Alaska's Fishing Communities: Harvesting the Future
Conference Proceedings

September 21-22, 2006
Anchorage, Alaska

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AK-SG-07-02
$10.00

Published by Alaska Sea Grant College Program
University of Alaska Fairbanks

Elmer E. Rasmuson Library Cataloging in Publication Data

Alaska's fishing communities : harvesting the future : conference proceedings / Paula Cullenberg, editor.
— Fairbanks : Alaska Sea Grant Program, University of Alaska Fairbanks, 2007.

p. : ill. ; cm. (Alaska Sea Grant College Program report ; AK-SG-07-02.)
Conference proceedings, September 21-22, 2006, Anchorage, Alaska.
Includes bibliographical references.

ISBN 1-56612-120-5

Fishery management—Alaska—Congresses I. Title. II. Cullenberg, Paula. III. Series: Alaska Sea Grant College Program report ; AK-SG-07-02.

SH329.C57 A43 2007

Credits

This book is published by the Alaska Sea Grant College Program, supported by the U.S. Department of Commerce, NOAA National Sea Grant Office, grant NA06OAR4170013, projects A/161-01 and A/151-01; NOAA grant HA133F-06-SE-2951 (project OF/06-02); and by the University of Alaska Fairbanks with state funds. The University of Alaska is an affirmative action/equal opportunity employer and educational institution.

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Book layout and cover design by Dave Partee, and copyediting by Sue Keller, of Alaska Sea Grant. Cover photo of Sitka, Alaska © 2007 Clark James Mishler/ AlaskaStock.com.

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Looking Out for the Future of Alaska's Small Fishing Communities

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Nicole Kimball
Fisheries Analyst, North Pacific Fishery Management Council, Anchorage, Alaska

Alaska's geographic isolation from the rest of the United States, along with its cultural diversity and dependence of residents on fish and wildlife resources, make the state unique. From coastal communities bordering Canada, north to communities above the Arctic Circle, subsistence and commercial fishing are the backbone of the rural economy in Alaska. In many ways, Alaskans strongly relate to people in the Arctic and developing nations that are heavily dependent on fish and wildlife resources for economic and subsistence purposes.

"Alaska's Fishing Communities: Harvesting the Future," a two-day conference recently held in Anchorage, focused on how fishermen, community residents, local governments, and other stakeholders can work together to ensure that this vibrant fishing economy continues for future generations. Over 150 Alaskans from 29 communities traveled to Anchorage (mostly by air, as Anchorage cannot be reached by road from nearly all of the represented communities) to participate in the discussions. Chandrika Sharma, executive secretary of the International Collective in Support of Fishworkers in Chennai, India, presented the keynote address at the invitation of the conference steering committee. The most surprising aspect of her presentation, "Rural Communities in a Global Marketplace—Can Fisheries Be a Part of Community Sustainability?" was the degree of commonality among

issues facing fishing peoples from across the globe, including Alaska fishing communities.

Alaska is the only U.S. state located in the Arctic. It is 1,482,970 square kilometers in area, about half the size of India, with 55,110 kilometers of coastline. About 660,000 people live in Alaska, 18% of which represent eleven distinct Alaska Native cultures. Approximately half of all Alaskans live in the urban center of Anchorage. The remainder of the population lives in the smaller cities of Juneau and Fairbanks, and in one of over 80 geographically isolated towns and villages—from Ketchikan in Southeast, to Barrow north of the Arctic Circle. While natural resources provide a vital source of food in these rural villages, the need for cash to pay for energy to heat homes, provide electricity, and get fuel for transportation to access nearby resources is often the primary issue for these communities. Fuel costs are often four times those in urban Alaska.

Fishing, both subsistence and commercial, is the largest private employer in the state and a major economic force. Rural Alaskans eat more than 375 pounds of wild fish and wildlife per person annually. Commercial fishing (ex-vessel value) in Alaska is valued at over 1 billion U.S. dollars per year, the majority of which is generated by salmon, crab, halibut, cod, pollock, and other groundfish fisheries. The wild salmon fishery, in which thousands of Alaskans participate each year, was valued at over $300 million in 2006, with a harvest of 140 million salmon. Five species of Alaska salmon are harvested in 26 different areas of the state.

A primary focus of the fishing communities conference were ways to retain access to fish resources by local community residents and future generations. Alaska's fisheries are regulated by either the State of Alaska and/or federal law, since fish harvested beyond 3 miles of the coastline are considered "federal" or owned by the American public. As a result, while federal law mandates that impacts on fishing communities be considered during the development of management regulations, the State of Alaska's constitution mandates that no preference be given to specific individuals, groups, or communities in state-managed fisheries. A number of quota share programs have been developed in the federal system, while the state manages access primarily using a license limitation system, in which licenses are transferred among fishermen on the open market. This dual management system in Alaska's waters can be both confusing and contradictory.

Fisheries managers in both of these systems have recognized a drain on locally owned access over the last few decades. At the same time, the value of access privileges has increased significantly, making it more difficult for young people to start-up a fishing business. Recognizing that loss of community-based access is equivalent to a small local business shutting its doors, local community and tribal

governments have recently focused on how to provide for long-term access within the community.

Two broad approaches to maintaining fisheries access by communities were addressed during the conference. These included (1) direct provisions or programs implemented by the government, and (2) increased education and tools that enable retiring fishing business owners to transfer their assets within the community. Quota share and license-based systems were specifically addressed under the first approach, as many participants recognized that the value of quota share or licenses has increased dramatically over time, making it more difficult for a person to enter the fishery. It was noted that including communities in a share-based system should be done during the development of the initial program, such that the increased price of entry does not preclude the purchase or use of community shares in the future. Limited duration of quota share, as opposed to granting shares in perpetuity, might also allow managers to adjust a program on a periodic basis, to ensure that community access and other potential goals have been reached.

Education and creative financing were the primary examples of the second approach to supporting continued community access to fishing privileges. Bruce Jones, city manager of Petersburg, Alaska, noted that his community was looking at ways to educate young people about opportunities in fishing and how to develop a business plan to buy into a fishing business. In addition, there are financial tools and support services available to help fishing business owners transfer their assets upon retirement. Linda Behnken of Sitka, and Eric Rosvold of Petersburg, both brought forth ideas on how to ensure that crewmembers were able to use their experience to buy into eventual ownership of a fishing business. Behnken advocated the design of management systems that "focused on fostering sustained or expanded participation by independent community-based fishermen." She noted that owner-onboard provisions are essential to this design, to ensure that resident fishermen continue to be tied to the harvest of the resource.

