

# Bering Sea Flatfish Harvest Specifications Flexibility

Discussion paper for June 2012 Council meeting

## 1 Overview

In December 2010, the Council requested a review of using non-specified reserves or alternative measures to increase flexibility in the harvest of flatfish (yellowfin sole, rock sole, and flathead sole) in the Bering Sea and Aleutian Islands Management Area (BSAI) by the Amendment 80 sector (i.e., non-American Fisheries Act trawl catcher/processors). A discussion paper was presented in February 2011, which examined a possible method for providing Amendment 80 cooperatives with additional harvest opportunities for flathead sole, rock sole, and yellowfin sole without increasing the aggregate total allowable catch assigned to those species. After reviewing the report, the Council requested an expanded discussion paper to address legal, practical, and policy implications of the proposed action, including consultation with NOAA General Counsel, NMFS management, and stock assessment scientists. The Council also requested the expanded discussion paper include possible impacts on prohibited species bycatch, and examine the possibility of including the CDQ sector. A revised discussion paper was provided in February 2012, addressing these issues. The Council postponed action pending the receipt of the Amendment 80 cooperative reports, scheduled for April 2012. The Council also asked for further work on the proposed approach to achieve flexibility.

The current discussion paper reflects further discussions with NMFS management about how such flexibility, for both Amendment 80 cooperatives and the CDQ groups, might be practicably achieved within the existing management structure. Section 2 provides some background on the Amendment 80 sector, and the harvest specifications process, while Section 3 identifies the assumptions that were used to identify alternative management measures. Section 4 discusses an approach that would allow eligible entities, during the course of the fishing year, to access ABC for yellowfin sole, rock sole, or flathead sole, which may be available in excess of the TAC determined during the specifications process, in exchange for existing quota allocated to a different flatfish species. Section 5 discusses what the value of the proposed approach might be, and associated policy considerations.

The approach that is discussed in this paper would require regulatory changes, which would need to be implemented independent of the annual harvest specification process, and at the beginning of a fishing year.

## 2 Background

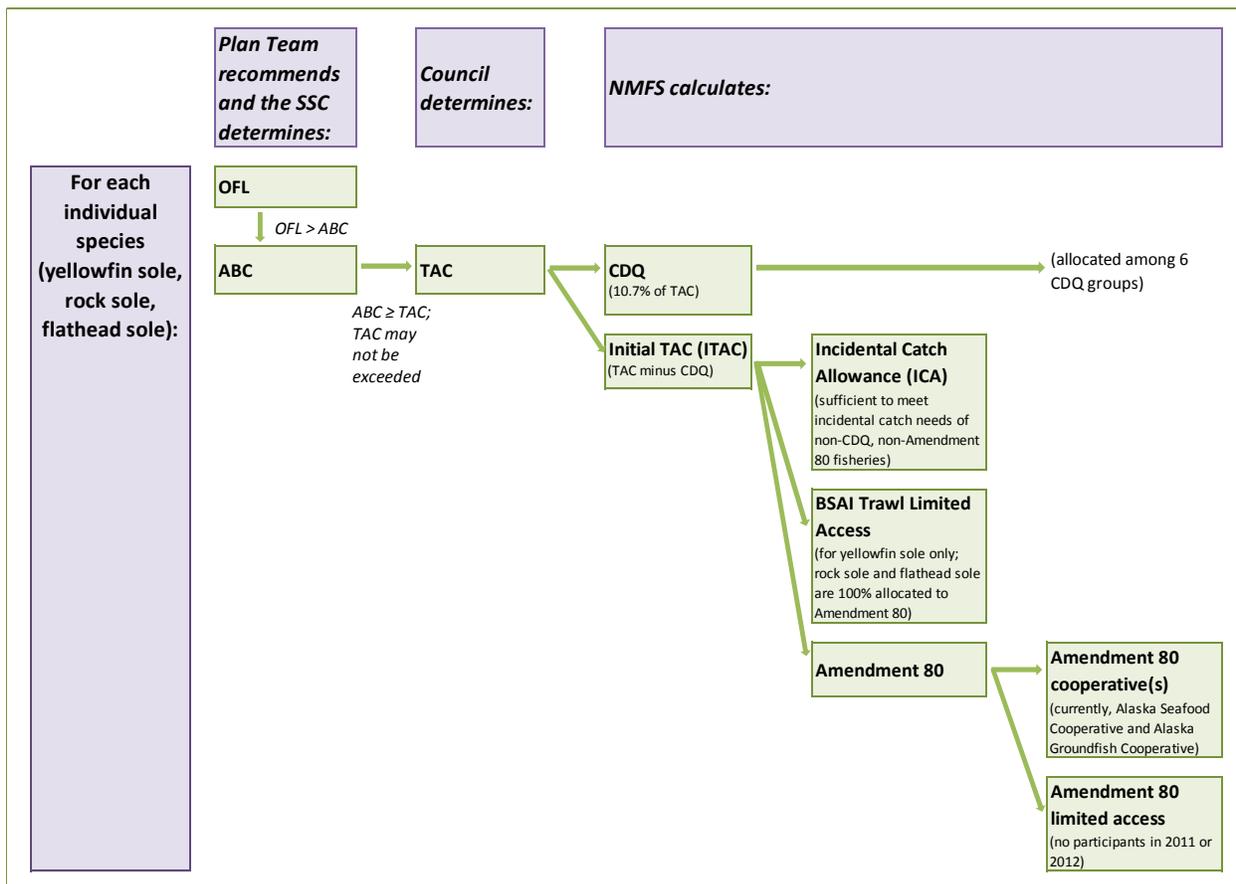
The Fishery Management Plan for Groundfish of the BSAI Management Area (FMP) establishes requirements for setting an overfishing level (OFL), an acceptable biological catch (ABC), and a total allowable catch (TAC) for target groundfish species. The ABC is the maximum permissible annual catch. The TAC cannot be set higher than the ABC, and can be set lower depending on biological or socioeconomic factors considered by the Council and NMFS.<sup>1</sup> The OFL, ABC, and TAC are set through the harvest specification process (Figure 1). The FMP establishes an Annual Catch Limit (ACL) for each target species consistent with National Standard 1 of the Magnuson-Stevens Fishery Conservation and Management Act (MSA).<sup>2</sup> For groundfish of the BSAI, including flathead sole, rock sole, and yellowfin

