commercial fisheries. Many anglers participate on the expectation of a catch and continue to fish without realizing a positive catch on every trip, and some anglers release the fish they do catch. Many anglers prefer management options that do not foreclose fishing opportunity or access and will accept a lower catch limit in return.

Limited access, however, is a pre-requisite for a MSA LAPP. Thus, any recreational management program based on allocating shares to a limited number of individuals may not be a widely-accepted approach by anglers because it contradicts a longstanding open-access tradition. Designing and enforcing an individual angler catch share program for potentially millions of

participants in a fishery could also be a prohibitively costly and complex undertaking. Thus, as explained in more detail below, NOAA will support the design and implementation of catch share programs for the recreational charter and head boat sectors where appropriate, but does not advocate the use of individual private angler catch shares. However, NOAA will support Councils in the identification and application of innovative management measures that both promote individual recreational angler fishing access and foster sustainable fisheries.

There are a few examples[21] where a limited number of tags for individual fish have been allocated to anglers on a per capita or lottery basis. Historically these tagging programs have been used where the resources were limited and a strict constraint on landings was required. NOAA will continue to work with Councils who have expressed interest in adopting such tag programs.

NOAA also recognizes the interest among recreational fishermen to sustain or increase their fishing access, and as such is open to considering innovative approaches that may allow for this in the context of a Council's goals and objectives. For example, some angler groups have suggested an approach in which their sector might increase its underlying allocation of the ACL through inter-sector purchase of commercial catch shares and creating a recreational catch share pool. The purchase and management of the shares would be overseen by an agreed-upon third party such as a state fisheries agency or non-profit organization, similar to an RFA under section 303A of the MSA. The entity could increase the amount of fish in the pool by transfers of shares from other sectors as long as share transferability was allowed by the Council and other program requirements were met.

If a Council recommends such inter-sector trading, it should do so in a manner that considers trading in both directions, promotes the conservation and accountability objectives of the MSA, and ensures that inter-sector transfer of shares results in no loss in ACL accountability. While many variations and details must be evaluated to establish this as a management alternative, because of high stakeholder interest *NOAA is committed to working with any interested Council, state agency, and angling organizations on the development of new approaches for fishing access by recreational fishermen through appropriate inter-sector trading programs and/or catch share pools.*

The for-hire component of the recreational sector is a significant part of the U.S. fisheries contribution to the economy and provides opportunities and fishing access to millions of anglers on charter and head boats and guided fishing trips. Charter and head boat captains manage a fishery dependent business similar to commercial fishermen, with many for-hire captains also possessing a commercial fishing license. Given these similarities, Councils might consider catch share management for the charter and head boat sector in a given fishery. The MSA and other applicable laws do not prohibit the adoption of a catch share program for just the for-hire recreational sector if a Council and stakeholders wish to do so. Thus, NOAA supports the design and development of catch share programs for the recreational charter and head boat sector as appropriate. Councils should evaluate these options and provide an open and transparent opportunity for stakeholders to assess the pros and cons of this approach to see if a catch share is appropriate for meeting the goals and objectives of their FMP.

[21] See for example http://www.fish.wa.gov.au/docs/pub/RecPinkSnapper/index.php?0103#A09

Since experience with developing catch share programs for the for-hire component of the recreational sector is limited, *NOAA is willing to work with Councils, states, commissions, and interested for-hire stakeholders to consider a pilot program to design and implement an effective for–hire catch share program*. This will require close coordination with the for-hire sector of the fishery. Such a case-study approach would provide valuable guidance and best-practices for other Councils to follow by resolving any impediments to the use of catch shares in these circumstances and provide a useful template that could save limited resources and time for future efforts.