A substantial portion of the conference was spent in small group discussions with coastal residents, fishermen, and fisheries managers. These discussions highlighted a common need for community residents to work together at the local level to define fisheries goals for their community, thus creating a "bottom-up" management system. In Alaska, while many issues are shared across the state, the broad cultural, geographic, and resource differences make it impossible to implement a "one size fits all" approach. Instead, participants focused on methods that could be used to identify the primary priorities, opportunities, and assets within a community, to develop a plan to address and implement a community's goals. The needs of fishermen, crewmembers, processing

workers, small support businesses, and local governments, should be well represented and taken into account during this process.

As Chandrika Sharma noted, the UN Law of the Sea and the Code of Conduct for Responsible Fisheries address the need for recognition of the "economic needs of coastal communities" and the need for "preferential access to traditional fishing grounds." She recommends putting in place management systems and approaches that recognize the rights of small-scale fishing communities to resources, and ensuring that these communities are part of the management and decision-making processes. We in Alaska are also taking responsibility for considering small coastal communities in the development of local and national fisheries policies.

For more information about "Alaska's Fishing Communities: Harvesting the Future" please refer to the conference Web site at seagrant.uaf.edu/conferences/fish-com2/agenda.html. Most of the conference presentations are provided on this site, as well as a video link to Chandrika Sharma's comments. The conference steering committee was composed of government, university, industry, and nonprofit organization representatives. Another conference is tentatively scheduled for early 2008.

If you missed the book *Managing Fisheries—Empowering Communities* (www.alaskaseagrant.org/bookstore), the forerunner to *Alaska's Fishing Communities: Harvesting the Future,* you can order it now from Alaska Sea Grant. Recognizing the importance of fisheries to our coastal communities, both now and in the future, was the theme of the 2005 "Managing Fisheries—Empowering Communities" conference.

Acknowledgments

We would like to thank the speakers for their contributions, particularly our out of state speakers—Chandrika Sharma, executive secretary of the International Collective in Support of Fishworkers, Chennai, India; Courtney Carothers, University of Washington; John Kearney, John F. Kearney & Associates, Nova Scotia, Canada; and Rachel Donkersloot, Ph.D. candidate, University of British Columbia, Vancouver. Thanks also to Sherri Pristash, Alaska Sea Grant, for coordinating the conference. We would also like to thank the funders of the conference—NOAA Fisheries, Alaska Region (primary sponsor), Alaska Department of Fish and Game, Alaska Sea Grant and Marine Advisory Program, Alaska Marine Conservation Council, Aleutian Pribilof Island Community Development Association, Gulf of Alaska Coastal Communities Coalition, Icicle Seafoods Inc., Norquest Seafoods, North Pacific Fishery Management Council, North Pacific Seafoods Inc., Norton Sound Economic Development Corporation, and Ocean Beauty Seafoods.

Conference planning team

- Paula Cullenberg, chair, Alaska Sea Grant Marine Advisory Program, University of Alaska Fairbanks
- Sue Aspelund, Alaska Department of Fish and Game
- Dorothy Childers, Alaska Marine Conservation Council
- Mark Fina, North Pacific Fishery Management Council
- Nicole Kimball, North Pacific Fishery Management Council
- Kris Norosz, Icicle Seafoods
- Philip J. Smith, NOAA Fisheries, Alaska Region
- Gale K. Vick, Gulf of Alaska Coastal Communities Coalition

Agenda

September 21, 2006

8:15 Opening remarks

Paula Cullenberg, Alaska Sea Grant, University of Alaska Fairbanks

Doug Mecum, Acting Regional Administrator, Alaska Region, NOAA Fisheries

Keynote: *Rural communities in a global marketplace: Can fisheries be a part of community sustainability?*
Chandrika Sharma, Executive Secretary of the International Collective in Support of Fishworkers, Chennai, India

9:00 The value of fish, fishing and seafood to your community

Moderator: Mark Fina, North Pacific Fishery Management Council

Economic multiplier: How do Alaska's coastal communities benefit from their local fishing and seafood industries?

Panel 1: *State and federal management view*

- McKie Campbell, Commissioner, Alaska Department of Fish and Game
- Alan Austerman, Office of the Governor, and McDowell Group. Overview of the Alaska Seafood Development Strategy
- Stephanie Madsen, Chair, North Pacific Fishery Management Council

Panel 2: *Local community view*

- Bruce Jones, Petersburg City Manager
- Jerome Selby, Mayor of Kodiak
- Freddie Christiansen, Old Harbor/Gulf of Alaska Coastal Communities Coalition

10:45 How are Alaska's fishing communities changing?

Moderator: Sue Aspelund, Alaska Department of Fish and Game

Panel 3: *Synthesis of current research on cumulative impacts of fisheries management and lessons for the future*

- Frank Homan, Commercial Fisheries Entry Commission. *Permit ownership, changes over time, demographics of those fishing.*
- Dan Robinson, Alaska Department of Labor. *Employment in Alaska fisheries, changes over time in both seafood/fishing values and incomes, changes to data collection.*
- Marie Lowe, Institute of Social and Economic Research, University of Alaska Anchorage. *Social and economic impacts of crab rationalization in the Aleutians East Borough.*
- Courtney Carothers, University of Washington. *Impacts of halibut IFQs on Kodiak fishing villages and the potential of community quotas.*
- Steve Langdon, University of Alaska Anchorage. *Community-based fisheries in the Gulf of Alaska: Status and issues.*

1:30 Defining your community's goals for fish/fishing/seafood

Moderator: Nicole Kimball, North Pacific Fishery Management Council

Speaker: John Kearney, John F. Kearney and Associates, Nova Scotia, Canada. *Process for communities to use in defining goals.*

Panel 4: Models for community organization

- Torie Baker, Cordova Fish Committee
- Julie Decker, Southeast Conference
- Fred Pike, Mayor of Naknek/Bristol Bay Borough
- Jill Klein, Executive Director, Yukon River Drainage Fisheries Association

3:15 Working group session

Break into small group sessions with a moderator to discuss the following issues:

- How valuable is fishing to your community? What are your community's assets, needs, strengths, weaknesses?