<sup>1</sup> See regulations at 50 CFR 679.20(a)(3)

<sup>2</sup> National Standard 1 of the MSA, and National Standard 1 guidelines are described in the final rule to implement National Standard 1 guidelines (January 16, 2009; 74 FR 3178), and the final rule implementing Amendments 95 and 96 to the fishery management plans for groundfish of the BSAI and Gulf of Alaska (October 6, 2010; 75 FR 61639).

sole, the ACL is equal to the ABC.<sup>3</sup> Typically, the TACs for flathead sole and rock sole are set well below the ABC. Historically, the yellowfin sole TAC has been set at the ABC, but the Council recommended that TAC be set below the ABC in the 2011/2012 harvest specifications<sup>4</sup>. For 2012/2013 harvest specifications, TAC was again set almost at the ABC.<sup>5</sup> An example of allocations to all sectors for 2011 is provided in Table 1.

**Figure 1** Current process for establishing OFL, ABC, TAC, and fishery allocations for yellowfin sole, rock sole, and flathead sole.



**Table 1** 2011 OFL, ABC, TAC, and allocations of yellowfin sole, northern rock sole, and flathead sole (in mt)

	Yellowfin sole	Northern rock sole	Flathead sole
OFL	262,000	248,000	83,300
ABC	239,000	224,000	69,300
TAC	196,000	85,000	41,548
<b>Sector</b>			
CDQ allocation (10.7%)	20,972	9,095	4,446
ICA	2,000	5,000	5,000
BSAI Trawl Limited Access allocation	34,153	n/a	n/a
<b>Amendment 80 allocation</b>	<b>138,875</b>	<b>70,905</b>	<b>32,102</b>
Alaska Groundfish Cooperative allocation	58,948	19,902	6,269
Alaska Seafood Cooperative allocation	79,926	51,003	25,833

<sup>3</sup> See section 3.2.3.3.2 of the FMP, "The ACL is equal to the ABC for each stock and stock complex in the target species category."

