

**Requirements for evaluating the performance of individual fishing quota (IFQ):
A legal analysis**

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October 13, 2007

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Introduction

This report presents a legal analysis of the requirements of the 2006 reauthorized Magnuson-Stevens Act and relevant Gulf of Mexico fishery management plans and documents,¹ for evaluating the performance of individual fishing quota (IFQ) programs implemented to manage the U.S. Gulf of Mexico commercial reef fisheries with a focus on the red snapper IFQ.

Any legal analysis must always begin with the black letter law. This law is provided by statutes, regulations, and judicial decisions. If there is little to no law on point, then a secondary form of law such as the council's own plan or proposal, legislative direction, or general practice among colleagues may be persuasive authority for further analysis. Finally, scholarly articles may offer a glimpse of those requirements for evaluation.

As the reader will note, the research shows that most of the evaluative techniques and review specifications currently in the field are piecemeal and non-determinative in regards to IFQ plans; there is no set formula for the science or the over-all evaluation.

To that end, the following is divided up to satisfy those facets of analysis.

I. Law

There are two legal mandates regarding the Individual Fishing Quota (IFQ) that are important for the Gulf's Red Snapper plan: The first is the Magnuson-Stevenson Act (MSA), including the 2006 amendments signed into law in 2007; the second are regulations for IFQs and Fisheries Management Plans (FMP) by the National Marine Fisheries Service (NMFS), which is given regulating power in the MSA.

While there have been a few cases that have been brought to the courts regarding IFQs, these cases are primarily about the permits and leases given to fishermen. However, an analysis of these cases, which will not be listed here, demonstrates that the NMFS and the Secretary of Commerce are given a great deal of discretion on decisions made about IFQs. Thus, if the legality of the regulations above were questioned, it seems unlikely that the statutes would be over-turned or modified.

¹ The Gulf of Mexico Reef Fish Fishery Management Plan, and specifically Amendment 26, which establishes an individual fishing quota (IFQ) system for the commercial red snapper fishery (available at <http://www.gulfcouncil.org/Beta/GMFMWeb/downloads/Amend26031606FINAL.pdf>). Also see the Final Supplemental Environmental Impact Statement, available at <http://www.gulfcouncil.org/Beta/GMFMWeb/downloads/Amend%2026%20FSEIS%20072706.pdf>.

A. MAGNUSON STEVENSON ACT

URL: <http://www.nmfs.noaa.gov/msa2005/index.html>

Analysis: The following sections of the MSA are relevant for evaluation of IFQ programs. Note that inapplicable portions have been excised and important statutory guidelines have been placed in bold. Those portions in bold indicate either information that must be included in any review, or information that may be included in any review. Each section below will be followed by an analysis of the section and whether or not there is a requirement or a suggestion for inclusion.

i. SEC. 303A. LIMITED ACCESS PRIVILEGE PROGRAMS. 16 U.S.C. 1853a

(c) REQUIREMENTS FOR LIMITED ACCESS PRIVILEGES.—

(G) include provisions for the regular monitoring and review by the Council and the Secretary of the operations of the program, **including determining progress in meeting the goals of the program and this Act, and any necessary modification of the program to meet those goals, with a formal and detailed review 5 years** after the implementation of the program and thereafter to coincide with scheduled Council review of the relevant fishery management plan (but no less frequently than once every 7 years);

*Analysis – required in the review. This portion details that the IFQ must include the progress of the LAP in regards to the **goals** established within the MSA, as well as **any modification of the LAP program approved by the Secretary**. The goals of the MSA are extensive and the review should attempt to determine the progress in those goals, some of which include the following: fair and equitable distribution of privileges; the LAPs are reasonably calculated to promote conservation; they are carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges; conservation and management measures shall, where practicable, promote efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose; conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches; conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.*

ii. SEC. 407 GULF OF MEXICO RED SNAPPER RESEARCH 16 U.S.C. 1883

(1) Within 30 days of the date of enactment of the Sustainable Fisheries Act, the Secretary shall initiate an independent peer review to evaluate—

(A) the accuracy and adequacy of fishery statistics used by the Secretary for the red snapper fishery in the Gulf of Mexico to account for all commercial, recreational, and charter fishing harvests and fishing effort on the stock;

(B) the appropriateness of the scientific methods, information, and models used by the Secretary to assess the status and trends of the Gulf of Mexico red snapper stock and as the basis for the fishery management plan for the Gulf of Mexico red snapper fishery;

(C) the appropriateness and adequacy of the management measures in the fishery management plan for red snapper in the Gulf of Mexico for conserving and managing the red snapper fishery under this Act; and

(D) the costs and benefits of all reasonable alternatives to a limited access privilege program for the red snapper fishery in the Gulf of Mexico.