- What are your community's goals? Are they realistic? Are you willing to change to reach those goals?
- How can collective goals for a community be balanced with individual residents' goals?
- Is intergenerational transfer of assets and access important and how can it be facilitated?
- Is some form of local management feasible in your community? What kind of organizational group would represent the community?
- What common goals can be identified to use in developing strategies to ensure fishing is a part of your community's future economic development?
- How can those goals be developed and shared within your community?

5:30 Reception and poster session

September 22

8:30 Working group reports

The spokesperson from each working group presents a brief summary (and/or PowerPoint) of the working group issues or conclusions from day 1.

10:15 Strategies for the next generation: Fishing as a long-term economic source for Alaska's coastal communities

Moderator: Kris Norosz, Icicle Seafoods

How can a community encourage individual fishing families to pass on their business locally? How can a community provide the tools to enable young people to make a living from fishing, processing, guiding, or otherwise benefiting from local fish resources? Are young people interested in fishing and seafood businesses as a career choice? What types of fishing-related employment opportunities are available?

Panel 5

- Andy Ruby, Bristol Bay Economic Development Corporation. *Keeping permits in your region; BBEDC operates a permit brokerage service and makes loans to local residents to purchase permits.*
- Eric Rosvold, Petersburg, and Al Burch, Kodiak. *Graying of the fleet—community impacts from asset transfers.*
- Rachel Donkersloot, Naknek resident and master's student, University of Montana. *Social change and the life-paths of young Alaskans.*
- Linda Behnken, Alaska Longline Fishermen's Association. *Designing limited-access commercial fishery management programs.*

1:15 Financial strategies for the future

Moderator: Gale Vick, Gulf of Alaska Coastal Communities Coalition

What tax incentives and strategies can communities use to encourage fish processing? What loan programs are available for individuals or communities to purchase quota share or permits? How to manage a fishing business? How can communities invest in infrastructure to support fishery-related businesses?

Panel 6

- Greg Winegar, Alaska Department of Commerce, Community and Economic Development
- Marvin Adams, Native American Bank
- Glenn Haight, Alaska Department of Commerce, Community and Economic Development
- Lela Klingert, President, Commercial Fishing and Agriculture Bank

2:45 Working group session

Break into small group sessions with a moderator.

4:30 Wrap up, next steps and plans for proceedings

Paula Cullenberg, Alaska Sea Grant, University of Alaska Fairbanks

Welcome

Doug Mecum
Deputy Regional Administrator, NOAA Fisheries, Juneau, Alaska

Good morning and welcome. I want to thank all of you for coming to this conference. It's good to see such a great turnout and so many friends and colleagues. I especially want to thank Paula Cullenberg and the other Sea Grant staff for their hard work in organizing this conference and the planning committee for their work in developing the goals and agenda for this conference. I also want to thank the speakers and presenters for agreeing to participate in what promises to be a very productive and informative conference.

NOAA Fisheries provided financial support for this conference, as well as last year's "Managing Fisheries, Empowering Communities" conference, because we understand the importance of commercial, as well as recreational and subsistence fisheries, to the economy of coastal communities and to the entire state of Alaska. We feel this conference provides a good opportunity for residents of coastal communities and their representatives to interact with state and federal agency representatives in order to increase their knowledge of management systems and regulatory processes, investment and financing opportunities, and ways to better plan for the future. And it's also an opportunity for us, as agency representatives and policy makers, to learn more about the needs of coastal communities and the people we serve.

Not to mention the fact that federal law, namely National Standard 8 of the Magnuson-Stevens Act, requires the councils and federal agencies to "take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities and (B) to the extent practicable, minimize adverse economic impacts on such communities."

Changes, challenges, and opportunities

During this conference we are going to talk about how fishing communities are changing, the challenges they are facing, and some opportunities to meet those challenges.

During the last 26 years that I have been in Alaska, most of that time working for the Alaska Department of Fish and Game, the Alaska seafood industry has undergone rapid and profound changes that have affected nearly every sector. Many of these changes have resulted from globalization of the world economy and the rapid growth of aquaculture. These key factors have greatly increased the pressure on the commercial fishing industry to increase efficiency, reduce costs, and respond to market demands for better quality and more consistent supply. Responding to these pressures has and continues to be a struggle for Alaska's wild fisheries given the inherent uncertainty and variability in production and the fact that most wild stocks are fully exploited. We have seen declining fish prices and reductions in participation in some fishing sectors, e.g., the salmon and herring fisheries, that have resulted in losses of jobs and tax revenue for coastal communities. Consolidation of fleets, as well as fishing businesses, have meant the loss of jobs, revenue, and infrastructure. Permits once held by residents of rural communities have migrated to more urban areas, or out of the state. Fuel prices, as we are all painfully aware, have gone through the roof in recent years and profits are getting squeezed further even though fish prices have improved for many fish species. And as if we didn't have enough to worry about, the waters of the North Pacific Ocean have been warming at an alarming rate over the past thirty years. Nobody knows exactly what this will translate to for our fisheries and our living marine resources. Some species are likely to benefit, perhaps to the detriment of others. We just don't have enough scientific facts to make sound predictions.

So how can we meet these future challenges and take advantage of new opportunities? One thing I want to stress is the importance of continuing to invest in fishery management, monitoring, and research. The North Pacific Fishery Management Council and the Alaska Board of Fisheries have a very strong track record of developing fishery management plans that are grounded in independent science and that ensure conservation and sustainable management of fishery resources. However, the quality of the decisions that they make depends greatly on the quality and availability of information. Furthermore, the ability of fishery managers to provide the fishing opportunities that residents of many coastal communities rely on, depends on adequate fiscal and staff resources to manage the fisheries and collect information on abundance, harvest rates, by catch, and fishing impacts on non-target species and essential fish habitat.

Finally, I want to emphasize the importance of maintaining adequate public and community input into our fishery management and regulatory decision-making processes. Our efforts cannot be successful without input and participation by members of the coastal communities. Our public processes must be open and transparent and we need to encourage and welcome public input. We must be aware of community needs, listen to community comments and concerns, and take communities into consideration in our decisions. Hopefully this conference will help in some measure to achieve these goals.

In closing, I again want to thank all of the people that worked to bring this conference to fruition and I wish you all the best in your discussions over the next few days. Thank you.

Rural Communities in a Global Marketplace: Can Fisheries Be a Part of Community Sustainability?