A key requisite for improved management in the for-hire sector is related to enhanced catch accounting. Therefore, *NOAA recommends Councils continue working with NMFS, stakeholders and regional data collection partners toward implementing data collection enhancements to improve management such as Marine Recreational Information Program-endorsed methods for mandatory, validated electronic trip reporting for charter, party, and other for-hire recreational fishing.*

Improved social and economic data are also key for better conservation and management for fisheries under any management regime. These data are essential to computing and tracking allocations, and conducting analyses of the relative economic values and impacts of different fishery sectors. Natural and man-made disasters in the Gulf of Mexico in recent years have demonstrated that we do not have an adequate baseline of information on the social and economic contributions made by all types of fishing, including essential employment and value-added economic statistics. Filling this gap is critical not only to the use of catch shares but to all other fishery management and ocean policy decisions made by NOAA. Therefore, *NOAA recommends Councils consider endorsing the obligatory submission of data, including social and economic data, in return for the use of the public's fishery resources.*

In summary, Councils have discretion over whether and which sector to manage with catch shares. Catch share programs can implement whatever distribution of the allowable catch the Councils decide upon, subject to MSA requirements. The design flexibility associated with catch shares (including transferability provisions such as inter-sector trading) can help ensure Council goals and objectives are achieved for all sectors.

Duration: Catch share privileges are not granted to an entity in perpetuity. The MSA defines a LAP as a permit, issued for a period of not more than 10 years, which will be renewed if not revoked, limited or modified. The program can be amended at any time specified by the Council. Regular monitoring and review of LAPPs by the Council is required by statute with a formal and detailed review 5 years after implementation of the program and at least every 7 years thereafter. If the underlying allocation between sectors for a given fishery has not been reviewed by the Council since a LAP was initially approved, the Council should include such an assessment as part of its 5-year review unless there are compelling reasons not to do so. The mandatory 5-year review for each LAP is an appropriate time for a review and assessment of a given fishery's allocations since the fishery should have benefited significantly during its extended period of management under the LAP. Any such reallocations must be made in accordance with the National Standards of the MSA. *NOAA recommends Councils apply the LAPP review and duration principles and requirements to all catch share programs, and should explicitly define the duration of their catch share program to reinforce the fact they are temporary privileges, not property granted in perpetuity.*

Fishing Community Sustainability: *Councils should develop policies to promote the sustained participation of fishing communities and take advantage of the special community provisions in the MSA.* This will help assure sustainable fishing communities, including the continuation of working fishery waterfronts, fishery infrastructure, diverse fishing fleets, and recreational access. Fisheries have provided the underlying economic, social and cultural fabric of many coastal communities for centuries. Many Alaska native villages and Western Pacific island communities have fishing histories going back thousands of years. Changing circumstances in fisheries as well as many outside influences are resulting in risks to the sustainability of the fishing community way of life.

National Standard Eight of the MSA and section 303A require management authorities to take into account the importance of fishery resources to fishing communities. Section 303A provides unique fishing community and regional fishing association design options for LAPPs and requires Councils to consider the basic cultural and social framework of a fishery being considered for a LAPP. In particular, the MSA calls for Council development of policies to promote the sustained participation of fishing communities as a means to satisfy this requirement; this includes commercial, recreational and subsistence fishing communities.

NOAA will work in partnership with other federal agencies and coastal states, consistent with the goals of the MSA and each Council's FMP's objectives, to use catch shares to promote sustainable fishing communities, resource access and co-management principles. To this end, NOAA will support community-based design and investment in FCs and RFAs. This partnership would include issuing guidance and providing technical assistance in the development and submission of community sustainability plans under MSA Section 303A, and providing technical assistance in the creation of fishing community trusts or permit banks to help retain access to fisheries resources by fishermen in local communities.

In addition *NOAA will support capacity building in fishing communities to help fishermen's/community groups explore and organize catch share options. NOAA will also encourage public-private partnerships, and collaborate with state and local governments, regional economic development districts, public and private nonprofit organizations, and tribal entities to help communities address problems associated with long-term fishery and community sustainability*. In planning and adapting to changing economic, environmental and management conditions, additional capacity and statutory authority may be drawn from other NOAA line offices, other Commerce bureaus (e.g., Economic Development Administration assistance to communities to develop and implement economic development and revitalization strategies) or other agencies (such as the Small Business Administration to deal with access to capital and business planning expertise, or the Department of Agriculture on setting up direct marketing structures). NOAA will facilitate stakeholder access to these resources.
The Councils and NOAA share responsibility to engage fishing communities directly in the development of catch share programs. Two General Accounting Office reports[22] highlighted a series of actions to improve community engagement in catch share programs including:

[22] Government Accountability Office, 2004. *Individual Fishing Quotas: Methods for Community Protection and New Entry Require Periodic Evaluation*. GAO-04-277.; Government Accountability Office, 2006. *Fisheries Management: Core Principles and a Strategic Approach Would Enhance Stakeholder Participation in Developing Quota-Based Programs.* GAO-06-289.

