

REPORT ON TRIP TO NEW ENGLAND

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This is a collection of thoughts and observations made while participating in a series of ten port meetings conducted by the Sea Grant Program of the Northeast where the possibility of an industry-funded groundfish fishery buy-back program was discussed. I was an invited participant and funding was made possible by the National Marine Fisheries Service. There were a total of ten meetings ranging from Riverhead, NY in the south to Ellsworth, Maine in the north. The meetings occurred between June 23, 2003 and July 2, 2003. No written material was made available in advance, detailing the history of the current management system for groundfish or descriptive data characterizing the fleet. My total understanding of the situation in New England comes from reading trade publication articles in the past and what I learned during this trip.

To help frame the issue for fishermen, the NEFMC staff gave a presentation on Amendment 13 which is scheduled for implementation next spring. At the heart of the Amendment is the need to reduce fishing mortality rates substantially for many species in order to achieve the required rebuilding schedule for a number of overfished species of groundfish. It has been estimated that the number of days-at-sea (DAS) will need to be reduced from around 41,000 days to 28,000 days.

New England fishery very different than West Coast fishery

It became immediately obvious that the fishing industry in New England is very different than on the west coast. The number of groundfish permits in New England is around six times greater than in the pacific region, while the landings and exvessel value of groundfish is only a little more than double. On the surface it would appear that the Pacific region is much better situated than New England. However, the fleet in New England has the benefit of many other fishing opportunities. For the New England fleet landing groundfish, the revenue from groundfish accounts for approximately 25% of the fleet's total revenue, while in the pacific region, groundfish accounts for roughly 85% of the fleet's revenue.

Although data was not provided at any of the meetings, I suspect that groundfish effort and revenue within the New England fleet is highly concentrated in a small portion of the total permit vessels.

The number of inactive permits in New England is another notable difference from the Pacific region. There are more latent permits in New England than the total number of permits in the Pacific Region.

The approach to managing the resource in New England is the last dramatic difference. The Pacific region uses hard quotas to achieve the proper fishing mortality rate. In New England, effort is constrained by a limit on the number of days at sea a vessel may fish. This approach seems to have resulted in a variety of management and social problems. Many fishermen claimed that with declining DAS they simply fish harder to achieve the same landings that they produced prior to the reduction in DAS.

Fishermen are fearful of change

It was clear that the New England fishermen do not like the National Marine Fisheries Service. The prospects of Amendment 13 and the changes that it will bring are thought to be directly the fault of NMFS. What surprised me was the view that any buy-back program that NMFS was involved in was bound to be detrimental.

There was much misunderstanding concerning the loan arrangement of an industry-funded buy-back program and resentment that the fleet's opportunities had been reduced greatly and now the fleet was being asked to think about buy-back using their money. However, many fishermen could not see any direct link between a smaller fleet and increased opportunity to harvest fish. This was further complicated by the fact that many of the stocks are increasing at current fishing mortality rates and the rationale for the need to reduce mortality further was not clear to many fishermen. Overall, fishermen appeared to resent and fear change and fail to accept the changes demanded by the court that will be implemented through Amendment 13.

Many fishermen expressed concern with the prospect of a buy-back program because they felt that a smaller fleet would make it difficult to maintain port infrastructure in many of the smaller ports. There was considerable concern expressed about the impacts of buy-back upon the relative size of the fleets that participate in the offshore versus onshore components of the fleet, as well as balance between big boats and small boats. Some of these feelings I believe go back to the lack of association made between a smaller fleet and increased benefit to those that remain. I have assumed that the management system used for groundfish is flexible enough to provide an increased number of days at sea or trip limit to vessels that would remain in a smaller fleet. However, my sense is that most fishermen do not believe that the system will provide such an adjustment if a buy-back were to occur. If the fishermen are correct that the system is so inflexible as to not allow the remaining fleet to reap the benefits post

buy-back, then the system needs to change or forget about an industry-funded buy-back program. If the industry is to pay the bill, those that remain need to have a return on their investment.

Has management caused some of the problems?

