Discussion Paper: IFQ Access Opportunities- Global Examples

May 24, 2019¹

1	Introduction	1
2	Background	2
	2.1 Balancing the benefits and consequences of limiting access	2
	2.2 Existing programs in IFQ fisheries to address access concerns	2
	2.3 IFQ access challenges	
3	Global Examples of Access Programs	4
	3.1 Norway Recruitment Quota	4
	3.2 Other global examples3.3 Access program design specifications	5
4	Challenges/Benefits in NPFMC region	9
	4.1 Legal considerations	9
	4.2 Distributional impacts on other IFQ users	
	4.3 Benefits in the North Pacific region	
5	Next steps	10
6	References	11

1 Introduction

At the June 2018 Council meeting, the Council received a presentation on the document "Turning the Tide: Addressing the Graying of the Fleet and Loss of Rural Fisheries Access in Alaska".² The presentation was based on a research report (Cullenberg et al. 2017) that outlined "barriers to entry for the next generation of fishermen" and provided some examples of fisheries management programs with specific provisions designed to facilitate participation by "small-scale fishermen, rural communities, indigenous peoples, and youth and future generations." In response to this report, information from the IFQ 20-year program review (NPFMC/NMFS 2016) and public testimony regarding access challenges in the IFQ Program, the Council requested a discussion paper to review Norway's Recruitment Quota and similar global examples of programs that facilitate access opportunities for rural communities and new entrants within limited access fisheries and how these programs may apply to the Halibut and Sablefish IFQ Program.

This discussion paper first provides a brief background on the tradeoffs of limiting access in fisheries, existing provisions in the IFQ Program designed to facilitate access for specific users, and the IFQ access challenges that have previously been highlighted. Next the discussion paper uses the global programs identified in the Turning of the Tide document to summarize the characteristics and intent of other programs designed to facilitate access, noting different target populations and mechanisms employed. As directed in the Council's motion, this discussion paper focuses more specifically on Norway's Recruitment Quota Program considering its overall efficacy in providing fisheries access, as well as general successes and failures. This paper considers the functionality, benefits and challenges of such a program within the North Pacific management framework including a preliminary assessment of legal requirements that would need to be addressed. The discussion paper concludes with a summary of potential next steps.

¹ Prepared by: Anna Henry (NPFMC), Sarah Marrinan (NPFMC), Sam Cunningham (NPFMC); Contributors: Doug Doucan (NMFS), Alicia Miller (NMFS), Tom Meyer (NOAA GC)

² Presented by Dr. Courtney Carothers and Dr. Rachel Donkersloot

2 Background

2.1 Balancing the benefits and consequences of limiting access

Environmental, economic and social challenges associated with open access fisheries such as overexploitation, overcapacity, inefficiency and safety issues are well documented (e.g. Hartwick 1982, Bjorndal and Conrad 1985, Beddington et al. 2007, Grimm et al. 2012). Fisheries management regimes throughout the world have implemented various forms of limited access management programs to address these issues (National Resource Council 1999, Anderson and Holliday 2007, Melynchuk et al. 2011). The Halibut and Sablefish IFO Program was implemented in response to similar concerns about issues that had emerged from management of the sablefish and halibut fisheries under the open access regime. In both fisheries, growth in fishing effort under open access had necessitated large reductions in the length of the fishing seasons and caused a host of undesirable biological, economic, social and safety effects. In some areas the halibut fishery had been reduced to a few short "derby-like" openings each year (NPFMC/NMFS 2016). The congestion on the fishing grounds during relatively short openings led to gear conflicts, gear loss, resource wastage and safety concerns. Short fishing seasons led to gluts at processing plants and, coupled with what was often hurriedly handled fish, resulted in a mostly frozen product and lower ex-vessel prices for fishermen. In developing the IFO Program, the Council sought to address the problems with the race for fish, including excess harvesting capacity and gear conflicts that had resulted from the previous management regime (ibid).

As the name suggests, one of the goals of limited access programs is to limit access to a fishery and reduce capacity (Anderson and Holliday 2007). As described in a NOAA report on limited access programs, "The chronic management problem with open access fisheries is that there are too many people chasing too few fish...However, changing the 'too many people' to 'just the right number of people' is a very difficult social and economic process" (Anderson and Holliday 2007 p.8). While limiting access and overcapacity in fisheries is often a goal of these programs, the specific changes in distribution of access opportunities is often a consequence that disproportionately impacts specific populations (e.g. Yandle and Dewees 2008, Carothers et al. 2010, Olson 2011, Himes-Cornell and Hoelting 2015).

