

DECISION DOCUMENT
for
AMENDMENT 6
to the Fishery Management Plan
for the Golden Crab Fishery
of the South Atlantic Region

The Golden Crab Fishery Management Plan relies on a system of traditional fishery management measures plus controlled access. Traditional fishery management includes: measures to provide biological protection to the resource (escape gaps in traps and no retention of female crabs); gear regulation (define allowable gear, degradable panel, tending requirements, gear identification, and maximum trap size by zone); measures to enable law enforcement (depth limitations and prohibit possession of whole fish or fillets of snapper grouper species); identification of the number of participants (vessel and dealer/processor permits); collection of necessary data (vessel/fishermen and dealer/processor reporting); and a framework procedure to adjust the management program (framework adjustments and adjustments to activities authorized by the Secretary of Commerce). Use of these traditional management techniques in other fishery management plans has not solved all fisheries management problems. Ignored or even exacerbated are underlying social and economic problems resulting from gear conflicts, high regulatory costs, and low marketing incentives. To solve these social and economic problems, managers have increasingly turned to various forms of controlled access or effort limitation. The South Atlantic Fishery Management Council (Council) chose to limit the number of vessels in the golden crab fishery. Combining the more traditional fisheries management measures with controlled access best allowed the Council to address problems in the golden crab fishery.

The purpose of this amendment is to develop a catch share program for the golden crab fishery. Currently, the golden crab fishery is a limited entry fishery and has had a relatively low level of participation. The fishery operates near several deepwater coral habitats of particular concern, which were developed to protect sensitive deepwater coral ecosystems. The level of experience needed to fish near but not among the deepwater coral reefs is quite high and a catch share program is expected to further limit participation in the golden crab fishery to those individuals who have a high level of experience in the fishery. The development of a catch share program would not exclude new entrants from purchasing permits and getting involved in the fishery. However, it is expected that any new entrants would have a good understanding of the fishery (i.e., previous crew or captains) before making a significant investment to participate.

A catch share program is expected to result in increased profitability for the catch share holders. Increased long term security afforded through participation in a catch share program could lead to fishermen expanding their operations or making improvements to their current vessels including enhancing their at-sea storage systems and developing new markets for the golden crab.

This document is intended to serve as a decision document for all the actions and alternatives in the Environmental Assessment (EA)/Amendment 6 to the Fishery Management Plan for the Golden Crab Fishery of the South Atlantic Region (Amendment 6). It also provides background information and includes a summary of the expected biological and socio-economic effects from the proposed management measures.

Why is the Council Taking Action?

The Council is taking proactive action to prevent derby fishing and overcapitalization of the fishery. The Council wants to ensure that participants have a high level of experience in the fishery in order to protect sensitive deepwater habitat near where the golden crab fishery occurs. Due to annual catch limits being placed on other federally managed species, there is potential for vessels to shift effort into the golden crab fishery.

The purpose of Amendment 6 is to develop a catch share program intended to maximize harvest in the golden crab fishery that otherwise might not occur due to inactive permit holders and the large ACL in place. Catch share programs are typically established to rationalize effort after a fishery has become overcapitalized. When a fishery is overcapitalized, derby fishing often occurs resulting in reduced ex-vessel value, higher operation costs, and decreased safety at sea.

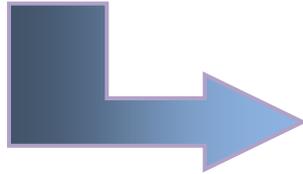
The Council concluded that establishing a catch share program for golden crab would help them meet the needs for this amendment.



Photo credit: Golden Crab taken on board NOAA Ship Pisces, 12 April 2010 at position 32° 02.6 'N, 078° 42.5 'W during SE Deep-Sea Coral Research and Technology Cruise. "

What Are the Proposed Actions?

There are fifteen actions in Amendment 6/EA. Each action has a range of alternatives, including a 'no action alternative' and a 'preferred alternative'.



Proposed Actions in Amendment 6/EA

1. Establish eligibility criteria for a golden crab catch share program
2. Initial apportionment of catch shares
3. Establish criteria and structure of an appeals process
4. Establish criteria for transferability
5. Define quota share ownership caps
6. Use it or lose it policy
7. Cost recovery plan
8. Revise boat length limit rule
9. Modify regulations on golden crab fishing zones
10. Modify the small vessel sub-zone restriction
11. Modify 'one vessel, one permit' policy for golden crab
12. Monitoring and enforcement
13. Define annual pounds ownership cap
14. Annual pounds overage
15. Approved landing sites

Action 1. Establish eligibility criteria for a golden crab catch share program

Alternative 1. No Action. Do not establish eligibility criteria for a golden crab catch share program

Alternative 2. Restrict eligibility to valid or renewable commercial golden crab permit holders who have made landings of 1 pound or greater from 2001 through 2010.

Alternative 3. Restrict eligibility to valid or renewable commercial golden crab permit holders who have made landings of 1 pound or greater from 2005 through 2010.



Preferred Alternative 4. Restrict eligibility to valid or renewable commercial golden crab permit holders. Eligibility for participation in this catch share program is defined as having a valid or renewable commercial golden crab permit as of the effective date of the final rule.

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What Are the Expected Effects?

Biological Impacts

This action would not directly affect the biological environment as the fishery is constrained by an annual catch limit (ACL) of 2 million pounds. This action would limit the number of participants in the catch share program and would not affect the level of harvest. Alternatives for this action could have indirect effects by influencing the total number of shareholders and how the fishery is prosecuted (**Table S-1**).

Table S-1. Number of permits eligible under each alternative for Action 1 for 2001-2010.

