## Appendix 1

MASSACHUSETTS MARINE FISHERIES INSTITUTE

Gulf of Maine Research Institute

# Alternative Groundfish Management Structures: the Points System and Area Management

*A workshop hosted by the Gulf of Maine Research Institute and the Massachusetts Marine Fisheries Institute*

AGENDA

***Wednesday, April 4***

10:00 AM Welcome, introductions and ground rules (*Singer and Demarest*)

10:30 AM Update on Amendment 16 process, timelines and requirements (*Cunningham*)

10:45 AM Overview of FMP requirements: What are we measuring against? (*Nies*)

11:30 AM Broad Description of the Points System: What is it trying to accomplish?

12:00 PM Broad Description of Area Management: What is it trying to accomplish?

12:30 PM Lunch

1:30 PM Topics common to both proposals:

- Monitoring of catch and landings
- Incorporation of discards and at-sea sampling data
- Reliance on existing management measures
- Recreational fishery considerations
- Integration with other fisheries (*e.g. monkfish, skates*)
- Enforcement measures and concerns

5:00 PM Break for the Day

6:00 PM Dinner

***Thursday, April 5***

8:30 AM Topics specific to the Points System:

- Allocation of points
- Points carryover
- Voluntary Contribution Program
- BPV setting and adjustment
- Vessel upgrade restrictions
- Points transferability (*e.g. leasing, permanent and associated timelines*)
- Other topics as appropriate

11:30 PM Lunch

12:30 PM Topics specific to Area Management:

- Defining local areas
- Allocating TACs, determining TAC set-asides
- Permeable boundaries and annual declarations
- Common vs. area-specific regulations
- Establishing and administering Area Advisory Panels
- Transitional management measures
- Other topics as appropriate

3:30 PM Meeting Summary and Next Steps

4:00 PM Adjourn

## Appendix 2



# Alternative Groundfish Management Structures: the Points System and Area Management

*A workshop hosted by the Gulf of Maine Research Institute and the Massachusetts Marine Fisheries Institute*

LIST OF PARTICIPANTS

| | |
|---|---|
| **Carl Bouchard**, *Fisherman* | Groundfish Advisor |
| **Doug Christel**, *NMFS NERO, Sustainable Fisheries* | PDT Member |
| **Mike Crocker**, *Northwest Atlantic Marine Alliance* | Area Management Coalition |
| **Rip Cunningham**, *Salt Water Sportsman Magazine* | NEFMC Groundfish Ctte Chair |
| **Chad Demarest**, *Massachusetts Marine Fisheries Institute* | *Workshop Co-facilitator* |
| **Aaron Dority**, *Penobscot East Resource Center* | Area Management Coalition |
| **Roger Fleming**, *Conservation Law Foundation* | Area Management Coalition |
| **Randy Gauron,** *Fisherman* | Groundfish Advisor |
| **Vito Giacalone**, *Northeast Seafood Coalition* | Points System |
| **David Goethel**, *Fisherman (tentative)* | NEFMC Member |
| **Dan Holland**, *Gulf of Maine Research Institute* | PDT Member |
| **Ted Hoskins**, *Downeast Initiative* | Area Management Coalition |
| **Kohl Kanwit**, *Maine Dept. of Marine Resources* | PDT Member |
| **Glen Libby**, Midcoast *Fisherman's Association* | Area Management Coalition |
| **Dave Marciano**, *Fisherman* | Groundfish Advisor |
| **Meredith Mendelson**, Gulf *of Maine Research Institute* | *Workshop Coordinator* |
| **Frank Mirarchi**, *Fisherman* | Points System |
| **Susan Murphy**, *NMFS NERO, Sustainable Fisheries* | NEFMC Member (designate) |
| **Tom Nies**, *NEFMC Council Staff* | PDT Chair |
| **Jackie Odell**, *Northeast Seafood Coalition* | Points System |
| **Paul Parker**, *Cape Cod Comm. Hook Fishermen's Assoc.* | PDT Member |
| **Craig Pendleton**, *Northwest Atlantic Marine Alliance* | Area Management Coalition |

| | |
|---|---|
| **Dave Preble**, *Fisherman and author* | NEFMC Member |
| **Paul Rago**, *NMFS Northeast Fisheries Science Center* | PDT Member (designate) |
| **Phil Ruhle**, *Fisherman* | NEFMC Member |
| **Kate Semmens**, *University of Delaware* | Points System |
| **Laura Singer**, *Gulf of Maine Research Institute* | *Workshop Co-facilitator* |
| **Geoff Smith**, *The Nature Conservancy* | Groundfish Advisor |
| **Rob Snyder,** *Island Institute* | Area Management Coalition |
| **Bob Steneck**, *University of Maine* | Area Management Coalition |
| **Terry Stockwell**, *Maine Dept. of Marine Resources* | NEFMC Member |
| **Eric Thunberg**, *NMFS Northeast Fisheries Science Center* | PDT Member |
| **Tom Warren**, *NMFS NERO, Sustainable Fisheries* | PDT Member |
| **Jim Weinberg**, *NMFS Northeast Fisheries Science Center* | NEFSC Liaison to NEFMC |
| **John Williamson***, The Ocean Conservancy* | Groundfish Advisor |

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**MEMORANDUM**

**DATE:** January 17, 2007

**TO:** Groundfish Oversight Committee

**FROM:** Groundfish Plan Development Team

**SUBJECT:** **PDT Conference Call January 11, 2007 - Amendment 16 Scoping Comments**

1. The Groundfish Plan Development Team (PDT) held a conference call on January 11, 2007. The PDT reviewed comments received during the scoping period for Amendment 16, focusing on proposals for management systems. Participants in the call included Tom Nies and Chad Demarest (NEFMC), Tom Warren and Doug Christel (NMFS NERO), Kohl Kanwit (Maine DMR), Steve Correia (Massachusetts DMF), Eric Thunberg and Paul Nitchske (NMFS NEFSC), Paul Parker (Groundfish Advisory Panel Chair), and Jim O'Grady (interested party representative).

2. The PDT reviewed each major proposal and compared its elements to the broad criteria listed below. These reflect a combination of the principles published in the scoping document as well as practical issues identified by the PDT. The criteria are:

- What is the primary fishing mortality control?
- Is the proposal an input our output based system?
- Is the method of allocation clearly stated for all permit holders, area, gear, etc.?
- Does the proposal include a mechanism for accountability?
- Is the proposal narrow in focus?
- Can the proposal be analyzed?
- What issues will need to be addressed during development? This is a preliminary, not comprehensive, evaluation.
- Are there major hurdles that need to be resolved early in the process? This criterion attempts to identify problems that *may* prove insurmountable for the

proposal as submitted. In most cases we tried to identify *possible* legal or policy issues that are beyond the expertise of the PDT. NOAA GC was not available to participate in the call to address these questions.

3. Evaluation of the proposals is summarized in the pages attached. During the review, the PDT also identified overarching issues that are summarized in this memo. The PDT briefly discussed several suggestions that were not proposed revisions to the management system. A few comments on those ideas are included in this memo.

**General Comments or Concerns**

4. A common theme in most, if not all, of the proposals is that improvements in data collection are necessary. Most proposals include recognition that catch data (both landings and discards) must be reported and distributed in a timely manner for the proposals to work as designed. Some of the proposals identify specific tools for improving fishery dependent data collection, such as daily VMS reporting. Given the significant time lags between design and implementation of these systems, the Committee may want to recommend the Council and NMFS begin working immediately to create an improved data collection system that is ready by the time Amendment 16 is implemented. Amendment 13 already authorized daily dealer electronic reports and electronic vessel reports at a finer scale than statistical area. Development of these reporting programs need not (and should not) wait for Amendment 16, though that action may need to require more frequent vessel reports.

5. Closely related to the previous paragraph is that many of the proposals may place increased demands on the observer program. It can be argued that some proposals increase the incentive to discard. Several of the proposals may increase the need to know with certainty the total catch (landings and discards) of individual vessels. As a result, there may be a need for higher levels of observer coverage to meet discard estimation standards either at a higher level of precision or at a finer scale than currently under consideration for the Standardized Bycatch Reporting Methodology (SBRM). At the same time, it is possible that the proposals may make vessels more efficient and result in reduced fishing time, which could reduce the number of required observer days. These impacts on the observer program should be carefully considered and funding options should be explored well in advance of implementation.

6. Differences between the alternatives will complicate analyses. This is particularly true for economic and social impacts. Over the years, NEFSC development of the Closed Area Model provided an integrated analytic tool that estimated biological impacts and provided extensive information on likely economic impacts for the effort control measures used by the Council. That model is not compatible with several of the proposals. The PDT will need to develop different analytic tools that may have to be specific to each proposal. This has several impacts. From a practical standpoint, it may take a lot of time to develop and verify these tools. Given the compressed time available for this amendment, this must be considered as the Committee and the Council choose the alternatives to be developed; they should be identified as early as possible. Second, the Closed Area Model outputs allow for extensive exploration of the distributive impacts of management measures. The PDT cannot guarantee that a similar level of detail will be provided by models that are not yet developed. The Committee and the Council may receive

information that is less quantitative than that provided in the past. Finally, it is possible that the tools will complicate comparing results across alternatives. They may have different assumptions and limitations that make it difficult to directly compare results between alternatives.

7. Because updated stock assessments will not be completed prior to public hearings, the Council suggested the Amendment 16 Draft Supplemental Environmental Impact Statement (DSEIS) illustrate the impacts of alternatives under "high, medium, and low" mortality reduction scenarios. This is problematic. Not only does this triple the analytic work for the PDT, it may prove difficult to identify these scenarios in a way that provides meaningful information to the public and the Council. Some PDT members are skeptical that this approach is feasible. If it is, the Committee and the Council should recognize that it will increase the work needed to complete the DSEIS and consider that as alternatives are developed.

8. Several proposals proposed as alternatives to the current effort control system suggest removing year-round and/or seasonal closures, trip limits, etc. The PDT notes the Council should carefully consider such actions as there may be reasons to retain some of those measures even if no longer strictly required to control fishing mortality.

**Miscellaneous Comments or Concerns**

9. Comments were received that did not constitute full-scale management proposals. The PDT only briefly discussed a few of these issues because of a lack of time. The PDT's comments on these issues are:

- Sectors: Notice was received from two organizations that they may submit applications to form sectors – presumably these would be adopted in Amendment 16 as it is the next groundfish action. Several suggestions were also received for improving the management of the sector program. It is not clear if these suggestions should be part of Amendment 16 or should be considered as part of the Omnibus Sector Amendment. The Committee and PDT will need guidance from the Council on how these suggestions will be considered.
- Allow a vessel to possess a limited access scallop and limited access multispecies permit at the same time: With the exception of a combination permit, this practice is currently prohibited. The PDT commented during the development of FW 42 that this change would allow for better use of capital/vessels, but the Council may want to consider the social and economic impacts in an amendment rather than a framework.
- Allow the closed area access program scallop yellowtail flounder TAC to be allocated to scallop sectors if they are adopted by the scallop plan in the future: Discussions with NMFS staff indicate that this provision would not require a groundfish action but could be adopted under a scallop action. (Note that NMFS may have concerns over administration of such a provision).
- Develop a groundfish research set-aside program: The PDT suggests that any such program should cover all groundfish stocks.

- Modify the General Category Scallop Exempted Fishery east of Cape Cod to allow fishing year round: This fishery is prohibited during times of peak yellowtail flounder spawning. Council staff is confirming the rationale for this limitation that was adopted by NMFS. This suggestion may be outside the range of scoping issues as published in the FR notice. If included in the amendment, any change would not take place until May 2009, which may be later than desired by the scallop industry. Since the Regional Administrator has considerable authority over exempted fisheries, it may also prove possible to have this change adopted by NMFS without a Council action.

- Additional habitat measures: The current Omnibus EFH Amendment (Phase II) will consider additional measures to minimize the impacts of fishing on EFH. It does not make sense to duplicate that effort. The PDT does not believe the suggestion that there should be "general" habitat measures and "rebuilding" habitat measures is consistent with current guidance: we adopt measures to "… minimize, to the extent practicable, the adverse impacts on EFH that are more than minimal and less than temporary in nature." There is no distinction made that those measures should be different once rebuilding is completed or should be more stringent if rebuilding is ongoing. If wolffish and cusk are incorporated into the fishery management unit, EFH will need to be defined for those species. While it would be preferable to include those definitions in the Omnibus EFH Amendment (Phase I), this may not be possible due to timing and the EFH definitions may need to be added to Amendment 16.

- Allocate TACs or points to the scallop fishery: The PDT notes that if a different management system is adopted provisions will need to be made for all other fisheries that catch groundfish in any quantity – such as the scallop fishery. There may also be opportunities to improve the management of this bycatch, such as be allowing these fisheries to acquire additional allowances.

- Remove chronic violators from the fishery: Beyond Council control

- Return to mother ship operations: Difficult to implement through Council actions.

- Government supervision of offloads: This may fall into the improvement sin catch monitoring noted in several proposals and could take several forms (such as government-certified weighmasters).

- Promote commercial mariculture: Beyond Council authority.

- Consider impacts of global warming on management of fisheries: This might be a more appropriate for the scientific advice provided to the Council.

**"Revised Days-at-Sea"**

| Constraining management measure | Input or output based? | Scoping Guidance: *Method of allocation stated; distro of TAC for all permit holders?* | Scoping Guidance: *Mechanism for accountability?* | Scoping Guidance: *Narrow in focus or absent detail?* | *Can it be analyzed?* |
|---|---|---|---|---|---|
| Days-at-Sea | Input | Yes, No | Yes—DAS/VMS | Broad, with some details still to be worked out | Yes, primarily with existing tools |

***Major hurdles:*** None

***Comments or concerns:***

- *Count DAS at 24 hours* – none
- *Reduce size of differential area* – none
- *Eliminate conservation tax for DAS transfer program* – May increase effective fishing effort, modeling outcomes may be difficult
- *Eliminate/reduce rolling closures* – Recent catch rate data not available for time/area closure areas
- *Allow scallopers to acquire groundfish permits* – May involve equity issues
- *One commenter suggested using DAS coupled with an ITQ for a few individual stocks where mortality objectives are exceeded* - Program provides no detail for mechanizing allocation, monitoring or enforcement of ITQ. Furthermore, proposal is silent on how to restrict catch for stocks that need mortality reductions but do not exceed previous year's TAC.

**"Differential Days-at-Sea"**

*Including the Anderson and Wong proposals*

| Constraining management measure | Input or output based? | Scoping Guidance: *Method of allocation stated; distro of TAC for all permit holders?* | Scoping Guidance: *Mechanism for accountability?* | Scoping Guidance: *Narrow in focus or absent detail?* | *Can it be analyzed?* |
|---|---|---|---|---|---|
| Days-at-Sea | Input | Yes, No | Yes—DAS/VMS | Broad, with sufficient detail included in proposal | Yes, but will require new tools |

***Major hurdles:*** Potentially high administrative burden

***Comments or concerns:***

- Timing issues relative to returning DAS
- Calculation of differential rate conditioned on several factors (species composition, trip length, trip limit)
- May increase incentive to discard
- Discards need to be accounted for
- Observer monitoring required
- May increase incentive to misreport landings of stocks of concern

## "Hard TACs"

| Constraining management measure | Input or output based? | Scoping Guidance: *Method of allocation stated; distro of TAC for all permit holders?* | Scoping Guidance: *Mechanism for accountability?* | Scoping Guidance: *Narrow in focus or absent detail?* | *Can it be analyzed?* |
|---|---|---|---|---|---|
| Hard TAC | Output | Yes, yes | Yes—TACs distributed by gear, sector, area and time | Adequate detail to make progress | Yes, with difficulty |

***Major hurdles:***

- Ability to determine mortality objectives for each gear, area, sector, and time period is in question.
- Administrative costs associated with monitoring TACs divided into time, gear, vessel size categories are likely to be enormous.