2.2 Existing programs in IFQ fisheries to address access concerns

While it is difficult to simultaneously limit and maintain access, many limited access management programs include specific design aspects to minimize consolidation and the IFQ program is no exception. In developing the IFQ Program and conferring QS, the Council intended to link the initial allocations to recent dependence on the halibut and sablefish fixed gear fisheries and to broadly distribute QS to prevent excessively large QS amounts from being allocated to some persons (both stated objectives of the program). This resulted in some individuals receiving small amounts of QS. At the same time, the Council sought to minimize the number of potential initial QS recipients so as to address overcapacity in the fisheries. In effect, the Council implemented countervailing provisions into the IFQ Program to try to balance these contrasting goals. The Council employed use caps (limiting the amount of QS that could be held by participants) and vessel IFQ caps (limiting the amount of IFQ that could be landed on any one vessel) to mitigate consolidation in the IFQ fisheries.

The IFQ Program also includes specific provisions designed to maintain, improve and promote access in rural and coastal communities. The Community Development Quota (CDQ) Program is an economic development program that provides western Alaska communities the opportunity to participate and invest in BSAI fisheries. The CDQ program supports economic development in western Alaska, seeking to alleviate poverty and provide economic and social benefits for residents while achieving sustainable and diversified local economies. In fitting with these goals, NMFS allocates a portion of the annual catch limits for a variety of commercially valuable marine species in the BSAI to the CDQ Program. Each CDQ group is allocated a portion of the halibut catch limit that varies by management area. Depending on

annual catch limits and their allocations, CDQ groups may opt to make this allocation of halibut (and potentially sablefish) open to local harvesters. If the stock is not accessible to a small-vessel fleet, the CDQ group may choose to lease their allocation to a non-resident harvester for a fee. Returns from leasing halibut and sablefish CDQ can generate revenue the CDQ groups can use in other ways to promote economic development and other opportunities for their residents.

In the first several years of the IFQ Program, there was evidence of the out-migration of QS out of small Gulf of Alaska coastal communities (69 FR 23861). In response to concerns about the potential impacts from this out-migration, including loss of income, income diversification opportunities, and employment, the Council revised the IFQ Program to allow specific communities to purchase sablefish and halibut QS through the Community Quota Entity (CQE) Program. The CQE Program was intended to provide community access to fishery resources and promote QS ownership by individual residents. Some individuals lease annual IFQ from the CQE and gradually build up the capital and experience to purchase their own QS. The CQE Program was implemented in 2004 to allow a distinct set of 42 coastal communities to purchase halibut catcher vessel QS in Areas 2C, 3A, and 3B and sablefish catcher vessel QS in the SE, WY, CG, and WG areas (69 FR 23681). In 2013, Amendment 94 added three eligible communities in the GOA to the list of communities eligible to form CQEs (78 FR 33243). In 2014, BSAI Amendment 102 expanded the Program to include one community in Area 4B (79 FR 8870). As of 2019, there are 46 CQE-eligible communities (See Table 21 in 50 CFR 679).

Eligibility to participate in the CQE Program was limited to communities with fewer than 1,500 residents, a documented historical participation in the IFQ fisheries (at least one landing of halibut or sablefish), direct access to saltwater on the Gulf of Alaska coast, and no road access to a larger community. In order to acquire catcher vessel QS by transfer, eligible communities must form non-profit corporations called CQEs. In order to use their catcher vessel QS, the CQEs must annually lease the IFQ resulting from the shares to community residents. NMFS requires that CQEs develop criteria for leasing their IFQ. Many communities have developed specific and comprehensive criteria to distribute IFQ among eligible community residents based on the goals and objectives set out by the community. For example, some communities emphasize providing IFQ to new entrants versus long-term participants (or vice-versa), while others may focus on ensuring that the resident IFQ holder's crew is comprised of resident crewmembers.

In addition to regulatory programs designed to maintain community access, such as CDQ and CQE, there are other non-regulatory efforts such as loan funds administered by the Alaska Division of Economic Development, Department of Commerce, NMFS Financial Services Division (Fisheries Finance Program, "NMFS Loan Program"), Community and Economic Development (DCCED) or Alaska Commercial Fishing and Agriculture Bank (CFAB) that are expressly targeted towards fishing businesses.