Chandrika Sharma
Executive Secretary, International Collective in Support of Fishworkers, Chennai, India

The role of fisheries in sustaining communities

Millions of people worldwide depend on fisheries, and an estimated 90% of the 38 million people recorded as fishers and fish farmers are small-scale. In addition, more than 100 million people are estimated to be employed in other fisheries-associated occupations. These figures are likely to be underestimates.

Small-scale fisheries provide an important source of livelihood, particularly for communities in rural areas with few other sources of employment. Small-scale fisheries are drivers of rural economies, as seen in the recent tsunami media reports, and these multiplier effects are not well recognized. Fisheries often form the culture and identity of communities.

A number of international bodies have recognized the importance of fisheries to rural communities. The United Nations Convention of the Law of the Sea asks states to take into account relevant environmental and economic factors, including the "economic needs of coastal fishing communities and the special requirements of developing States," while taking measures to conserve and manage the living resources of the exclusive economic zone (Article 61).

Agenda 21 emphasizes that States must take into account traditional knowledge and interests of local communities, small-scale artisanal fisheries and indigenous people in development and management programs.

The Code of Conduct for Responsible Fisheries (CCRF) asks States to protect the rights of fishers and fishworkers, particularly those engaged in subsistence, small-scale, and artisanal fisheries, to a secure and just livelihood, as well as preferential access where appropriate, to traditional fishing grounds and resources in the waters under their national jurisdiction (Article 6.18).

If fisheries are to continue to sustain communities, certain issues need to be addressed. These issues undermine access to resources, returns to labor, or the resource base on which communities depend for their livelihoods.

Top-down management measures, taken from an economic efficiency and production perspective, that disregard community, social, and cultural aspects, can hurt sustainable communities. For example, some types of ITQ (Individual Transferable Quota) systems lead to divisions and conflicts within communities.

Ineffective enforcement of management measures, such as no-trawling zones, bans on destructive gear, etc., can also damage small-scale fisheries. Industrial fishing boats, including distant water fishing boats that compete directly with small-scale fishers over resources, grounds, and markets also negatively impact the ability of community-based fishers to sustain themselves.

Gender-biased policy and management initiatives, that disregard women's roles in the fisheries and in fishing communities, can have major social and economic impacts for communities. Small-scale fishers, traders, and processors from fishing communities may face difficulties in accessing local, regional, and global markets as well as certifications or meeting quality standards. Increased competition for coastal resources and spaces from oil industry, tourism, port development, etc., can cause communities to lose access to fishing grounds and lands.

Conservation initiatives, such as marine protected areas, that are conceptualized and implemented in non-participatory ways, can displace or otherwise impact fishing communities. On the other hand, increasing pollution of coastal areas affects the quality of life of communities and fisheries resources.

Certain types of commercial aquaculture can negatively affect fishing communities by affecting the wild resources or by pushing prices down.

What needs to be done?

We need to promote the small-scale model of fisheries development and progressively redistribute fishing space and resources to the small-scale fisheries sub-sector (owner operators and workers from fishing communities). Management systems should be put in place that recognize the

rights of small-scale fishing communities to access the resources and to be a part of the decision-making process.

Community-based systems of management should be developed; and measures such as ITQs, which have the potential to lead to inequity and greater conflict of interest within communities, should be discouraged. Rights to resources should be linked to responsibility for their sustainable management. Toward this, investment should be made in capacity building of fishing communities and their organizations. Women's roles in fisheries and in decision-making should be supported and strengthened.

Enforcement must be effective. Lack of enforcement creates de facto open access conditions—a race for fish won by those with greater access to capital and technology. Consider allocating rights to harvest commercially important species, such as shrimp and lobster in territorial waters, exclusively to small-scale fishers using selective gear. Marine protected areas should be considered only if proposed through a participatory process and after ensuring that access to resources and livelihoods of the small-scale sector using selective gear are not compromised.

Livelihoods of those dependent on small-scale fisheries should not be compromised by other users of coastal resources. Coastal aquaculture should be developed in a manner that is complementary to fisheries and does not negatively affect the resource base, the returns to those in capture fisheries, or access of small-scale fishing communities to resources. Effective steps should be taken to control pollution of coastal areas, and an ecosystem approach to management should be pursued.

Role of communities

Communities need to strengthen their own organizations to protect their interests. Appropriate models of organization need to be explored, taking into account the limitations of current models. These organizations need to be broad-based, made up of both men and women. Growing differentiation within communities is a challenge that will need to be addressed if the role of fisheries in sustaining community livelihoods and culture is to be maintained.

Fish Benefit Communities

Denby S. Lloyd
Director, Division of Commercial Fisheries, Alaska Department of Fish and Game, Juneau, Alaska

This is a panel discussion on How Do Alaska's Coastal Communities Benefit from Their Local Fishing and Seafood Industries, or The Value of Fish, Fishing, and Seafood to Your Community: State Management View.

The various titles for this conference's first two panels (State Management View, and Community View) cover quite a bit of territory, but the words can be distilled down to: fish-benefit-communities. Yes, they do.

For my part, all this ground is then supposed to be covered from a state management viewpoint. Well, as any good bureaucrat would, I will begin my remarks recounting some general statistics. After that, however, I will take a more general tack, addressing in somewhat a different fashion the question posed to our keynote speaker—Can fisheries be a part of community sustainability? Of course they can, and we're counting on it.

The bare facts

In Alaska, based on 2005 reports, we produced fish and other seafood that commercially brought 1.3 billion dollars in direct payments to fishermen (ex-vessel value), which is estimated to have resulted in 3.5 billion dollars in first wholesale value. This puts us on a par with many of the world's largest seafood producing countries, let alone any of their individual states or territories. Some highlights of Alaska's seafood harvests include over 220 million salmon (setting a new record in 2005), 40,000 tons of herring, over 1.5 million tons of pollock (making it the world's largest food fishery), almost 250,000 tons of Pacific cod, over 40,000 tons of halibut and sablefish, over 20 million pounds (i.e., 10,000 tons) of king crab, and almost 40 million pounds of snow and Tanner crab.

These harvests supported the equivalent of almost 7,000 full-time harvesting jobs (with 17,000 people being employed during peak seasons) and 8,500 full-time processing jobs (again, with about 17,000 different people actually employed during peak seasons). This makes fishing and seafood processing one of the largest employment sectors in Alaska, producing over half of all jobs in southwestern Alaska, about 18% of all jobs along the Gulf of Alaska coast, and 14% of all jobs in southeastern Alaska.