It appears that the fishery management system of limiting the number of days at sea has led to some of the hard feelings and other social problems within the fleet. Talking with fishermen before and following each of the meetings, it became clear that a shift in fishing strategy occurred under days-at-sea. In order to maximize the use of available days at sea, fishermen began fishing closer to port rather than spend days at sea running to offshore banks. This has resulted in about 70% of the fleet now day fishing, as opposed to trip fishing. When reductions in allowable number of days at sea occurred, vessels that chose to day fish began to feel penalized. It is clear that animosity exists between near-shore fishing vessels and those that fish off-shore. Some fishermen characterized this division as large boats versus small boats, while others wished to make clear that this relationship had more to do with the amount of fish caught rather than the size of the vessel. These negative feelings were also manifested in attitudes between ports.

Complicating these attitudes is the fact that some fishermen lost days at sea when reductions in allowable DAS occurred because they had not been utilizing their days available. These fishermen often made statements indicating the system was not fair since they lost days because they stop fishing for groundfish when they were asked to stop fishing for groundfish. In this case I suspect that fishermen stopped fishing for groundfish because they had better opportunities elsewhere. They simply followed the money.

The last management issue that was apparent, was the lack of relationship made between DAS and fishing mortality rates. Most fishermen did not understand the requirement of Magnuson for rebuilding stocks and court orders to achieve the rebuilding within the proper time frames. Many of the stocks are growing rapidly at the current fishing mortality rates and the requirements of Amendment 13 to further reduce DAS is confusing to fishermen and seems to be a contradiction, and this situation has resulted in great mistrust of NMFS.

This mistrust of NMFS was carried over into the discussion about buy-back programs. The topic was met with a great deal of suspicion and negativity at each of the meetings.

Buy back can work in NE but not sure it is needed

I believe that an industry funded buy-back program could work in the New England groundfish fishery. Although, much work would be required to properly identify which sectors and other fisheries should be included in such a program. However, a bigger question needs to be addressed first – Is a fleet reduction program needed in New England? It appears the stocks are growing quite rapidly. In fact, the reductions in harvest that will occur as a result of Amendment 13 may be of such a short duration that landing comparable to 2002/2003 landings could be occurring in few years.

The fleet as a whole does not appear to be constrained by regulations that will lead to wholesale bankruptcies. If the current revenue flow for the New England groundfish fleet is adequate now, then following a few tight years, the revenue of the fleet should be back to current levels. These few tight years will be very difficult for the portion of the fleet that does not have other fishery opportunities to pursue.

Latent effort

There is a tremendous problem with latent effort that needs to be addressed whether a buy-back program is pursued or not. There is a large number of fishing businesses that hold groundfish permits that are not dependent upon groundfish revenues at this time. These businesses are either not fishing at all or fishing in other fisheries than groundfish.

Under a status quo strategy of implementing Amendment 13 without a buy-back program, these fishing businesses will be free to enter into the groundfish fishery as the stocks increase. This addition of fishing effort will not be needed to harvest the available fish and will negatively impact those businesses that depend upon groundfish revenue to a greater degree by diluting the potential increases that they could enjoy.

If a buy-back program was implemented and it focused on removing this latent effort, this type of program can not be industry-funded. Removing permits that have not been active does not provide any benefit to those that remain in the fishery. Therefore, repaying a loan without any return benefit makes no sense. On the other hand, conducting an industry-funded buy-back program that removes active permits from the fishery, and allows latent effort to replace the removed active effort, once again provides no benefit to those that repay the loan.

If an industry-funded buy-back program is to be conducted in New England, then the latent permits must be removed from the fishery.

Estimating cost and ability to repay loan

If an industry-funded buy-back program were to occur in the New England groundfish fishery, then decisions about reduction goals and scope of the program as to involvement with other fisheries must be made first. Once this is done, then estimates of the cost of the program and the ability of the industry can be made.

Table 1 shows the number of vessels, total days at sea, and the mean days at sea that has occurred between 1996 and 2002. If a reduction goal of a buy-back program was to reduce the fleet to so that the remaining boats on average fished the same number of days as the average boat had done in 2002 and still keep the total number of day to 28,000, then 693 vessel could remain fishing. If the goal were to provide the average number of days to the remaining fleet that occurred in 2001, then only 440 vessels could remain. These two possible scenarios would mean a fleet reduction of 30.7% and 56% and remove 332 boats and 585 boats, respectively.