2.3 IFQ access challenges

Despite both regulatory provisions built into the IFQ Program and support from external organizations, access is still a challenge in IFQ fisheries. As analysts for the final Environmental Impact Statement to the IFQ program noted (NPFMC/NMFS 1992), initial allocations of QS to as many people with qualifying history as possible as well as allocations to the CDQ communities which provided additional opportunities to some individuals that had not previously participated increased the number of participants on the grounds to more than had ever fished in a single year³. However, many initial recipients received such small amounts of IFQ that it was not economically worthwhile to fish; this promoted rapid consolidation within the first years of IFQ Program implementation. With QS allocated at no cost on the basis of historical fishery participation, the future sale of that QS led to differentiated accessibility for initial recipients and new entrants (NPFMC/ NMFS 2016). Economic theory suggests

that any economic rent accrued in a fishery due to the implementation of a catch share program is capitalized in the sales price of the QS paid to the seller. This is the payment in excess of the normal profit which arises from the scarcity value of the resource. The individual buying the QS will thus only earn normal economic returns associated with a comparably risky investment (Szymkowiak and Felthoven 2016). *Many of the distributional consequences of an IFQ Program are decided at initial QS allocation and cannot easily be undone*.

The acquisition of QS in the IFQ Program is fundamentally different for initial recipients and new entrant QS holders. Whereas initial recipients receive allocated QS gratis, new entrant shareholders have to purchase all of their QS. Initial recipients may utilize their allocated QS as collateral for loans, or subsidize the purchase of additional QS through revenues generated from harvest of IFQ derived from initially allocated QS. This distinction exacerbates inter-generational equity-in-access issues, given that new entrant shareholders compete for QS in a market with initial recipients. According to participants in the crew workshop held for the IFQ program review (April 7, 2016; Anchorage), many new entrants interested in transitioning into the IFQ fisheries now have to start by participating in other fisheries (e.g., Alaska's state fisheries), building up the capital to buy halibut and/or sablefish QS through revenues generated in the state fisheries. Crew workshop participants also noted that increasingly regulations and external costs are mitigating entry, including observer fees or electronic monitoring costs, compliance costs associated with Coast Guard safety regulations, management cost recovery payments, and changing management regimes in other fisheries that would affect the IFQ fisheries (e.g., charter sector allocations, bycatch). These themes were reiterated in an IFQ outreach meeting hosted by the Council in 2018⁴.

The trends demonstrated in the IFQ Program Review on the number of new entrants over the last 20 years of the IFQ Program substantiates claims of decreasing entry in the halibut and sablefish IFQ fisheries (NPFMC/NMFS 2016). Rates of new entry have decreased since a peak in the first several years of the IFQ Program, with an annual average of 49 halibut new entrants and 17 sablefish new entrants from 2011 to 2015 compared to an average of 207 and 38 new entrants in these fisheries, respectively, in the first five years of the IFQ Program. From Program implementation to 2015, there have been about 2,214 new entrants into the halibut IFQ fishery and 513 new entrants into the sablefish IFQ fishery (ibid). The differentiated entry rates for these two fisheries are likely due to the substantially greater capital investment needs of the sablefish IFQ fishery.

3 Global Examples of Access Programs

3.1 Norway Recruitment Quota⁵

Many limited access fisheries management programs include provisions focused on increasing access opportunities for a specific subset of the population. Norway's Recruitment Quota (RQ) is an example of an access program targeted at young fishermen that uses a separate allocation to provide access opportunities. Recruitment of young participants in Norwegian fisheries has been a challenge since the implementation of a limited access program. From 1990 to 2011, the percentage of registered harvesters under 30 years of age dropped from 25.1% to 14.5% (Fiskeridirektoratet 2012b in Neis et al. 2013). In an effort to curb this decline and recruit young people from the open access "open group" fishery into the limited access "closed group", Norway developed the RQ program in 2009. The RQ program is administered by the Minister of Fisheries (an elected position) with input from the Directorate of Fisheries (the Minister's advisory and executive body) and slight modifications have been made throughout its 10 years of implementation.

⁴ <u>NPFMC IFQ Outreach Meeting</u>. June 5, 2018 Kodiak, AK.