***Comments or concerns:***

- Dividing TAC into smaller time periods doesn't eliminate derbies, just makes them smaller and harder to monitor
- Mandated level of observer coverage not yet defined to achieve precision on such small scales for undefined areas and time periods – would likely require reanalyzing SBRM work
- Unclear what is meant by "mortality caps." Fishing mortality (F) caps aren't realistic for a real-time monitoring because F is calculated for calendar year basis; we can only monitor proxies of F through target TACs, a system that is not necessarily accurate.
- Mortality is not currently defined for each sector or for vessels in other fisheries; rather, it is calculated on each stock as a whole over a calendar year.
- Bycatch caps, as well as directed caps on an area and time basis, would be difficult to monitor and project for closures. The tasks involved in administration, monitoring and enforcement for these would likely be too severe given current staffing and budgetary conditions.
- Mortality caps on threatened and endangered species would be difficult to monitor without significantly greater observer coverage.
- So many opportunities to close fishery may hinder ability to achieve OY.
- Program fails to justify why current closures are no longer necessary.
- Determining bycatch TAC set-asides based on historical catch by other fisheries is difficult and potentially inaccurate given current data.
- Determining appropriate mortality and catch levels for ESA and marine mammal species is a problem, and would require significant additional observer funding.

## "Individual Hard TACs"

| | | Scoping Guidance | | | |
|---|---|---|---|---|---|
| **Constraining management measure** | **Input or output based?** | ***Method of allocation stated; distro of TAC for all permit holders?*** | ***Mechanism for accountability?*** | ***Narrow in focus or absent detail?*** | ***Can it be analyzed?*** |
| Hard TAC | Output | Yes, TACs distributed by proportion of vessel's effort relative to total fleet | Not really | Lacking details | Unknown but shares common components with other proposals |

***Major hurdles:*** See Hard TAC and ITQ proposals.

***Comments or concerns:***

(Note that this proposal is primarily conceptual so details are not well specified)

- How is total fleet effort defined? DAS, or landings?
- Qualification of "C" DAS permits for points could increase effort in the fishery by reactivating latent effort.
- How will regional TACs be established?
- How will areas be defined?

## "Individual Transferable Quotas"

| Constraining management measure | Input or output based? | Scoping Guidance: *Method of allocation stated; distro of TAC for all permit holders?* | Scoping Guidance: *Mechanism for accountability?* | Scoping Guidance: *Narrow in focus or absent detail?* | *Can it be analyzed?* |
|---|---|---|---|---|---|
| Stock-specific hard TACs | Output | Yes, yes | Yes | Comprehensive, with sufficient detail to understand intentions | Yes |

***Major hurdles:***

- The proposal places burden for qualification on ability to link DAS call-in to activity. Currently this link cannot be made reliably for much of the historical period.
- Limits on quota ownership and quota acquisition will require change in permit application process to clearly identify ownership of all permits. This has proven difficult to implement effectively in other fisheries.
- Obvious potential logistical problem with implementation due to required referendum. If this alternative is selected and the referendum fails, then some back-up plan will need to be identified.
- Proposal relies on level of observer coverage that is higher than what existing program will likely be able to support. Available funding is a problem as is the ability to train and place enough manpower needed. The proposal does provide suggestions for alternatives including video monitoring
- Qualification for initial allocations could not begin until May 1, 2008. This means that workload would include, qualification review, work on all other selected alternatives for the DSEIS, and the GARM III.
- Reauthorization contains language that would require consideration of an auction for initial allocation.
- M-S Act requires cost recovery for any IFQ within specified limits.

***Comments or concerns:***

- The initial shares for each stock must sum to 1. As described, the allocation formula has two components. The landings history share sums to one. The DAS shares within vessel permit sizes also sum to one, *but the sum of all DAS shares for each vessel sums to 3*. The proposed weighting procedure does not reconcile this problem, though there are options for fixing it.
    - Divide the DAS share by 3. This would have no affect on the relative position of vessels within, or outside of, a size class. Initial weighted landings and DAS shares would also then sum to one.
    - A more complicated solution would be to allocate 50% (75%) of the TAC based on the landings share then take the remaining 50% (25%) and sub-allocate to each vessel permit size group according to the DAS share for all vessels in the permit size group.
- Proposal is silent on what happens if TAC for an entire stock is reached.
- Provisions for overage may not be possible since total TAC cannot be exceeded in any year. That is, TAC for all stocks in every year has to be reconciled.

- Definition of qualifying A DAS may be interpreted as being inconsistent with how qualifying DAS are determined in the description of base allocations.
- Historic period would clearly result in fishing for history since would still be building history through April, 2008. A qualification period that predates January 2007 would eliminate this

tendency. Would also raise questions associated with the ability for some fleet components subject to differential DAS counting to compete with others for history.

- Given the requirement that initial shares must sum to one, can see how cap on allocations associated with DAS would work (i.e. overage gets allocated to everyone else) but can't see how the floor can work (i.e. can't take share away from everyone to make up for the difference).
- Note wording of temporary transfers refers to $1/20^{th}$ of landed ton seems to imply that discards will not be counted against quota allocations unless option 1 for discards is selected.
- Removal of upgrade provision makes sense but may pose problems with the social objective to maintain existing fleet composition and the provision that limits transfers between size classes. That is, quota could be moved from one size class to another through an upgrade alone. If the recommended ceiling on allocation has been reached does this mean that the upgrade would not be allowed?
- Provision in the proposal that would require forfeiture of proceeds in the event of an un-reconciled overage exceeding 10% cannot be enforced under existing law.
- The proposal does not include consideration of bycatch caps of groundfish in other fisheries.
- Potential social and economic impacts would need to rely on assessment of qualifiers/non-qualifiers as well as assigned quota shares. Will need to assess likely amount of consolidation.

## "Stewardship Shares"

| Constraining management measure | Input or output based? | Scoping Guidance: *Method of allocation stated; distro of TAC for all permit holders?* | Scoping Guidance: *Mechanism for accountability?* | Scoping Guidance: *Narrow in focus or absent detail?* | *Can it be analyzed?* |
|---|---|---|---|---|---|
| TAC, stock-specific, per-share | Output | Suggest using buyout capacity formula; yes | Strong, well specified | Broad in focus but absent some detail | Yes, though simulation may be difficult |

***Major hurdles:***

- Appropriate allocation of the baseline share by species and permit will need to be nailed down.
- Setting of appropriate share drawdown and reinvestment rates is unspecified and may be troublesome.
- There is a significant administrative burden for monitoring share drawdown, reinvestment, and catch by species and permit.
- There may be significant administrative issue with requiring a stock utilization plan before the fishing year

***Comments or concerns:***

- Potential for large discarding of a species when the shares are consumed for the limiting species

## "Area Management"

| Constraining management measure | Input or output based? | Scoping Guidance: *Method of allocation stated; distro of TAC for all permit holders?* | Scoping Guidance: *Mechanism for accountability?* | Scoping Guidance: *Narrow in focus or absent detail?* | *Can it be analyzed?* |
|---|---|---|---|---|---|
| Hard TACs, species and area-specific | Output – but may use input to slow landings | Yes, unspecified | In concept, yes…real-time monitoring | Broad in focus but absent significant detail | Yes - Biological impacts easier than economic and social |

***Major hurdles:***

- Legal authority to grant smaller groups management control
- Legal authority to charge industry for monitoring
- Proposed association/coop membership may not be consistent with revised M-SA RFA definitions.

***Comments or concerns:***

- Determination of areas
- Allocation of TACs to areas
- Transition to and implementation of local management
- Possibility of widely varying measures in different areas – possible enforcement concerns.
- Local authority compliance with legal requirements.
- Rec sector interaction.
- New M-S LAP provisions: do they apply? If so, how?
- Interactions with monkfish/skate fisheries.
- What if there are alternative organizations in one area?
- Fairness and equity standard may not apply to all issues- e.g. TACs, boundaries

**"The Downeast Initiative"**

| Constraining management measure | Input or output based? | Scoping Guidance: *Method of allocation stated; distro of TAC for all permit holders?* | Scoping Guidance: *Mechanism for accountability?* | Scoping Guidance: *Narrow in focus or absent detail?* | *Can it be analyzed?* |
|---|---|---|---|---|---|
| Hard TACs, species and area-specific | Output | Yes, unspecified | In concept, yes…real-time monitoring | Narrow in focus (but not if considered one element of broader area management system), absent some detail | Yes - Biological impacts easier than economic and social |

***Major hurdles:***

- Legal authority to grant smaller groups management control
- Proposed association/coop membership may not be consistent with revised M-SA RFA definitions.

***Comments or concerns:***

- Determination of areas
- Allocation of TACs to areas
- Determining future value of TAC for area
- Transition to and implementation of local management
- Proposed subdivision of access/effort initially calculated on a permit basis: administrative complexity.
- Local authority compliance with legal requirements.
- No entry/exit rules identified – what if a vessel/permit leaves the coop?
- New M-S LAP provisions: do they apply? If so, how?
- Permit "banking" implies revisions to current permit rules.
- Permit banking impact on non-groundfish permits.
- Coop effort/allocation metric may need to be consistent with other areas.
- What if there is a competing/alternate coop?
- "Relevant state government" – may conflict with M-SA – there ISN'T a relevant state government in federal waters.
- Linkages between other fisheries are not clearly described at this point – effects of splitting permits, etc.
- "Shares' issue needs to be better defined.

## "The Points System"

| Constraining management measure | Input or output based? | Scoping Guidance: *Method of allocation stated; distro of TAC for all permit holders?* | Scoping Guidance: *Mechanism for accountability?* | Scoping Guidance: *Narrow in focus or absent detail?* | *Can it be analyzed?* |
|---|---|---|---|---|---|
| Biological Point Values, Total points allocated | Output | Yes, yes | Yes, with questions | Some kinks to work out, but well-specified | Yes, with difficulty |

***Major hurdles:***

- All output-based systems assume a level of stock biomass understanding and certainty that may or may not be achievable…significant safeguards must be considered to account for uncertainties.
- Adequate monitoring and enforcement may require new ways of thinking about observers, enforcement (at sea and shoreside) and landing procedures.
- Command-and-control style management of Biological Point Values may distort fishery operation in ways that are difficult to analyze and predict.
- The ultimate constraint on mortality, total points (BPVs) allocated, may be insufficient to protect weak-link stocks. High BPV differentials, assumed to be necessary to protect such stocks, may lead to discarding due to large discrepancies in the open-market value of a point, the BPV for a particular fish, and its dockside price paid.
- Quantitative impacts analysis may be difficult and/or may require with high levels of uncertainty

***Comments or concerns:***

- Voluntary Points Contribution Program: When are points cashed out? What is the basis for the 'interest' accumulated on contributed points? Is there a social or biological benefit to this program?
- Vessel Upgrade Restrictions: are they necessary?
- Hailing/landing/offloading procedures will need to be looked at for enforceability and ability to administer.
- Why full retention of all legal (vice all) fish?
- Are points used for discarded (sub-legal) fish? If not, discards will have to be accounted for in assessing TACs.
- Initial assignment of BPVs may be difficult and, if done incorrectly, may have severe unintended consequences. Nonetheless, this remains perhaps one of the most vital components of the program.
- Periodicity of BPV change may be difficult to get right--how to determine optimal time scales? How to administer them within the regulatory framework?
- Observer coverage funding may need set-aside or other tool.
- Administrative feasibility of landings monitoring is uncertain.
- Interactions with monkfish and skate plans may need additional development.

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**MEMORANDUM**

**DATE:** March 15, 2007

**TO:** Multispecies (Groundfish) Oversight Committee

**FROM:** Groundfish Plan Development Team (PDT)

**SUBJECT:** **PDT Meeting, March 7, 2007**

1. The Groundfish PDT met March 7, 2007, in Falmouth, MA. The PDT reviewed management proposals for Amendment 16 that were received during scoping and were still being considered by the Council. The PDT met to develop a list of questions, issues, or concerns to be provided to the proponents of each alternative submitted through scoping that is still being considered by the Council. PDT participants were Eric Thunberg (Acting chair), Paul Nitschke, Kohl Kanwit, Chris Kellogg, Dan Holland, Paul Parker, Steve Correia, Tom Warren, Doug Christel, Jen Andersen, and Dave Potter. Multispecies Committee chair Rip Cunningham also attended. Audience members present were Phil Ruhle, Jackie O'Dell, Vito Giacalone, Chad Demarest, Sara Wetmore, and Amy VanAtten.

2. The PDT did not discuss the Downeast Initiative because they were advised that this has been withdrawn from consideration in Amendment 16. PDT members were provided three research papers for review that were submitted after the Rhode Island scoping meeting, but these were not discussed.

3. The PDT began with a discussion of issues that cut across all alternatives. Issues identified included:

1. Monitoring
2. Allocation
3. Increased Costs
4. Overlap of groundfish with monkfish and skates
5. Implementation timeline

*Monitoring*

- Monitoring and enforcement issues need to be considered early – some discussions at NERO have been initiated already

- Concern is that capability to do real time reporting of landings by May 1, 2009 will not be possible. Paul Parker reported discussions with John Witzig indicating that full electronic data reporting may not be up and running by implementation date.
- Note that enhanced discard reporting may also need to be developed.
- Doug Christel noted that development of enhanced monitoring has three potential components; VMS, land-based (dealer), and sea-based. NMFS is currently trying to identify what combination of these systems needs to be developed to meet monitoring requirements. This activity may require additional funding. It is also necessary to determine what frequency of data is necessary to implement the proposals: must it be daily? Is trip level data frequent enough?
- Implication is that funding, human resources, and delivery systems need to be developed. This will take time that could have implications for implementation.
- Observer Program – Dave Potter
    - Due to the budget planning process funding levels for 2008 and 2009 (fiscal years) have already been submitted and not subject to change and even 2010 may be difficult. This means that without a specific appropriation outside the budget process the planned for level of funds would be not sufficient to ramp up observer coverage in time for implementation.
    - Ability to train observers not necessarily a major problem. Takes approximately 90 days from recruitment to placement in the field including training. Training can accommodate about 15-20 people. Depending on what level of observer coverage may be required, the time needed to train multiple cohorts means that training would have to take place before May, 2009 but the earlier cohorts may have little or no work until A16 is implemented.
    - Data collected by observers consists of OBSCON and paper logs. The former is a subset of information entered using a PDA and made available within 2 days after completion of a trip. Additional fields may be added to this system but additional programming would be required. The detailed observer logs are submitted with a turn-around time of about 90 days including data entry and all audits.
    - Note that "real-time" data reporting always will involve some time lag between the data stream and when it is ready for use. This suggests that some thought needs to be put into what real-time monitoring means and what time-step may be acceptable.
    - Observer contract has a five-year life cycle so costs are locked in with modest annual cost increases.
    - Video-Monitoring – does introduce some flexibility in that advance notification to get an observer on board would not be required. Effectiveness as a monitoring tool depends on the type of gear used and whether species and length identification is required. Video monitoring effective for bottom longline because all fish come on board on at a time and at a fixed location. Other gears not so much. If there is a full retention requirement video monitoring would be capable of identifying discarding. Otherwise, capability to identify species and lengths is not adequately developed as of yet.