Alternative	Number of Permits Eligible to Receive Initial Allocation
1	11
2	8
3	7
4	11

Economic and Social Impacts

While the number of currently valid permits is understood to be 11, each vessel must have a valid permit on board, and only 5 vessels per year landed golden crab on average in 2006-2010, compared with as many as 11-15 vessels in 1995-2010. Some of the five or so “small business entities” engaged in harvesting golden crab appear to own, or control through affiliation, more than one permitted vessel. Whether the golden crab fishery would become more economically viable and profitable with fewer vessels over the long term is not clear, however the increased security of participation in a catch share program ought to make participants more willing to make investments in their operation such as installing refrigerated sea water systems.

Establishing a catch share program may affect participation in the golden crab fishery, although fewer eligible participants could produce negative social effects by excluding some golden crab permit holders. **Alternatives 2 and 3** would exclude some 3-4 golden crab permit holders as ineligible, which may have negative impacts if the permit holders planned to start harvesting golden crab again due to the new catch share program. **Preferred Alternative 4** would designate all 11 permit holders as eligible to receive catch shares and would likely have the least impact on the social environment. There would be no criteria for endorsement qualification under **No-Action Alternative 1**; therefore, all 11 active golden crab permit holders would be able to participate in the catch share program. There would be no difference in negative social economic effects between **Alternative 1 (No Action)** and **Preferred Alternative 4**.

Action 2. Initial apportionment of catch shares

Alternative 1. No action. Do not specify a method for initial apportionment of catch shares.

Alternative 2. Distribute initial catch shares proportionately among eligible participants based on the aggregate annual golden crab landings from logbooks associated with their current permit(s) during the time period 2002 through 2010.

Alternative 3. Distribute initial catch shares proportionately among eligible participants based on the aggregate annual golden crab landings from logbooks associated with their current permit(s) during the time period 1997 through 2010.

Alternative 4. Distribute 50% of initial catch shares equally among eligible participants and distribute 50% of initial catch shares among eligible participants based on the aggregate annual golden crab landings from logbooks associated with their current permit(s) during the time period 1997 through 2010:

Sub-alternative 4a. To receive catch shares distributed equally among eligible participants, aggregate golden crab logbook landings from 1997 through 2010 associated with an eligible participant's current permit must equal or exceed 25,000 pounds.

Sub-alternative 4b. To receive catch shares distributed equally among eligible participants, aggregate golden crab logbook landings from 1997 through 2010 associated with an eligible participant's current permit must equal or exceed 50,000 pounds.

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8. Revise boat length limit rule
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Preferred Alternative 5. Distribute 25% of initial catch shares equally among eligible participants and distribute 75% of initial catch shares among eligible participants based on the aggregate annual golden crab landings from logbooks associated with their current permit(s) during the time period 1997 through 2010:

Alternative 6. Distribute initial catch shares proportionately among eligible participants based on the best consecutive three year average of golden crab logbook landings associated with their current permit(s) during the time period 1997 through 2010

Alternative 7. Distribute initial apportionment of catch shares through an auction. All eligible entities as determined in **Action 1** would be able to participate.

What Are the Expected Effects?

Biological Impacts

This action does not directly affect the biological environment as the fishery is constrained by an annual catch limit (ACL) of 2 million pounds. There could be indirect benefit to the biological environment as the amount of shares allocated to inactive permits increases due to fewer crabs being harvested, assuming the shares are not transferred or leased to active participants. Negative effects on habitat could occur if less active or inexperienced permit holders decide to increase their participation in the fishery. This action would determine how the catch share allocation would be split between the catch share participants determined under Action 1. Alternatives for this action could have indirect effects by influencing how the fishery is prosecuted.

Alternatives 2-6 would base initial allocation on vessel catch history based on certain landing years and landing requirements. It would be expected that vessels with the most recent landing history and those that meet the highest requirements for pounds landed would have the most experience in the fishery. This may result in less gear and time used in pursuing golden crab and, consequently, less adverse impacts in the form of habitat interactions, regulatory discards, and bycatch of non-target species as described in Action 1.

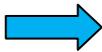
Economic and Social Impacts

The economic impacts for this action are tied to the Council's preferred alternative in **Action 1**. Regardless of the alternative selected in **Action 1**, the current ACL would result in allocation of shares to individuals that are higher than the individual's current landings, resulting in potential economic gains. The amount of the increase in shares allocated to fishermen over what they have currently or historically landed is not consistent across all alternatives. Only **Preferred Alternative 5** would ensure that each permit, including historically inactive ones will receive at least some allocation. **Preferred Alternative 5** guarantees each permit will receive at least 2.2727% of the initial allocation, roughly 45,000 lbs of crab with the current ACL of 2 million pounds.

The social effects of the initial allocation of catch shares are mostly associated with vesting these fishing privileges to an individual, which would result in social benefits and social costs. An allocation would allow fishermen to harvest golden crab when it is most efficient, profitable, and safe. For fishermen who do not receive an allocation (or receive an allocation that is smaller than needed), the allocation of catch shares could have broad negative social impacts at the individual and community level. These fishermen could lose current and future access to the fishery.

Action 3. Establish criteria and structure of an appeals process

Alternative 1. No Action. Do not specify provisions for an appeals process.



Preferred Alternative 2. A percentage of the golden crab shares for the initial fishing year under the program will be set-aside to resolve appeals for a period of 90-days starting on the effective date of the final rule. The Regional Administrator (RA) will review, evaluate, and render final decisions on appeals. Hardship arguments will not be considered. The RA will determine the outcome of appeals based on NMFS' logbooks. If NMFS' logbooks are not available, the RA may use state landings records. Appellants must submit NMFS' logbooks or state landings records to support their appeal. If the amount of set-aside for appeals is exceeded, then the shares and annual pounds of all IFQ shareholders would be proportionately adjusted. After the appeals process has been terminated, any amount remaining from the set-aside will be distributed back to remaining shareholders according to the redistribution method selected under Action 2:

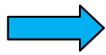
Sub-alternative 2a. Three percent of golden crab shares will be set aside for appeals.

Sub-alternative 2b, Five percent of golden crab shares will be set aside for appeals.

Sub-alternative 2c. Ten percent of golden crab shares will be set aside for appeals.