⁵ Unless otherwise noted, information in this section is provided from personal communications, Alessandro Andrès Tøvik, 5/21/19

The RQ Program creates a set aside of quota, taken off the top and distributed annually, at no cost, to young vessel owners fishing with jig, gillnet and longline gear. The amount of RQ issued and the number of RQ permit recipients is determined annually by the Minister, thus it has varied year-to-year. Most years there are 10 recipients however there have been 15 in some years and 25 during one election year, for a total of around 120 recipients to date. RQ has been composed of 90-95% cod, saithe and haddock, with a smaller percentage of mackerel. It is awarded to individuals for a 10-year period if they maintain eligibility and must be harvested by the individual recipient. RQ can be used as collateral to purchase additional quota and can be harvested by the individual recipient on a different vessel, but it cannot be transferred or sold to another harvester. If the recipient leaves the program, the RQ is returned to the overall quota pool.

In recent years, criteria to be eligible to apply for RQ has dictated that harvesters must be: 1) under 30 years old at the time of application, 2) own over 50% of a vessel not greater than 15 meters in length in the "open group" 3) have earned fishing income on that vessel in previous years exceeding the threshold set by the Directorate 4) cannot own more than 49% of a vessel with a permit in the "closed group" fishery and 5) completed a safety training (personal communication, Jahn Petter Johnsen, 5/23/19). Applicants are initially screened for the eligibility criteria and then selected based on priorities developed by the Ministry with input from the Directorate of Fisheries. These priorities often include formal education such as fisheries education within high school studies or captain's licenses, and years of experience on their own vessel or as harvesters on other vessels in the fishery. Gender and regional distribution may also be taken into account (personal communication, Jahn Petter Johnsen, 5/23/19).

The concept of the RQ program has generally been perceived positively although it is not without controversy. RO was first implemented during a period of relatively high quota which made the initial set aside less concerning to existing quota holders. At that time, quota was often left unfished so the RO was seen as an additional strategy to ensure a fully prosecuted fishery. The RQ program has become more contentious in recent years as stocks have declined and there has been a subsequent reduction in the total available quota. This has led to complaints from some established harvesters, not because they disagree with the objective of the RQ program, or because their allocations have been greatly affected (the level of RQ allocation has been modest compared to overall allocations) but rather due to the fact that it is a valuable allocation provided at no cost. These objections are made on the basis of fairness -- a "golden ticket" into the closed fishery is provided to RQ recipients that was not available to previous generations, or eligible young harvesters who are not selected. Each year there are more eligible RQ applicants than recipients. This has led to criticism of the selection process and differing opinions on whether the program should prioritize recipients from coastal communities with limited employment opportunities over those who have greater professional education and participation in larger scale fishing operations. Moreover, given the limited number of opportunities per year, a common narrative focuses on those who did not receive the allocation rather than those who benefited from the RO opportunity.

Despite the criticism, the RQ program has successfully recruited young harvesters into the closed group fishery (although there is no counterfactual to determine if these recipients would have otherwise gained entry). Currently in its 10th year, the first cohort of recipients will see their RQ expire in the next year and it remains to be seen what percentage will maintain fishing operations in the closed group. The Ministry is developing a white paper on quota reforms that will include more analysis of strengths, weaknesses and potential modifications to the RQ program.

3.2 Other global examples

Many limited access fisheries management programs include provisions focused on increasing access opportunities for a specific subset of the population. Table 1 provides an overview of access programs in other countries and elsewhere in the United States and identifies similar existing programs in the North Pacific region (if applicable). Programs in Table 1 were selected based on their inclusion in the Turning

the Tide report (Cullenberg et al. 2017). This table summaries programs including their objective and whether it is administered by the government or a non-governmental organization. It identifies the target population and mechanisms for addressing the issue (discussed further in the next sections), the quota source if there is one, and how it was funded if there was funding involved. The table also compares these global programs to North Pacific fisheries to evaluate if the North Pacific has any similar programs.

3.3 Access program design specifications

Target population

There are many subsets of fisheries participants that face access challenges in the IFQ fishery. Turning the Tide (Cullenberg et al. 2017) outlines four target populations which would benefit from programs to support or improve fisheries access: 1) young people, 2) small-scale fishermen, 3) indigenous populations and 4) rural communities. Our review of access programs in Table 1 identified two additional target populations for which these programs have been designed: 5) low income, and 6) disenfranchised populations (i.e. individuals that may have participated in a fishery prior to a limited access program as captain or crew, but did not qualify for limited access privileges). Identifying the target population(s) is an important first step in developing a program that promotes access opportunities.