*Allocation*

- Refers to timing issues associated with implementation of new alternatives that are departures from current DAS allocations. Here, early decision by Council will facilitate timely implementation of any new allocations (the point system for example) and allow for appeals etc.

*Costs – Budget, manpower, timelines*

- Administrative costs – more demanding data collection systems as well as need to overhaul computer software needed to adjust existing systems to accommodate anything new. This process takes time and the ability to get all systems ready in time for implementation is questionable. Increased observer program costs.
- Industry costs – there may be increased use of VMS that will result in higher costs to industry.

*Overlay of Monkfish and Skates*

- There was some discussion of the need to fold monkfish and skates into groundfish plan. The PDT reiterates that if DAS controls are removed, there are implications for monkfish and skate management since these FMPs rely on groundfish effort controls.

4. Comments on specific proposals are on the following pages.

**Evaluation of Recreational Limited Entry Proposal**

As proposed, the limited entry program would rely on existing data and contains few qualification criteria. Because of its simplicity the proposal should be fairly easy to analyze as a stand-alone measure. The following issues or concerns were identified.

Rationale

- The rationale contains several assertions that may need to be supported. Further development of the rationale is needed to match the rationale with the limited entry plan itself. For example, limited entry would not, in and of itself, obviate the need for additional management of the recreational sector in general or the P/C sector in particular. The assertions that need to be examined are:

1. Are new entrants "streaming" into the fishery? Note that data indicate an average annual exit of 30 to 40 participants but an annual entry ranging from 30 to 58 vessels. Net entry spiked at 26 participating vessels in 2001 and net increases of 6 and 9 vessels in 2004 and 2005 respectively (see Figure 1).
2. Has recreational sector been cut back disproportionate to its impact?
3. Is 10 cod per day an absolute minimum?
4. No change in size, no change in bag limits, no further season closures, implies that limited entry would exempt the sector from further regulation – this needs to be rebutted as this may not be the case.
5. Contrary to the implications of the rationale, limited entry does not afford commercial vessels protection from competition from new entrants, nor does it offer protection from additional management restrictions. Limited access was implemented to control growth in fishing effort. If this measure is designed primarily to limit competition in the party/charter fleet it may conflict with M-S Act guidelines and other legal requirements.

*Qualification Criteria*

1. The management area is identified as the GOM regulated mesh area. The proposal lists areas not subject to the limited access proposal as "GB/CC/SNE/MA stock areas." We assume that CC refers to Cape Cod which creates some ambiguity as to where the proposal applies. For purposes of clarity, it may be simpler to identify the accepted GOM statistical areas of 511, 512, 513, 514, and 515.
2. The species list may need to be reconsidered. Monkfish and skates are not regulated under the Multispecies FMP. It may be inappropriate to establish recreational fishing possession restrictions for these species through the Multispecies FMP. The term "GOM groundfish species…" should be dropped since several of the listed species are single-stock species. Further, any reference to stock area in the species list is unnecessary since stock area is embedded in the management area and qualification criteria.
3. The qualification period should include specific dates (i.e. March 30, 2001 to March 30, 2006).
4. The qualification criteria may need to provide a definition of a P/C trip. Is it sufficient to produce a VTR that merely checked-off the party/charter box on the logbook, regardless of whether any passengers were reported or what gear was used? There are VTR records that used gear other than hooks where the P/C box was checked on the logbook. There are other records that checked the P/C box, yet did not report taking passengers.

5. The qualification criteria need to clearly define what is meant by a "P/C boat". Is it the intent to exclude vessels that engage in a combination of commercial fishing and taking passengers for hire? Will a vessel be able to qualify for a P/C permit and retain its groundfish commercial limited access permit, and participate in both fisheries (as is currently allowed)?
6. Is it the intent that an individual that had no prior participation in the P/C business would qualify for a limited access permit if a vessel was under construction prior to the control date?
7. Does history exist for open access permit categories? Not a problem if a vessel has not been sold or replaced but could be a problem if ownership has been transferred.
8. The upgrade provision for horsepower and boat size may need to be consistent with existing regulations for multispecies permit holders. Also, the reason for the upgrade provision needs to be clarified. That is, the provisions are written as if the only thing affecting capacity is the number of passengers. What is the rationale to prohibit vessels that now are limited to six passengers from upgrading?
9. The permit transferability provision needs to be consistent with existing regulations that do not allow permit splitting.

Additional PDT Discussion:

- Do the proponents want to address consolidation? There are limits on numbers of vessels that may be owned in the scallop plan but none in the groundfish plan.
- If limits on consolidation are desirable should these limits be based on passenger capacity or number of permits?
- PDT discussion ventured into the potential joint effects of limited entry and an anticipated follow-up request for an allocation of GOM cod and/or haddock. Some felt that the limited entry proposal and a sector share allocation should be considered as a joint proposal. This observation was based on the assumption that the P/C sector would be asking for its own allocation. Rip Cunningham, Groundfish Committee chair, clarified that the RAP was recommending an allocation for the recreational fishing (private and P/C) sector as a whole and not for a separate allocation for the P/C sector alone. If this approach is followed, it means that if the recreational (including P/C) sector exceeds an allocation in the future, it will not be possible to identify whether private boats or P/C boats need additional restrictions.

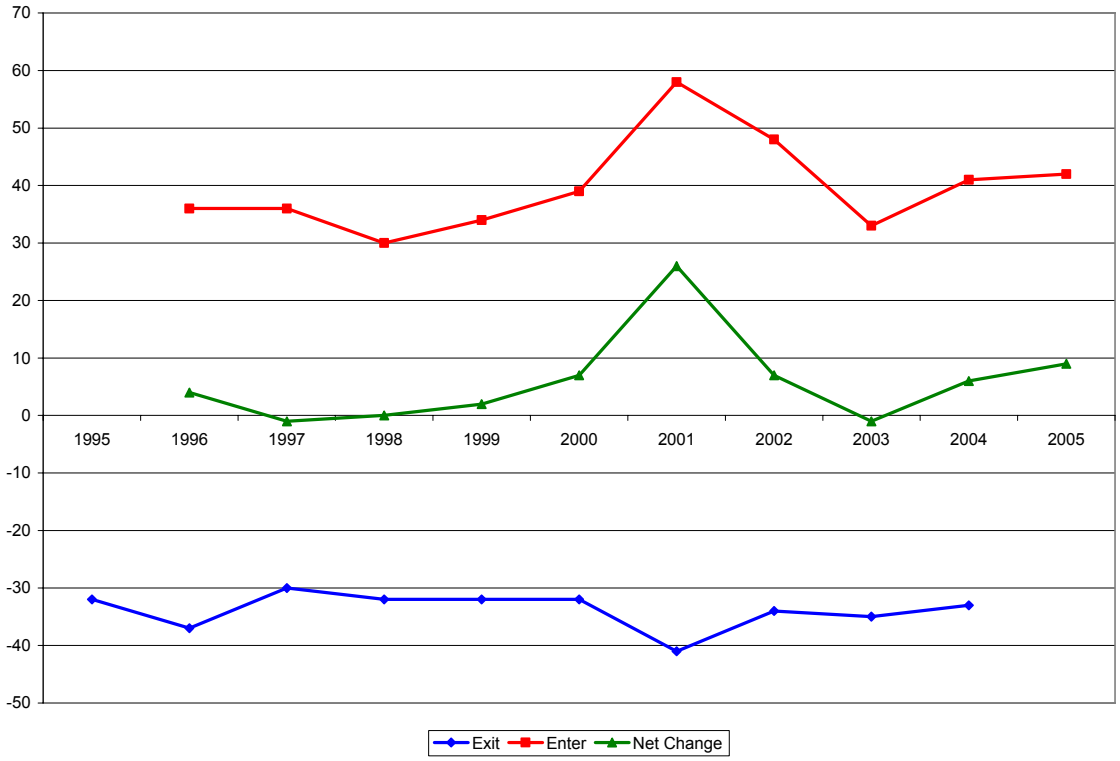


Figure 1. Annual number of entry and exiting vessels carrying passengers for hire in the Gulf of Maine

## Evaluation of The Points System

The PDT reiterates the comments provided to the Groundfish Committee in January. Additional or expanded comments are provided below. The discussion was lead by Dan Holland.

*Determining initial points allocation*
There was an issue with trying to use upgraded baselines for allocation but this has apparently been resolved. Apparently there is no such thing as an upgraded baseline and the plan would be to use the legal vessel baselines.

Including monkfish and skates in the allocation formula may have distributive effects on the initial allocation that are different than the distributive effects of the existing Amendment 13 DAS allocation.

*Monitoring point use on multi-area trips*
The proposal does not preclude vessels from fishing in more than one stock area on a given trip. It would probably not be possible to allocate catches from a given trip across more than one stock area for the purposes of charging points unless you had full observer coverage.

The proposal suggests that in those cases, the vessel would simply be charged the highest point value for the species (e.g. if they had caught yellowtail flounder and had been on Georges Bank and in the Cape Cod area, they would be charged the higher point value for all of the yellowtail). VMS could be used to ensure compliance. However, there is also a need to account for transiting vessels which could be tricky. One way to deal with this might be to require vessels to declare which areas they will fish in before they go into them. If they declare more than one area on trip they get charged the higher point value. If they don't declare an area and are caught fishing in it without declaring they would be subject to penalties.

There is also a separate question of allocating catches to stocks for the purpose of tracking overall catches relative to TACs. This information may be needed in-season in near real time to either adjust point values or shut down areas if there is a hard TAC backstop. Thus even if, for the purposes of charging points, you assign all catch to the highest point value area, you would still need to determine the percentage going to different areas for the purposes of monitoring catch relative to the TAC. You could use the VTR data for this, but it would need to be available more quickly than it is now. Alternatively you could require landings be assigned to areas in dealer reports. There could be incentives to misreport (on VTR as well) but these should not be too strong if they don't affect the point value being charged.

*Hailing, landing, offloading procedures*
NERO says a hailing requirement is not absolutely necessary and they could use regular dealer reporting for catch accounting (use of points), however it would be useful for enforcement. Proponents pointed out that the purpose is to create a window of opportunity for enforcement and that the hail should be species specific weights so that they can target enforcement on high point species. It is not clear what legal ramifications and penalties there would be for a false hail.

Note that hail would also provide verification or check against what is reported to a dealer. Note also that the hail has the added advantage of being a single source declaration. This may be helpful when tracking sales to multiple dealers.

It is not clear that the magnetic strip cards that were proposed as a way to account for catches and points in real time are really necessary. They would duplicate the dealer reporting system.

*Time constraints on implementing*
This was discussed in the cross-cutting discussion on all plans at the beginning of the meeting. There are definitely concerns about ability to implement by May 2009 given current budgets.

It is possible this system may require a referendum under the LAPP provisions of the M-S Act which may delay implementation.

*Monkfish and Skates*
There is definitely a concern that if monkfish and skates are not included in the point system the utility of the system would be seriously undermined because you would still need effort limits to manage these stocks.

*Setting and adjusting BPVs*
This is probably the biggest area of concern. Excessive variability in BPVs would make business planning difficult. If there is a bias toward setting them too low and then raising them that could fuel a derby. If there is a bias toward setting them high and lowering them that would be unfair for people that only fish early in the year (probably smaller boats that fish in better weather).

Simple simulations suggest that you may need to adjust BPVs at least monthly to match the dynamics of the fishery. NERO says a federal rule is needed every time a BPV is changed, so at best it could be done with a week's notice. NMFS, however, cautions that they cannot guarantee adjustments will be made according to a pre-specified schedule. It sounds like monthly changes might be feasible but you would still need lead time on the change for the rule making.

Phil Ruhle made the point that changes in point values that affect landings of different species will affect prices which will affect incentives. If a high point value causes landings to fall, prices may go up thereby weakening the incentive of the high point price to stay off that species. Alternatively, if a low point price attracts effort it may drive the price of fish down. That would tend to offset the impact of the low point price in drawing effort. It might be necessary to factor this in when modeling how point prices will work. The degree to which these price impacts are important depends on price elasticities. It might be useful to have NEFSC economists determine whether these price elasticities are high.

It is not clear whether the onus is on the proponents of this plan or the PDT to design and test the specific mechanism for setting and adjusting points. Ultimately the PDT will be responsible for verifying the mechanism will achieve management goals, but absent substantial input from the proponents in developing this mechanism the plan may not move forward. The NESC is planning a technical workshop to address this issue.

*Backstops to prevent overfishing*
The proposed plan does not include a hard TAC backstop. Some PDT members expressed concern about whether this is a problem and could lead to overfishing of some stocks. NERO says it is not yet clear what the guidance following the M-S Act reauthorization will say about accountability and the ability to allow overages, perhaps if they are subtracted the next year.

The current plan is to adjust BPVs as necessary to avoid overfishing. However, that poses problems discussed above.

There is also a question of how discards will be accounted for. One of the options would require full retention. However, for the other there would likely have to be a set aside of the TAC for discards.

What is the overlay between Eastern Canada area TACs with overall stock TACs and the interaction with the point system? It is not clear that any changes in measures necessarily result in changes to management of the Eastern US/CA area. Should there be a separate point value for these areas? A similar concern exists for SAPs.

If there is a hard TAC for the Eastern Canada area, but not separate point values for that area, that could result in a derby, though not all PDT members agree. One option would be to have separate point values in areas with their own TACS so that could catch could be controlled. This approach, however, complicates administration of the point system.

Note that potential set asides for other fisheries (herring, scallops for example) would also need to be considered. These set-asides would mean that more catch would need to be taken off the top of the total TAC which would mean that the more that is set aside the higher the starting BPVs will need to be. Also note that the overlay of the point system and sectors needs to be addressed more clearly.

*Compliance issues*
There are three major compliance issues to consider. The first is that the plan may create strong incentives for discarding high point value fish. Discarding might not be allowed, but enforcement could be costly. It is not clear what level of observer coverage might be required and what other compliance measures might help, but there is concern that the current level of observer coverage would not be sufficient.

The second concern would be people assigning fish to the wrong area. This might be dealt with by requiring vessels to declare into areas before or while on the trip before fishing in them. They would then be charged the higher point values for the areas they fished. They could be fined for fishing in an area they had not declared into. It might be possible to use VMS positions (without area declarations) to track fishing activity and charge the appropriate BPVs, but NMFS is not currently set up to use this data in this way. There is also the question of how to allow transiting an area without incurring the point value in that area.

The third major compliance issue is recording the wrong species to reduce point use (e.g. call a cod a haddock if it has a lower point value). Dockside monitoring, particularly if combined with hailing requirements should be able to control this problem. However, a much higher level of dockside monitoring is probably necessary.

Is there an understanding that a BPV for a particular stock may approach infinity as the TAC is approached?

Can a vessel fish in an area if it does not have enough points available to catch a small amount of one of the stocks in the area?

Additional PDT Discussion:

- NESC provided some clarification that the point system has the flexibility to deal with any specified conservation objective. That is, the point system is flexible enough to accommodate a hard TAC objective or a policy that may allow for some acceptable range of overages. Guidance from the Council is being sought.
- Development of an analytical model is unaffected by the conservation objective. That is, a more stringent conservation objective would just mean that the BPVs would be set at different rates without changing the algorithm needed to calculate them.
- Incentive for at-sea discards is believed to remain high. A no-discard provision may make monitoring more cost-effective since it would introduce a greater range of monitoring possibilities including video monitoring.
- Modeling done to date (i.e. materials submitted at scoping) is not sufficient to demonstrate that the system will work nor is it likely to be adequate modeling approach for setting BPVs.
- In terms of model development the time-step needs to be consistent with the known time frame including administration and implementation needed to actually notify all affected vessels of the change. That is, if the time frame needed to implement a change is a quarter then the algorithm would need to be based on a quarterly time step. Note that this has implications for setting initial BPV where the initial BPV will likely be higher the longer the time step.
- The responsibility for developing, testing, and operating the computer model that determines BPVs must be clarified.
- How would vessels not under DAS be treated under the point system? Note that qualification criteria state that only limited access vessels with a category A DAS allocation would receive an allocation of points. This leaves limited access hand-gear, limited access 30-feet DAS exempt vessels, and any open access permit categories outside the point system.