(2) The Secretary shall ensure that commercial, recreational, and charter fishermen in the red snapper fishery in the Gulf of Mexico are provided an opportunity to—

(A) participate in the peer review under this subsection;

Analysis – not required for review. The peer review in this portion is specific to the Secretary; however, the “appropriateness and adequacy” of the data used by the Secretary should be considered the minimum standard for any review. Any scientific method or data that does not meet the standards used in the initial peer review should be omitted and/or modified. Note: this section may be a veiled realization that the scientific research and evaluations used in the past could have provided better “science”.

(d) CATCH LIMITS.—Any fishery management plan, plan amendment, or regulation submitted by the Gulf Council for the red snapper fishery after the date of enactment of the Sustainable Fisheries Act shall contain conservation and management measures that—

(1) establish separate quotas for recreational fishing (which, for the purposes of this subsection shall include charter fishing) and commercial fishing that, when reached, result in a prohibition on the retention of fish caught during recreational fishing and commercial fishing, respectively, for the remainder of the fishing year; and

(2) ensure that such quotas reflect allocations among such sectors and do not reflect any harvests in excess of such allocations.

Analysis – not required for review. However, this is a requirement for the IFQ plan and any review of the IFQ may want to provide a evaluative look at quota apportionment, as was done in the Alaska Halibut IFQ review.

iii. Secondary Considerations

SEC. 302. REGIONAL FISHERY MANAGEMENT COUNCILS

(g) COMMITTEES AND ADVISORY PANELS.—

(1)(A) Each Council shall establish, maintain, and appoint the members of a scientific and statistical committee to assist it in the development, collection, evaluation, and peer review of such **statistical, biological, economic, social, and other scientific information** as is relevant to such Council's development and amendment of any fishery management plan.

(h) FUNCTIONS.—Each Council shall, in accordance with the provisions of this Act—

(5) review on a continuing basis, and **revise as appropriate**, the assessments and specifications made pursuant to section 303(a)(3) and (4) with respect to the optimum yield from, the capacity and extent to which United States fish processors will process United States harvested fish from, and the total allowable level of foreign fishing in, each fishery (except as provided in section subsection (a)(3)) within its geographical area of authority;

(6) develop annual catch limits for each of its managed fisheries that may not exceed the fishing level recommendations of its scientific and statistical committee or the peer review process established under subsection (g);

(7) develop, in conjunction with the scientific and statistical committee, multi-year research priorities for fisheries, fisheries interactions, habitats, and other areas of research that are necessary for management purposes, that shall—

(A) establish priorities for 5-year periods;

(B) be updated as necessary; and

(C) be submitted to the Secretary and the regional science centers of the National Marine Fisheries Service for their consideration in developing research priorities and budgets for the region of the Council; and

(8) conduct any other activities which are required by, or provided for in, this Act or which are necessary and appropriate to the foregoing functions.

Analysis – required in review. Any revision or modification of an IFQ plan must be included in any review (see section 303 above).

Appendix - P.L. 109-479, sec. 217 [uncodified]

STUDY OF SHORTAGE IN THE NUMBER OF INDIVIDUALS WITH POSTBACCALAUREATE DEGREES IN SUBJECTS RELATED TO FISHERY SCIENCE.

(a) IN GENERAL.—The Secretary of Commerce and the Secretary of Education shall collaborate to conduct a study of—

(1) whether there is a shortage in the number of individuals with post-baccalaureate degrees in subjects related to fishery science, including fishery oceanography, fishery ecology, and fishery anthropology, **who have the ability to conduct high quality scientific research in fishery stock assessment,**

fishery population dynamics, and related fields, for government, nonprofit, and private sector entities;

(2) what Federal programs are available to help facilitate the education of students hoping to pursue these degrees; and

(3) what institutions of higher education, the private sector, and the Congress could do to try to increase the number of individuals with such post-baccalaureate degrees.