(1) Providing education and outreach; (2) Holding meetings using different times, locations, and formats; (3) Streamlining the [catch shares] program development process; (4) Diversifying interests represented in the council process; and (5) Sharing decision-making authority. Both *Councils and NOAA should be more proactive in seeking out community participation,* for example through both expansion of membership on Council panels and committees and more direct outreach by the government in local communities.

Catch share programs provide new means for engaging communities directly through allocation of catch shares using FC, RFA and catch share set-aside provisions. Other design options include provisions that: allow a community the right of first refusal on catch share transfers, establish geographic restrictions or prohibitions on transfers, and support for the acquisition of additional catch shares through loan programs and support for permit or quota banks. Furthermore, additional catch share design options on eligibility, participation, new entry and transferability can result in preserving the economic vitality of communities by preserving continued access to shares over time.

However, *Councils must be careful not to over-prescribe protections to preserve community status quo and preclude opportunities for innovation, improved efficiency and structural adjustments that fishermen, processors and related businesses need to remain competitive. Councils will need to: set clear, balanced objectives for all stakeholder groups; evaluate the array of benefits and costs; and recognize the cumulative impacts of many regulatory actions.*

This challenge associated with seeking the simultaneous attainment of biological, economic and social objectives in not unique to catch shares. Any management program seeking to rebuild fish stocks to biological target levels will likely face economic and social losses in fleet size, distribution or catch rates. Any management program that seeks to maintain traditional employment and community structures may sacrifice economic efficiency goals and compromise biological overfishing limits. The tension may even be found within a fishing port as policies that are beneficial for an individual harvester may not equally benefit the larger fishery-dependent community. The Councils must rely on the deliberative public and transparent MSA process to meet all 10 MSA National Standards and satisfy the objectives of their FMP. Councils face a delicate balancing act to achieve all goals, and must be willing to evaluate and make the resulting trade-offs. One advantage of catch shares is their design flexibility compared to traditional measures that allow Councils to more easily adapt to or mitigate these competing or conflicting outcomes. However, *to be most effective Councils must make use of the entire range of catch share design options and engage all the relevant stakeholders.*

Royalties: Section 303A(d) of the MSA requires the Councils to consider the use of auctions or other means to collect royalties for the initial or any subsequent distribution of LAPs. (Technically, a royalty is but one mechanism for collecting resource rent, and other mechanisms include auctions and taxes. Resource rent is an economic term defined as a surplus value, i.e., the difference between the price at which fish can be sold and the respective production costs which include a normal return.[23]) Many managers and stakeholders confuse rent recovery with cost recovery, which is addressed separately in the following section.

[23] For a plain-language explanation of resource rent and cost recovery see: Sinner, Jim and Jorn Scherzer, 2007. The public interest in resource rent. *New Zealand Journal of Environmental Law, Vol. 11, 2007: 279-295.*

NOAA will assist Councils if and when they determine that it is in the public interest to collect royalties in connection with the initial or subsequent allocations in a limited access privilege program. The Nation's fisheries resources are managed in the public trust by NOAA. Many of the Nation's other public resources consumed or used by private individuals are subject to a payment (i.e., resource rental) for their usage (e.g., oil and gas leases, permit fees for grazing or silviculture on federal lands, auctions of federal radio frequency spectrum). The government recovers some rent for public resources other than fisheries. To date, the recipients of initial allocations of catch shares have received their allocations without a fee based on their historical fishing records; no Council has adopted a program to collect resource rent.

Any FMP or amendment containing a LAP program should include a description of how the MSA Section 303A(d) provision was addressed. If a Council decides to include a royalty program, the revenues would be deposited in a special fund and can only be expended in the fisheries from which they came. Currently no LAP program collects royalty payments. Many important social, economic and community objectives of a FMP could be funded by royalty payments such as supporting specific goals for research, monitoring, new entrants/small entities, or sustainable fishing communities. Collection and use of royalty payments is one of several options to deal with criticisms that catch shares redistribute wealth and create windfalls to initial recipients. The capitalization of privileges also creates barriers to new entry. Initial share allocations/set-asides and adaptive management programs can deal with entry barriers before the fact whereas loans/subsidies for share purchases are alternatives that can support similar outcomes after the fact.