## Evaluation of DAS Alternatives

The PDT reiterates the comments provided in January.

- Under revised DAS, public comment received on FW42 expressed reservations regarding vessel safety if DAS are counted as 24 hours. The proponents need to demonstrate why the 24 hour DAS counting would not be a safety issue.
- Under the DAS performance plan, there would be a need to double track DAS while on a fishing trip. That is, upon call-in DAS would need to be tracked until call-out which would require an adjustment based on species composition.
- The proposal for the performance plan includes 4 different DAS counting procedures depending on trip duration, area fished, and species caught.
- The performance plan has many of the same issues that the point system does. These include, tracking landings in multiple stock areas, issues with compliance, making in-season adjustments to DAS charges etc.
- Should the performance plan be pursued, the Council should be aware that the specific differential DAS counting rates may differ from those currently in effect. These will need to be calculated after stock status is estimated in GARM III.

## Evaluation of Area Management

The PDT reiterates some of the comments provided in January. Additional comments are below.

What has been submitted through scoping reflects a vision for the future. The comments submitted through scoping have the appearance of being impracticable for a May 2009 implementation date since what is envisioned includes institutional or governance arrangements that have yet to be developed and demands a level of fine-scale science that present data collection systems is unlikely to be able to support. For purposes of A16, what is need is a dialogue between the PDT and the proponents to clarify a programmatic approach that would allow for scientific and governance institutions to evolve over time. Put simply, what would be implemented on May 1, 2009 and what processes would be codified to allow area management to evolve?

1. Determination of areas: The proposal gives only general guidance on determining areas and suggests only one area division (between the inshore and offshore GOM). It is not clear how ecological information is to be used in determining area boundaries. While it may be that there are clear ecological divisions, that is uncertain at this point (the PDT has not yet reviewed recent NEFSC ecological work that may bear on this issue). The number of areas is not specified. During A13, there was considerable debate over where area boundaries should be located and five or six alternatives were put forward. Reaching agreement on area boundaries could be time consuming. Declaring a primary area: is this vessel or permit specific? Could a vessel owner with two permits declare into two different areas and then move the permits on and off the vessel depending where he wants to fish?

2. Assigning TACs to areas: The proposal does not describe a method to allocate TACs to areas and gives only general guidance on what information should be considered. The TACs for the US/CA area are based solely on historic landings and recent survey info, allowing creation of a formula to divide the overall TAC between countries. While this approach could also be used for area management, there are a number of issues: (a) the time period for historic catches is not specified (b) depending on area boundaries there may be few survey tows on which to base allocations (c) some stocks will overlap area boundaries, complicating monitoring of stock and area specific TACs (area TACs might be species specific, but stock specific TACs still shouldn't be exceeded – it is possible that this could occur if two stocks of the same species overlap an area). The AMC, however, suggests considering other factors (fish tagging, biological info, DAS, VTRs, etc.) and it is not specified how those factors would be incorporated into a TAC distribution formula.

3. Assigning TACs to areas: The proposal is not clear on how the part of an area TAC assigned to those vessels that do not declare into the area is treated. When this is caught, are vessels that did not sign-in prohibited from fishing in the area?

4. Local governance: It appears the AMC may be backing off some of the local governance issues, at least when area management is first adopted, so the PDTs earlier comments may not be germane.

5. Enforcement and monitoring: As noted above, it is not clear how the set-aside for vessels not declared into the area is treated. This set-aside complicates monitoring of TACs as it potentially doubles the number of TACs that must be monitored. It is not clear what time period is used to allocate TACs – does this differ by area? The TAC monitoring Option 2 (110% overage provision) isn't clear, but appears to allow a TAC overage which would conflict with the law (the PDT is not certain this is the case- the provision first talks about a set aside, and I can't tell if this set aside is meant to make sure that even if 110% of what remains is caught the overall TAC is not exceeded). Overages in another area may very well impact fishing in an area that stayed within its limit – this needs to be thought through and spelled out – up to a point, transfers from the offending area may buffer the impact on an area that remains within its TAC, but a larger overage could impact any area. Observer funding - rules on this aren't clear, clarification is needed from NOAA GC about whether an overall "tax" can be used to fund observer coverage. Enforcement mechanism: the proposal seems to imply more direct influence on enforcement actions by participants in an area, but this may not be possible with the current enforcement system.

6. Default measures: Transition to area specific measures must be specified, and measures are not addressed for areas other than the GOM. All areas should rely on the same basic tools for consistency (whether that is points, DAS, or something else). Vastly different rules between areas could make enforcement difficult- for example, if one area retains DAS and another does not (this also could complicate future management, permit transfers, etc.).

7. Biological justification for area management only addresses GOM and not other areas.

8. Overlap with other fisheries (in particular skates, monkfish, scallops) must be addressed. This will expand scope of A16 if area management is applied to skates and monkfish.

Additional PDT Discussion:

- Based on a careful reading of the proposal what appears to be contemplated for implementation on May 1, 2009 would be 1) designation of areas (Inshore GOM, Offshore GOM, GB, and SNE), 2) Assignment of TACs to each area, 3) default management measures for each area and 4) appointment of Area Advisory Panels (AAP) that would deliberate and replace the default management measures with those recommended by the AAPs.
- Default management measures listed by proponents are limited to indirect controls. Other more direct effort controls may need to be developed.
- Concerns expressed over ability to assign TAC for both single stocks and for stocks like CC/GOM yellowtail that would require an allocation for 3 different areas.
- The area management proposal could be considered a hard TAC proposal, yet very little detail is provided on how this TAC system will be constructed. The proposal is silent on what would happen if a hard TAC is reached. The proposal is silent on whether there will be a single species TAC for an area, or separate TACs for different stocks of the same species if the area boundaries overlap stock boundaries.
- Note that the proposal is not a global hard TAC but is hard TAC-based nevertheless.
- The proposal suggests a 20% set aside for vessels that do not designate an area. What justification is there for the 20% set aside?

- The initial proposal indicated that area designation would be for three years while a more recent draft suggests an annual declaration. How would management measures be adjusted if declarations by area vary from year to year?
- How would any pre-existing sectors or new sectors which are not necessarily area based be affected?
- Is it likely that derbies would emerge for area-specific set-asides?
- Is area management all-or-nothing? The proposal suggests that this is the case. If not, how would area management be integrated with the points system or DAS?
- Note that the suggested initial area designations contain a large degree of heterogeneity in the fleets operating in those areas. This heterogeneity may make coming to agreement on area-specific management measures very difficult. As areas become smaller and smaller the population of individuals fishing there is likely to be more homogeneous which will facilitate reaching agreement.

# AREA MANAGEMENT COALITION

*Chair*: Craig Pendleton, Northwest Atlantic Marine Alliance

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December 26, 2006

Paul Howard, Executive Director
New England Fishery Management Council
50 Water Street, Mill #2
Newburyport, MA 01950

Regarding: Multispecies Amendment 16 Scoping Comments

Dear Mr. Howard and Members of the New England Fisheries Management Council:

The Area Management Coalition requests that you fully analyze and consider Area Management as an alternative management system in the Amendment 16 supplemental environmental impact statement (SEIS).

The Area Management Coalition formed in 2006 to develop and advance proposals for area management of groundfish in New England. The Coalition includes fishermen, conservation organizations, scientists and other citizens who care deeply about the future of New England's groundfish fisheries. The enclosed proposal represents a collective investment of time and energy by Coalition members, many of whom have been committed to local area management over the past decade.

The enclosed proposal addresses the applicability of Local Area Management for the New England region, and methods for allocation, governance and accountability. The local area management concept is reinforced in additional scoping proposals the Council will receive from Down East Initiative and Fish-Tank.

Please feel free to contact me with any questions or concerns related to this proposal and know that the Coalition will provide any and all input that the Council desires as it explores the Area Management paradigm.

Sincerely,

Craig Pendleton

Chair, Area Management Coalition
Director, Northwest Atlantic Marine Alliance

Attachments: Area Management Coalition Proposal



cc: TN (1/4)

# Local Area Management of Groundfish:

# A Framework for Moving New England Forward

Submitted To:

Paul Howard, Executive Director
New England Fisheries Management Council
50 Water Street, Mill #2
Newburyport, MA 01950

By:

The Area Management Coalition
Craig Pendleton, Chair

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"Fishing's a shadow of what it was – it's time for a change"

--- Gary Libby, Mid-Coast Fishermen's Association

## I. INTRODUCTION:

The Area Management Coalition (AMC) requests that the Concil fully analyze and consider Local Area Management as an alternative management system in the Amendment 16 supplemental environmental impact statement (SEIS). The AMC is confident that that Local Area Management will lead to greater accountability, ecological sustainability, equitable management, and an enduring fishing industry throughout New England.

Local Area Management is a management system for allocating resources to a particular area. It is an ecosystem-based approach to groundfisheries management whereby fishermen share responsibility for aligning the incentives to conserve and rebuild fish stocks with the New England Fisheries Management Council (NEFMC). This approach to fisheries governance has strong biological, oceanographic and socioeconomic underpinnings that are justified throughout the entire New England management area (Appendix A). In addition to analyzing the Local Area Management system proposed below, we have included the goals and principles for Local Area Management developed by the Area Management Coalition (Appendix B).

The AMC proposes a Local Area Management system in which:

- Areas are finer-scale, geographically-specific and reflect ecological and biological uniqueness.
- Each Area has an annual limit of fish that can be harvested from that area.
- Each Area may develop area-specific management rules, and methods of allocating fish to individuals or groups.
- Fishermen and other stakeholders in that area develop area-specific management measures and are submitted for approval as part of the Fisheries Management Plan.
- New Area-based localized governance structures are nested within the current management regimes.
- Area boundaries are permeable, with vessels fishing in multiple areas abiding by the rules applicable to the area fished on each trip.
- Area management proposals should include provisions for real-time catch reporting to promote a more responsive management system.

This proposal seeks to respond to specific questions and concerns about implementing Local Area Management that have been raised during discussions with members of the Council, Council staff, fishermen, and other interested parties. The AMC recognizes the additional work is needed to address some areas of this proposal and is committed to working with the NEFMC, its staff, and other interested parties to continue to address questions and further refine this proposal. This scoping document is organized around the core pieces of the proposal including Governance, Scale/Boundaries, Allocation, Accountability and Mortality Controls, and Default Local Area Management Measures. Proposed management measures are included for implementing the system, and in some cases alternative options to the proposed measures are included.

## II. AREA SCALE and BOUNDARIES

The Area Management Coalition recognizes that defining boundaries is perhaps the most challenging and significant aspect of establishing effective Local Area Management. As the Council explores the most appropriate location for Local Area Boundaries we suggest that it is helpful to recognize that there are three important scales within the New England region that must be considered when designing a Local Area Management system. There is (1) the regional scale that defines the differences between New England and the mid-Atlantic; (2) a middle scale within New England, that is defined by the coastal shelf (or inshore) and offshore waters, and (3) on both the coastal shelf and in the offshore waters there are a number of finer scale, ecologically distinct areas – e.g., Nantucket Shoals, Mass Bay, Georges Bank, South Channel, the Eastern Maine Coastal Current, and the Western Gulf of Maine, among others.

**1. Defining Boundaries**

We propose that the NEFMC consider recognizing new management areas that include *Inshore Gulf of Maine* and *Offshore Gulf of Maine,* expanded recognition of the existing *Eastern and Western Georges Bank* Management Areas, and *Southern New England* Management Areas. Scientific evidence of the ecological characteristics of these areas will be mapped to assist the Council in approximating the most appropriate management boundaries (Sample maps Fig 1 - 11).

For example, there has been growing interest in the separation of inshore and offshore fishing Areas in the Gulf of Maine (*see* Fish-Tank scoping comments). Inshore and Offshore Areas are justified based on ecological function, biological productivity and oceanographic information for the Gulf of Maine. The inshore coastal zone in the Gulf of Maine is relatively shallow, the tidally mixed water with nutrient-rich water that is turbid due to its rich plankton abundance that rains to the seafloor feeding demersal fish and other organisms. In contrast, towards the center of the Gulf of Maine, water is clear, relatively stratified and nutrient poor. The striking differences between these two regions translate to concentrated food in coastal zones that can sustain dense populations of groundfish and other species.

The AMC suggests that there is an ecologically defined boundary between the 25600 and 25500 loran lines that coincides with the critical ecology of groundfish stocks. Before a final line is determined we request that the PDT convene a representative advisory committee to seek a consensus on the final location of the line. In addition, it should be noted that the location of any lines would be subject to revision as science adapts to inform the management of each area (see Appendix A – Adaptive Management). Please take time to analyze the maps provided at the back of the proposal to get a sense for the biophysical and socioeconomic characteristics that support the development of an inshore and offshore area among others.

**2. Defining Sub-Areas for Management**

In recognition of potential future interest in creating finer scale governance, the Council would accept proposals from Local Area Management Organizations (e.g., sectors, coops) that would enable finer-scale area boundaries and other management measures consistent with this proposal to address local situations. Based on oceanographic and fishing-practices data provided in the maps submitted as part of this proposal, we note the potential to further divide the inshore Gulf of Maine.

**3. Movement Between Areas**

The AMC recommends that fishermen be required to declare into a primary area for a three-year or longer period. This would allow for accurate accounting of planned fishing effort for that (and other) area(s). The logic behind this distinction is that there is evidence from around the world that longer resource-management tenure corresponds with a greater sense of responsibility for the long-term health of the resource.

To accommodate limited movement between areas, vessels would be required to declare one area to fish per trip and would be required to adhere to the management measures (gear, trip limits, closed areas, etc) for that area. We recommend a 20% set-aside in each area to accommodate vessels that have not opted into that area as their primary area.

**III. ALLOCATION**

**Distribution of Total Allowable Catch to Areas:**

The AMC supports assigning a hard-TAC for each regulated multi-species for each Area. The TAC for each species for each Area is based on a combination/comparison of fish tagging studies, trawl survey data, primary biological productivity, DAS, VTR, Observer Data, Recreational Data and Dealer Reporting from the Area. Over time, we believe that this approach will move TAC closer to the biological

productivity of the Area. The process for setting the distribution of TAC between Area should be fair, equitable, and transparent and it should consider the historical ecological function of each Area as it pertains to the health of the entire GOM ecosystem.

**Method of Allocation within Areas:**

Area governing bodies such as Sectors or Co-ops would develop allocation measures to harvesters who have opted in to those Areas (see Co-op and Sector provisions contained herein). Additionally, local governance structures would determine binding management regulations including gear modifications, with the NEFMC.

Local governance bodies should be permitted to use input controls in order to pace effort and eliminate the potential for derby fishing. While we recognize that a hard-TAC backstop would be the overriding limit on activity in an Area it is important that the Council be open to considering creative alternatives that emerge from within each Area.

Essentially, the area allocation would be the area sector or co-op's annual catch limit (TAC), potentially, less an amount set aside for group X which would self-select to continue with a DAS allocation or other management approach combined with a Hard-TAC backstop. Group X must abide by the area management regulations, such as seasonal and gear restrictions.