Analysis – required in review. The very use of this in the appendix demonstrates that the review must include “high quality” scientific research.

B. NMFS REGULATIONS

URL: <http://sero.nmfs.noaa.gov/regulations/pdfs/Vr070402.622.pdf>

There are no specifics under 622.16 (a)(2) as to what an evaluation should consist of. As in the MSA, there are some portions of the NMFS regulations that might provide guidance.

i. § 622.16 Gulf red snapper individual fishing quota (IFQ) program. (URL -)

(2) Duration. The IFQ program established by this section will remain in effect until it is modified or terminated; however, **the program will be evaluated by the Gulf of Mexico Fishery Management Council every 5 years.**

Analysis – a review of the red snapper IFQ is required at least every 5 years. Further, while the NMFS does not clarify what must be included in a review, the following are regulated by NMFS and should be considered in any evaluation of the program: the scope of the program; the duration of the program; the administrative functions associated with this IFQ program, e.g., registration and account setup, landing transactions; the procedures for initial implementation; the calculation of the initial IFQ shares and allocation changes; the procedure for appeals, as well as the number and outcome of appeals; a review of procedures related to the IFQ online system; IFQ cost recovery fees; payment responsibility; collection and submission responsibility; fee reconciliation processes; annual IFQ dealer ex-vessel value report; measures to enhance IFQ program enforceability; the restrictions on transfer of IFQ red snapper; fleet management and assignment of IFQ allocation; the IFQ share cap; and annual recalculation and notification of IFQ shares and allocation.

II. Secondary Sources.

A. Legislative Guide.

There have been a few attempts to clarify and determine what an evaluation should entail. Though none have become law, they could guide an evaluation:

i. The Small Fishermen and the Fishing Quota Act of 2003, S. 1106

No URL, search under www.thomas.gov for full text and legislative history.

Included language that would require a 5-year recurring independent review of IFQ systems by the National Research Council, to: (1) evaluate the **effectiveness of such systems and determine who the systems contribute to improved management, conservation and safety**; (2) **evaluate the social, economic and biological consequences of the systems, including economic impacts on fishing communities**; (3) **evaluate the costs of implementation**; and (4) **provide recommendations** to ensure the systems meet Magnuson-Stevens Act requirements and the goals of the plans.

ii. The Fishing Quota Standards Act of 2003, H.R. 2621

No URL, search under www.thomas.gov for full text and legislative history.

Attempted to set national standards for IFQs to protect small commercial fishing fleets. The Act would have Banned processor quota shares; limited consolidation by limiting transferability of quota shares, mandating quota share caps, and prohibiting "cross-sector consolidation" by allocating IFQs to sectors based on vessel size and/or gear types; and, evaluate the IFQ allocations on a yearly basis.

Analysis: not required in the review. The 4 evaluative techniques urged by the Senate in the Fishing Quota Act are determinative of what Congress would like to see regarding reviews of IFQs. Thus, these techniques are suggested in this analysis as things that may be included in a review.

B. Gulf IFQ plan

There is no legal analysis of this section. The reason for this is that the Council, once it has chosen the appropriate alternative, must fulfill the review requirements it has laid out in its initial plan, or at least demonstrate why the fulfillment of its responsibilities within the IFQ plan are impossible. While the government has not sued a Council for not following the IFQ plan requirements, there is a tome of cases where the government or environmental groups have brought forward litigation against a state or organization for not following its own plans, be they coastal management plans, land use plans, or other environmental plans. Thus, the following sections are highlighted portions to determine review requirements within the plan that must be followed.

i. Review:

Section 4.2, pg. 54-5: **Preferred Alternative 2A** would not limit the duration of the IFQ program, but would require the Council evaluate the program's effectiveness every five years relative to its **ability to address the chronic, long-standing problems described in Section 3.**