The MSA provides the Councils with a great deal of flexibility to determine the timing, amount and means to collect royalty payments. For example, royalties could be deferred in the initial years of implementation to account for weak economic conditions if stocks need to be rebuilt at a program's outset. Not all the resource rent has to be recovered and any royalty program must be carefully designed and sized so it does not undermine or offset the biological conservation and economic incentives associated with catch shares. The Councils must evaluate whether the benefits over time of improved economic performance and stock rebuilding should accrue to the initial recipients of catch shares or whether royalty payments should be adopted to capture some of that value for the public. NOAA will assist Councils and stakeholders to provide more specific guidance on royalty program design options where desired, and consult with Councils, states and affected stakeholders on use of any subsequent royalty funds collected.

Cost Recovery: *It is NOAA policy to compute and recover from participants only the incremental operating costs associated with LAPPs.* Cost recovery aims to recover a variety of government costs attributable to the private sector use of a public resource. Section 303A(e) of the MSA requires cost recovery of the management, data collection and analysis and enforcement programs that are directly related to and in support of LAP programs. The relevant costs to recover are the incremental costs, i.e., those costs that would not have been incurred but for the LAP program, since cost recovery is not authorized for non-LAP fisheries. Conceptually, measuring these costs involves a "with and without" comparison of the cost of running the management program for the specified fishery under the *status quo* non-LAP regime, relative to the cost of running the management program under the LAP program. The difference is the incremental costs attributable to implementing the LAP program. It is possible that the incremental costs could be negative (i.e., that costs for management, etc., go down under a catch share program) and therefore no cost recovery fee needs to be levied.

This approach requires the identification of the incremental costs of adding LAP programs relative to the entire cost of compliance monitoring, data collection, stock assessment and catch specification. However, it excludes the costs of managing a resource for the benefit of the public, such as costs for species preservation or biodiversity protection.

Costs for catch share programs include the same operational categories associated with other management strategies but may incur some additional design, operational and monitoring costs due to changes in scale. However, fixing inadequacies in the quality, frequency or coverage of existing monitoring or enforcement programs should not be attributed as catch share costs when these needs pre-existed the catch share program. While cost recovery will reimburse the public for some of the costs of management, data collection and enforcement, actual costs can exceed the 3-percent MSA cap, particularly in the early years of a catch share program and in cases of currently overfished stocks. Design costs (i.e., prior to implementation of a LAP) are also not subject to cost recovery.

Adequate cost recovery can be especially problematic in economically depressed fisheries or for low-valued species. The subject of who pays for these costs may become an impediment to catch share support in the short term. Therefore, government support may be needed for some fisheries to address start-up and transition costs. Such investments are justifiable for catch share programs where the benefits of rebuilt fisheries can outweigh these costs in a relatively short period of time for most fisheries.

Under any structure, *NOAA and Councils will need to design the most efficient catch share programs possible to meet their needs and minimize costs to the participants and the public.* This includes consideration of common infrastructure capabilities that support multiple catch share programs and spread the costs across multiple fisheries.

Review Process: *Councils should periodically review all catch share and non-catch share programs. The intent is to ensure that management goals are specified, measurable, tracked and appropriate steps taken to ensure a program is meeting its goals and objectives.* The review process is the final stage of the management cycle after setting specific objectives and implementing and monitoring a FMP. The MSA requires Councils to regularly monitor and review the operations of its LAP programs. Once management goals and FMPs are in place, section 303A(c)(1)(G) requires the conduct of a formal and detailed review after 5 years for each LAP program. In addition, the Secretary is required to review on a continuing basis and revise as appropriate the conservation and management measures included in Atlantic Highly Migratory Species plans. However, Councils are not currently required to conduct similar periodic reviews of their non-LAP fisheries.

Councils and NOAA must establish relevant performance measures. Performance metrics for some of the typical fishery goals may include how fishery stocks responded to management; what were the impacts on fishing communities, participation and entry into the fishery; what happened to prices, revenues and profits; and how recreational fishery access and participation rates changed after program initiation. Determining relevant performance measures and collecting data to monitor the outcomes of catch share programs for use in a review process is essential. NOAA is committed to working with Councils, stakeholders, the Department of Commerce, the Office of Management and Budget, and Congress in improving and monitoring

useful and relevant performance metrics for all U.S. fishery management policies, not just catch share programs. The derivation of such performance measures will contribute to the Council FMP Review Process described earlier.