Table 2 presents the average days at sea, total dollars and pounds landed, and average dollars by the permitted groundfish fleet for all species landed as well as just groundfish.

Table 3 estimates the cost of a buy-back program using the number of vessels that were identified in Table 1 that would be needed to be removed to achieve the two possible reduction goals. In this exercise, it is assumed that fishermen would submit bids for the sale of their fishing business and these bids are some multiple of their fishing income. The multiple presented are 1 times earnings, 1.5 times earnings, and 2 times earnings. Additionally, there are two approaches estimated here for the two possible reduction goals. The first is the cost of program that would remove groundfish and other permits, the second is the cost of only groundfish. From Table 3 it can be seen that the cost of a buy-back program that removed 332 boats and the average bid was equal to average income would be \$115 million to remove groundfish and all other permits. Similarly, the cost would only be \$28 million for groundfish permit only.

The next step is to estimate the ability of the industry to repay Federal loan for such a buy-back program. Moving forward with a program is silly if the value of the fishery would not support the repayment of a loan of the size necessary for a successful program. Table 4 estimates the maximum amount of money that would be available for loan repayment under two scenarios. The first is that the value of the landings that will occur under Amendment 13 will be reduced in proportion to the reduction in average number of days at sea that occurred in 2001 (28 days / 64 days). The second is that the value of the fishery will not decline. The two cases will likely bracket the reduction that will occur. Using 5% of gross revenue as the maximum fee that could be imposed to repay the loan, Table 4 presents the amount of money that the fishery could generate for loan repayment. This ranges from a worse-case groundfish only of \$2.2 million to \$27.5 million for the no reduction in value case and all fisheries contributing.

The last step is to examine an amortization table (Table 5) to determine how much money the industry can borrow and to compare that amount to the cost of the program presented in Table 3.

Looking at groundfish only in the worst case, the fishery could generate \$2.2 million for loan payments. From the amortization table, with a 30 year term, \$2,179,467 would allow \$30 million to be borrowed. Looking back at Table 3 in the groundfish only situation with the lower fleet reduction case, if the average bid was very near average income, then cost of the program would be \$28.5 million and the program could be done. However, if the average bid was much greater, then there would not be sufficient income to borrow enough money.

If the value of the fishery does not decline to the low level assumed in the worst case scenario, then the amount of money available to make loan payment would be higher and therefore a larger loan could be made.

Table 1. Number of permits and Day-at-Sea in the New England groundfish fishery, and two possible fleet reduction goals.

	Permits			Days at Sea			Per Boat DAS		
	Total	Active	Active w/ GF	Total	Active	Active w/ GF	Total	Active	Active w/ GF
1996	1765	1372	1090	236216	140612	51968	134	102	48
1997	1781	1340	1077	155270	101905	49462	87	76	46
1998	1651	1263	1031	156989	106415	52935	95	84	51
1999	1670	1241	1009	160452	106506	54271	96	86	54
2000	1655	1207	1016	160720	109757	61290	97	91	60
2001	1631	1223	1025	156290	111572	65275	96	91	64
2002	1400	1223	1025	71218	61812	41410	51	51	40
2003									
2004						28000			28
# of Boats so the # DAS = 2002			693	Reduction of		30.7%	removing # of boats		332
# of Boats so the # DAS = 2001			440	Reduction of		56.0%	removing # of boats		585

Table 2. Pounds and value of the groundfish and other fisheries landed by the New England groundfish fleet.

	Dollars		Millions of Pounds		Dollars per Boat	
	All	GF	All	GF	All	GF
1996	340	82	454	72	\$311,927	\$75,229
1997	328	82	529	73	\$304,550	\$76,137
1998	319	88	523	72	\$309,408	\$85,354
1999	383	88	468	72	\$379,584	\$87,215
2000	406	95	486	91	\$399,606	\$93,504
2001	389	100	551	104	\$379,512	\$97,561
2002						

Table 3. Estimated cost of a buy-back program for groundfish only and all fisheries for two reduction possible reduction goals.