The review provision in **Preferred Alternative 2** would require the Council to periodically **evaluate the effectiveness of the IFQ program**, and discuss **whether it should be modified, extended, or terminated.** Ideally these periodic reviews should coincide with stock assessment updates to allow **new information to be incorporated into the program** in a timely manner and demonstrate to participants the program is adaptive...The five-year schedule seems a more realistic timeframe within which to conduct a new red snapper stock assessment or assessment update, and years three and four are expected to provide a reasonable basis for a fifth year evaluation.

ii. Fee review:

Section 4.1, pg. 50... the proposed program would define the commercial red snapper fishery in the U.S. Gulf of Mexico as the red snapper IFQ fishery. The fee percentage would initially be specified as three percent, and would be **reviewed annually** to determine if changes were warranted. Revisions would be published in the *Federal Register* and would be determined based on the following information:

- The catch subject to the IFQ cost recovery fee.
- The projected ex-vessel value of the catch.
- The costs directly related to managing and enforcing the IFQ program.
- The projected IFQ program balance in the LASAF.
- Expected non-payment of fee liabilities.

The fee percentage may be set equal to the calculated fee percentage using the following equation or three percent: $\text{Calculated fee percentage} = (100 \times (\text{DPC} - \text{AB}) / \text{V}) / (1 - \text{NPR})$; where DPC is the direct program cost for the IFQ fishery for the previous fiscal year, AB is the projected end of year LASAF account balance for the IFQ program, V is the projected ex-vessel value of the catch subject to the IFQ fee for the current

iii. IFQ Program Duration

Section 6.2.1, pg. 95. ... **Alternative 2** differs in that it would require periodic reviews at either 5-year or 10-year intervals. This required review provision is expected to further benefit the physical, biological, and ecological environments

by increasing the likelihood the Council would identify and adjust, as needed, components of the IFQ program that are not working as predicted, and take action to address any unintended consequences.

iv. Cumulative Effects Analysis (CEA)

Section 6.15 , pg. 132. The plan also calls for periodic reviews of the stock to ensure the plan's rebuilding trajectory is maintained. A red snapper stock assessment was completed in July 2005 and the Council will be evaluating measures to ensure rebuilding continues within the guidelines of the plan.

v. Data

Section 6.13, pg 117. In order to establish both baseline data and to contextualize the information already gathered by survey methods, there is a great need for in-depth, ethnographic study of the different fishing sectors or subcultures. Second, existing literature on social/cultural analyses of fisheries and other sources in social evaluation research need to be culled in order to offer a comparative perspective and to guide the SIAs. Third, socio-economic data need to be collected on a continuing basis for both the commercial and recreational sectors, including the for-hire sector. Methods for doing this would include regular collection of social and economic information in logbooks for the commercial sector, observer data, and dock surveys.

The following is a guideline to the types of data needed:

1. Demographic information may include but is not necessarily limited to: population; age; gender; ethnic/race; education; language; marital status; children, (age and gender); residence; household size; household income (fishing/non-fishing); occupational skills; and association with vessels and firms (role and status).
2. Social structure information may include but is not necessarily limited to: historical participation; description of work patterns; kinship unit, size and structure; organization and affiliation; patterns of communication and cooperation; competition and conflict; spousal and household processes; and communication and integration.
3. In order to understand the culture of the communities dependent on fishing, research to gain information may include but is not necessarily limited to: occupational motivation and satisfaction; attitudes and perceptions concerning management; constituent views of their personal future of fishing; psycho-social well-being; and cultural traditions related to fishing (identity and meaning).
4. Fishing community information might include but is not necessarily limited to: identifying communities; dependence upon fishery resources (this includes recreational use); identifying businesses related to that dependence; and determining the number of employees within these businesses and their status.