## IV. ACCOUNTABILITY and MORTALITY CONTROLS

The accountability section also addresses the Council's recommendation contained in its Amendment 16 scoping notice that proposals for new management systems may address decreasing dependence on input controls and establishing a closer link between allocation and catch.

**Enforceable Annual Catch Limits:** Each Area will be assigned an annual catch limit for each managed stock with accountability assured through a hard-TAC backstop.

> **Option 1:** Once a stock's TAC is reached, the area (area where the stock is) will close to all gear capable of catching the stock. This would occur for the specifies TAC period.
>
> **Option 2:** Overage Provision up to 10% above the TAC – A deduction would be required from the TAC for the stock for the period (e.g. week, quarter or year (annual catch limit)). The Area will close to all gear capable of catching the stock if 110% of the TAC is reached in any TAC period

**Measures to Pace TAC:** The governing body for each Area will establish input controls and other measures designed to ensure the TAC is not exceeded and to pace the distribution of the TAC across the fishing year (e.g. at minimum there will be division of the TAC as determined by the local governing entity).

**Underages:** "Underages" for any stock within a fishing year may be carried over to the following defined TAC period (e.g., week, month quarter). While underages will not be carried over from year-to-year, an area that stays under its TAC should not be penalized for overfishing that takes place in other area.

**Point System:** If a point system is approved by the Council, Local Area Management could use the point system as a means to achieve mortality objectives and ensure accountability. The details for how this system would work within the Local Area Management system would be developed through the Amendment 16 process if the proposal by the Northeast Seafood Coalition proposal is accepted for consideration.

**Full retention:** All managed fish stocks caught within an area shall be retained and counted toward the area TAC.

**Real Time Electronic Data:** The Area Management Plan must include measures requiring the use of real time data are required in order to ensure that the Area TAC is not exceeded for any management period defined in the plan. Through the Amendment 16 process, an understanding and clear protocols need to be developed with NMFS in order to minimize the turn-around time for getting data back to fishermen and the Area Managers. Amendment 16 needs to include incentives for promoting the use of private sector resources to manage real-time data in order to decrease the burden and reliance on NMFS for providing all of the data for fisheries management.

**Funding for Additional Observer Coverage:** The local governance structure will establish mechanisms for funding additional levels of observer coverage or new more cost-effective monitoring technologies (e.g., video) sufficient to monitor the fishery and ensure accurate and precise estimates of catch, including any discards.

**Area Rules Enforcement:** The Area Management Plan must establish enforcement mechanisms through the governance structure for individuals or groups who violate rules including exceeding allocations, bycatch limits, Area closures, etc. For example, the Bay of Fundy Fisheries Council's Infraction Committee structure is one model that Areas could consider using or modifying.

## V. GOVERNANCE:

Local governance nested within the Council process is a necessary part of the Local Area Management System. Under Local Area Management there would be a governance structure for each Area that better utilizes the local knowledge of fishermen who fish in that Area. Sectors and Co-operatives hold great promise in this regard although alternative governance structures should be allowed to emerge with approval from the Council. In addition, governing bodies may propose to subdivide in order to engage fishermen at more local levels.

While there are multiple ways to approach the transition from the current governance system to Local Area Management we provide a proposed initial structure and three alternatives for how each Area could be governed in the long term.

### Proposed Initial Governance Structure:

Areas would be managed under the general provisions of the Multi-species Fishery Management Plan (FMP), incorporating any Area-specific measures implemented as part of Amendment 16 or subsequent Council actions, until an Area-specific governance structure and management plan is approved by the NEFMC and NOAA Fisheries. These management measures would be the "default management measures." At that point, responsibility to directly manage aspects of the fishery in that Area would pass from the NEFMC to the Local Area Management body.

The transition to Local Area Management governance would work as follows:

1. Amendment 16 will define discreet Management Areas with annual catch limits and measures assuring accountability, including a hard-TAC backstop, set for stocks in those Areas. (*See* Section V. Accountability and Mortality Controls). Until a Local Area Management Plan is approved and implemented, effort would be controlled by the default management measures as initially defined in Amendment 16. (*See* Ongoing Local Area Management Option 1below).
2. Fishermen who declare into a specific Management Area will fish under the default management measures for that Area.
3. Fishermen declared into a Management Area can organize into a sector or a fishing cooperative in order to develop rules for managing their sector or cooperative, but that continue to ensure that the FMP's goals - including annual catch limits for the Area - are achieved.
4. Sectors, Coops, Area Advisory Panels, and alternative governance entities may propose Management Plans that are consistent with the rules established for plan approval. If the Plan is

approved by the NEFMC and NMFS, direct management responsibility as defined in the Plan will pass to the local area governance entity.

Responsibilities Once Established:

1. The sector or co-op will set fishing input rules (e.g., gear restrictions, closed areas, etc.) applicable to all fishing activity in the Area. An important aspect of the responsibility of sector or co-op governing bodies would be to predict likely Area closures on an annual basis to the Council. However, because of the unpredictable nature of the fishery, the governing body would have the ability to create specific spawning closure areas and times.
2. The sector or co-op will determine the metric (or kind) of fishing effort appropriate to its Area, e.g., DAS, some modification of DAS, IFQs, ITQs, trip limits, point system.
3. Each year the sector or fishing co-op will determine how individual allocations in combination with input control rules will meet the hard-TAC and will prepare a Plan that includes methods of monitoring catch and enforcement to address overages or other local rules violations, for approval by the NEFMC and NMFS. As part of the stewardship ethic and accountability that emerges through Local Management, fishermen who opt into an Area will contribute to monitoring landings and the Area participants' actions regarding all management rules established for the Area.
4. The sector or co-op will establish rules addressing bycatch and habitat protection at the local scale that go beyond those set by the NEFMC.

**Ongoing Area Management Governance Option 1:**

Governance of individual Management Areas would remain a function of the NEFMC jurisdiction. Commercial fishermen declared to fish in a Management Area would nominate and elect representatives to serve on an NEFMC Area Advisory Panel specifically formed for that area; in areas with significant recreational fisheries, there would also be one or more elected recreational representatives. Area Advisory Panels would also include appropriate State Agency representation, and elected representation from environmental NGO's. The names of all elected representatives would be submitted to the NEFMC Executive Committee for final approval pursuant to criteria developed through Amendment 16 and consistent with the Magnuson Stevens Act.

Every Managed Area would have an Area Advisory Panel that would maintain oversight for the performance of area-specific regulations in contributing to the overarching goals of the Multispecies FMP. The Area Advisory Panel would submit recommendations for changes to regulations in the affected Management Area. These recommendations would be brought to the NEFMC Groundfish Committee and Council for approval, before being submitted to NMFS for final approval, as indicated above, and implementation.

This governance structure would continue in place until a system for managing Areas through sectors, co-operatives or another governing entity at more refined scales is approved by the Council.

**Ongoing Local Area Management Governance Option 2:** Sector Contracts:

Using Sector Management in an Area Management System would allow an appropriate governance structure to evolve as fishermen in a Management Area become organized and agree to set up a management plan that includes the necessary elements of accountability, administration and enforcement. The intent is to adapt a mechanism, already in use by the NEFMC, to provide the organizational, economic and contractual infrastructure necessary to manage a discrete portion of the resource

As part of the initial formation of Management Areas, fishermen would declare some or all of their effort to be fished in discrete areas under a general set of rules. Using the Sector mechanism (as created in

Amendment 13 with any subsequent modifications) some fishermen in an area could then organize under a Sector Plan specific to that area. When the Sector represents 2/3 of the permit holders or other eligible fishery participants declared in the Management Area, partial management responsibility as defined in the plan for that area (including by fishermen in the "general pool") could then pass to the Sector Organization (consistent with NEFMC/NMFS guidelines and plan approval). The Sector/Local Area Management Plan Organization would have to demonstrate reasonable capability to fulfill this responsibility in order to be granted the authority.

To accomplish this end, the NEFMC would have to expand on the Sector planning mechanism created under Amendment 13 to adapt it to the Area Management concept. Changes to be developed in Amendment 16 should include:

- A provision that Sector Plans would have to specify the Management Areas where members will fish.
- A provision allowing two or more Sector Organizations to band together to submit a Local Area Management Plan for NEFMC/NMFS approval.
- Definition of the "tipping point" for eligibility to receive authority to manage under the Council's purview through a Local Area Management Plan to pass to the Sector organization. Because that "new" management responsibility would require non-members to conform to the Local Area Management Plan rules, the Sector membership should represent at least 2/3 of the permit holders or other eligible fishery participants in the managed Area. In addition the Sector must gain Council approval for an operations management plan for the Area.
- A list of the minimum elements that would have to be included in a Sector/Local Area Management Plan to fulfill the governance role.
- Identification of the optional types of management action that a Sector/Local Area Management Organization would have authority to develop and implement, aside from the basic governance and administrative elements. These might include special gear requirements, days out of fishing, seasons, or habitat closures.
- Ensure that permit banking is allowed, and the ability to break down the fishing effort associated with a permit into smaller units.

Once a Sector/Local Area Management Organization was functioning, it would have some flexibility to adapt local response to emerging problems or opportunities.

**Ongoing Area Management Governance Option 3:** Local Area Fishing Cooperatives

Local area fishing cooperatives can be formed in order to provide an appropriate governance structure for a Management Area. Any cooperative seeking to manage an Area must submit a plan, including a governance structure, demonstrating that it can achieve the necessary elements of Local Area Management, including accountability, administration (e.g., data management), and enforceability. As with sectors formed under the council's existing sector rules, the intent is to establish a mechanism to provide the organizational, economic and contractual infrastructure necessary to manage a discrete portion of the resource

Please see Appendix C for a detailed example of a proposed cooperative structure adapted from draft comments written by the Downeast Initiative. This represents only one example of cooperative governance structure, and others cooperatives could be structured very differently.

**Ongoing Area Management Governance Option 4**: Alternative Governance Structure

Alternative Governance Structures (other than advisory panels, sectors, and fishing cooperatives) can also be formed in order to provide an appropriate governance structure for a Management Area. Any such structure seeking to manage an Area must submit a plan, including a governance structure, demonstrating that it can achieve the necessary elements of Local Area Management, including accountability,

administration (e.g., data management), and enforceability. As with sectors formed under the council's existing sector rules, the intent is to establish a mechanism to provide the organizational, economic and contractual infrastructure necessary to manage a discrete portion of the resource.

## VI. DEFAULT LOCAL AREA MANAGEMENT MEASURES

In addition to any applicable management measures approved from Sections I. through Section V. above, a set of default measures will be developed through the Amendment 16 process for each Area (Inshore Gulf of Maine Offshore Gulf of Maine, Eastern Georges Bank, Western Georges Bank, Southern New England) that would apply until the time that a Local Area Management Plan is approved for an Area and new rules for the Area are approved. Examples of the types of measures that should be considered as default measures for Areas are included in Appendix D.

## VII CONCLUSION

Attempts to gauge whether or not Local Area Management will succeed as a management tool in other areas of the world have taught us that any attempt to create sound Local Area Management must include the following considerations.

a. Effective governance requires good, clear boundaries. The boundaries have to define the Area and the people to which the rules of governance apply.

b. The boundaries of the governance unit work best when they correspond to a distinct, fairly homogeneous area; in the case of fisheries, a distinct biological/oceanographic system. Good boundaries tend to contain the results of actions taken within those boundaries and, as a result, make accountability and learning easier.

c. The organizations of governance have to be "nested" – e.g., local, state, and federal levels, or boundaries within boundaries, and there has to be close cooperation that also allows as much independence as possible at each level of governance.

d. In multiple-scale resources, such as the groundfishery, rule-making authority has to be divided so that "locally" made rules apply as much as possible to activities whose principal impacts are "local" and rules made at a broader scale apply to activities whose impacts occur at a broader scale.

e. Users have to have an active role making the rules for the use of the resource (e.g., in a representative council); there has to be a strong element of user responsibility and self-governance and self-financing – a sense of ownership and a self-interested commitment to the future health of the resource.

f. The people who enforce rules have to be accountable to the people who make the rules and use the resource. In the best circumstances, there is a strong element of informal self-enforcement by users.

g. Sanctions for rule breakers have to be graduated and adjusted to the circumstances and manner of use of the resource.

h. There have to be timely, affordable cost arenas for the resolution of conflicts.

We believe that the groundfish fisheries in the Gulf of Maine meet these guidelines, making Local Area Management all the more likely to succeed. (Map Figs. 8-11[1])

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[1] Fig 10 includes shrimp data, however, the more important story being told here is the relationship between home-port and fishing grounds. In addition, these maps have been cropped based on available VTR data thus the absence of data for Down East Maine.

**APPENDIX A: Biophysical Justification for Area Management.**

**Biophysical Justification (Figures 1-7):**

The spatial domain for fisheries management must conform with the spatial scales of the species or ecosystems to be managed. The Gulf of Maine's coastal zone is geologically, topographically (Fig. 1), oceanographically (Fig. 2, 3) and biologically distinct from the rest of the Gulf of Maine (Fig. 3). This results in distinct patterns of distribution and abundance of several important harvested species such as Atlantic cod, American lobster and winter flounder (Fig. 5, 6).

The Gulf of Maine's inshore coastal zone has a relatively shallow shelf that distinguishes it from the topographically deeper offshore basins (Fig. 1). Over this inshore region flow the coastal currents of the Gulf of Maine (Figs. 2, 3) as part of the larger counter-clockwise gyre that circulates within the Gulf of Maine. The Eastern Maine Coastal Current (EMCC) drives oceanography and trophodynamics in the region from eastern Maine from the Canadian boarder to about Penobscot Bay. The EMCC is unstratified, tidally mixed water that is distinctly cooler and nutrient-rich. It contributes to phytoplankton distributions (Fig. 4).

The coastal zone is particularly productive because of its depth and proximity to coastal productivity from benthic macroalgae and phytoplankton. Phytoplankton are relatively short-lived. After death and as they sink, microbes consume them. In shallow coastal zones a higher proportion of their food value reaches the benthos. The rich foodweb in Maine's seafloor supports numerous groundfish species that live on or near the benthos.

Although many species such as white hake and Acadian red fish have cosmopolitan distributions throughout the Gulf of Maine, many others show coastal and shallow water distributions such as those in Figs 5 and 6. More importantly, the elevated levels of primary productivity have historically supported high concentrations of groundfish.

Numerous studies have concluded that groundfish stocks are structured as metapopulations. That is, species such as cod have discrete regions in which spawning, growth and recruitment occur. These local stocks are spatially segregated, demographically distinct demes (subpopulations) with limited gene flow among adjacent demes. Evidence for local stocks in the gulf of Maine comes from several sources. First, the chronology of decline in groundfish stocks shows marked asynchrony. Coastal Maine stocks collapsed in the 1930s, Canada's Grand Banks in the late 1980s and the Gulf of Maine in the early 1990s. Similarly stock recovery shows different trajectories in different regions. Single stocks would be expected to decline in unison. Several genetic studies conducted in Canada support the idea of local stocks forming metapopulations. Finally, research by Ted Ames mapped the location of inshore spawning grounds that complement the earlier maps made by Goode and Rich for the 1880s and 1920s, respectively (Fig 7).

Defining the proper spatial domain is critical for ecosystem-based management. Tansley (1935) defined ecosystems as "the whole system (in the sense of physics), including not only the organism-complex but also the whole complex of physical factors forming what we call the environment of the biome." Clearly the whole complex of physical factors found in the inshore coastal zone is distinct from offshore regions of the Gulf of Maine. We cannot determine with precision the spatial area that defines a local stock or an ecosystem. However, management should move forward adaptively. Finer spatial-area subdivisions allows for higher-resolution understanding of how the system works.