Performance measures need to be linked back to the initial objectives in a FMP. Many current FMPs have general and sometimes vague objectives. Objectives for biological, economic and social outcomes should be readily measurable, such as eliminating overfishing and the race-to-fish or derby fishing behavior; promoting more precise catch accounting and reducing scientific uncertainty to meet ACLs; reducing bycatch and improving ecosystem function; improving socio-economic conditions for fishery participants and/or fishery-dependent communities.

Catch shares can result in fishery improvements in many areas but the metrics chosen to monitor performance should not be limited by the current availability of data. It is important to ensure in the catch share design stage that share holders will supply relevant data to monitor program performance in return for their allocation. This includes obtaining more specific biological and economic performance data from the participants, all in accordance with applicable law governing maintenance of business trade secrets and confidentiality of data. In addition, the social recovery metrics should encompass the broad range of possible social and community impacts. Relevant measures to be considered may include impacts on quality of life, degree of community stability and preservation of cultural values and traditions.

Summary of Guiding Principles: The key to a successful catch share program is a thoughtful program design process. There are many tools and references available to help Councils design good programs. The guiding principles described above reflect experience and practices from many current catch share programs. Throughout, the NOAA policy has emphasized that each Council's fisheries are different. A comparative framework is an efficient means to assess the different design and implementation choices for management of a particular fishery or sector. A useful starting point for evaluating the pros and cons of different catch share design options can be found in NOAA's technical memorandum on LAPs[24] where it identifies seven criteria for the evaluation of LAP programs relative to other types of management strategies for a particular fishery. *NOAA is committed to working with the Councils, recreational, commercial and other stakeholder groups to help them assess their options and the advantages and disadvantages of adopting a catch share program for their sector, and research areas that need further investigation.*

CATCH SHARE PROGRAM SUPPORT

Because of the effectiveness, flexibility and the potential applicability of catch shares to many fisheries, NOAA will provide leadership, technical advice, and other support for the consideration and use of catch share programs. To achieve this end, NOAA will collaborate with its many federal, state and constituency partners to support catch share programs in the following four categories:

1. **Reduce technical and administrative impediments to designing and implementing catch share programs.** NOAA will assist Councils and stakeholders that want to consider

[24] Anderson, L.G. and M.C. Holliday (Eds.), 2007. Design and use of limited access privilege programs, NOAA Tech Memo NMFS-F/SPO-86, 156p.

catch share programs with technical and administrative support to help them design and implement a catch share program, while empowering local fishermen to be part of the process. This includes assisting in research and evaluation of catch share applicability for their particular fishery, resolving outstanding questions on application of the MSA and other legal requirements to their proposed design, and organizing a common infrastructure and enforcement protocols to minimize program costs and promote "best practices."

2. **Provide expertise and related support to assist development of new catch share programs.** NOAA will provide expertise and work with Councils, interested stakeholder organizations, and other partners to adopt and implement catch share programs that are cost effective and meet the Councils' objectives. This includes providing analytical capacity through staff details and access to external experts, providing analysis of the impact of alternative allocation and transfer options between sectors, providing tools for assisting fishermen to explore options and evaluate impacts of management alternatives, and facilitating access to other government and private sector programs to support the design and implementation of a catch share option.

3. **Inform and educate stakeholders so that they can best participate in the design and implementation of catch share programs.** NOAA will work with Councils, states, Sea Grant and its Marine Advisory Service, and other partners to provide information and training to raise awareness and increase understanding about the advantages and disadvantages of catch share programs; to improve general catch share literacy in communities, including fishermen, regulators and the public; and to increase stakeholder engagement in the development and review of catch shares.

4. **Coordinate data collection, research and performance monitoring of catch share programs.** NOAA will partner with Councils, states, Interstate Commissions and other collaborators to ensure appropriate data are collected, relevant research is conducted, and catch share performance metrics are derived to support the Councils in their consideration, adoption, operation and evaluation of catch share programs

CATCH SHARE POLICY IMPLEMENTATION

Starting with FY 2011, an annual plan to implement the NOAA Catch Share Policy will be developed in association with NOAA's fiscal year budget appropriation. Based on approved spending levels, the plan will include the specific actions that NOAA believes will ensure catch share programs have the highest likelihood of success. NOAA will work diligently with its partners to use this support to effectively carry out the policy's guiding principles.