Fisheries-related taxes and fees brought in over 53 million dollars to Alaska in 2005, 26 million of that in fishery business (i.e., raw fish or fish processing) taxes, but also significant amounts in marketing and enhancement taxes, and in limited-entry permit and crewmember license fees.

Jobs, value, and taxes: these attributes are often used as indicators of economic benefit. But they are not the only important benefits. Some other measures include the fact that 32 million pounds of fish and another million pounds of shellfish are harvested and consumed for direct subsistence purposes in Alaska each year. And, while these subsistence harvests have an estimated dollar-equivalent value of several hundred million, the real value is so much more.

A broader perspective

All economic activity, everywhere on the planet, derives originally from the extraction or harnessing of natural resources. Fisheries, agriculture, and forestry are obvious examples. But even mining and manufacturing depend on the extraction of raw materials; electronics and computing rely on the permutation of metals and other materials that initially had been extracted; economics, finance, and even political science are in essence based upon the trade and governance of natural resources and those assets and services that are synthesized or derived from them.

In Alaska, while we do have some secondary and tertiary economic activity, the primary extraction of natural resources is our dominant economic engine. However, I pose this question to you: which of the resource extraction industries is for us most broadly sustaining and sustainable? Oil and gas fuel a huge portion of Alaska's economy, but there are certainly legitimate questions about how long such extraction will be sustainable. And, while the wages and taxes are financially sustaining, there are many aspects of spiritual, individual, and community life that are not promoted by this highly industrial activity. Mining is of a similar nature, although there is certainly substantial history and community spirit associated with mining in Alaska. Logging is arguably sustainable in an environmental sense, if conducted correctly, but not necessarily within the generation time of us humans, given the 50 to 150 years needed to produce mature stands of timber. And, while agri-

culture can be readily renewable more within our lifetimes, the climate in Alaska is not overly conducive to farming.

All of which, I would suggest, leaves fisheries as the most sustainable and broadly sustaining way of life in Alaska, one that brings people back to first principles and provides them a living. This is true for a wide range of Alaskans, from relatively anonymous individuals in our larger urban centers to well-recognized leaders within smaller communities. An association with fish (and wildlife) on a continuing and basic level, for spiritual and bodily sustenance, recreation, and economic livelihood, is one of the proud legacies that we can still maintain in Alaska.

State management view

Management of public resources is a public responsibility, and governments act on behalf of their citizens. In our case the State of Alaska is charged, explicitly in the Alaska Constitution, to manage fish (and wildlife and other natural resources) on the sustained yield principle for the maximum benefit of its people. Here we have that same distillation that I started with: fish-benefit-communities, with a particular emphasis on sustainability.

The Alaska Department of Fish and Game takes very seriously its responsibility to the people of Alaska to manage fish and fisheries on a sustainable basis, in recognition of the many values that these resources provide in sustaining our various ways of life.

To do this, of course, requires taxes and the appropriation of funds for research and management. I'll argue here, though, that the very small portion of the value of our fisheries that goes into their management and conservation (e.g., 53 million divided by 1,300 million equals about 4%) is indeed a bargain. But there is room for improvement, especially if expenditures on fish and game management are considered investments. For this, I'll give a simple example.

Below the outlet to Frazer Lake on Kodiak Island is a waterfall that presents a complete barrier to the upstream migration of salmon. In the 1950s, sockeye salmon were transplanted into the lake and eventually a fish ladder was built to help returning adults swim around the waterfall and into the huge expanse of spawning and rearing habitat provided by the lake and its tributary streams. For an initial investment of a couple hundred thousand dollars and annual expenditures of about $50,000, we get an annual return comprising an average of 1.2 million dollars in commercial harvest, 250,000 dollars to guides and lodges for sport fishing activity, and the equivalent of tens of thousands of dollars in subsistence salmon harvests. This doesn't count the additional return of several hundreds of thousands of dollars in associated bear viewing and bear hunting that would not otherwise accrue if the sockeye

salmon run was not present. So, for an ongoing fishery management investment of about $50,000 each year, we get economic activity worth a couple million.

Now, we can't create new runs of salmon in very many places, and admittedly most of our management and research programs are more mundane, but they are necessary if we are to sustainably enjoy the continuing benefits to be gained from our fishery resources. And there are a host of fish and shellfish species that currently are not exploited. These harbor additional benefits that could be tapped with some additional investments in research and management. In some regards, we are only limited by our creativity.

Summation

Can fisheries be a part of community sustainability? Of course they can, and we're counting on it.

Managed correctly, these truly renewable resources can bring sustained, ongoing benefits to communities large and small, throughout Alaska. Our fish can sustain us economically, socially, physically, and spiritually. So long as we learn our lessons well, restrain ourselves from the temptations of overharvest, and wisely share the benefits of these resources, fisheries will not only be a part of community sustainability—they will, in many, many places in Alaska, be central to sustaining our livings and our ways of life.

Petersburg and the Seafood Industry

Bruce Jones
City Manager, City of Petersburg, Alaska

Petersburg was founded on fishing because of its source of fresh water, availability of ice, and a safe natural harbor. Fishing has always been the economic stabilizer for Petersburg. Even during severe economic downturns, the fishing industry has carried Petersburg through the worst of times.

In 2001 the Petersburg City Council commissioned an economic profile of Petersburg. Out of that study, which covered the years 1990-2000, quite a bit of interesting information came forward. Seafood harvesting and processing made up 78% of the basic industry employment and payroll. It was over half of the basic and support industries combined, for employment and payroll figures.

Over that ten-year period, raw fish tax receipts to the city averaged $800,000 annually. Over the last five years that average has decreased to approximately $544,000 annually. That is the direct value of the seafood industry to Petersburg.

Indirectly, seafood harvester and processor employees pay sales tax and property tax, own homes, and send their children to school, all of which adds even further to the funding of services and programs that make Petersburg a great place to live.

Of growing concern are the potential loss of harvest shares and the retention of harvesting rights by local harvesters. Due to a focus on the fresh market and the lack of adequate air freight access, landings of halibut have diminished. The community will begin to see real losses of revenues and residents if permits and quota shares are sold to nonresidents.

With Petersburg being so dependent on the fishing industry, it is time that the city government, processors, and harvesters come together with the future of the community in mind and begin to address some of these issues.