5. This list of data needs is not exhaustive or all-inclusive, and this list should be revised periodically in order to better reflect on-going and future research efforts.

vi. Impact Review

Section 8.0, pg. 155. NMFS requires a RIR for all regulatory actions that are of public interest...requiring a comprehensive review of the **level and incidence of impacts associated with a proposed or final regulatory action**; 2) it provides a review of the **problems and policy objectives** prompting the regulatory proposals and an evaluation of the major alternatives that could be used to solve the problem...

vii. Duration of IFQ Privileges

Section 8.5.2, pg. 172, ... **setup a formal time line to review the IFQ program.**

Pg. 173: The **program's review could range from a simple summary of comments received about the program, to a thorough analysis of impacts on incidental catch, employment, profitability, consolidation, spillover of effort into other fisheries, safety, enforcement issues, etc.** Direction on the type of review expected could be provided at the time of program implementation or it could wait until policy makers have a better feel for the program. The types of data collected would limit the types of analysis that can be completed. If a very thorough analysis of the program is being contemplated, it may be appropriate to consider the types of data t needed at this time. If they are not being collected the analysis expected should be scaled back, or those data should be collected. Collecting additional data would increase the cost of the program, but the information obtained would be expected to outweigh the costs.

viii. Data Quality (based on Data Quality Act, 2002)

Section 10.2, pg. 233. Scientific information and data are key components of FMPs and amendments and the use of **best scientific information** available is the second national standard under the Magnuson-Stevens Act. To be consistent with the Act, FMPs and amendments must be based on the best scientific information available. They should also properly reference all supporting materials and data, and be reviewed by technically competent individuals. With respect to original data generated for FMPs and amendments, it is important to ensure the data are collected according to documented procedures or in a manner that reflects standard practices accepted by the relevant scientific and technical communities. Data should also undergo quality control prior to being used by the agency and a pre-dissemination review performed.

The above only represents some of the information in the current IFQ. There are likely other empirical nuances that are outside my scope of understanding that may require scientific review.

III. Other reviews

With no formal standard for reviews, another avenue to look to for guidance could be other program reviews or papers. As above, this section will include no legal analysis; these papers and reviews may be used as guides but are not dispositive.

A. IFQ paper Development of the Individual Fishing Quota Program for Sablefish and Halibut Longline Fisheries off Alaska, Clarence G. Pautzke and Chris W. Oliver

URL: http://www.fakr.noaa.gov/npfmc/sci_papers/ifqpaper.htm

This discusses how a review of their IFQ has been implemented on a yearly basis. The first section is a list of those things that were amended because of evaluation; the second list are those things that were/are evaluated in relation to the MSA:

i. Refinements of the IFQ System

Block Plan.

CDQ Compensation.

Catch Sharing Plan.

Multiple Area Fishing.

Catcher Vessel QS Use on Freezer Boats.

Buydown of QS Blocks.

Sweep-up of QS Blocks.

Slime and Ice Deduction.

Longlining of Pots for Sablefish in Bering Sea.

Extension of Sablefish Season in Aleutian Islands.

Emergency Transfers to Heirs.

Hired Skipper Requirements.

Increased Quota Share Use Level in BSAI..

ii. Evaluation of IFQ Issues in the Magnuson-Stevens Act

(A) The Effects of Limiting Transferability.

(B) Preventing Foreign Ownership and Control.

(C) Limiting the Duration of IFQ Programs.

(D) Individual Processor Quotas (IPQs).

(E) Diversity, Socioeconomic/community Impacts, Displaced vessels, and Shifting of Capital Value from Vessels to IFQs.

(F) Monitoring and Enforcement, and Bycatch/discard Reduction.

(G) Criteria for Determining Appropriateness of IFQ Management.

(H) Fair and Equitable Initial Allocations.

(I) Social and Economic Costs and Benefits.

(J) Creation and Comparisons of Value of IFQs.

B. IFQ review and evaluation

i. Alaska Sablefish

URL: http://www.cfec.state.ak.us/research/h98_ts/h_title.htm

A review after 4 years of implementation. The following list demonstrates what was reviewed in the IFQ and the chapter headings for each portion of the review:

This study uses NMFS-RAM administrative data and other ancillary data to analyze the first four years of the halibut individual fishing quota (IFQ) program in Alaska. The topics covered in the report include basic data on the extent of consolidation of quota share (QS) holdings, the volume of permanent QS

transfers; QS prices; the volume of seasonal QS lease transfers, and IFQ lease prices. The report highlights the importance of several special features of the IFQ program and provides an extensive overview of changes in the geographic distribution of QS holdings. The report includes summary data on permanent transfers including the amount of QS transferred as sales, gifts, and trades; the relationships between the transferors and transfer recipients; and the finance methods used in sales transfers. The report investigates changes in the distribution of QS by person-type, changes in the distribution of QS between initial QS recipients and new entrants, and changes in halibut harvest and delivery patterns. The report also provides information on the consolidation of IFQ permit holders onto single vessel operations and on the underharvest of IFQ during the 1995 to 1998 fishing seasons.