<sup>4</sup> <http://www.fakr.noaa.gov/npfmc/PDFdocuments/SPECS/CouncilSpecs1210.pdf>

<sup>5</sup> [http://www.fakr.noaa.gov/npfmc/PDFdocuments/SPECS/BSAI%20Specs\\_Final-1211.pdf](http://www.fakr.noaa.gov/npfmc/PDFdocuments/SPECS/BSAI%20Specs_Final-1211.pdf)

Statute limits the optimum yield (OY) for groundfish species in the BSAI to two million metric tons (mt)<sup>6</sup>. The Council sets the combined TACs at less than or equal to two million mt to ensure the BSAI OY limit is not exceeded. When BSAI pollock and Pacific cod biomasses are high, there is increasing pressure to maximize the TAC for these species during the annual harvest specification process. This could result in increased pressure to limit the TAC for flathead sole, rock sole, and yellowfin sole to ensure the total BSAI groundfish TAC does not exceed the two million mt OY limit.

Rock sole and flathead sole TACs are apportioned between the Western Alaska Community Development Program (CDQ Program) and the Amendment 80 sector (Figure 1). NMFS also sets an incidental catch allowance (ICA) to account for incidental catch in non-CDQ and non-Amendment 80 fisheries. The yellowfin sole TAC is apportioned among the CDQ Program, the Amendment 80 sector, and the BSAI trawl limited access sector (i.e., non-Amendment 80 trawl vessels), in addition to an ICA set aside. NMFS reallocates any portion of the TAC not projected to be harvested by the BSAI trawl limited access sector to Amendment 80 cooperatives during the fishing year.

The portion of the flathead sole, rock sole, and yellowfin sole TAC assigned to the Amendment 80 sector is further apportioned between Amendment 80 cooperatives and the Amendment 80 limited access fishery (Figure 1). Amendment 80 cooperatives receive an exclusive harvest privilege, cooperative quota (CQ), for each species, which cannot be exceeded; NMFS retains management authority of the Amendment 80 limited access fishery.<sup>7</sup> Since 2011, all participants in the sector have been members of a cooperative.

Typically, not all of the three flatfish TACs have been fully harvested (Table 2), due to limitations associated with allocations of species harvested incidentally in the directed flatfish fisheries, such as Pacific cod and halibut, or timing of the fisheries. For example, the Amendment 80 fleet usually does not successfully target rock sole or flathead sole after August, but yellowfin sole is targeted through the end of the year. However, it is possible that Amendment 80 cooperatives could fully harvest one or more of its flatfish allocations through improved coordination and operational efficiencies gained when fisheries are managed under an exclusive harvest privilege, or catch share.<sup>8</sup>

Management measures that went into effect in 2011, to protect the Endangered Species Act-listed Western population of the Steller sea lion, have constrained the Aleutian Islands Atka mackerel and Pacific cod fisheries that are typically targeted by the Amendment 80 sector.<sup>9</sup> These constraints could increase the importance of maximizing flathead sole, rock sole, and yellowfin sole harvests by Amendment 80 businesses.

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<sup>6</sup> See section 803(c) of Pub. L. No. 108-199 "The optimum yield for groundfish in the Bering Sea and Aleutian Islands Management Area shall not exceed 2 million metric tons."

<sup>7</sup> The methodology and rationale for apportioning the TAC among the CDQ, ICA, Amendment 80 sector, and BSAI trawl limited access fishery, as well as allocations to Amendment 80 cooperatives and the Amendment 80 limited access fishery is detailed in the proposed rule for the Amendment 80 Program (May 30, 2007; 72 FR 30061), and described in the harvest specifications (e.g., See proposed 2011-2012 harvest specifications (December 8, 2010; 75 FR 76372).

<sup>8</sup> The proposed rule for the Amendment 80 Program details the potential benefits of catch share management for these fisheries (May 30, 2007; 72 FR 30061).

<sup>9</sup> See Interim Final Rule to implement Steller sea lion protection measures (December 13, 2010; 75 FR 77535).