Petersburg has done a good job of continuing to expand infrastructure to accommodate an increasing number of vessels. The water and electrical utilities can now keep up with demand. It will be a shame to have this entire infrastructure in place and young men and women trained and ready to take the industry into the future, and not have the permits or quotas available for them to use.

Petersburg was given a number of strategies to work on to help address these issues through a Seafood Industry Action Plan developed as part of a Strategic Development Plan. It's time we began working on them.

The strategies include

- Retain harvesting rights now held by Petersburg residents.
- Establish an Interest Rate Forgiveness (IRF) program to provide a financial incentive to purchase harvesting rights. The program could provide up to 5% reduction of interest on loans for harvesting rights. One to two percent interest rate forgiveness would be for Petersburg residents. Up to an additional 3% additional forgiveness would be for delivering all IRF-fish harvested to Petersburg. One percent additional forgiveness would be for a vessel home-porting in Petersburg. The program could run through the Petersburg Economic Development Corporation.
- Encourage nonresident fishermen to relocate to Petersburg with access to the IRF Program. Create a relocation packet and send it in response to inquiries on permanent moorage.
- Increase and promote the desirability of Petersburg for a full range of processors, both established and emerging.
- Conduct a survey of waterfront property and other commercial property for availability for seafood processing and related businesses.
- Create a business response packet to send to commercial property inquiries.
- Investigate water transportation alternatives for shipping seafood products to Skagway, Prince Rupert, and Bellingham in order to improve Petersburg's competitive position as a processing port.
- Stimulate air freight carrier interest in Petersburg.
- Assist in consolidating air freight demand.
- Increase harvest volume landed in Petersburg.

- Form a committee or task force to thoroughly explore establishing a commercial-quantity pink and chum salmon hatchery or remote release site in the area.
- Thoroughly explore the possibility of a local shellfish test lab in Petersburg.
- Encourage ongoing stock assessment efforts for dive fisheries.
- If requested, assist in market research efforts for green urchin stocks.
- Assist in research efforts for local shellfish aquaculture. If demand merits, consider hosting an informational workshop on shellfish aquaculture.

The Value of Fish, Fishing, and Seafood to Kodiak

Norm Wooten
Director (former), Kodiak Chamber of Commerce, Kodiak, Alaska

Kodiak's marine infrastructure includes three piers, two harbors with 650 stalls, a tidal grid, a gravel grid, two general-purpose docks, and within two years, a 600 ton travel lift.

Kodiak is the third largest fishing port in the United States, and fishing has a huge effect on Kodiak's economy. In 2005, 366.3 million pounds were landed with a wholesale value of $95.2 million. Halibut make up 26% of that value, followed by salmon at 19%, Pacific cod at 18%, pollock at 15%, and sablefish at 8%.

In Kodiak, 1,158 commercial fishing permits are held by area residents. Over 600 residents are employed in the harvesting sector and

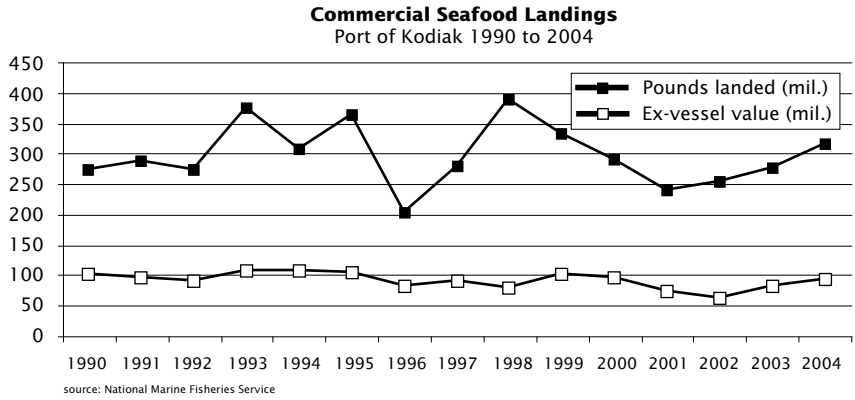

Figure 1. Kodiak is the third largest fishing port in the United States.

1,368 are employed in processing plants with a $54 million payroll (Fig. 1).

There are important tax implications to Kodiak from the fishing industry. In fiscal year 2005, the Kodiak Island Borough collected over $1 million in severance taxes (statewide assessed on fishing, timber, and mineral extraction). Kodiak's top ten employers in 2005 were

1. Kodiak Island Borough School District ... 441
2. Trident Seafood Group 257
3. Ocean Beauty Seafoods 201
4. North Pacific Seafoods..... 194
5. International Seafoods 182
6. City of Kodiak..... 159
7. Global Seafoods..... 132
8. Safeway, Inc. 129
9. Kodiak Area Native Association 128
10. Sisters of Providence..... 124

Multiple marine support business providers are also important to Kodiak's economy, including grocery and food providers, household goods, airlines, marine transportation, and real estate.

Fishing also impacts K-12 public education and the public school system through enrollment fluctuations and transience, which impacts the state foundation formula dollars coming into the community. Student diversity is also impacted by cultural shifts in processing and harvesting workers. Post secondary education opportunities in Kodiak related to fisheries includes the Fishery Industrial Technology Center (FITC), part of the University of Alaska Fairbanks School of Fisheries and Ocean Sciences, which has a graduate program and does research in fishery-related sciences.

Research also takes place at the Kodiak Fisheries Research Center, a NOAA Fisheries facility that collaborates with the Alaska Department of Fish and Game and the University of Alaska.

The largest U.S. Coast Guard unit in the United States is on Kodiak Island with 1,300 military and civilian workers and 1,700 dependents. Fourteen separate USCG Commands are operated from this base, which generated a $50 million payroll in 2005. (Because the table above cites only businesses whose employees pay into unemployment insurance, USCG does not appear on that list.)

Given the importance of fisheries to the community of Kodiak, efforts have been made by local government and residents to increase the value of the fisheries. This includes the quality assurance/brand marketing program, Star of Kodiak, for salmon (Fig. 2). The program is supported by the Kodiak Chamber of Commerce, and participation by harvesters and processors is voluntary.

Figure 2. Brand marketing for Kodiak-landed seafood.