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Preferred Sub alternative 2d. Two percent of golden crab shares will be set aside for appeals.

What Are the Expected Effects?

Biological Impacts

Establishing an appeals process for a catch share program is an administrative action. Therefore, it is not anticipated to directly or indirectly affect the physical, biological, or ecological environments in a positive or negative manner.

Economic and Social Impacts

The sub-alternatives under **Preferred Alternative 2** serve to help ensure the golden crab ACL would not be exceeded the first year of the program in the event many appeals are settled in favor of fishermen. Setting aside a portion of the ACL for appeals purposes limits the likelihood of major share adjustments that would need to take place after initial allocation in an effort for fishermen to adjust their shares to current catches. Smaller reductions in allocation would be more acceptable to currently active fishermen than large reductions in share allocations during the first fishing season. Use of initial allocation methodologies that allocate shares to currently active fishermen would also be beneficial.

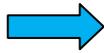
Preferred Sub-alternative 2d sets aside the smallest percent of the allocation for appeals. However, **Preferred Alternative 2** stipulates that if the amount of set aside is not sufficient for all the successful appeals, the allocation of all permits will be adjusted proportionately to meet the successful appeals.

The establishment of an appeals process, and the design of its structure, have mainly equity effects. While equity considerations are important, they have less significance in shaping the economic implications of a catch share system. Thus, neither the appeals process nor its structure is expected to have a noticeable effect on the benefits associated with implementation of the catch share program. This is particularly true when an appeals process would only marginally affect the initial distribution of shares among eligible participants. Economic changes would only be evident if the number of successful appeals were large compared to the number of qualifying persons or vessels.

An appeals process provides the potential participants an avenue to set the record straight with respect to transfers of licenses and the associated landings history for each license. Since most of the landings histories are currently on record through logbook submissions, the aggregate amount of contentious landings involved in the appeals is expected to be relatively low. The administrative and public cost of an appeals process for the proposed catch share cannot be estimated but may be expected to rise with the number of appeals.

Action 4. Establish criteria for transferability

Alternative 1. No Action. Do not establish criteria for transferability.



Preferred Alternative 2. Shares or annual pounds can only be transferred to valid or renewable golden crab permit holders. Participants cannot possess shares or allocation without a valid or renewable golden crab permit.

Alternative 3. Shares or annual pounds can only be transferred to valid and renewable golden crab permit holders during the first five years of the catch share program and all U.S. citizens and permanent resident aliens thereafter. Participants cannot possess shares or allocation without a valid or renewable golden crab permit.

IPT Recommendation:

The IPT recommended removing "or renewable" to be consistent with allocation transfer procedures that exist for other SE catch share programs. To be eligible to transfer shares and allocation in the red snapper and grouper-tilefish IFQ programs, participants must have a valid account. For the Gulf IFQ programs, an IFQ account is considered active if the fisherman's reef fish permit is valid and/or in the case of red snapper an IFQ account application has been completed. This allows SERO to maintain up to date permit and account records and prevents transfers when permits/accounts are not valid.

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What Are the Expected Effects?

Biological Impacts

Alternative 1 (No Action) could have the greatest biological benefit for the golden crab stock if it results in decreased landings of golden crab. Based on the ACL set by the Council's Scientific and Statistical Committee there does not appear to be a biological justification to decrease landings of golden crab. Since this action is administrative and does not establish immediate harvest objectives, it will not directly affect golden crab. **Alternatives 2 (Preferred)** and **3**, which would allow transferability of golden crab annual pounds, would not be expected to negatively impact the golden crab stock. The biological effects of **Alternatives 2 (Preferred)** and **3** would likely be very similar as landings would be constrained by the ACL for the golden crab stock. Additionally, **Alternative 3** could be contrary to the objectives of establishing a catch share program. Allowing any US citizen or permanent resident alien to purchase shares could result in less experienced participants in the fishery possibly resulting in greater negative biological impacts, particularly to habitat.

Economic and Social Impacts

Alternative 1 (No Action) is not consistent with implementation of a catch share program. **Preferred Alternative 2** requires the sale of shares only to another fisherman already permitted in the fishery. Such a requirement could make it more difficult for a fisherman to sell shares because the potential pool of buyers would be greatly reduced to only those few already in the fishery, thus making it more difficult for a fisherman wanting to sell shares. **Alternative 3** has the same requirements as **Preferred Alternative 2**, but only for five years. After that initial period, this alternative requires U.S. citizenship or permanent resident status for permit ownership. **Preferred Alternative 2** allows sale between permit holders, which decreases the risk of speculation because it adds an additional cost to the ability to transfer shares. That is, it increases the likelihood that only fishermen would transfer shares. If **Alternative 3** is selected, purchasers of allocation who do not fish it, could lose it later depending on the selected alternative in **Action 6**. The ability to transfer shares allows for increased efficiency for harvesters to land amounts of golden crab equivalent to their operational capacity, increasing profitability for the fleet as a whole.

Allowing transferability would provide an avenue for new entrants to enter the fishery and for current participants to expand operations. **Alternative 1 (No Action)** would be expected to result in reduced social benefits relative to the other alternatives. Because **Preferred Alternative 2** would limit the number of potential buyers, it would likely result in fewer social benefits than **Alternative 3**, although potential buyers who intend to harvest golden crab with the catch shares need to hold one of the 11 available golden crab permits, which limits the number of buyers regardless. However, allowing any eligible entity to purchase shares (**Alternative 3**) may result in some buyers purchasing shares without intent to harvest, and this would result in negative social impacts on active harvesters.

Action 5. Define quota share ownership caps

Alternative 1. No Action. Do not constrain the percentage of catch shares held by a person, including a corporation or other entity.

Alternative 2. No person, including a corporation or other entity, may individually or collectively hold catch shares in excess of the maximum share initially issued to any person at the beginning of the catch shares program.

Alternative 3. No person, including a corporation or other entity, may individually or collectively hold catch shares in excess of 25 percent of the total shares.