**Oceanographic and biological determinants for inshore/offshore boundaries.**

From afar, adjacent marine ecosystems often look distinct but upon closer inspection, their boundaries blur. The inshore coastal zone in the Gulf of Maine is relatively shallow, the tidally mixed water with nutrient-rich water that is turbid due to its rich plankton abundance that rains to the seafloor feeding demersal fish and other organisms. In contrast, towards the center of the Gulf of Maine, water is clear,

relatively stratified and nutrient poor. The striking differences between these two regions translate to concentrated food in coastal zones that can sustain dense populations of groundfish and other species, as mentioned above.

One the goal for Local Area Management is to contain sufficient area for local stocks to complete their life cycles. Spawning, natal, nursery and feeding grounds of each managed species should be contained within the Local Management Area. In addition, other aspects of these ecosystems should be included such as coastal productivity, interaction effects, such as competition and predation.

**Adaptive Management**

Management moves forward with the best available science. However, gaps between what we need to know and what we do know must be bridged by assumptions that should be critically examined at a later date. Such information may require management changes (i.e. adaptive management) that could be further perfected with more information. We call this an information loop and the source of information should be from both the fishing and the scientific communities. Local Area Management requires thatwe know the location of boundaries for the managed ecosystem and/or stocks. While the inshore zone is easy to approximate, it is difficult to define precisely because it is affected by so many highly variable factors such as ocean currents, plankton blooms and fish stocks.

As we learn more about the spatial domain of the managed stocks, ecosystem, and social system, we will be able to more surgically and crisply define boundaries. In the long-term the credibility of the information loop will hinge on the quality of the input information. For that reason, local governance units should be encouraged to develop their own scientific infrastructure. Over time the credibility of competing theories can be tested and the best available science will improve. The resulting management decisions will be robust.

**APPENDIX B**

**GOALS and PRINCIPLES of LOCAL AREA MANAGEMENT**

**Goals:**

1. To restore and enhance the Gulf of Maine ecosystem.
2. To create new management and governance structures in order to achieve Goal 1.
3. To create open and participatory methods of sharing information and conversation in order to achieve ecological and economic stability, personal responsibility and accountability, resource protection and distributed power and authority as appropriate.

**Principles:**

To achieve these goals, the following principles will form the foundation upon which all decisions and actions shall be built upon.

Social

1. Make decisions at the most local level possible that includes all relevant and affected parties
2. Give each participant an equitable opportunity and responsibility to participate in discussions and deliberations.
3. Deliberate and make decisions using current and objective knowledge and information derived from scientific methods and practical experience.
4. Have an equitable obligation to provide knowledge and information that is relevant and essential to the realization of our goals and that is collected in a way that has minimal impact on confidentiality and competitive position.
5. Maintain the highest standards of credibility and ethical conduct, fair and accurate dissemination and full disclosure and accountability for our affairs.
6. Protect marine uses or interests consistent with the goals and principles from being substantially sacrificed to, or eliminated by, any other use or interest.

Biological Principles

1. Protect reproduction. Fisheries must be managed in a way that recognizes critical points in the life-history strategies and spawning patterns of species.
2. Protect juveniles. Fisheries must be managed in a way that will allow adequate numbers of juveniles to reach reproductive age.
3. Maintain food-chain relationships. Fisheries must be managed in a way that recognizes and protects food-chain linkages.
4. Maintain critical habitat. All activities must be managed so as to maintain the integrity of habitats critical for spawning, juveniles and feeding.
5. Protect local stocks. Fisheries must be managed in a way that protects local stocks where there is a probability that they exist.

**Collaborative Fisheries Management - Defined**

Collaborative management is a form of problem-solving that engages all relevant stakeholders (users, scientists, environmentalists, managers, and concerned citizens) in decision-making from start to finish. It does not supplant the current management process; rather it enhances legally sanctioned decision-making by creating new social arrangements and solutions in cooperation with the affected communities. This approach carries the distinct advantage of creating a sense of shared ownership of the science and policies that ultimately regulate the livelihoods of resource-dependent communities. While some modest achievements have been made to protect and preserve the country's natural resources, they have almost invariably been accomplished through the force of legal authority. Most of us would agree that the

preferred path to long-term protection of resources is by enabling and embracing a collective recognition that our natural resources contain inherent value; that an ecological problem or crisis indeed exists and that acceptance of responsibility is necessary to correct the problem. When this is achieved, the energies of a majority can be harnessed toward action.

**The Northeast Region's Vision for the Future of the Groundfish Fleet**
Northwest Atlantic Marine Alliance
Fleet Visioning Project, 2005

**DIVERSITY:** A geographically distributed commercial and recreational fleet that includes all gear types and boat sizes.

**ECONOMIC VIABILITY:** An economically viable, safe, and sustainable fleet that works with shoreside infrastructure to supply seafood and job opportunities for coastal communities.

**GOVERNANCE:** Participatory, accountable, and decentralized governance structures at various scales that include local involvement in decision-making and maintain an adaptive regulatory environment.

**ENVIRONMENTAL RESILIENCE:** Fishery stakeholders who exhibit stewardship of resources that is consistent with the long-term health and restoration of the marine ecosystem.

**APPENDIX C**

The following cooperative governance structure example is modeled on the draft comments from the Downeast Initiative and represent one example of cooperative governance. )ther cooperatives could be structured differently.

1. Co-op Governance

The Co-op must be broadly representative of stakeholders with an interest in the health of the fishery, with three classes of members: the fishing industry, state and federal governments and public non-profits. The three classes of stakeholders in the Co-op will have the following voting representation within the Co-op: current permit holders who choose to fish in the Area - 50%, relevant state government - 25% - and public non-profits, i.e., non-fishing public interests - 25%

There are two ways that non-profits could gain membership in Co-op governance: (1) They could be appointed by the industry and state representatives on the board; or (2) non-profits could be required to purchase permits/DAS equivalent up to the value of 33% of current permits/DAS in order to vote, otherwise representation is by states.

At any time except during the initial start-up, the total number of industry shares in the co-op should reflect the current value of the fishery relative to its expected value when it is restored. (e.g., if the current value of the fishery (TAC x price x species summed for all species) is 20% of the estimated maximum value of a restored fishery, then current shares in the Co-op will be 20% of the potential maximum number of shares.

The initial start-up value of industry shares should be equal to twice the long-term value of fishing from the current TACs in the Area. (i.e., current permit holders are guaranteed there will be no new entry until the fishery rebuilds to twice its current value. After that any new entry or expansion of current shareholders has to be purchased as new shares from the Co-op. The Co-op is required to issue new shares as the fishery grows and uses the revenue for its own operations.)

2. Transition from DAS/Permits to Co-op Shares

Before the initial start-up, fishermen will declare the percentage of the value of their current permit/DAS they want to assign to the Area.

The initial distribution of individual shares in the Co-op will be equivalent to the individual's current percentage of the total value of permits/DAS initially assigned to the Area by fishermen.

3. Shares

Shares may be bought and sold.

Shares are created in small denominations so that the entry of new small scale fishermen is not artificially restricted. (Consequently, each shareholders may have dozens of shares.)

Shareholders may hold shares in more than one area co-op or permits to fish elsewhere, thereby giving them access across boundaries. (This requires an 'investment' in each area fished and is the mechanism for permeable boundaries with stewardship incentives. Both 'resident' and 'non-resident' fishermen may cross the boundaries of the Area under these conditions.)

NEFMC will set limits on the percent of shares held by an individual or corporation or non-fishing interests in an Area or in the whole of New England. Each Co-op may set limits on percent shares that are stricter than those set by NEFMC.

4. Determination of Individual Allocations of Access to the Fish

Each fisherman is guaranteed an individual allocation of fishing effort equal to his percentage share of the non-governmental shares in the Co-op.

Each year the Co-op will offer to lease in a market open only to fishermen shareholders approximately one-third of the total fishing effort for the Area, i.e., DAS, trips limits, or whatever unit of fishing effort it chooses. (Alternatively, the co-op will conduct a quarterly lease sale. This allows the Co-op to incrementally adjust fishing effort as it sees conditions changing, while at the same time giving fishermen a three-year lease.)

Only non-governmental shareholders may lease effort.

Each lease will have a term of three years (long enough to provide a fisherman with a reasonable business planning horizon. Initial leases may be for different terms until three years becomes the norm. Then at any time a fisherman might hold, for example, 33% of his effort in leases that expire in one year, 40% that expire in two and 27% that expire in three.)

Fishing leases also will be created in small denominations so that a fisherman may hold dozens of leases (also facilitates trading of leases and increases flexibility.)

The revenue from the sale of leases by the Co-op is returned to shareholders in proportion to their Co-op shares (i.e., a fisherman who leases effort in proportion to his shares in the co-op has no net expense for leases.)

A fisherman may lease more than an amount equivalent to his shares in the Co-op, but the Co-op may set limits on that amount, e.g. 200% (This is to allow flexibility for fishermen making a transition, or just entering the fishery. A fisherman who leases in greater proportion than his co-op shares will make a net positive lease payment. A fisherman who leases less than in proportion to his Co-op shares will receive lease revenues.)

Leases may be sub-leased (a fisherman who chooses not to fish or has a sudden change in plans can lease his effort with no penalty.)

The Co-op may lease to individual fishermen a part or all of the government shares. Revenue from these shares will be used to support the operations of the Co-op (This is basically a means for the Co-op to tax itself for its own operations without having an explicit taxing authority.)

**APPENDIX D**

The following examples of Default Local Area Management Measures are intended as examples of Area Management Measures that have been discussed for the inshore Gulf of Maine area and are intended only to begin the discussion for the appropriate set of default measures to be determined through the Amendment 16 process.

Habitat Protection:

1. Jeffery's Ledge closure to include mid-water trawling
2. A portion of Middle Bank
3. Eastern Maine Deep See Coral
4. Close Jeffery's Bank to all but Lobstering

Examples for Bottom Trawlers:

1. No bottom trawling at night inside the 50 fathom curve year round
2. Roller/rockhopper gear limited to no greater than 12 inches in height
3. Groundcables and legs limited to a total length of 45 fathoms with a phased reduction to 15 fathom legs over three years.
4. 6.5 inch diamond mesh on bottom and 6.5 square on top to form a composite cod end.
5. Provide incentives for using gear technology to reduce depleted species catches and discards.
6. Elimination of 20-day blocks out of the groundfish fishery between March and May.
7. Reconfigure rolling closures to more effectively address cod aggregations and also to address other species of concern.
8. Mandatory real-time data collection
9. Collaborative research requirements identified and prioritized locally
10. VMS

Examples of potential rules for Gillnet vessels:

1. Develop a night time conservation equivalent to no trawling (i.e. no overnight soaks)
2. 7-inch minimum mesh
3. Maximum of 30 stand up or 50 tie-downs
4. Continued use of pingers and effective gear configurations during peak harbor porpoise and whale migration
5. Participate in whale disentanglement teams
6. Eliminate 20-day blocks out of the groundfish fishery between March and May
7. Participate in real-time data collection and collaborative research
8. VMS

# Area Management Coalition

**Local ecology, local people, local decisions.**

## A solution to New England's fisheries management crisis demands greater cooperation between government agencies, scientists, and the fishing community.

**We already have area management:** While "area management" may sound novel it is actually a fisheries governance approach that New England adapted to long ago: in the sharing agreement for U.S. and Canadian waters; in the lines that divide fish stocks in the Gulf of Maine, Georges Bank, and southern New England; in the areas of the ocean that have been designated for special access permits, gear types, marine protected areas, and seasonal closures.

Put simply, the strategy is designed to create economic incentives that lead to an optimum sustainable harvest of fish and a fair distribution of the resource to fishing communities. A fundamental strength of the strategy is that it allows local communities to design fishing controls (within the bounds of legal and biological limits set by the government.) The strategy is based the commonsense idea that fishermen are experts in regards to their business and need to be included in the decision-making process that determines their livelihoods—and the health of the ocean upon which they depend.

**The Council asked the fishery for innovative ideas. The fishery has spoken:** Last year, the New England Fishery Management Council (NEFMC) asked the industry to think outside the box for solutions to the social, economic, and ecological problems that have long plagued the region's groundfishery. On Feb. 8, the Council voted to have its groundfish committee to further investigate the merits of three strategies for possible implementation in Amendment 16. One of the proposals selected is known as area management, in reference to its adaptability for particular ecological needs in the ocean and particular social needs on land. The recent revision to the Magnuson-Stevens Act, which prohibits exceeding a fishery's maximum sustainable yield (MSY), underscores the need for fishermen to collaborate with managers in designing regulations that set an effective pace for fishing effort and assurances that we live within limits. In short, if we don't create rules that achieve the plan goals, the government (or some court) is likely to do the job for us. We believe area management gives fishermen maximum flexibility to protect their resource—and their communities—within the boundaries set by nature and statutory law.

**Area Management FAQS**

**What are the areas?** Management areas would be set based on real ecological boundaries, the abundance and distribution of fish, and economic and the social and economic differences between fishing communities rather than political convenience. Initially, we propose a split between the inshore and offshore Gulf of Maine. We believe that this split borders on and around the 25600 loran bearing and incorporates the 100 fathom curve. Such a division is needed for two reasons. First, it recognizes that fishing businesses are tightly woven into the social fabric of their communities. Second, it acknowledges the substantial social and economic goals and thus management needs which exist between the inshore and offshore fleets. It is important to emphasize again, however, that the area management model does not impose one set rules on the entire region. Rather, it establishes a framework for communities to adapt rules within constraints to the fine-scale social and biological characteristics of their area. Since our understanding of these characteristics tends to improve through on-going industry, government, university, and institutional research, the need for new management areas may become obvious. In such a case, the plan encourages these localities to create fishing practices and controls that work best for them.

**To which area will I belong?** Initially, area boundaries would be permeable, with fishermen making declarations into their primary fishing area for three years. These declarations would include information on vessel size, horsepower, and days-at-sea allocations so that fishing power and investments by area fishermen can be appropriately considered. This information will help quantify the potential total amount of fishing effort in each area and inform the advisory panel's development of appropriate management measures for the area. Such a declaration is important so that the number of participants can be determined. Once that's determined, measures such as weekly trip limits, for example, can be established and monitored. Fishermen would be allowed to fish in both inshore and offshore areas during the course of the year. However, catch by vessels fishing outside their primary area would be limited by a set-aside based on a percentage of the overall area TAC. Fishing in multiple areas on the same trip may complicate efforts to monitor area-specific TACs and should not be permitted unless monitoring and enforcement concerns can be addressed. The goal of this provision is to allow fishermen to have a stake in how the management works in his chosen area and accept stewardship responsibility for it. The more tightly connected operations are to one area, the greater the likelihood that the rules will be effective. Allowing vessels to waffle between areas adds a level of complication that we feel should not be encouraged.

**Who sets the TACs, and what about the derby?** Managers at the NEFMC and National Marine Fisheries Service (NMFS) will determine annual catch limits as hard total allowable catch (TAC) levels for each stock of all regulated groundfish species in the existing management areas stock -- the Gulf of Maine, Georges Bank, and Southern New England -- based on the best scientific information available. Once this is done, the council and NMFS would allocate TAC to the inshore area and a TAC to the offshore area based on information from vessel trip reports, trawl surveys, tagging studies, and other relevant data. We recognize that many fishermen, understandably, oppose strict catch limits because they have so often led to derby fishing and waste. However, the Magnuson-Stevens Act now demands that management plans prevent overfishing. Under area management, fishermen and community stakeholders will develop controls to pace the harvest, improve market prices, and ensure that TACs are not exceeded.