GOAC3 Brief Comments for "Alaska's Fishing Communities: Harvesting the Future," Anchorage, Alaska, Sept. 2006[1]

Fred Christiansen
Fisherman, Gulf of Alaska Coastal Communities Coalition, Old Harbor, Alaska

Gale K. Vick
Executive Director and Chairman, Gulf of Alaska Coastal Communities Coalition, Anchorage, Alaska

> *"In order for small coastal Gulf of Alaska communities to stay alive, there must be access and opportunity to fisheries resources and the livelihoods they can support so community residents and their offspring can continue to live and work in the villages and small coastal communities for generations to come. Things have changed dramatically in 20 years. It used to be that at any dock in one of these small communities you would see 8-10-12 year olds going fishing with their families. We just don't see it much anymore because of lost opportunities. We've lost crews, boats, canneries, cold storage. Now the young people are drifting and there are social problems because of it. When they worked on the boats they were hardworking and contributing and making a future for themselves. They don't have the opportunity now and won't have a chance unless we preserve community fisheries."*[2]

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[1] Revised Jan. 2007.

[2] Gale K. Vick, in Obstacles and Opportunities for Community-Based Fisheries Management in the United States, by Michael L. Weber and Suzanne Iudicello, September 2005, Published by Coastal Enterprises, Inc., with support from the Ford Foundation, Oak Foundation, Surna Foundation, and Henry P. Kendell Foundation. (Quote revised from original by author.)

Introduction

The Gulf of Alaska Coastal Communities Coalition (GOAC3) is a private nonprofit organization with membership representing over 45 small coastal communities in the Gulf of Alaska, incorporated in 1998. The GOAC3's purpose is to assist specific fisheries-dependent GOA fisheries communities in developing viable economies through retaining and then regaining access to adjacent marine resources, the foundation for their existence, for commercial, tourism and subsistence opportunities in perpetuity. Many of the ancestors of current fisheries community residents sustained themselves for countless centuries—not a few arbitrary recent years—from the sea.

In the last twenty years there has been a steady and serious erosion for local fishery opportunities—often bought about by inadvertent effects of regulatory action—in the Gulf of Alaska. Most of the younger generation no longer see career opportunities in fishing and ultimately must leave the community to find work elsewhere. These losses are destroying the cultural and economic fabric of many coastal Gulf of Alaska communities.

The GOAC3 maintains that:

- The protection of our marine resources is vital and best accomplished where there are healthy local communities dependent on them.
- People and communities are inherently important to the security and integrity of the state and nation as a whole.
- The health of our smaller coastal communities impacts the health of larger GOA communities and the state of Alaska.
- When communities lose access to their local resources they are dependent on, they lose their economic, social, and cultural viability and they become threatened, eventually becoming extinct unless there is some equitable sharing of the resource.
- Fisheries management programs have too often ignored the long-term and cumulative impacts on communities.
- Communities need a voice and tools for securing and protecting their access to marine resources.
- The only way fisheries communities are going to retain a certain amount of access, guaranteed into the future generations, is with ownership of such access rights.

Sharing the fish, spreading the wealth, protecting our Gulf of Alaska fishing communities: the primary questions we should be asking ourselves and others

1. Who owns Alaska's fishery resources now and where is this trend heading?
2. How do we "provide for the sustained participation" of our communities from fisheries resources in perpetuity?
3. What has the piecemeal rationalization of Alaska's living marine resources and the resulting loss of long-term fishing strategic flexibility (i.e., "combination fishing") meant to the sustainability of our fisheries communities?
4. How can we add value to our raw products to benefit Alaskans?
5. How do we encourage agencies to take on more responsibility for cumulative impacts of their decision making?
6. How do we bring back fishing effort that has been lost for an assortment of reasons?
7. How do we address the social problems created by lost opportunity and livelihoods?
8. What do we want our community fisheries to look like in 5 to 50 years and beyond?
9. How do we make community quota work for the Gulf of Alaska?
    a. How do we ensure that as many participants as possible benefit?
    b. How do we protect the interests of all to the greatest maximum benefit?
    c. What have we learned from the CDQ (community development quota) program?
10. What do recent socio-economic studies say about sustained community participation?
11. If not now, when?
    a. If we wait any longer, we will lose some communities forever.
    b. If we wait any longer, we could be going back to pre-statehood conditions.

c. If we wait too long, there will be no options for reversing the trends.

12. If not community ownership, what?

a. Purchase programs alone cannot solve the problem; there has to be a significant capital base and administrative structure to implement such programs or they are likely to be illusory.

b. Buy-backs (or buy-outs) do not solve the problem; in some instances, they actually can make the situation worse.

c. Consolidation of the fleet consolidates wealth and control.

i. Consolidation of the fleets can disenfranchise owners, skipper and crew, vendors, and many others.

ii. Consolidation of fleets to bigger boats can shift the landing dynamics dramatically.

iii. Consolidation of processing effort can hold communities hostage.

d. Individual ownership does not guarantee quota will stay within a community or region in the long term.

Conclusion

Since access to abundant marine resources is inherent to the existence of coastal communities, it is critical for their economic and cultural survival to assure continued access that can provide for career employment opportunities in fishing with reasonable income. There must be stable resource ownership (access) that does not and cannot migrate out of the area. Any regulatory initiatives must assure stable resource access rights that are geographically based, with government policies, regulations, and programs that support and encourage this stabilization.

There is a lot of talk about how fisheries-dependent communities should approach the problems of remaining viable. But in the end, there is only one way to accomplish this: ownership. From National Standard #8 (Magnuson-Stevens Fisheries Management and Conservation Act) requiring federal fishery management councils to consider the impacts of their decision making on communities to the various Government Accounting Office (GAO) reports to the National Academy of Sciences (NAS) Sharing the Fish, and to many private and university reports, there is the same consistent message; fisheries-dependent communities should have some ownership of the resource.

It is time we worked with each other to craft programs worthy of our ideals instead of working against each other for short-term gain. It is time to take creative steps that will help, rather than hinder, the future of the Gulf of Alaska small coastal communities, the skippers and crews, processors, and vendors who live in those communities, and the future of the youth, the economic well being of entire regions and the state.

If policy makers do not rise to this challenge, the very face of the Gulf of Alaska, the region, and the state will change dramatically for the worse. The Gulf of Alaska fishery-dependent communities are depending on the action policy makers take in stepping forward in this crucial time in history, to make wise and innovative decisions to protect the resources of the ocean and share them equitably with people who live adjacent to those resources and have depended on them for thousands of years.