1 Introduction

1.1 The Purpose of This Study

1.2 The Halibut Fishery

1.3 Background on the Halibut IFQ Program

2 Overview of This Report

2.1 Topics in the Report

2.2 Overview of Chapters 3 through 16

3 Consolidation of QS Holdings

3.1 Introduction

3.2 QS Consolidation by Vessel Category

3.3 QS Consolidation by Size of QS Holding

4 QS Transfers and QS Prices

4.1 Transfer Rates by Area

4.2 Transfer Rates by Area and Vessel Category

4.3 QS Sales Prices

4.4 Estimated QS Prices

5 Halibut QS Leases

5.1 Halibut QS and QS Holder Lease Rates by IFQ Area

5.2 Halibut QS and QS Holder Transfer and Lease Rates by Area and Vessel Category, 1995-1998

5.3 Lessors, Lessees, Leases, and Lease Rates

5.4 QS Lease Prices

6 Types of Transfers, Financing of Transfers, Relationships Between Transferors and Transfer Recipients, and Use of Brokers

6.1 Sales, Gifts, Trades, and Other Transfers

6.2 Finance Source on Priced Sales Transfers

6.3 Relationship of Buyer and Seller on Permanent Transfers

6.4 Use of Broker Services in Permanent QS Transfers

6.5 Use of Broker Services in Lease Transfers

7 Distribution of QS by Blocking Factor, CDQ Compensation QS, CDQ Compensation QS "Swaps"

7.1 Introduction

- 7.2 QS Blocks, CDQ Compensation QS, and Swappable CDQ Compensation QS
- 8 "Sweep-ups" of Small QS Blocks
 - 8.1 Changes in Sweepable QS Blocks
 - 8.2 Sweep-up Transactions
 - 8.3 Sweepable QS Relative to Total QS
 - 8.4 Summary
- 9 Changes in QS Holdings by Type of Person
- 10 Changes in the Distribution of Halibut QS by State
- 11 Changes by Management Area, Rural-Urban, and Local-Nonlocal
 - 11.1 Initial and Year-end 1998 QS Holdings, by Resident Type
 - 11.2 Net Result of QS Transfers, Migrations, and Revocations
 - 11.3 Details of Halibut QS Transfers: To and From Each Resident Category
 - 11.4 Intra-cohort and Cross-cohort Transfers
- 12 Changes in the Distribution of Halibut QS by Census Area
- 13 New Entrants in the Fishery
- 14 Changes in Harvest and Delivery Patterns
 - 14.1 Deliveries by State, Census Area, Annual Quarter, and Residency
 - 14.2 Harvests by QS Owners and Hired Skippers
- 15 Overharvest and Underharvest of IFQs and TACs
 - 15.1 TACs and Harvests: 1990 to 1998
 - 15.2 Total Available IFQs and Actual Harvest by Vessel Category
 - 15.3 Unchanged QS and Unharvested IFQ, 1995 to 1998
- 16 Consolidation of Permit Holders on Fishing Operations(*PDF file, 29K*)
- Appendix I Local/Nonlocal and Rural/Urban Designations(*PDF file, 6K*)
- Appendix II QS Transfer Application Forms

ii. Environmental, Public Trust, and Socioeconomic Impacts, The Marine Fish Conservation Network

PDF attached to email.

While not a "review" of IFQs, this paper does offer a look into the IFQ needs and, reading between the lines, how a better review could fix some of the negative impacts of IFQs.