**Table 2 ABC, TAC, and catch, by sector, of BSAI yellowfin sole, rock sole, and flathead sole, 2008-2012, and catch of Pacific cod and halibut prohibited species catch (PSC) over the same time period.**

Species and year	ABC	TAC	Catch							
			Amendment 80: Best Use Cooperative <sup>1/</sup> Alaska Seafood Cooperative <sup>2</sup>		Amendment 80: limited access <sup>3/</sup> Alaska Groundfish Cooperative <sup>4</sup>		BSAI trawl limited access		CDQ Program (divided among 6 CDQ groups)	
			Catch	% of cooperative's TAC <sup>5</sup>	Catch	% of ltd access/ cooperative's TAC <sup>5</sup>	Catch	% of limited access <sup>1</sup> TAC <sup>5</sup>	Catch	% of CDQ sector's TAC
<b>Yellowfin sole</b>										
2008	248,000	225,000	84,853	86%	*	*	19,382	44%	7,671	32%
2009	210,000	210,000	69,564	79%	23,279	40%	10,394	27%	1,741	8%
2010	219,000	219,000	74,022	67%	21,003	35%	19,485	46%	3,053	13%
2011	239,000	196,000	85,418	95%	21,487	42%	25,375	74%	16,308	78%
2012	203,000	202,000								
<b>Rock sole</b>										
2008	301,000	75,000	34,982	74%	*	*			1,917	24%
2009	296,000	90,000	33,668	59%	3,923	21%			893	9%
2010	240,000	90,000	44,558	76%	4,693	27%			1,337	14%
2011	224,000	85,000	42,388	76%	5,071	33%			3,306	36%
2012	208,000	87,000								
<b>Flathead sole</b>										
2008	71,700	50,000	16,931	47%	*	*			500	9%
2009	71,400	60,000	12,031	28%	1,893	33%			508	8%
2010	69,200	60,000	13,913	32%	611	11%			943	15%
2011	69,300	41,548	6,964	23%	461	20%			674	15%
2012	70,400	34,134								
<b>Pacific cod</b>										
2008			13,518	79%	*	*				
2009			19,637	95%	2,025	58%				
2010			20,023	99%	4,005	121%				
2011			21,143	91%	3,599	89%				
<b>Halibut PSC</b>										
2008			1,293	70%	*	*				
2009			1,496	83%	577	85%				
2010			1,668	80%	587	87%				
2011			1,323	77%	488	73%				

<sup>1</sup> 2008-2009; <sup>2</sup> 2010-2011; <sup>3</sup> 2008-2010; <sup>4</sup> 2011. Essentially, the same vessels are represented in each column.

<sup>5</sup> Catch as a proportion of the sector's final quota at the end of the year; may include reallocations, and/or transfers among cooperatives.

\* confidential data

Source: NMFS

### 3 Management assumptions

This discussion paper brings certain basic assumptions to the consideration of changing the way in which flatfish may be harvested in the BSAI. This paper is not intended to provide a comprehensive overview of potential flatfish management approaches. It is presumed that the Council intends for any change in management to meet the following requirements:

- Ensure that the OFL and ABC for a target stock are not exceeded.
- Ensure that the 2 million mt optimum yield cap is not exceeded.
- Be consistent with the management goals established under the Amendment 80 Program.
- Provide a transparent process for determining allocations before the start of the fishing year, preferably in the harvest specifications process.

Under the approach outlined in this paper, no change is envisioned to the current process for establishing individual OFLs, ABCs, or TACs for each of the three species through the harvest specification process. The proposed approach would not alter the way that stock assessments are conducted for the individual species, nor the recommendations for OFL and ABC made by the Plan Team and the SSC.

The discussion also assumes that, to the extent possible, the Council's intention is to be consistent with the existing Amendment 80 Program. The various sectors that harvest the three flatfish species would continue to be managed, either through hard caps or through NMFS' inseason management, in such a way as to prevent allocations or catch limits from being exceeded.

#### **4 Practical approach to accommodate flatfish harvest flexibility**

The purpose of this approach is to provide a mechanism for the Amendment 80 sector and CDQ groups to have increased flexibility in their targeting of yellowfin sole, rock sole, or flathead sole, to maximize their harvest of these species while ensuring that the overall 2 million mt optimum yield, and ABCs for each individual species, are not exceeded. The proposed approach combines both the concept of the groundfish reserve that was used to allow flexibility prior to the implementation of Amendment 80, and the concept of inter-cooperative transfers.