Access challenges for these populations are complex and can be compounded by other social and economic conditions. Distinct target populations may face access challenges unique to their social situation. For example, Turning the Tide reported that youth in rural communities identified a "lack of exposure to commercial fishing; lack of experience, knowledge, and family connections to fishing; discouragement from pursuing fishing as a career; and substance abuse and related problems in communities" as obstacles to gaining entry into fisheries (Cullenberg et al. 2017). Other challenges are more widespread and may impact multiple populations including financial risk, lack of quota, "mixing fishing with other, often times limited, local jobs; lack of stable markets increasing risk; and lack of experience managing debt and small businesses" (Cullenberg et al. 2017). The design of any access program should be tailored to the population for which the Council is trying to improve access and the specific barriers it is trying to alleviate.

Mechanisms

Through our review of access programs in Table 1 we classified specific mechanisms used to improve access opportunities into nine categories: 1) separate allocation- a distinct quota pool that is allocated for the target population, 2) different criteria/rules- specific regulatory provisions that apply to the target population, 3) opportunity to buy in- special opportunities allowing target populations to purchase quota, 4) permit bank-a subset of quota managed by a government agency or non-governmental organization that offers quota to specific target populations below market rates, 5) open access- a subset of an otherwise limited access fishery that is maintained as open access for a target population, 6) technical assistance-usually in the form of business planning or financial management, 7) educational support- providing knowledge and skills to participate in fisheries and fisheries management processes and run successful businesses, 8) financial support- direct financial assistance or access to subsidized loan programs, and 9) direct marketing- programs designed to facilitate premium prices and niche market access for target populations. These mechanisms have different goals and objectives. Selecting the appropriate mechanism to increase access should be considered based on the barrier(s) being addressed.

Table 1. Global examples of access opportunity programs

Country	Program	Objective	Administration	Target Population	Mechanism	Quota Source	Funding	Alaska Counterpart
	Recruitment Quota	To recruit young boat owners into the fisheries	government	youth/crew/recent entrants	separate allocation; different criteria/rules	redistribution	N/A	Nothing really. CQE or CDQ groups could focus on age when determining their own criteria for quota distribution, but there are no official Federal fisheries programs off Alaska where eligibility is based around age.
Norway	Limits on Transferability	Slow down the concentration of IVQs, geographically and within large companies, to preserve a diverse fleet structure. To slow down any increase in prices	government	all participants	different criteria/rules	N/A	N/A	Many of the catch share program in the Alaska region include limits on transferability. For example, in the IFQ Program the quota must be used by the assigned vessel class in the assigned IPHC area, limits on acquiring blocked/ unblocked QS, and QS use caps.
	Open Group Fishery	A compromise to accommodate part-time and small-scale fishers who did not qualify for IVQs in 1990.	government	disenfranchised; low- income; small-scale (boat size, gear type, trip length)	open access; separate allocation	redistribution	N/A	Somewhat similar to the Entry Level longline fishery in the CGOA Rockfish Program, which does not require quota to access. However, the Entry Level fishery does not have an income threshold requirement.
	Provisions to protect Indigenous Access	Improve access for Norway's Indigenous Sámi population	government	indigenous	open access; separate allocation	redistribution	N/A	Some similarities to the CDQ Program - in that it identifies communities where Native people live, but it doesn't necessarily ensure that the benefits ONLY go to the Native people in those communities.
	Community Quota	Economic development for coastal communities	government	rural/coastal communities	separate allocation	redistribution	N/A	There are some similar to the CDQ and CQE programs, except here the communities don't hold access to the quota. Quota is allocated from the government directly to the qualifying fishermen, but the communities can specify their priority requirements for the allocation.
Iceland	Coastal Fishing (Quota-Free Fishery)	Open up access to fisheries as a response to a 2004 UN Human Rights Committee ruling that said the ITQ system violated the human right to work; and to offer economic development opportunities in the rural fishing villages.	government	rural/coastal communities; small- scale (boat size, gear type, trip length)	open access; separate allocation; different criteria/rules	redistribution	N/A	Somewhat similar to the Entry Level longline fishery in the CGOA Rockfish Program, which does not require quota to access. In practice, this fishery appears to be much more competitive than the Entry Level fishery.