Alternative 4. No person, including a corporation or other entity, may individually or collectively hold catch shares in excess of 35 percent of the total shares.



Preferred Alternative 5. No person, including a corporation or other entity, may individually or collectively hold catch shares in excess of 49 percent of the total shares.

Note: For the purposes of considering the share cap, an individual's total catch share is

determined by adding the applicable catch shares held by the individual and the applicable catch shares equivalent to the corporate share the individual holds in a corporation. A corporation's

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total catch share is determined by adding the applicable catch shares held by the corporation and any other IFQ shares held by a corporation(s) owned by the original corporation prorated based on the level of ownership.

What Are the Expected Effects?

Biological Impacts

This action would not directly affect the biological environment.

Economic and Social Impacts

The Magnuson-Stevens Act requires the Council ensure that individual share holders do not acquire an excessive amount of shares. Establishment of a limit on the proportion of shares that one individual may own has important social implications that are tied to the economic effects, such as market control, and equity issues for a fishery. Excessive share holding is a major concern in regards to catch share programs and may change the distribution of effort and ownership if concentration occurs. In general, there must be a balance between preventing concentration and market control, and allowing fishermen to optimize harvest. **Alternative 1 (No Action)** would not establish a share cap and would likely have negative social impacts due to the potential for one individual to control a majority of the shares, which would affect distribution among other harvesters. **Alternative 2** could result in a large share cap (depending on how shares are allocated), which would allow for expansion but could cause concentration of the fishery. As the potential share cap increases in **Alternatives 3 – Preferred Alternative 5**, the possibility of concentration increases.

It should be noted that with the ACL for golden crab, it is likely that permit holders would receive annual shares in excess of their recent annual landings history. Therefore, it is possible that the share caps in **Alternatives 3 – Preferred Alternative 5** would not have negative social impacts that often result from limit on share ownership.

Action 6. Use it or lose it policy

Alternative 1. No Action. Do not specify a minimum landings requirement for retaining shares.

Alternative 2. Shares that remain inactive for 3 consecutive years will be revoked and redistributed proportionally among the remaining shareholders:

Sub-alternative 2a. Inactive is defined as landings less than 10% of a shareholder's annual pounds allocated in sum over a 3 year running average.

Sub-alternative 2b. Inactive is defined as landings and/or transfer of annual pounds less than 10% of a shareholder's annual pounds allocated in sum over a 3 year running average.

Alternative 3. Shares that remain inactive for 3 consecutive years will be revoked and redistributed proportionally among the remaining shareholders.

Sub-alternative 3a. Inactive is defined as landings less than 30% of a shareholder's annual pounds allocated in sum over a 3 year running average.

Sub-alternative 3b. Inactive is defined as landings and/or transfer of annual pounds less than 30% of a shareholder's annual pounds allocated in sum over a 3 year running average.

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 **Preferred Alternative 4.** Shares that remain inactive for 3 consecutive years will be revoked and redistributed proportionally among the remaining shareholders.

 **Preferred Sub-alternative 4a.** Inactive is defined as landings less than 20% of a shareholder's annual pounds allocated in sum over a 3 year running average.

Sub-alternative 4b. Inactive is defined as landings and/or transfer of annual pounds less than 20% of a shareholder's annual pounds allocated in sum over a 3 year running average.

IPT Recommended Wording Change:

For **Alternatives 3 & 4** the IPT recommends revising the wording as follows: “Shares that remain inactive for 3 consecutive years will be revoked and proportionally redistributed among the remaining shareholders (subject to share cap restrictions) based upon the amount of shares each holds immediately prior to the redistribution.” The IPT does not recommend changing the wording of the sub-alternatives.

What Are the Expected Effects?

Biological Impacts

Alternative 1 (No Action) would provide the greatest benefit to the biological environment because participants would not be required to fish or lease their shares in order to retain them. If fishermen choose not to fish, then habitat-gear interactions would be reduced. **Alternative 3** would result in the least benefits to the biological environment of any of the action alternatives because it would require participants to harvest on average 30 percent or more of their allotted shares over a three year period in order to retain them. The effects of **Alternatives 2 and 4 (Preferred)** would be intermediate to those of **Alternative 1 (No Action)** and **3**. The fewer shares shareholders are required to fish in order to retain shares, the greater the benefit to the marine environment.

Economic and Social Impacts

Economically under a “use it or lose it” provision, it would not make sense for fishermen to hold shares and not use them. At a minimum they would forgo the revenue associated with selling their shares. If they were efficient harvesters, the value of the annual pounds they would forgo would be even greater. Because traditional harvesters of golden crab would be inclined to harvest their annual pounds, the discussions associated with this provision frequently focus on non-consumptive users buying shares. However, there may be other reasons why fishermen who have shares may not be able to use them for an extended period of time. Potential reasons for fishermen not to use their shares might be vessel breakdowns, fishermen health issues.

Alternative 1 (No Action) would allow people to hold shares but not use them. **Alternatives 2, 3 and 4 (Preferred)** would force shareowners to fish a portion of their shares so they are not lost and proportionally distributed to other shareholders. If **Sub-alternative 2b, 3b, or 4b** are selected, shareholders could meet use or lose requirements by transferring their shares to another fisherman and never actually having to fish themselves. Therefore, the provision may not be totally effective in limiting shareholders to persons wanting to harvest the available resource. Redistributing inactive shares could benefit members of the fleet that remain active. However, a minimal number of shares are expected to be redistributed among the fleet because of this option as fishermen have an incentive to sell their shares before they are redistributed. All

sub alternatives under **Alternatives 2 – 4 (Preferred)** require fishermen to harvest on average a percent of their allocation or risk losing the difference between the required percent of their allocation and what they actually harvested on average. Over time, permit holders who don't fish their allocation under **Preferred Sub-Alternative 4a** would see their allocation reduce substantially. A permit with allocation assigned to it, but not used at all, would see its allocation reduced annually by 20% beginning in year 3. After seven years of no fishing, the permit would no longer have any allocation assigned to it.