As described in Figure 1, under the status quo, OFL, ABC, TAC, and fishery allocations are established for each of the three flatfish species in the annual harvest specifications process. The Council cannot establish a TAC that is higher than the ABC for any species, but frequently for these three flatfish species, the TAC is set lower than the ABC, sometimes substantially so. Fishery allocations to the various sectors are determined based on regulations that were established in the development of the CDQ and Amendment 80 programs.

Under the proposed approach, the annual harvest specifications process would continue unchanged, and allocations of each flatfish species would be made at the beginning of the fishing year. However, a system would be set up to allow Amendment 80 cooperatives and CDQ groups, during the course of the fishing year, to access yellowfin sole, rock sole, or flathead sole ABC that may be available in excess of the TAC. No entity would be able to access any amount in excess of the ABC, so there would not be a biological or conservation concern with the proposed approach. Also, any entity wanting to access the ABC surplus for a particular flatfish species (e.g., yellowfin sole) would need to exchange an equivalent amount of existing quota for another of the three flatfish species (e.g., rock sole or flathead sole). This would ensure that the entity remained within its aggregated quota limits, and thus guarantee that the overall groundfish optimum yield for the BSAI would not be exceeded.

Only Amendment 80 cooperatives and CDQ groups would be eligible, as only those entities have been assigned an exclusive catch and use privilege, and have the requisite infrastructure to manage their own quotas. An entity would also need to have more than one of these flatfish species allocated to it, so there is no net gain in TAC.

Exchanges would be processed in a manner similar to inter-cooperative transfers, with built-in limits for how much quota may be exchanged. At the beginning of each year, NMFS would calculate the amount of ABC surplus to which each entity would have access. Table 3 is an example of how this process would work. For each of the three species, yellowfin sole, rock sole, and flathead sole, the agency would first calculate whether there is an ABC surplus, by subtracting the TAC from ABC. If there is a surplus, this

would then be allocated amongst eligible entities. As with the existing harvest specifications process, the CDQ program would be allocated 10.7% of the ABC surplus, which would become their ABC reserve<sup>10</sup>. Further work may be needed to determine how the ABC reserve would be allocated among the six individual CDQ groups<sup>11</sup>.

The remaining portion of the ABC surplus would be assigned among eligible cooperatives, in proportion to the cooperative's share of each individual flatfish species. This is the same formula that is currently used for allocating their share of TAC to the Amendment 80 cooperatives. Table 3 illustrates the process with 2011 values, and results in an ABC reserve value for each flatfish species, for each of the two cooperatives in 2011.

**Table 3 Proposed process for calculating the ABC reserves for yellowfin sole, rock sole, and flathead sole, for Amendment 80 cooperatives and CDQ groups, illustrated with 2011 values (mt).**

	ABC	TAC	ABC surplus	Assignment of ABC surplus to user groups					
				CDQ ABC reserve	A80 program	ASC % of CQ	AGC % of CQ	ASC ABC reserve	AGC ABC reserve
				10.7% of ABC surplus	89.3% of ABC surplus	Percent of A80 CQ initially assigned to each cooperative, for each species			
yellowfin sole	239,000	196,000	43,000	4,601	38,399	57.6%	42.4%	22,100	16,299
rock sole	224,000	85,000	139,000	14,873	124,127	71.9%	28.1%	89,286	34,841
flathead sole	69,300	41,548	27,752	2,969	24,783	80.5%	19.5%	19,943	4,840

A80 = Amendment 80, ABC = acceptable biological catch, AGC = Alaska Groundfish Cooperative, ASC = Alaska Seafood Cooperative, CDQ = community development quota program, CQ = cooperative quota, TAC = total allowable catch

Once these ABC reserve limits are calculated and entered into the account balance tracking system, they may be accessed by the relevant cooperative or the CDQ program through an online exchange. While this exchange would be modeled on an inter-cooperative transfer, there would also need to be changes. Inter-cooperative transfers are designed for transferring quota for an individual species from one account to another. Under the proposed approach, transfers for two species would need to be linked. A request to transfer from the ABC reserve into an entity's quota account for one species would necessarily be linked with a transfer of a different flatfish species out of the entity's quota account, in order to ensure that the overall cooperative quota assigned to that entity would not be exceeded.