GLOSSARY OF TERMS

Catch Share Program

Not defined in MSA. A catch share program is a generic term used to describe fishery management programs that allocate a specific percentage of the total allowable fishery catch or a specific fishing area to individuals, cooperatives, communities, or other entities. It includes more specific programs defined in statute such as Limited Access Privileges (LAP) and Individual Fishing Quotas (IFQ). It also includes Territorial Use Rights Fisheries (TURFs) that grant an exclusive privilege to fish in a geographically designated fishing ground. The recipient of a catch share is directly accountable to stop fishing when its exclusive allocation is reached.

Community Development Quota

Quota set-aside by the North Pacific Council in support of community and economic development as authorized under Section 305(i) of the MSA establishing the Alaska and Western Pacific Community Development Programs. The Western Alaska Community Development Quota (CDQ) Program allocates a percentage of all Bering Sea and Aleutian Islands quotas for groundfish, prohibited species, halibut, and crab to eligible communities. The purpose of the CDQ Program is to (i) to provide eligible western Alaska villages with the opportunity to participate and invest in fisheries in the Bering Sea and Aleutian Islands Management Area; (ii) to support economic development in western Alaska; (iii) to alleviate poverty and provide economic and social benefits for residents of western Alaska; and (iv) to achieve sustainable and diversified local economies in western Alaska.

Dedicated Access Privilege (DAP)

Not defined in MSA. Defined in the U.S. Commission on Ocean Policy Report as "…a novel form of output control whereby an individual fisherman, community, or other entity is granted the privilege to catch a specified percentage of the total allowable catch." Includes individual fishing quotas (IFQ), individual transferable quotas (ITQ), fishing community quotas, fishing cooperatives, and other geographically based programs that give an individual or group dedicated access to the fish within a specific area of the ocean.

Fishing Community

[MSA 16 USC 1802(17)] A community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew and United States fish processors that are based in such community.

Fishing Cooperatives

Not defined in MSA; defined under the Fishermen's Collective Marketing Act (FCMA) of 1934 (15 USC 521). A group comprised of "persons engaged in the fishing industry as fishermen, catching, collecting, or cultivating aquatic products, or as planters of aquatic products on public or private beds, that may act together in association, corporate or otherwise."

Individual Fishing Quota (IFQ)

[MSA 16 USC 1802(23)] A Federal permit under a limited access system to harvest a quantity of fish, expressed by a unit or units representing a percentage of the total allowable catch of a fishery that may be received or held for exclusive use by a person. Such term does not include community development quotas as described in section 305(i).

Individual Transferable Quota (ITQ)

Not defined in MSA. An individual fishing quota (IFQ) program where privileges can be transferred subsequent to initial allocations.

Limited Access Privilege

[MSA 16 USC 1801(26)] A Federal permit, issued as part of a limited access system under section 303A to harvest a quantity of fish expressed by a unit or units representing a portion of the total allowable catch of the fishery that may be received or held for exclusive use by a person. This includes individual fishing quotas, but does not include community development quotas as described in section 305(i).

Limited Access System

[MSA 16 USC 1802 (27)] A system that limits participation in a fishery to those satisfying certain eligibility criteria or requirements contained in a fishery management plan or associated regulation.

Regional Fishery Association

[MSA 16 1802(14)] An association formed for the mutual benefit of members to meet social and economic needs in a region or sub-region; comprised of persons engaging in the harvest or processing of fishery resources in that specific region or sub-region or who otherwise own or operate businesses substantially dependent upon a fishery.

Sector

Not defined in MSA. A sector is defined here as a distinct subset of fishery participants who share similar characteristics, such as a group of commercial, recreational or subsistence fishermen and, unless further qualified, includes the allied shore side entities they engage with. It does not equate to the use of the regulatory term sector or "sector allocation" in the New England Council groundfish management plan.

Territorial Use Right Fishery

Not defined in the MSA. A single fisherman (or firm, organized group, community, etc.) having an exclusive privilege to fish in a geographically designated fishing ground. [Note: Even though the term itself uses the word "right" the catch share programs in this policy are defined in terms of a granting of a privilege, not a property right.]