# boats removed	1996 to 2001 average revenue	Bid Scores		
		1	1.5	2
332	All	\$115,323,060	\$172,984,591	\$230,646,121
	\$347,431			
585	All	\$203,358,993	\$305,038,490	\$406,717,986
	\$347,431			
332	GF	\$28,490,761	\$42,736,141	\$56,981,522
	\$85,833			
585	GF	\$50,240,190	\$75,360,285	\$100,480,380
	\$85,833			

Table 4. Estimated revenue available for buy-back loan repayment assuming both a reduction in value of the fishery and no reduction in the fishery.

Value of Fishery after reduction in Day-at-Sea				
	2001	reduction	value	Maximum loan payment
GF	\$100,000,000	0.4375	\$43,750,000	\$2,187,500
All	\$550,000,000	0.4375	\$240,625,000	\$12,031,250
GF	\$100,000,000	1	\$100,000,000	\$5,000,000
All	\$550,000,000	1	\$550,000,000	\$27,500,000

Table 5. An amortization table for a buy-back loan of 20 years and 30 years.

Principal	6%	
	Term in years	
	20	30
\$20,000,000	\$1,743,691	\$1,452,978
\$30,000,000	\$2,615,537	\$2,179,467
\$40,000,000	\$3,487,382	\$2,905,956
\$50,000,000	\$4,359,228	\$3,632,446
\$60,000,000	\$5,231,073	\$4,358,935
\$70,000,000	\$6,102,919	\$5,085,424
\$80,000,000	\$6,974,765	\$5,811,913
\$90,000,000	\$7,846,610	\$6,538,402
\$100,000,000	\$8,718,456	\$7,264,891
\$110,000,000	\$9,590,301	\$7,991,380
\$120,000,000	\$10,462,147	\$8,717,869
\$130,000,000	\$11,333,992	\$9,444,358
\$140,000,000	\$12,205,838	\$10,170,848
\$150,000,000	\$13,077,684	\$10,897,337
\$160,000,000	\$13,949,529	\$11,623,826
\$170,000,000	\$14,821,375	\$12,350,315
\$180,000,000	\$15,693,220	\$13,076,804
\$190,000,000	\$16,565,066	\$13,803,293
\$200,000,000	\$17,436,911	\$14,529,782
\$210,000,000	\$18,308,757	\$15,256,271
\$220,000,000	\$19,180,603	\$15,982,761
\$230,000,000	\$20,052,448	\$16,709,250
\$240,000,000	\$20,924,294	\$17,435,739
\$250,000,000	\$21,796,139	\$18,162,228
\$260,000,000	\$22,667,985	\$18,888,717
\$270,000,000	\$23,539,830	\$19,615,206
\$280,000,000	\$24,411,676	\$20,341,695
\$290,000,000	\$25,283,522	\$21,068,184
\$300,000,000	\$26,155,367	\$21,794,673
\$310,000,000	\$27,027,213	\$22,521,163
\$320,000,000	\$27,899,058	\$23,247,652
\$330,000,000	\$28,770,904	\$23,974,141
\$340,000,000	\$29,642,749	\$24,700,630
\$350,000,000	\$30,514,595	\$25,427,119
\$360,000,000	\$31,386,441	\$26,153,608
\$370,000,000	\$32,258,286	\$26,880,097
\$380,000,000	\$33,130,132	\$27,606,586
\$390,000,000	\$34,001,977	\$28,333,075
\$400,000,000	\$34,873,823	\$29,059,565
\$410,000,000	\$35,745,668	\$29,786,054
\$420,000,000	\$36,617,514	\$30,512,543
\$430,000,000	\$37,489,360	\$31,239,032
\$440,000,000	\$38,361,205	\$31,965,521
\$450,000,000	\$39,233,051	\$32,692,010
\$460,000,000	\$40,104,896	\$33,418,499
\$470,000,000	\$40,976,742	\$34,144,988
\$480,000,000	\$41,848,587	\$34,871,478
\$490,000,000	\$42,720,433	\$35,597,967
\$500,000,000	\$43,592,278	\$36,324,456