An example of how such a exchange might proceed is provided in Table 4. In this case, ASC is assumed to want additional access to yellowfin sole, for which it is willing to forego a portion of its flathead sole allocation. The transfer of 22,100 mt of yellowfin sole from the ASC ABC reserve account into the ASC cooperative quota account is coupled with a transfer of 22,100 mt of flathead sole out of the ASC cooperative quota account. No net change in the total flatfish available to ASC would arise, but ASC would give up flathead sole to gain additional access to yellowfin sole. Note, it is not envisaged, as part of this approach, that the exchanged flathead sole quota would be added back to the cooperative's ABC reserve for flathead sole.

<sup>10</sup> Under the MSA (as revised by Section 416(a) of the Coast Guard and Maritime Transportation Act of 2006), the primary portion of each CDQ reserve (10 percent of the TAC) must be allocated among the six CDQ groups, based on the percentage allocations that were in effect on March 1, 2006. The balance of each reserve (0.7 percent of the TAC) is allocated among CDQ groups based on the percentage allocations agreed on by the Western Alaska Community Development Association Board of Directors (WACDA), serving in its capacity as the Community Development Quota (CDQ) Program Panel (16 U.S.C. 1855(i)(1)(G)).

<sup>11</sup> WACDA would need to agree about how to allocate the seven-tenths of one percent of the CDQ's ABC reserve that the Panel is authorized to allocate under section 305(i)(1)(C) of the Magnuson-Stevens Act (16 U.S.C. 1855(i)(1)(C)) to each of the six CDQ groups.

**Table 4 Fictional illustration of proposed approach, using 2011 values (mt) for the Alaska Seafood Cooperative (ASC)**

Account	Flatfish species	Initial cooperative quota or reserve amount	Mid-year transfer	Ultimate cooperative quota or reserve amount
ASC CQ	Yellowfin sole	81,077	+ 22,100	103,177
	Rock sole	51,003		51,003
	Flathead sole	25,833	- 22,100	3,733
ASC ABC reserve	Yellowfin sole	22,100	- 22,100	0
	Rock sole	89,286		89,286
	Flathead sole	19,943		19,943

The agency has noted that allowing the total of individual allocations to equal ABC will reduce the available buffer against accidentally exceeding ABC. Entities with exclusive catch and use privileges (e.g., cooperatives and CDQ groups) are prohibited from exceeding their allocations by regulation, so the uncertainty would be for exceeding the incidental catch allowance, the BSAI trawl limited access sector, or an Amendment 80 limited access sector if it existed. If necessary, under this approach, the agency may set a more conservative incidental catch allowance for these species.

The approach that is proposed in this discussion paper is intended to allow Amendment 80 cooperatives and CDQ groups access to yellowfin sole, rock sole, or flathead sole in excess of the initial TAC, subject to a limit that prevents the ABC of any species being exceeded. This limitation would also prevent any additional risk of exceeding the overall 2 million mt optimum yield cap. The definition of TAC<sup>12</sup> (with respect to these species) may need to be modified to avoid the suggestion that an overage is occurring, as the program is intended to allow the flexibility to exceed the Council's initial TAC assignment, providing the aggregated TACs of the three flatfish species are not exceeded. It may be possible for the Council to recommend, and the agency to approve, the annual TACs for these species with sufficient flexibility to allow the exchanges that are proposed under this approach to proceed. Another, related, question is whether NMFS would need to publish revised harvest specifications tables whenever an ABC reserve exchange occurred. If so, it may be worthwhile considering a limit on the number of times an entity may exchange from the reserve during the course of a year. Such a limit may also be appropriate for management purposes.

## 5 Value of the proposed approach

The proposal is intended to provide increased flexibility for the Amendment 80 cooperatives and the CDQ groups to harvest their flatfish allocations. Since 2008 (the Program's inception), the Amendment 80 cooperatives have not fully utilized any of their existing allocations of flatfish (with the exception of yellowfin sole by one cooperative in 2011). This has historically been the situation for this fleet, and the implementation of the Amendment 80 program has succeeded at improving utilization of the flatfish resource. To the extent that additional constraints in targeting flatfish can be resolved through inseason flexibility in the choice of a flatfish target, the proposed approach could be of benefit for maximizing flatfish TAC utilization. In addition, the action will give individuals within the sector greater flexibility to use their allocation of each flatfish species, when they have used the amount available to them under the cooperative agreement (and others have not). These instances will not be apparent in cooperative totals, since they reveal catches aggregated for the cooperative.