Action 7. Cost recovery plan

Alternative 1. No Action. Do not implement a cost recovery plan.

➔ **Preferred Alternative 2.** Cost recovery fees would be calculated at time of sale at a registered dealer:

➔ **Preferred Sub-alternative 2a.** Cost recovery fees would be based on actual ex-vessel value of landings.

Sub-alternative 2b. Cost recovery fees would be based on standard ex-vessel value of landings, as calculated by NMFS.

➔ **Preferred Alternative 3.** Fee collection and submission shall be the responsibility of the:

Sub-alternative 3a. Shareholder.

➔ **Preferred Sub-alternative 3b.** Dealer.

➔ **Preferred Alternative 4.** Fees submitted to NMFS:

➔ **Preferred Sub-alternative 4a.** Quarterly

Sub-alternative 4b. Monthly

Sub-alternative 4c. Annually

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What Are the Expected Effects?

Biological Impacts

This is an administrative action required by the Magnuson-Stevens Act. The Magnuson-Stevens Act authorizes the Secretary of Commerce to collect up to 3 percent of the ex-vessel value of crab harvested for management, data collection, and enforcement. None of the cost recovery alternatives are expected to directly or indirectly affect the biological environment.

Economic and Social Impacts

Alternative 1 (No Action) is inconsistent with requirements of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). **Preferred Alternatives 2-4**, and associated sub-alternatives, would implement a cost recovery plan. This cost recovery plan also specifies the calculation of the ex-vessel value as basis for the fee (either as actual or standard ex-vessel value), the fee collection and submission responsibility (either by the shareholder or the dealer), and the timing of fee submission to NMFS (either quarterly, monthly, or annually).

In general, social benefits are associated with lower economic costs for fishermen, and **Alternative 1 (No Action)** would be expected to result in the greatest social benefits. Although cost recovery is required by the Magnuson-Stevens Act, **Sub-alternatives a and b** under **Preferred Alternatives 2-4** would provide flexibility in how fees are collected by defining how fees are calculated (**Preferred Alternative 2**), who collects and submits fees (**Preferred Alternative 3**), and timing of fees (**Preferred Alternative 4**). **Preferred Sub-alternative 2a** would use actual ex-vessel values paid to the fisherman for the landed crabs for calculating cost recovery fees. **Sub-alternative 2b** would use standard ex-vessel values for calculating cost recovery fees. For example, the ex-vessel price per pound paid to fishermen would be averaged across all fishery participants over a specific time period. That averaged price per pound would be used for calculating cost recovery fees for all pounds landed by all participants during that period. **Sub-alternative 2b** would be expected to have more social benefits than **Preferred Sub-alternative 2a** due to a standard and consistent fee schedule for fishermen. **Preferred Sub-alternative 3b** would place the burden of collection and submission on the dealers and **Sub-alternative 3a** would place burden on the fishermen. Lastly, **Preferred Sub-alternative 4a** would reduce the burden on fishermen and dealers in fee submission more than **Sub-alternative 4b**, but less than **Sub-alternative 4c**.

Action 8. Revise boat length limit rule

Alternative 1. No Action. To obtain a permit for the middle or southern zone via transfer, the documented length overall of the replacement vessel may not exceed the documented length overall, or aggregate documented lengths overall, of the replaced vessel(s) by more than 20 percent.

Alternative 2. Eliminate vessel length restrictions for obtaining a permit for the middle and southern zones via transfer.



Preferred Alternative 3. To obtain a permit for the middle or southern zone via transfer, the documented length overall of the replacement vessel may not exceed the documented length overall, or aggregate documented lengths overall, of the replaced vessel(s) by more than 35 percent.

Proposed Actions in Amendment 6/EA

1. Establish eligibility criteria for a golden crab catch share program
2. Initial apportionment of catch shares
3. Establish criteria and structure of an appeals process
4. Establish criteria for transferability
5. Define quota share ownership caps
6. Use it or lose it policy
7. Cost recovery plan
8. Revise boat length limit rule
9. Modify regulations on golden crab fishing zones
10. Modify the small vessel sub-zone restriction
11. Modify 'one vessel, one permit' policy for golden crab
12. Monitoring and enforcement
13. Define annual pounds ownership cap
14. Annual pounds overage
15. Approved landing sites

What Are the Expected Effects?

Biological Impacts

Taking action to modify the boat length limit rule is an administrative action, which is not expected to affect the program's potential to provide the environmental benefits.

Economic and Social Impacts

The current regulations regarding **Action 1 (No Action)** (boat length restrictions) were set in Amendment 3 to the Fishery Management Plan for the Golden Crab Fishery of the South Atlantic Region. In order “to obtain a permit for the middle or southern zone via transfer, the documented length overall of the replacement vessel may not exceed the documented length overall, or aggregate documented lengths overall, of the replaced vessel(s) by more than 20 percent”. **Alternative 2** proposes to eliminate the vessel size rule.

Alternatives 2 and 3 (Preferred) would allow fishermen to obtain larger vessels to fish in the middle and southern zones. **Preferred Alternative 3** caps the rate at which a vessel can be replaced by a larger vessel in the fishery, but ultimately, there is no upper bound on the size of vessels. Eliminating size limit rules in the middle and southern zones could potentially allow more golden crab permit holders to fish closer to their homeport and therefore reduce trip costs.

The social benefits of this action are tied to the economic benefits of allowing fishermen to expand operation size by increasing boat size. As the golden crab fishery continues to expand, multi-day trips and larger catches per trip, along with new gear on board to keep crabs alive, may require a larger vessel. Additionally, multi-day trips on larger vessels would be more efficient. Overall, social benefits would be greater with **Alternative 2**, which would allow fishermen to move permits to larger vessels if needed, than for **Alternative 1 (No Action)**.