Country	Program	Objective	Administration	Target Population	Mechanism	Quota Source	Funding	Alaska Counterpart
Canada	Atlantic Shrimp Fishery "Adjacent to the Resource" Allocation	Economic development for coastal communities	government	rural/coastal communities	separate allocation	redistribution	N/A	Similar to CDQ. Community allocations of an offshore resource can be fished by larger firms; royalties may be used to support a small-scale inshore fishery, local processing capacity, and economic development.
	Prince Edward Island Future Fisher Program	Training and financial assistance for resident fishermen who obtained a commercial license after a defined cut-off date	government	youth/crew/recent entrants; rural/coastal communities	educational support; technical assistance; financial support	N/A	government	Federal Loan Program, Sitka apprentice program
New Zealand	Annual Catch Entitlement (ACE)	Allow those who do not own quota shares in a fully allocated fishery to annually lease the opportunity to fish (alternative to purchasing the underlying QS)	government	all participants; disenfranchised; youth/crew/recent entrants	opportunity to buy in	purchase (lease)	N/A	Analogous to IFQ in the Halibut/Sablefish Program (as distinct from QS). Prior to introduction of ACE, the only way to secure the opportunity to fish was to purchase quota shares, which created a higher barrier to entry and little opportunity.
	The Cape Cod Fishery Trust	ensure the profitability and sustainability of local, small-scale fishing businesses as the scallop and groundfish fisheries transitioned into catch share management programs	NGO	rural/coastal communities; small- scale (boat size, gear type, trip length); low income	permit bank, financial support, technical assistance	purchase	external fundraising, grants, loans	Alaska Sustainable Fisheries Trust, local fish fund, BBEDC Permit Loan Program
US (not AK)	Maine Lobster Island Limited Entry	Opportunities for year-round island community residents	government	rural/coastal communities	different criteria/rules	N/A	N/A	Nothing specifically analogous. Somewhat similar to some CDQs and CQEs that have specified community residence requirements, but Maine program is specified in regulation and involves separate spatial management area.
	Maine Lobster Student Licensing	Youth entry into lobster fishery	government	youth	different criteria/rules	N/A	N/A	N/A
	Eastern Maine Skippers Program	Help facilitate young people staying in fishing industry and staying in local communities	NGO	youth, rural/coastal communities	educational support	N/A	external fundraising, grants, loans	ALFA young fishermen's initiative, AKMCC young fishermen's network, young fishermen's development act (proposed)

4 Challenges/Benefits in NPFMC region

4.1 Legal considerations

Many of the programs outlined in Table 1 create separate allocations or eligibility criteria based on geographic locations (communities) or age of the participant. While similar programs may be considered by the Council there are particular regulatory requirements that must be addressed. Both the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) National Standard 4 and the Halibut Act (16 U.S.C. 773c) prohibit any action that discriminates between residents of different states. Any community-based program must take this requirement into account. The Magnuson-Stevens Act does not include specific guidelines regarding age-based criteria, however the Age Discrimination Act of 1975⁶ limits actions that differentiate based on age. A preliminary assessment suggests that it may be permissible to use an age-based criterion in designing an access program; however, care must be taken to clearly define the purpose of such a program and build sufficient rationale around the age classification and why this particular age group is advantaged and another disadvantaged and treated unequally (for example, why a cutoff would be at age 30 rather than age 31). The record for the decision must be well documented, supported by fisheries data⁷, public testimony, and other evidence.

While there are state and federal labor laws that may prohibit participation in commercial fisheries for children age 16-18⁸, we are not aware of any program that creates distinct fisheries access eligibility criteria for different age groups in fisheries managed by the Council. As this would be a new type of access design it is possible that unanticipated regulatory issues could emerge. Future analysis would need to consider unintended consequences, and ways to mitigate unintended behavior. For example, if parents/guardians or other harvesters over the qualification age take advantage of quota issued freely to someone of the qualifying age (even if that young person is a non-fisher), we may see a new class of "ride-alongs". Moreover, it may be more prudent to create a program based on specific criteria that targets "new entrants" rather than a specific age group⁹. An access program focused on new entrants may, in practice, assist young participants without directly discriminating based on age.

4.2 Distributional impacts on other IFQ users

It is important to keep in mind that in a fully-allocated fishery creating access opportunities for some has the potential to limit access for others. This potential will vary based on the design of the program. Programs providing support that do not involve quota allocation (i.e. financial support, educational support, technical assistance) may influence the market for quota, but are less likely to directly influence current user's existing holdings. Programs that carve out a separate quota allocation from a fully-allocated fishery are more likely to directly impact non-target populations because quota must be deducted from some other source, reducing the existing quota pool available to other populations.