The benefits of the increased flexibility approach arise only when the ABC for the species differs from its TAC. For flathead sole and rock sole, TACs have been below ABCs for many years, but in most years, the Council sets the yellowfin sole TAC at the ABC (2011 being the notable exception). Yellowfin sole is

<sup>12</sup> Def:

a particularly versatile fishery, in that vessels can successfully target yellowfin sole through the end of the calendar year, therefore the ability to maximize yellowfin sole catch in a year where the Council does not set the TAC at the ABC, would benefit flatfish participants. Table 5 provides an example of how catch potential could have been increased for each flatfish species, under the proposed flexibility approach, using 2011 allocations. Note, not all of the flatfish fisheries could have been maximized simultaneously. The ABC reserve approach allows the Amendment 80 cooperatives and the CDQ groups to select which flatfish species to target with their ABC reserve, within the constraints of their total flatfish quota allocations. It does not increase the overall amount of quota that is available for the species combined. Increasing the catch of one species necessarily reduces the available quota of another.

**Table 5 Increased catch potential under proposed approach, by sector, based on 2011 values (mt)**

	Yellowfin sole		Rock sole		Flathead sole	
	Actual allocation in 2011	Additional catch potential through ABC reserve	Actual allocation in 2011	Additional catch potential through ABC reserve	Actual allocation in 2011	Additional catch potential through ABC reserve
<b>Amendment 80</b>						
Alaska Seafood Cooperative	79,926	<b>22,100</b>	51,003	<b>89,286</b>	25,833	<b>19,943</b>
Alaska Groundfish Cooperative	58,948	<b>16,299</b>	19,902	<b>34,841</b>	6,269	<b>4,840</b>
<b>CDQ</b>	20,972	<b>4,601</b>	9,095	<b>14,873</b>	4,446	<b>2,969</b>

There are many constraints affecting the target flatfish fisheries, not least of which is incidental catch. For many years before Amendment 80 was implemented, prohibited species catch (PSC) limits for halibut bycatch were a major constraint on the harvest of flatfish in the Bering Sea. Since the implementation of the Amendment 80 program, and the end of the race for fish for vessels within a cooperative, vessels have improved their ability to avoid halibut. More recently, the sector received an allocation of Pacific cod that has constrained its harvests (Table 2). This year, the Pacific cod TAC is higher, and should allow for increased opportunities for participation in other flatfish fisheries (e.g., the rock sole roe fishery).

To some extent, these incidental catch factors can be taken into account during industry negotiations and Council deliberations to balance the BSAI TACs within the 2 million mt optimum yield. However, individual species catch rates in a multispecies fishery vary year to year, and the fishery is operating under multiple hard cap allocations of target and prohibited species. In this situation, it may be beneficial for the fleet to have other alternatives to relieve constraints midseason, in response to changes in bycatch conditions. For example, this year the fisheries will also be operating under lower red king crab PSC limits in Zone 1, which affects the rock sole fishery. Based on last year's bycatch rates this PSC limit may be constraining, although not based on previous years. In future years, the proposed approach could potentially provide the cooperatives and CDQ groups the flexibility to adjust to such a situation by switching to a target fishery that has lower PSC rates. More importantly, the flexibility to exchange quota among species allows the fleet to shift between targets when unexpected changes occur. So, if an unexpected increase in a prohibited species occurs, the fleet will have the opportunity to move to another target species with a lower PSC rate.

Environmental conditions, such as the timing of sea ice retreat, can also create constraints that are difficult to predict pre-season. The location of flatfish aggregations in accessible fishing grounds, particularly those that have low halibut prohibited species catch, is affected by the timing of the Bering Sea ice retreat, and it may be difficult to predict, prior to the beginning of the fishing year, which target fish are likely to be successfully harvested in areas of low incidental catch. In recent years, conditions have not favored flathead sole aggregations, and it may be difficult to predict pre-season when fishing for that target species is likely to be successful. Market conditions are also an important factor. There is considerable difference in the relative value of the three flatfish. A January 2012 estimate, averaging head

and gut prices across fish sizes, identifies rock sole with roe as the most valuable target fish, at approximately \$1.29/lb; flathead sole is valued at \$0.92/lb, rock sole at \$0.70/lb, and yellowfin sole at \$0.66/lb<sup>13</sup>.