Preferred Alternative 3 is similar to **Alternative 1 (No Action)**, except that it allows for a golden crab permit to be transferred to a vessel that is up to 35% larger rather than only 20% larger. This provision allows for permit holders who do not currently have vessels large enough to accommodate refrigerated sea water systems to transfer their permit to a larger vessel that does have such a system. Vessels with refrigerated sea water systems are able to hold their catch with lower risk of product spoilage, thus increasing potential trip profitability.

Action 9. Modify regulations on golden crab fishing zones

Alternative 1. No Action. A vessel with a permit to fish for golden crab in the northern zone or the middle zone may fish only in that zone. Upon request from an owner of a permitted vessel, the NMFS Regional Administrator will change the zone specified on a permit from the middle or southern zone to the northern zone. A vessel may possess golden crab only in a zone in which it is authorized to fish, except that other zones may be transited if the vessel notifies NMFS Office for Law Enforcement in advance and does not fish in a zone in which it is not authorized to fish.



Preferred Alternative 2. Participants can use annual pounds in any zone for which they possess a permit.

Alternative 3. A vessel with a permit to fish golden crab can use annual pounds in any of the three golden crab fishing zones.

Proposed Actions in Amendment 6/EA

1. Establish eligibility criteria for a golden crab catch share program
2. Initial apportionment of catch shares
3. Establish criteria and structure of an appeals process
4. Establish criteria for transferability
5. Define quota share ownership caps
6. Use it or lose it policy
7. Cost recovery plan
8. Revise boat length limit rule
9. **Modify regulations on golden crab fishing zones**
10. Modify the small vessel sub-zone restriction
11. Modify 'one vessel, one permit' policy for golden crab
12. Monitoring and enforcement
13. Define annual pounds ownership cap
14. Annual pounds overage
15. Approved landing sites

What Are the Expected Effects?

Biological Impacts

Taking action to modify where vessels can harvest annual pounds is an administrative action, which is not expected to affect the program's potential to provide the environmental benefits. However, there is some concern that if **Preferred Alternative 2** or **Alternative 3** are selected as preferred, most of the fishing effort would occur in the Middle and Southern Zones and increase pressure on the golden crab stock in those areas.

Economic and Social Impacts

The social benefits of this action are tied to the economic benefits of allowing fishermen to maximize efficiency on each trip and take advantage of multiple zones on one trip. Social benefits would be expected to be greater under **Preferred Alternative 2** and **Alternative 3** than under **Alternative 1 (No Action)**. In regards to **Preferred Alternative 2**, fishermen would be able to fish in any zone they are permitted to fish in as long as they have golden crab annual pounds and a permit to fish in that zone.

Action 10. Modify the small vessel sub-zone restriction

Alternative 1. No Action. Do not modify the small vessel sub-zone restriction. The small vessel sub-zone was originally established to protect against very large vessels fishing in the sub-zone. In the small vessel sub-zone with the southern zone, no vessel with a documented length overall greater than 65 ft (19.8m) may fish for golden crab. The small vessel sub-zone is bounded on the north by 24°15' N. lat., on the south by 24°07' N. lat., on the east by 81°22' W. long., and on the west by 81°56' W. long.



Preferred Alternative 2.

Eliminate the small vessel sub-zone within the southern zone that was originally established to protect against very large vessels fishing in the subzone

*Proposed Actions in
Amendment 6/EA*

1. Establish eligibility criteria for a golden crab catch share program
2. Initial apportionment of catch shares
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5. Define quota share ownership caps
6. Use it or lose it policy
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8. Revise boat length limit rule
9. Modify regulations on golden crab fishing zones
10. Modify the small vessel sub-zone restriction
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14. Annual pounds overage
15. Approved landing sites

What Are the Expected Effects?

Biological Impacts

Removing the small vessel sub-zone as proposed in **Preferred Alternative 2** would only have a biological effect if larger vessels moved in and started extracting more crabs than are already being removed from this sub-zone. This could result in localized depletion; however, catch share program participants will be constrained by the amount of annual pounds they hold.

Economic and Social Impacts

The sub-zone was originally established to help smaller vessels have a separate fishing area where they could fish more safely and not have to compete with some of the larger vessels. None of the smaller vessels that the sub-zone was designed to protect are currently participating in the fishery.

Whether or not a larger vessel would move into the sub-zone as a result of **Preferred Alternative 2** would largely be dependent on stock availability and economic factors. Larger vessels would fish in the sub-zone as long as their rate of return exceeds what they would expect from fishing in other zones. Localized depletion of golden crabs is not likely under **Preferred Alternative 2** because such a reduction in stock could cause trips to become costlier based on rate of return. Fishermen would move to areas where they can maximize their rate of return based on effort and trip costs. Additionally, the catch share program planned for this fishery would keep it from having an expanded number of participants. Under **Preferred Alternative 2** which would eliminate the small vessel zone, social benefits would be expected due to harvesters having the opportunity to fish in an area that is no longer used by small vessels.

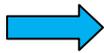
Action 11. Modify ‘one vessel, one permit’ policy for golden crab

Alternative 1. No Action. Do not modify “one vessel, one permit” policy for golden crab.



Preferred Alternative 2. Allow multiple permits to be issued to one vessel so that any zones for which the vessel has a permit can be fished in one trip.

Sub-alternative 2a. Two permits per vessel.



Preferred Sub-alternative 2b. Three permits per vessel.

Proposed Actions in Amendment 6/EA

1. Establish eligibility criteria for a golden crab catch share program
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5. Define quota share ownership caps
6. Use it or lose it policy
7. Cost recovery plan
8. Revise boat length limit rule
9. Modify regulations on golden crab fishing zones
10. Modify the small vessel sub-zone restriction
11. Modify ‘one vessel, one permit’ policy for golden crab
12. Monitoring and enforcement
13. Define annual pounds ownership cap
14. Annual pounds overage
15. Approved landing sites

What Are the Expected Effects?

Biological Impacts

This action is primarily administrative and so would not have any direct effects on the biological environment.