Quota allocation that involves a specific quota set aside is a controversial and challenging aspect of any access program. Other fisheries have utilized various strategies to assemble quota for access programs with varying degrees of success and controversy. Generally, strategies that have been less controversial involve quota set asides during initial allocation, when there is an increase in overall abundance of the

⁶ https://www.dol.gov/oasam/regs/statutes/age_act.htm

⁷ Note that data on age of QS holders exists; however, this is sensitive information (personally identifiable information), thus there may be more restrictive rules around its use.

⁸ <u>http://labor.alaska.gov/lss/forms/under16notice.pdf</u>, http://labor.alaska.gov/lss/rights.htm

⁹ Sec. 303A of the Magnuson-Stevens Act authorizes a Council to consider new entrants, and economic barriers in Limited Access Privilege Programs (see 303A(c)(5)). While this specific language may not apply for an access program that is not designed as a LAP, it supports the goals of creating opportunities for new entrants.

resource, or if the recipients are required to pay for the quota (it is not perceived as an unfair free allocation).

Another aspect of a quota set aside that could make it more palatable involves restrictions placed on the quota. For example, the Norway Recruitment Quota program distributes quota on an annual basis, the quota cannot be bought or sold and returns to the overall quota pool after 10 years. This type of temporary privilege may be preferred to a more permanent quota allocation, particularly in the IFQ Program where any permanent allocation could be perceived as creating a new class of "initial issuees" who are given free access to a resource that others paid for.

While use restrictions on any quota set aside may be more acceptable to other participants in the fishery, these types of restrictions and isolating quota that can only be used by a subset of participants could reduce efficiency in the overall prosecution of the fishery. There is evidence of this in the existing restrictions on quota use in the IFQ Program. The block program, use caps, and vessel class designations for catcher vessel QS that exist in the IFQ Program have likely limited the consolidation that would have otherwise occurred and provided for broader participants (i.e. QS holders) but also more diverse types of participants including small vessel owners, part-time participants, and new entrants. However, researchers have shown that these restrictions have decreased the present value of resource rent as measured by quota asset prices (Kroetz et al 2015).

At the time of IFQ implementation, the Council recognized that implementing QS trading restrictions between vessel classes would mean that the QS in the IFQ fisheries would be harvested at a higher overall production cost than if these restrictions were not in place. The Council weighed these efficiency costs against the expected social benefits associated from QS trading restrictions, such as providing more widespread fishing opportunities and employment in the IFQ fisheries. Similarly, balancing the distribution of impacts of an access program between the benefits to target populations and potential costs to other participants is an important aspect to be considered when designing any access program.

4.3 Benefits in the North Pacific region

Despite efforts to diversify access opportunities in the IFQ Program, access challenges remain, as documented in Turning the Tide (Cullenberg et al. 2017), other current research (Beaudreau et al. 2019), the IFQ Program review (NPFMC/NMFS 2016), and frequent public testimony at both the Council and the IFQ Committee. If the Council identifies a target population and seeks ways to mitigate access challenges, it may look to other mechanisms used in programs from other global examples (such as RQ or other examples in Table 1). Despite the potential distributional impacts to other IFQ participants, the Council may determine that addressing certain specific barriers to access is a worthy objective and may develop a rationale for that focus.

5 Next steps

If the Council chooses to move forward with this action it should specify the following criteria:

- Identify the specific objective of an access program including target population and mechanism(s) for increasing access opportunities. If the mechanism involves creating a separate quota allocation, identify potential quota source(s).
- It is important to define how an access program would be considered successful and identify metrics that would be used to determine whether or not a program is achieving its goals and objectives.

When the Council requested this discussion paper they intended it to be presented to the IFQ Committee. Scheduling challenges prevented this, but if the Council moves forward with this action, efforts should be made for IFQ Committee review. If a target population is identified that is not well represented on the IFQ Committee, it may be beneficial to create a subcommittee that includes stakeholders from the target population to help understand potential impacts and attitudes towards program designs and support rationale for specific criteria.