C. Scholarly articles

Here are some researched articles that may provide some insight into the review processes. However, these articles are only dispositive of the current science or policies in the field and are not required. If litigation were to arise and the current

accepted data assemblage in the field were used as described in these articles or others, the council or reviewer would have a defense:

Individual Fishing Quotas

- Policy Formulation Versus Policy Implementation Under The Magnuson-Stevens Fishery Conservation And Management Act: Insight From The North Pacific Crab Rationalization. By: Matulich, Scott C.; Seamon, Richard H.; Roth, Monica; Eppink, Ritchie. Boston College Environmental Affairs Law Review, 2007, Vol. 34 Issue 2, p239-272, 34p;
- Flexible catch-balancing policies for multispecies individual fishery quotas. By: Holland, Daniel S.; Herrera, Guillermo E.. Canadian Journal of Fisheries & Aquatic Sciences, Aug2006, Vol. 63 Issue 8, p1669-1685, 17p, 3 charts, 1 diagram, 5 graphs; DOI: 10.1139/F06-066;
- Empirical analysis and transboundary management for Georges Bank multispecies fishery. By: Sobol, Mark Lucas; Sutinen, Jon G.. Canadian Journal of Fisheries & Aquatic Sciences, Apr2006, Vol. 63 Issue 4, p903-916, 14p, 8 charts, 4 graphs, 1 map; DOI: 10.1139/F05-269; (AN 20454289)
- Fishing Aspirations and Fishing Capacity: Two Key Management Issues. By: Metzner, Rebecca. International Journal of Marine & Coastal Law, Nov2005, Vol. 20 Issue 3/4, p459-478, 20p, 1 chart; DOI: 10.1163/157180805775098603;
- Improving Compliance in U.S. Federal Fisheries: An Enforcement Agency Perspective. By: Randall, Jeffrey K.. Ocean Development & International Law, Oct-Dec2004, Vol. 35 Issue 4, p287-317, 31p;
- Sink or Swim Time for U.S. Fishery Policy. By: Sanchirico, James N.; Hanna, Susan S.. Issues in Science & Technology, Fall2004, Vol. 21 Issue 1, p45-52, 8p;
- Offshore Management Considerations. By: Duff, John A.. Boston College Environmental Affairs Law Review, 2004, Vol. 31 Issue 2, p385-402, 18p;
- A Global Industry With Local Impacts. (cover story) By: Naylor, Rosamond L.; Eagle, Josh; Smith, Whitney L.. Environment, Oct2003, Vol. 45 Issue 8, p18-39, 21p, 2 graphs, 3 maps, 4bw;
- Individual fishing quotas--A complex and contentious issue. By: Baker, Beth. Bioscience, Mar1999, Vol. 49 Issue 3, p180
- A brief history of bycatch management measures for Eastern Bering Sea groundfish fisheries. By: Witherell, David; Pautzke, Clarence. Marine Fisheries Review, 1997, Vol. 59 Issue 4, p15, 8p, 6 maps;

Conclusion

There are very few formal requirements for a review of the IFQ. The minimum standard for the review must include 1) any changes, revisions, modifications or alterations to the plan, the why and how these came about and the supportable data for the change; 2) the review must follow the IFQ plan established by the management council, ie., were the plan to state that a review requires daily fish

stock evaluation, then a review of the IFQ would require a summary of those daily findings; 3) the review must evaluate the plan's successes and failures in regard to the goals of the MSA; 4) the review must include at least a summary of compliance with the NMFS regulations; and finally, 5) use the best possible scientific methods and data. Following these guidelines should protect the plan from frivolous litigation. However, even the mandatory guidelines have ambiguous definitions that would allow for a variety of interpretations; thus, no review can be one hundred percent protected from litigation.

Even a more extensive review may not prevent litigation; however, additions to the review that are in accordance with legislative history may provide a buttress against some litigation and congressional interference. These evaluative additions may include: 1) a review of effectiveness of the IFQ to determine how it contributes to improved management, conservation and safety; 2) an evaluation of the social, economic and biological consequences of the systems, including economic impacts on fishing communities; 3) and a review that provides recommendations for further change and evaluation. Further, following precedent within the field may also protect against litigation. For example, the Alaska IFQ review has no tangible case law yet found to demonstrate adversarial juridical action. By following the methodology of other IFQs, the review may provide protection against litigation and a policy argument before a court were litigation to occur.