Economic and Social Impacts

Under the current regulations, fishermen are allowed only to fish in one zone per trip and must reassign permits after returning to port in order to fish other zones for which they have a permit (**Alternative 1, No Action**). **Preferred Alternative 2** would allow fishermen to have permits for multiple zones on the vessel at one time and allow them to fish between permitted zones on any given fishing trip. Depending on the preferred alternatives selected by the Council for **Actions 8** and **9**, this action may or may not be relevant.

From an economic perspective, **Preferred Alternative 2** and **Preferred Sub-alternative 2b** would provide the most flexibility for fishermen and would allow them to better balance their trip costs against anticipated harvest levels. Fishermen would incur additional costs associated with the purchase of permits for zones they are not currently permitted to fish, assuming they wish to fish in other zones. However, the additional cost might well be offset by the increased flexibility they have in deciding where they could fish and in potential reduction of trip costs if they choose to fish closer to their home port.

Action 12. Monitoring and enforcement

Alternative 1. No Action. Do not require additional monitoring and enforcement.



Preferred Alternative 2. Require all fishing vessels engaged in the golden crab catch share program to be equipped with VMS. The purchase, installation, and maintenance of VMS equipment must conform to the protocol established by NMFS in the *Federal Register*:

Sub-alternative 2a. The purchase, installation, and maintenance of the VMS equipment and communications costs will be paid for or arranged by the shareholder.

Sub-alternative 2b. The purchase, installation, and maintenance of the VMS equipment and communications costs will be paid for or arranged by NMFS.



Sub-alternative 2c. The purchase of VMS equipment will be reimbursed by the National OLE VMS reimbursement account if funding is available. Installation, maintenance, and communication costs will be paid for or arranged by the shareholder.

Proposed Actions in Amendment 6/EA

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7. Cost recovery plan
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9. Modify regulations on golden crab fishing zones
10. Modify the small vessel sub-zone restriction
11. Modify 'one vessel, one permit' policy for golden crab
12. **Monitoring and enforcement**
13. Define annual pounds ownership cap
14. Annual pounds overage
15. Approved landing sites

What Are the Expected Effects?

Biological Impacts

Alternative 1 (No Action) would not require vessel monitoring system (VMS) on golden crab vessels participating in the catch share program. VMS is useful for determining when a vessel leaves and returns to port and where they are fishing in relation to closed areas and habitat areas of particular concern. However, VMS is not a useful enforcement tool for determining where golden crab gear is fished on the seabed. VMS has been traditionally used in catch share programs and is essential to their operation (**Preferred Alternative 2**).

Economic and Social Impacts

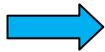
Sub-alternative 2a would have the greatest economic impact on fishermen as they would be required to bear the entire burden of the cost of establishing VMS on their vessels and pay for ongoing maintenance and data transmission costs. **Sub-alternative 2b** would have the least economic impact on fishermen as the entire costs of VMS systems would be paid for by NMFS. **Preferred Sub-alternative 2c** would split the costs between NMFS and the fishermen with NMFS paying for the equipment if funds are available, and fishermen paying for installation, maintenance, and communications cost. If no funds are available in the National OLE VMS reimbursement account, **Preferred Sub-alternative 2c** would have the same economic impact as **Sub-alternative 2a**.

There are social benefits associated with improved monitoring programs. Overall, the proposed measures may impose some additional burdens on fishermen, administrators, and law enforcement, but negative impacts would be outweighed by the social benefits of improved monitoring through electronic reporting, VMS use, and hail-in requirements. The proposed measures in this action would improve data for the golden crab fishery, and this would generate broad long-term social benefits.

Even if the Council chooses **Alternative 1 (No Action)** as its preferred alternative for this action, OLE can implement certain procedures as required in managing a catch share program. For example, a hail-in requirement prior to landing with location and time or other information, or the potential to phase-in additional monitoring measures as necessary based on the economic capacity of the fishery.

Action 13. Define annual pounds ownership caps

Alternative 1. No Action. Do not identify annual pound ownership caps



Preferred Alternative 2. Set the annual pounds cap equal to the corresponding share cap as defined in the “Define quota share ownership caps” action (**Action 5**) times the annual quota. For any single fishing year, no person shall possess annual pounds in an amount that exceeds the annual pounds cap. Anyone meeting the annual pounds ownership cap would not be able to purchase additional annual pounds. Anyone receiving annual pounds that were less than the annual pounds ownership cap could purchase additional annual pounds up to the amount of the annual pounds ownership cap.

Alternative 3. Set the annual pounds cap equal to:

Sub-alternative 3a. The share cap specified in Action 5 plus 1% times the annual quota.

Sub-alternative 3b. The share cap specified in Action 5 plus 5% times the annual quota.

Sub-alternative 3c. The share cap specified in Action 5 plus 10% times the annual quota.

Proposed Actions in Amendment 6/EA

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5. Define quota share ownership caps
6. Use it or lose it policy
7. Cost recovery plan
8. Revise boat length limit rule
9. Modify regulations on golden crab fishing zones
10. Modify the small vessel sub-zone restriction
11. Modify ‘one vessel, one permit’ policy for golden crab
12. Monitoring and enforcement
13. Define annual pounds ownership cap
14. Annual pounds overage
15. Approved landing sites

What Are the Expected Effects?

Biological Impacts

There are no expected biological impacts from this action.

Economic and Social Impacts

Alternative 1 would not place any cap on ownership of annual pounds. **Preferred Alternative 2** would set an annual pounds cap equal to the share cap. **Alternative 3** would add additional percent allocation above the share cap of up to 1 percent, 5 percent, or 10 percent.

It is possible that some entities would enter into long-term arrangements with other entities to buy up their annual pounds each year, and this would somehow circumvent the share cap provision. If such arrangements result in highly restricted flow of shares for efficiency purposes, then some form of cap may be necessitated from an economic efficiency standpoint. However, it would seem that the cap imposed under **Alternative 2 (Preferred)** or **3** would be too limiting for some entities to make within season adjustments of their fishing operations. A mitigating factor with respect to **Preferred Alternative 2** is the provision for higher percent caps. But unless a relatively high cap is chosen for share ownership, **Preferred Alternative 2** would be just as restrictive as **Alternative 3** with respect to allowing short-term adjustments in fishing operations.