**What would local government look like?** Initially, fishermen will participate in area advisory panels under the council's existing advisory panel structure to develop operating rules, such as gear modifications, closures, fishing time, and so on. The advisory panels would then submit their proposals to the council and NMFS for approval and implementation. We also suggest that the council consider mechanisms that encourage binding contracts, similar to those used in sector management approaches, to increase accountability and stewardship by area fishermen. Once the baseline operating procedures are established, local governance groups may form and further refine rules for their area.

**What about monitoring the catch?** Area management approaches will include provisions for real-time catch reporting to promote a more responsive and adaptive management system. We anticipate that vessel monitoring system units will be enhanced to accommodate daily reporting. Private contracts, similar to those used in sector management, also can be used to efficiently manage data. NMFS and the states would retain the authority to ensure area TACs are not exceeded. Under area management, the need for real-time monitoring will drive innovation. We believe that the private sector has the knowledge and capacity to help build technology that will accommodate such imperatives.

**Discards?** We recommend that area management approaches require full retention of all legal-size groundfish and full accountability for all landings. Accurate accounting of all catch -- landings and discards -- is an important part of any hard TAC management system and will lead to innovation and gear modifications to eliminate waste. Once the rules are defined and full retention becomes a requirement, fishermen will build better gear and share local knowledge in order to harvest a high-quality product. Everyone agrees that discards should be unacceptable. Area management rewards fishermen for innovation and eliminates regulatory discards.

**What happens when the TAC for a particular species is reached?** First and foremost, this will be driven by the pacing of the catch. When an agreed upon % of the TAC is caught, pre-determined, adaptive measures will kick in. Examples include closing down areas where a majority of the species has been caught, changing the trip limits or even gear modifications. It is the intention of Area Management to keep fishing on more abundant stocks while addressing the issues of stocks of concern.

**Questions still remain.** These are the basic elements of our proposal. Of course, there are still issues that need to be determined and questions that need to be answered. For example, how do we solve the initial allocation debate? How do we deal with stocks of concern with very low TACs? We have several ideas and will be answering these questions in the coming weeks and months. Like any new idea, great thought and debate will produce a superior product. We need to ask ourselves: Can we manage the fisheries better? Can we forego short-term profit to achieve long-term goals, like a sustainable fishery for our grandchildren? This group of dedicated people has said yes. We ask that you join us and give us your input. Everyone is welcome and encouraged to participate.

For more information contact:

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Robin Alden, director, Penobscot East Resource Center and former Commissioner of Maine Department of Marine Resources, 207-367-2708

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# NOTES

# POINTS SYSTEM MANAGEMENT PROGRAM

## AN OUTPUT CONTROL MANAGEMENT PROPOSAL FOR THE NORTHEAST MULTISPECIES FISHERY

Submitted by the Northeast Seafood Coalition

December 29, 2006

# POINTS SYSTEM MANAGEMENT PROGRAM

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# SECTION 1 CORE ELEMENTS OF THE POINTS SYSTEM PROGRAM

## A. METHOD OF ALLOCATION

### 1. Baseline Points

***All vessels that received any A DAS thru A13 would qualify to receive an allocation of Baseline Points.***

The baseline characteristics of each permit would be based upon the current NERO files for vessel replacement and expanded to include allowable upgrades. In other words, each permit as if fully upgraded from the baselines as corrected in each vessels individual NERO file. The DAS leasing and DAS transferring baselines should only be used for estimating and preliminary purposes. **Ultimate values would be based upon currently corrected baselines and potential upgrades if not yet taken.**

1. Only Length and Horsepower will be used for vessel baseline calculations.
2. "A" DAS and "B" DAS allocated through A13 will be treated the same. (Note: the ratio of A DAS to B DAS is exactly the same for all permits that received A DAS in A13. Therefore, it makes no difference to include or exclude B DAS from the calculation since the relative differences in allocations between vessels will be exactly the same. The net effect of not including B DAS in the calculation as far as allocation or in management of the Points System is virtually zero.)
3. "C" DAS and "B" minimums that may come from future framework actions will be treated the same.

The formula for calculating BASELINE POINTS would be:

**[(Length X 28) + (HP X 2.8)] X (total effective effort DAS)] = Baseline POINTS**

Example: A permit whose NERO file baselines for vessel upgrade / replacement are 70' length and 500 horsepower. This example permit has never been upgraded by a vessel replacement and is therefore eligible to upgrade. The vessel qualified 82 DAS through Amendment 13 effective effort determination (49.2 A days and 32.8 B days after A13 and 45.1 A days / 36.9 B days after FW42) .The following calculation would occur:

Upgraded vessel length 77' (10% length upgrade)
Upgraded Horsepower 600 hp (20% hp upgrade)

77 X 28 = **2,156** length points

600 X 2.8 = **1,680** horsepower points

**3,836** ***Total vessel / permit length and horsepower value***

**3,836 X 82 DAS = 314,552 Total Baseline Points**

## 2. Catch History Bonus Factoring

Catch History would be factored in by establishing vessel classes and associated landings and revenue during a baseline period.

### a. Vessel Length Classes

In order to minimize the effects on vessels that marginally fall within or outside any particular size range, it is proposed that finer resolution categories be used. The categories would be based upon the upgraded permit length used to calculate base points and would be the following increments:

1. Up to 30'
2. 31' to 35'
3. 36' to 40'
4. 41', to 45'
5. 46' to 50'
6. 51' to 55'
7. 56' to 60'
8. 61' to 65'
9. 66' to 70'
10. 71' to 75'
11. 76' to 80'
12. 81' to 85'
13. 86' to 90'
14. 91' to 95'
15. Greater than 95'

For the purposes of consistency and to avoid misapplication of a bonus multiplier, the length used to determine which vessel length class a vessel must be compared within will be the same upgraded baseline used to calculate the permit Baseline Points. The rationale for this is in theory, if a smaller vessel was fishing during the baseline period using a larger vessel permit, that permit will receive the higher vessel Baseline Points resulting from the larger vessel permit baseline. To avoid application of a Catch History Bonus multiplier attained by comparing the vessel to the smaller size class to a Baseline Points total from the larger permit baseline points it seems appropriate to use the same baseline for Catch History comparison as the baseline used to award Vessel / Permit Baseline Points..

## b. Baseline Period

The Baseline Period for determining Catch History Scores are the 8 fishing years from 1996 thru 2003.

*Rationale:* The reason 2003 was chosen as the terminal year of the baseline is because FY 2003 was the final full fishing year that each permit was restricted to fishing their individual allocation of DAS. Amendment 13 initiated the DAS leasing program which has a profound impact on individual permit catch history. Amendment 13 and the subsequent framework actions have created a tremendous dependence upon DAS transferability as the sole method of mitigating DAS reductions. Most groundfish dependent operations have invested in additional permits for the purpose of leasing the DAS associated with those permits to themselves. By using baseline years for catch history that are post A13, we would be devaluing the permits participating as lessors while using an apples to oranges evaluation of catch histories generated during the consolidated period relative to when all permits had equal opportunity to utilize individual allocations.

Each permit would undergo two separate evaluations:

1. Sum total of Landings in Pounds of NE multispecies regulated groundfish, monkfish and skates for the eight years of the baseline period.
2. Sum total of Gross Revenues from the sale of NE multispecies regulated groundfish, monkfish and skates for the eight years of the baseline period.

## c. Quartile Scoring Categories within Vessel Size Ranges

All permits would be distributed into their respective vessel size categories (1 thru 15) with each category being broken down into quartile scoring sectors.

***Score***

$0^{th}$ to $24^{th}$ percentile is the lowest rank score of…… **1**
$25^{th}$ to $49^{th}$ percentile a score of…….. ……...**2**
$50^{th}$ to $74^{th}$ percentile a score of ……**3**
$75^{th}$ to $99^{th}$ percentile being the highest score …..……...**4**

## d. Scoring System

1. For the total landings evaluation, each vessel (permit) would receive a score from 1 to 4 relative to other vessels (permits) within the size class, 4 being the highest.

2. For the total revenue evaluation, each vessel (permit) would receive a score from 1 to 4 relative to other vessels (permits) within the size class., 4 being the highest.
3. The two scores would be totaled and the average of the two would be the Catch History Bonus score to determine which tier / bonus the vessel would qualify.

### e. Catch History Bonus Tiers

**Tier One** ***(Average score of 4)*** would be a factor of 1.60 (60% bonus)

**Tier Two** ***(Average score of 3.5)*** would be a factor of 1.50 (50% bonus)

**Tier Three** ***(Average score of 3)*** would be a factor of 1.40 (40% bonus)

**Tier Four** ***(Average score of 2.5)*** would be a factor of 1.30 (30% bonus)

**Tier Five** ***(Average score of 2)*** would be a factor of 1.20 (20% bonus)

**Tier Six** ***(Average score of 1.5)*** would be a factor of 1.10 (10% bonus)

**Tier Seven** ***(Average score of 1)*** would be a factor of 1.0 (no bonus)

*Example:* Using the hypothetical vessel used in the example for calculating Baseline Points. That vessel received **314,552 Total Baseline Points.** During the Catch History baseline period (eight fishing years 96-03) this vessel was in the 56$^{th}$ percentile for total landings of groundfish, monkfish and skates (fisheries requiring the use of a DAS) and in the 79$^{th}$ percentile in gross revenues (from fisheries requiring the use of a DAS). The size class this permit was compared in was # 11 (76'-80'). This vessel would have scored a 3 for landings and a 4 in revenues for an average score of 3.5. An average score of 3.5 is a Tier 2 which qualifies for a bonus factor of 1.50 (50% bonus). The results would be: **314,552 x 1.50= 471,828 Total Points**

## 3. Future Individual Points Allocations & Points Carryover

Individual points allocations will remain the same each year. Once a permit is allocated points it will receive the same points each year. It will be unnecessary to have reductions in points allocations since the dynamic system for adjusting biological point values (BPVs) will be the management control.

No permanent transfers will occur during the moratorium period.

The only method for a vessel to increase the permanent point allocation for a particular permit is through the Voluntary Points Contribution Program explained below.

A vessel may carryover up to 10% of their points allocation from the current fishing year into the next.

## 4. Voluntary Points Contribution Program

At any time during the fishing year a permit holder can voluntarily deposit an unlimited number of his / her points allocation into a conservation account that will be associated with each permit in the database. Points transferred into these individual accounts are voluntarily frozen from use indefinitely. The benefit to the permit holder is that his / her annual and permanent points allocation will be increased by a number of points equal to 5% to10% (policy choice) of the principle balance of points in the conservation account associated with the permit.

The purpose of this concept is to promote conservation by offering an incentive to permit holders not to feel compelled to use all of their points for fear of losing them at the end of the fishing year. This problem exists in the current DAS leasing program that compels permit holders to unload excess DAS before the March 1st deadline since anything beyond 10 DAS carryover is lost with no benefits for voluntarily surrendering the DAS without leasing them.

This program can be utilized as an option to carryover points and points leasing and will provide permanent and recurring benefits to permit holders electing to utilize this program. Effectively, the benefits to the fishery will be that the finite universe of points used to calculate BPVs may be reduced voluntarily resulting in lower BPV costs to permit holders using their points.

## 5. Transferability

1. For two (2) complete fishing years, allow free exchange through Points Leasing. No vessel size or horsepower constraints between vessels.
2. Place a moratorium on permanent transfers for three (3) complete fishing years.
3. After two years, review the results to understand what desirable or undesirable changes have occurred as a result of an open and flexible leasing market.
4. Extend moratorium on permanent transfers until such time as the council has developed and implemented a comprehensive transferability program that achieves the policy objectives relative to fleet demographics and biological controls.

*Rationale*: As a result of converting all permit allocations to a common currency and utilizing Multispecies Points allocations as **output units** directly linked to species specific removal and mortality, transferability is theoretically conservation neutral. NSC recognizes and has seriously considered the range of social, economic and biological pros and cons associated with the selected method/s of transferability. At this time, we've concluded that absent a period of open and flexible exchange of points it would be difficult to predict socio-economic costs/benefits. However, it isn't difficult to imagine the negative biological effects that can occur as a result of an unnecessarily rigid policy on transferability. One of the flaws in the current system is that there is no method to reliably shift effort between vessel classes or geographical areas in a timely enough manner to be effective biologically or economically. The Points System offers an opportunity to allow the market (not just the fish prices but the Biological Market resulting from the biological objectives and the management of Biological Point Values) to freely influence (balance) the scale of species specific effort. NSC believes that while placing constraints on temporary (leasing) transferability may or may not have the desired effect on socio-economic policies it will certainly impede, to some degree, the dynamic movement of effort necessary to achieve biological objectives.

## 6. Permitted Vessels and Vessel Replacements / Upgrades

All vessels actively engaged in the fishery must continue to meet the current size and horsepower requirements of the regulations. Replacements and upgrades of existing vessels and any new vessels activated with an existing limited access permit would be limited to the baselines associated with the permit.

# B. OPERATIONAL MANAGEMENT OF THE FISHERY

## 1. Basic Operation Requirements

- All vessels must have **Vessel Monitoring Systems**. Utility of the VMS program to be expanded.
- **Daily reporting** thru VMS of all catch of species managed under the plan.
- Prior to crossing the Demarcation line to land fish or end a trip, all vessels must **declare a hail** describing estimated quantity of all species to be landed.
- All vessels declaring a hail of fish to be landed must **identify the unloading station** code where fish will be landed.
- No vessel can begin unloading until **receipt of confirmation to unload is obtained** via an unloading station terminal. (see Technological requirements)
- **Full retention** of all legal sized fish managed under the plan.
  (Note: monkfish, skates, lobsters and other species managed under separate plans will continue to be managed under those plans……..see discussion under "Ancillary Elements")
- **No daily or trip possession limits** on groundfish species managed under the plan for the purposes of meeting biological requirements. Higher trip limits to control rate of catch for market, socio / economic or other purposes are policy considerations that could be utilized if a program is developed that does not cause regulatory discarding.

## 2. Removal of Input Control Measures

### a. Reevaluation of Closed Areas

- **Reevaluate all permanent closures used primarily as effort / mortality closures** originally designed to reduce efficiency by lowering CPUE on specific or all stocks. Notwithstanding habitat and spawning protections, reduce, eliminate or modify closures to increase CPUE to increase efficiency and reduce overall effort and gear impacts.

### b. Removal of Rolling Closures & 120 Day Blocks

- Eliminate all existing rolling closures.
- Eliminate the requirement for 120 blocks out of the fishery for gillnet vessels.
- Eliminate the 20 day spawning block requirement.
- Implement as soon as practicable, a dynamic spawning closure program that closes designated areas triggered by fleet information transmitted via VMS and incorporating the observer and shore-side landings monitoring programs.

## C. MANAGING WITH POINTS

The New England Council will have to make critical policy decisions relative to setting objectives and priorities to meet the National Standards and Magnuson-Stevens mandates.

It must be understood that the Points System concept is intended to serve two distinct purposes.

- The first is a method of allocation by converting the current allocations of vessel baselines, DAS qualified as effective effort in Amendment 13 and catch history factoring……to a common currency output unit.
- The other distinct purpose of the Points System is a management tool that can be used to accomplish a range of socio-economic and biological objectives.