It is also possible that the Amendment 80 cooperatives have not exhausted their ability to use the tools inherent in the Amendment 80 program to afford themselves flexibility. At the sector level, all three of the flatfish targets remain underutilized. While transfers were made between the cooperatives in 2011, for yellowfin sole and flathead sole, there may still be opportunities within the structure of the program to increase cooperation, and to transfer and trade allocations so that fish can be harvested more efficiently. However, because of the seasonal timing of the various flatfish fisheries and uncertainties concerning catch composition, it may not be as easy to negotiate transfers until later in the year, when vessels can better predict whether they will fish up to their allocations.

To the extent that this proposal would allow the Amendment 80 sector to fully harvest their flatfish allocations, there may be an increase in incidental catch associated with the increase in effort. In terms of PSC, however, the sector is already capped in its use of prohibited species, as there are specific PSC limits for the sector's use of halibut and crab.

One caution about the proposed approach is that there may be some incentive for Amendment 80 participants to lobby for a lower yellowfin sole TAC in the annual harvest specifications process. As illustrated in Figure 1, the yellowfin sole target fishery is allocated among the CDQ Program, the Amendment 80 sector, and the BSAI trawl limited access sector, in prescribed ways. Both the CDQ groups and the Amendment 80 cooperatives would have the opportunity to increase their initial allocation of yellowfin sole by exchanging rock sole or flathead sole quota, under the proposed approach, if there was an ABC surplus for yellowfin sole. The BSAI trawl limited access sector, however, would be limited by their allocation based on the initial TAC. This situation only applies to yellowfin sole, as the other two species are exclusively allocated to the CDQ program and the Amendment 80 sector<sup>14</sup>.

Logistically, the proposed approach would have no effect on stock assessments or on annual catch limit accounting. The new approach does add a level of complexity, both to NMFS management and the annual harvest specifications process. There would be changes required to the catch accounting system, however, as additional accounts would need to be developed to track ABC reserves, and to allow exchanges. As the category functions similarly to existing transfers, however, such changes should be feasible.

## **6 Other approaches considered and rejected**

The Council's original motion requested that staff review the nonspecified reserve in the Amendment sector as a means of increasing flexibility in the harvest of flatfish species. In the February 2011 discussion paper, this proposal was dismissed. The nonspecified reserve is used as a necessary management buffer to ensure that TACs are not exceeded in an open access fishery, and is incompatible with exclusive harvest privileges.

The February 2011 discussion paper suggested an alternative approach, which proposed an aggregate flatfish TAC for the Amendment 80 cooperatives, and would allow Amendment 80 cooperatives to exchange some pre-determined percentage of their cooperative quota among flatfish species. The downfall of this approach is that to avoid exceeding the ABC in all years, the percentage would likely

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<sup>13</sup> John Gauvin, personal communication, January 12, 2012.

<sup>14</sup> Note, if there were an Amendment 80 limited access sector, similar drawbacks might also apply, as that sector would also be limited to the initial quota allocations. At the current time, it is not considered likely that any Amendment 80 vessels will choose to leave the cooperative and fish in the limited access sector.

need to be reconsidered annually with specific analysis and rulemaking, which add impractical complexity to the annual harvest specifications process.

The February 2012 discussion paper suggested creating a new, aggregate “flatfish complex” as part of the Amendment 80 CQ or CDQ allocation, for the harvest of yellowfin sole, rock sole, and flathead sole. At the same time, a new type of quota category would have been created for the three species: the “individual biological limit”, or IBL. The purpose of creating the IBL is to ensure that the ABCs for these individual species are not exceeded. This approach met with some difficulties with respect to tracking in the catch accounting system, and other avenues were pursued.

## **7 Council action**

At this meeting, the Council may decide whether this concept should be further developed into a proposed amendment package. Should the Council wish to proceed with an analysis, a problem statement and alternatives would be required.

The approach that is discussed in this paper would require an FMP amendment and regulatory changes, which would need to be implemented independent of the annual harvest specification process, and at the beginning of a fishing year. The proposed change could not be implemented in time for the beginning of the 2013 fishing year.