Action 14. Annual pounds overage

Alternative 1. No Action. Do not allow fishermen to exceed their allotted annual pounds.

Alternative 2. A person on board a vessel with the shareholder's only remaining golden crab annual pounds may exceed, by up to 10%, the shareholder's annual pounds remaining on the last fishing trip of the year. Shareholders who incur an overage will be required to pay back the annual pounds overage in the subsequent fishing year.



Preferred Alternative 3. A person on board a vessel with the shareholder's only remaining golden crab annual pounds may exceed, by up to 20%, the shareholder's annual pounds remaining on the last fishing trip of the year. Shareholders who incur an overage will be required to pay back the annual pounds overage in the subsequent fishing year.

Proposed Actions in Amendment 6/EA

1. Establish eligibility criteria for a golden crab catch share program
2. Initial apportionment of catch shares
3. Establish criteria and structure of an appeals process
4. Establish criteria for transferability
5. Define quota share ownership caps
6. Use it or lose it policy
7. Cost recovery plan
8. Revise boat length limit rule
9. Modify regulations on golden crab fishing zones
10. Modify the small vessel sub-zone restriction
11. Modify 'one vessel, one permit' policy for golden crab
12. Monitoring and enforcement
13. Define annual pounds ownership cap
14. Annual pounds overage
15. Approved landing sites

What Are the Expected Effects?

Biological Impacts

The annual pounds overage action would allow fishermen to exceed their annual pounds during the last trip of the fishing year but repay their overage in the following fishing year. This action would require the overage to be “paid back” the following fishing year by reducing the ACL by the amount exceeded. This action could have a biological impact as the overage could lead to less overall productivity of the stock.

Economic and Social Impacts

One purpose of this action is to provide potential economic relief for fishermen. **Alternative 1 (No Action)** would require fishermen to stop fishing at or below their quota share to ensure it is not exceeded. However, **Alternatives 2 and 3 (Preferred)** would allow a fisherman to exceed by either 10% or 20% the shareholder’s remaining annual pounds on the last trip of the season. Any overage would come off the next fishing year’s annual pounds. Allowing the flexibility would improve margins compared to trip costs on the last trip of the year. The economic downside of selecting **Alternative 2 or 3 (Preferred)** would be that any overage would reduce the following year’s annual pounds; therefore, potential earnings from that year might be slightly reduced, as well.

The social benefits of allowing an overage for the last trip of the season are associated with the economic benefits of this type of provision. **Alternative 1** would likely not produce any social benefits by not allowing overage, but could negatively impact fishermen by causing early termination of a trip. **Alternatives 2 and 3 (Preferred)** would likely be beneficial to the fishermen and allow them to maximize efficiency on the last trip of the year. **Preferred Alternative 3** provides fishermen with the most flexibility.

Action 15. Approved landing sites

Alternative 1. No Action. Do not establish approved landing sites for the golden crab catch share program.



Preferred Alternative 2. Establish approved landing sites for the golden crab catch share program. All participants must land at an approved landing site to participate in the program:



Preferred Sub-alternative 2a. Approved landing sites will be selected by fishermen but must be approved by NMFS Office of Law Enforcement (OLE) in consultation with the appropriate state law enforcement agency prior to use.

Sub-alternative 2b. Approved landing sites will be selected by the Council and NMFS in consultation with the appropriate state law enforcement agency, based on industry recommendations and resource availability.

Proposed Actions in Amendment 6/EA

1. Establish eligibility criteria for a golden crab catch share program
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5. Define quota share ownership caps
6. Use it or lose it policy
7. Cost recovery plan
8. Revise boat length limit rule
9. Modify regulations on golden crab fishing zones
10. Modify the small vessel sub-zone restriction
11. Modify 'one vessel, one permit' policy for golden crab
12. Monitoring and enforcement
13. Define annual pounds ownership cap
14. Annual pounds overage
15. Approved landing sites

What Are the Expected Effects?

Biological Impacts

Establishing approved landing sites is an administrative action. Therefore, designation of approved landings sites is not expected to directly or indirectly affect the physical, biological, or ecological environments in a positive or negative manner.

Economic and Social Impacts

Alternative 1 (No Action) would not require certification or use of approved landing sites, and thus this alternative would not result in any additional cost. If many landing sites are either not readily identified or inaccessible to law enforcement officers, the likelihood of not properly monitoring the catch share system would increase. This could eventually be disruptive to the proper functioning of the system, which in turn could reduce the economic benefits from the program.

Preferred Alternative 2 and associated sub-alternatives would establish landing sites for the commercial golden crab fishery. The cost for certifying a landing site is reportedly minimal for both the fishing participants and fishery managers, including enforcement personnel. Whatever benefits gained from properly enforcing landing/offloading rules would enhance the benefits from the catch share system. One possible negative feature of this option is that fishermen may have to incur more travel and other costs if they are compelled to land their fish in locations far removed from their usual landing sites. Naturally, this would happen only if their usual landing sites could not be approved and this would be minimized under **Preferred Sub-alternative 2a**.

In general, measures that contribute to improved monitoring and enforcement are expected to produce broad, long-term social benefits, and potentially some short-term social impacts associated with any economic costs from the proposed requirements. It is likely that designated landings sites would contribute to improved monitoring and data collection, and **Alternative 1 (No Action)** would likely not produce any of these long-term social benefits. **Preferred Alternative 2** and **Preferred Sub-alternative 2a** and **Sub-alternative 2b** would implement landing site designations and produce social benefits through improved monitoring. The flexibility in **Preferred Sub-alternative 2a** would have fewer impacts on fishermen by eliminating the possibility that harvesters would have to change landings sites under **Sub-alternative 2b**.