This submission is intended to set forth an explicit and comprehensive method of allocation. In this section we set forth management features and programs within the management system to compliment the basic elements. Further development of the Points System management concept will involve continued evolution and development of a computer model envisioned for accomplishing the setting and in-season adjustments of BPVs. In order to efficiently complete and accomplish this task there are basic elements of data and policy direction that can only come from the NEFSC, NEFMC, NMFS the PDT and council staff.

The basic elements and associated requirements for policy choices and data needed to develop the computer programs are set forth below:

1. Total points allocated to the fleet as a result of the allocation method specified in Section A must be known. This number is the total fleet capacity units that can be expended as output units on the multispecies complex.
2. The total allowable catch figures for all stocks managed under the plan.
3. A clear list of policy decisions relating to the balance between achieving Optimum Yield (OY), staying within catch limits, handling of overages, dealing with scientific uncertainties and the level of tolerance to volatility in periodic changes in BPVs must be set forth by the council.

Once the information above is available, a computer model can be developed to achieve the objectives of the plan. NSC is committed to development of such a computer model and has received preliminary technical review and sincere intent to continue development from the Massachusetts Marine Fisheries Institute and the University of Massachusetts Dartmouth.

At this time, the NSC wishes to offer a general explanation of the mathematical, output controlled concept of managing by utilizing a dynamic, in-season adjustment

method of TAC management. Guided by a computer model, the setting of initial BPVs and subsequent periodic adjustments to BPVs can be predetermined and objective.

## 1. Assigning Biological Point Values (BPVs)

### Method for Assigning Initial / Starting BPVs for Each Stock

This process will be heavily dependent upon policy decisions and objectives. In setting the initial BPVs, the following issues should be understood and considered carefully.

- Setting the values too low could create a derby dynamic and cause unnecessary volatility and fairness issues later in the fishing year.
- Setting the values too high can create a reverse derby where vessels wait knowing the value is artificially set too high and will certainly drop as the adjustment model attempts to utilize TAC. Setting values unnecessarily high can cause fleet allocations to diminish rapidly even as high BPV stocks are caught as bycatch. This can prove harmful towards the objective of achieving OY.
- The more frequent the intervals for adjustments the less likely the change in BPV will be steep. This serves to smooth any unanticipated changes and would not be much different than many aspects of the fishery. Unlike the current system, the Points System can easily adapt by adjusting starting BPVs the following year if undesirable in-season adjustments occurred the previous year.
- The greater the tolerance to volatility in BPVs for in-season adjustment, the greater the control relative to staying within catch limits and achieving OY.

## 2. In-Season Adjustments to BPVs

Adjusting the BVPs will also be heavily dependent upon policy decisions and objectives. In setting the initial BPVs, the following issues should be understood and considered carefully.

- Changes in BPVs will affect catch streams in two distinct ways. One affect will be the behavioral changes prompted by the incentives and disincentives resulting in some degree of changed fishing strategies. The other affect on catch is the mathematical reality that individual vessel allocations are diminished at a faster rate when catching stocks with higher BPVs. Vessels that do not choose to either alter their fishing practices or lease their points to vessels capable of utilizing the points at a higher efficiency will cease their fishing operations as their allocations are exhausted.
- The greater the tolerance to volatility in BPVs for in-season adjustment, the greater the control relative to staying within catch limits and achieving OY.

- Adjustment intervals must be selected. NSC would suggest monthly adjustments to strike a balance between BPV stability and finer control of catch to catch trajectory.
- By adjusting BPVs more frequently the relative changes from one period to the next are likely to be more subtle. Monthly adjustments should smooth the BPV changes and serve as a buffer to both derby and reverse derby conditions.

It is this mathematical link between Species Specific Catch and Individual Vessel Allocations that is the foundation of the Points System. We have included an excel spreadsheet that uses a simple method of using historical percentage of fleet catch on a per stock basis and comparing that to relative TAC percentages for a future fishing year. For stocks that could potentially be targeted at high levels based upon historical data and the removal of trip limits, a risk factor can be assigned to multiply the historical percentage a stock contributed to past landings to increase the BPV initially and buffer any derby or increased directed fishing concern. Once the starting BPVs are set, the monitoring and real time landing information will drive the automated BPV adjustments based upon decision rules built around the landings trajectories established for each stock.

# D. ADMINISTRATION OF THE POINTS SYSTEM

## 1. Monitoring

- Daily reporting of all catch of all species managed under the plan.
- Prior to crossing the demarcation line, vessels must declare a hail and identify the offloading facility.
- Each licensed / permitted unloading facility will be required to have a terminal that can accept a magnetic strip card and PIN info from permit holders. No offloading can occur before confirmation from the system. All landings are input to the terminal system similar to checking out at a super market. This effectively debits the appropriate points total from the permit holders account and updates landings trajectories for the fleet and managers.
- Individual stock trajectories and current BPVs will be readily available to vessel operators, dealers, enforcement, managers and other stakeholders on the system.

## 2. Observer Coverage

Observer coverage should be more easily coordinated as the efficiency of fishing at higher CPUE by removal of trip limits and the elimination of the economic anxiety associated with DAS provides greater confidence in catch data from vessels on unobserved trips.

NSC strongly supports improvements in fisheries data including the reliability of catch data through appropriate levels of observer coverage.

Traditional IFQ or ITQ systems pose a far greater risk of high grading or discarding due to the fact that the consequences of catching non-targeted species and unintended levels are severe and inescapable due to the fact that full retention would require a sophisticated quota balancing system to keep individuals or sectors within their rigid, species specific quotas.

The DAS system allows discarding of all fish beyond a trip limit. There is no legal mechanism to land fish over the trip limit. This presents the greatest concern for reliable fisheries data. It also causes great uncertainty in the estimation of biomass as unreported catch effectively never existed.

NSC has spent considerable time discussing the Points System with fishermen and a recurring theme is “if I’ve got something on deck and I have the legal right to land it, I will land it.” It will be far easier to secure common currency points that species specific quota. NSC envisions there will be greater incentive to seek points and land fish than to discard. We hope managers see the fundamental advantage to offering a system that allows landing the fish over one that mandates discarding.

Relative to Observer program resources, NSC believes this system will result in less fishing time overall due to the increased efficiencies and the consolidated effort likely to result from points leasing. This should provide greater coverage of fleet landings with less resources.

## 3. Technological / Systems / Hardware

- Increased utility of VMS macros and PC based systems for electronic logbooks, hails and declarations.
- A computer model developed to set starting BPVs and in-season adjustments.
- A secure central server networked similar to a banking / ATM system with terminals at each unloading station and individual accounts for all permit holders.
- Stock trajectory and BPV information available via internet, satellite / VMS.

## 4. Socio-Economic and Demographics Considerations

- Policy decisions to control the movement of points between vessel classes, gear types, ports, regions etc. can be dealt with by setting caps and floors on leasing or permanent movement of points.
- NSC proposes to allow two years of free exchange thru leasing to see what actually occurs. Setting false constraints may have unintended conservation results by restricting healthy movement of effort.

# Section 2: ANCILLARY ELEMENTS OF THE PROPOSAL

## A. HABITAT CONSIDERATIONS

Several factors associated with implementation of the Points System should contribute to a positive impact on marine habitat.

1. The increased efficiency of fishing during times and in areas of higher CPUE will require less fixed gear and less tow time for mobile gear sectors.
2. Removal of trip limits and full retention requirements with catch linked directly to allocation will result in higher efficiency and less gear impacts.
3. Transferability of points will likely result in healthy consolidation reducing swept area by mobile gear compared to the current system which requires many vessels to work at low efficiency.

## B. MARINE MAMMAL CONSIDERATIONS

Several factors associated with implementation of the Points System should contribute to a positive impact on marine mammal interactions.

1. The increased efficiency of fishing during times and in areas of higher CPUE will require less fixed gear to achieve the desired catch.
2. By removing the use of Days at Sea, day gillnet vessels no longer have to be concerned about not setting enough gear for fear of not catching enough fish to make the loss of the DAS worthwhile. Under the points system, a gillnet vessel would only lose point allocation based upon what is caught.
3. Conversely, a day gillnet vessel will have the proper incentive to set less gear to prevent catching large quantities of high BPV stocks and loss of allocation. The current system provides exactly the opposite incentive.

## C. INTERACTION WITH OTHER FISHERY MANAGEMENT PROGRAMS (FMPS)

The Points System does not modify the existing management plans.

- Monkfish FMP:
  Monkfish vessels would continue to use monkfish DAS and groundfish vessels would continue to abide by the trip limits and DAS requirements of the monkfish plan. However, it is feasible to consider using sliding scale of points system for different categories of monkfish permits by charging higher point values for monkfish to lower category monk permits than higher category permits. This would have to be done under the monkfish plan.

- The Skate, Dogfish and small mesh multi-species plans are unchanged by the Points System.

## D. INTERACTION WITH US / CA RESOURCE SHARING UNDERSTANDING

The points system should integrate well with the US / CA management. NSC looks forward to improvements to the current Trans-boundary management scheme.

## E. INTERACTION WITH SECTORS

The points system works well with the concept of sectors. In fact, we envision points sectors being a much simpler and realistic approach to accessing the benefits of sector management without the problems associated with rigid quota shares and controversial allocation implications.

The points system is compatible with sectors utilizing full retention and hard TACs on all stocks with no combinations of points or DAS. If the allocation of the hard TAC quota shares is approved, the sector allocations are simply deducted from the overall TACs and the balance is used to calculate BPVs for the points system vessels.

What would not work are sectors that seek a combination of quota and DAS or quota and Points. Sectors of all quota and sectors and individuals working exclusively with points would work well within the same system.

The existing Sectors will not work unless modified to accept hard TACs for all stocks.

## F. COMPLIANCE WITH MAGNUSON-STEVENS 2006

Some have asked the question as to whether the New England provision in the recently approved MSA reauthorization relative to the referenda requirement being applicable to the Points System.

The provision explicitly applies to Individual Fishing Quota Programs. MSA includes a definition for what constitutes and IFQ:

**104-297**

(21) The term "individual fishing quota" means 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).

Under the points system, permit holders are allocated access points that imply no linkage to a percentage share of any single species nor do his allocation points represent a percentage share of the overall TACs for the fishery. A permit holders share of the fishery is entirely dependent upon how he conducts his fishing operation and is free to use his points on any stock at any level his points will allow before exhausted.

We view the Points as being much more analogous to the current DAS allocations in terms of what they represent as far as access shares to the fishery and distinctly contrasting to an IFQ as defined in the MS Act.

# SECTION 3: POINTS SYSTEM PETITIONS

# NORTHEAST SEAFOOD COALITION

16 March 2007

RE: What the Points System Is and What It Is Not

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NSC greatly appreciates the opportunity to present and discuss the Point System proposal submitted to the New England Council. As you may know, there is tremendous interest within the New England groundfish community in this proposal and the Council has voted to move forward with its further development and analysis as part of the Amendment 16 process.

In addition to other materials we have provided, there follows a discussion of 'what the Points System is and what it is not'. After you have had a chance to review the NSC Proposal to the Council and some of the basic background documents, we hope this will facilitate our discussions and a more in-depth understanding of this proposal.

- The Points System is a method of converting all current limited access DAS permit baselines resulting from Amendment 5 and Amendment 13 into a common currency access unit.

- It is not intended to be a reallocation of the fishery but rather a conversion from incompatible allocation units that do not provide adequate species specific controls into units of access that can be measured and controlled commensurate with the biological impacts of individual fishing operations.

- Receiving an allocation of points is analogous to receiving an allocation of days at sea in that, regardless of the number of points one receives, there is no possibility of determining any percentage or poundage of any stock or the fishery as whole at any point in time that any number of points represents.

    - In fact, this improvement sets up the reality that receiving a higher allocation of points does not represent a greater allocation of pounds or access. Depending upon how one spends their points, it is entirely realistic and contemplated that there will be many cases where lower point allocations result in higher landings and values than some vessels with higher points allocations.

    - With this in mind, it should be clear that the Points System is not an IFQ or an LAPP as these terms are defined in MSRA 06. In order to be either and IFQ or a LAPP, a limited access program must involve allocating fish in unit/s that represent a percentage (IFQ) or portion (LAPP) of the total allowable catch of the fishery.

- The Points System utilizes output controls on a fleet-wide level. This is done by inputting ACLs to a computer model that uses algorithms responding to landings / catch trajectories by ***altering the rate of allocation unit expenditure on a stock by stock basis***.

- The Points System does not rely upon fleet behavioral predictions to achieve biological goals. The points system relies upon a purely mathematical approach that responds to catch trajectories by altering the rate of loss of allocation.

- Although the method for setting Initial Biological Point Values will utilize past data relative to stock ranges, past fleet percent of utility, catchabilty, fleet demographics, etc. to arrive at a neutral risk initial point value setting, the real time landings / catch monitoring and short interval adjustment periods will quickly adjust BPVs to reconcile initial settings with actual trajectories.

- In practice, the consequence of fleet behavior has little bearing on the biological impacts of the plan and instead, poses a range of economic results that will be commensurate with the industry's ability to fish selectively and utilize higher BPV stocks to leverage low BPV stocks. Therefore, achieving OY is discretionary to individual stakeholders / permit holders and should be defensible from a social science / NEPA standpoint. See mathematical considerations for supporting statements.

## Mathematical & Practical Considerations

- There is a finite universe of points that can be expended on the stock complex. It is the total points allocated to the fleet.

- Each point can only be spent once. This means that every point that is used to land any species is a point that is no longer available to spend on another.

- The concern expressed by some that "everyone will go out and catch cod before the BPV increases in time to prevent an overage" can only be supported if the following were true:

    1. That those intending to do such a thing have control over a sufficient number of points to legally land such high volumes of cod. Using the NSC strawman approach to setting initial BPVs on cod would mean that 50% of the fleet points would have to be committed to directed cod fishing just to ACHIEVE the TAC.

    2. That the fleet will suddenly forego targeting of other stocks-- or would have the ability to avoid the bycatch of any other stocks-- regardless of the fact that their initial BPVs are lower than cod.

    3. That the fleet is willing to commit financial suicide by selling purely cod as cod prices plummet and prices for every other species skyrocket, while cod BPVs strip points allocations at a far higher rate than other stocks being INTENTIONALLY avoided.

    4. That the new closed market economy that this system will create will be ignored by the majority of the points holders.
    5. That the majority of the points holders will choose to expend their points on cod instead of leasing points to vessels that can not only achieve a greater economic return

on those same points but could afford to pay the lessor an amount approaching his net economic return had he chosen to use them on cod.

6. That vessels could afford to lease points to spend on cod when they will be competing with vessels seeking to secure points to target lower BPV stocks.

- The reality is that many fishermen will be targeting the stocks they always target which means that a substantial percentage of points allocations will be held and expended on traditional catch mixes of a variety of stocks. The mathematical result is less points available to be spent on other stocks. This reality serves to mitigate potential effort on any given stock of concern.

- Each species has a biological limitation as to the extent to which it can be found, caught and landed at a rate that is economically viable.

    - For example: When there was no trip limit on GB yellowtail-- and prior to the Settlement Agreement DAS reductions (when total available DAS were 140,000 plus and used DAS at near 70,000)-- the fleet landed approximately 3,500 metric tons. At that time, the stock was believed to be at or near Bmsy. Simply setting a BPV lower does not increase catchability and abundance. Therefore, the biological limitations are a constraint that must be considered.

- The Points System should not be subjected to a standard that assumes that all of the points MAY be used to target any given stock. To be comparable, the DAS system would have to assume that all of the allocated DAS MAY get used on one stock. We do not assume this to be so because we know that it isn't. A similar consideration should be given to the analysis of the Points System.