6 References

- Anderson, L.G. and Holliday, M.C. 2007. The Design and Use of Limited Access Privilege Programs. NOAA Tech. Memo. NMFS-F/SPO-86.
- Beaudreau, A.H., Ward, E.J., Brenner, R.E., Shelton, A.O., Watson, J.T., Womack, J.C., Anderson, S.C.,
- Haynie, A.C., Marshall, K.N., Williams, B.C. 2019. Thirty years of change and the future of Alaskan fisheries: Shifts in fishing participation and diversification in response to environmental, regulatory and economic pressures. Fish and Fisheries.
- Beddington, J. R., Agnew, D.J, and Clark, C.W. (2007). Current Problems in the Management of Marine Fisheries. *Science*, 316, 1713-1716.
- Bjorndal, T. and Conrad J. 1987. The Dynamics of an Open Access Fishery. The Canadian Journal of Economics. 20(1) pp. 74-85.
- Carothers, C., Lew, D. and Sepez, J. 2010. Fishing rights and small communities: Alaska halibut IFQ transfer patterns. Ocean & Coastal Management. 53. 518-523.
- Cullenberg, P., Donkersloot, R., Carothers, C., Coleman, J., and Ringer, D. 2017. Turning the Tide: How
- can Alaska address the 'graying of the fleet' and loss of rural fisheries access? https://seagrant.uaf.edu/bookstore/pubs/M-215.html
- Grimm, D., Barkhorn, I., Festa, D., Bonzon, K., Boomhower, J., Hovland, V., Blau, J., Assessing catch shares' effects evidence from Federal United States and associated British Columbian fisheries. Marine Policy 36 (2012) 644–657.
- Hartwick, J.M. 1982. Free Access and the Dynamics of the Fishery in Essays on the Economics of Renewable Resources. Edited by L.J. Mirman and D.F. Spulber. Amsterdam, New York, Oxford: North Holland.
- Himes-Cornell, A., and K. Hoelting. 2015. Resilience strategies in the face of short- and long-term change: outmigration and fisheries regulation in Alaskan fishing communities. *Ecology and Society* **20**(2): 9.
- Kroetz, K., Sanchirico, J. N., and D.K Lew. 2015. Efficiency costs of social objectives in tradable permit programs. Journal of the Association of Environmental and Resource Economists, 2(3), 339-366.
- Melnychuk, Michael C., Timothy E. Essington, Trevor A. Branch, Selina S. Heppell, Olaf P. Jensen, Jason S. Link, Steven J. D. Martell, Ana M. Parma, John G. Pope, and Anthony D. M. Smith. 2011. "Can Catch Share Fisheries Better Track Management Targets?" Fish and Fisheries doi: 10.1111/j.1467-2979.2011.00429.x.
- National Research Council, 1999. Sharing the Fish: Toward a National Policy onIndividual Fishing Quotas. Committee to Review Individual Fishing Quotas,Ocean Studies Board. National Academies Press, Washington, D.C.O'Donnell, C.J., Rao, D.S.P., Battese, G.E., 2008. Metafrontier framework

Neis, B., S. Gerrard, Power, N.G. 2013. Women and children first: the gendered and generational social-

- ecology of smaller-scale fisheries in Newfoundland and Labrador and northern Norway. *Ecology and Society* **18**(4): 64.
- North Pacific Fishery Management Council and National Marine Fisheries Service [NPFMC/NMFS]. 1992. Final supplemental environmental impact statement/ environmental impact statement for the individual fishing quota management alternative for fixed gear sablefish and halibut fisheries: Gulf of Alaska and Bering Sea Aleutian Islands. Anchorage, AK. September 15, 1992. Available at: https://alaskafisheries.noaa.gov/sites/default/files/analyses/amd_15_20_seis_0992.pdf
- NPFMC/NMFS. 2016. Twenty-Year Review of the Pacific Halibut and Sablefish Individual Fishing Quota Management Program. December, 2016. Available at: http://www.npfmc.org/wpcontent/PDFdocuments/halibut/IFQProgramReview_1216.pdf
- Olson, J. 2011. Understanding and contextualizing social impacts from the privatization of fisheries: An overview. Ocean & Coastal Management 54(5): 353-363.
- Szymkowiak, M. and R. Felthoven. 2016. Understanding the determinants of hired skipper use in the

Alaska halibut IFQ fishery. Accepted for publication at the North American Journal of Fisheries Management.

Yandle, T., Dewees, C., Consolidation in an Individual Transferable Quota Regime: Lessons from New

Zealand, 1986–1999. Environmental Management (2008) 41:915–928.