Thirty Years of Limited Entry

Frank Homan
Chairman, Alaska Commercial Fisheries Entry Commission, Juneau, Alaska

Several early attempts at fishery limitation occurred in the 1960s. Each ran into the Alaska Constitution provision of No Exclusive Right of Fishery, Article VIII, Section 15. In 1972, the people of Alaska voted to amend the state constitution to allow for a restriction on entry to Alaska's fisheries for certain purposes: conservation, prevention of economic distress, and promotion of aquaculture. The amended section reads as follows (amendment in italics).

> "No exclusive right or special privilege of fishery shall be created or authorized in the natural waters of the State. *This section does not restrict the power of the State to limit entry into any fishery for purposes of resource conservation, to prevent economic distress among fishermen and those dependent upon them for a livelihood and to promote the efficient development of aquaculture in the State*."

The Limited Entry law was enacted in 1973. Some key features of the program were to (1) require issuance to natural persons (individuals) only and not to other legal entities such as partnerships and corporations, (2) prohibit permit leasing, (3) prevent the use of permits as collateral for loans, and (4) allow for free transferability. The Limited Entry law also defined entry permits as a use-privilege that can be modified by the legislature without compensation. Free transferability has resulted in maintaining high percentages of residents within Alaska's fisheries and has been upheld by Alaska's Supreme Court. Permit holders are free to transfer their permits to family members or any other individual who is able to participate in the fishery by means of gift, inheritance, or sale. Through 2005, a total of 16,264 limited entry permits have been issued in 65 fisheries. Over 80% of permits issued were initially issued to Alaska residents. As of year-end 2005, there were 14,536 remaining entry permits. Between initial issuance and the end of 2005, 1,728 had been eliminated, primarily due to cancellation of non-transferable

permits (non-transferable salmon hand troll permits account for over 1,000). Distribution of permits at year-end 2005 was as follows:

- 23% held by nonresidents.
- 38% held by rural Alaskans who live in the area of their permit fishery.
- 6% held by rural Alaskans who live in an area that is not local to their permit fishery.
- 24% held by Alaskans who live in an urban community local to their permit fishery.
- 9% held by Alaskans who live in an urban community that is not local to their permit fishery.

This distribution has changed over time. Total permit holdings by nonresidents has risen since initial issuance. The reason is mainly due to migration (Alaskan permit holders moving out of state), however, and not to permit sales from Alaskans to non-Alaskans. Permit holdings by nonresidents have declined as the net result of transfer activity by nearly 100 permits since initial allocation.

The most significant decline in permit holdings among Alaska resident types is from rural Alaskan permit holders living in an area local to their fishery (ARLs). Migrations of permit holders within and outside Alaska have led to a net decline in permit holdings by rural and urban Alaskans local to their fishery. Permit holdings of ARLs have also declined due to net transfer activity. Total permit holdings by ARLs have declined by 605 permits due to net transfer activity, 728 as the net result of migration, and 600 due to cancellation. However, of all permits held by Alaskans, Alaska rural residents hold more than 50%.

Across all years and fisheries, permits have been transferred at an annual rate of 9%. The annual transfer rate has ranged from 6% to 13%, with lower rates in recent years and higher rates in earlier years of Limited Entry. According to 1980 through 2005 Commercial Fisheries Entry Commission transfer survey data, nearly 50% of those permits that have transferred to rural Alaskans local to their fishery have been transferred as gifts. Approximately 50% of transfers to rural Alaskans local to their fishery are from immediate family. The same resident type has received only 45% of their permit transfers through sales. All other resident types have received their permits as gifts at a rate of 27-29% and through a sale type transaction at a rate of 65-67%. Of those permits sold to Alaskans, 27% (2,836) have been financed by state-authorized lenders. This is an option only available to Alaska residents, and it has clearly been helpful to Alaska fishermen purchasing permits.

A finer breakdown of permit holdings within Alaska shows the highest numbers of permits were issued to fishers residing in the following locations: Ketchikan, Anchorage, Juneau, Cordova, Petersburg, Kodiak, Sitka, Wrangell, Togiak, and Dillingham. Over time there has been little change in the communities holding the highest number of entry permits. As of year-end 2005, the list of communities with the highest number of permits is roughly the same. Homer is now in the top ten communities, replacing Dillingham. Some communities have had large declines in permit holdings due to cancellation, migration, or transfer. Communities with the greatest decline of permits (a decrease more than 100 permits) are Ketchikan, Juneau, Cordova, and Dillingham. Increases in permit holdings have occurred at the highest level (more than 100 permits) in Homer, Kasilof, Petersburg, and Wasilla.

Communities with the highest number of permits per capita are Elfin Cove, Point Baker, Meyers Chuck, Ugashik, Togiak, Kasilof, Nelson Lagoon, and South Naknek. Residents in each of these communities held a total number of permits summing to more than 30% of the community's 2000 U.S. population census.

The Limited Entry law has withstood constitutional challenges despite severe constitutional constraints. Limited Entry has been beneficial to Alaska's fisheries in several ways. Implementation of Limited Entry protected Alaska's fisheries from an influx of new fishermen from West Coast fisheries where fishing opportunities have been severely reduced by court decisions and stock conditions. Net economic benefits have accrued that may not have existed under open access.

Despite the successes, the program has many limitations. Traditional Limited Entry was designed for Alaska's salmon fisheries that are characterized by owner/operator participants and escapement goal management. The system has been less useful in the context of fisheries managed through guideline harvest levels or quota. If fishermen would like to develop different types of programs to better fit their fisheries, legislation will be needed to allow for implementation.

As refinements are explored, fishermen need to be aware of legal constraints on options. Several Alaska Supreme Court decisions enforce equal protection and equal access clauses of the state constitution. In particular, State v. Ostrosky, 667 P.2d 1184 (Alaska 1983) and Johns v. CFEC, 758 P.2d 1256 (Alaska 1988) provide the primary governing principle for the limited entry system as follows:

> "[T]o be constitutional, a limited entry system should impinge as little as possible on the open fishery clauses consistent with the constitutional purposes of limited entry, namely, prevention of economic distress to fishermen and resource conservation."

A recent case of significant importance is the Grunert v. State, 109 P.3d 924 (Alaska 2005) decision, in which the court states that allowing

persons who are not actually fishing to benefit from the fishery resource is "inconsistent with the Limited Entry Act's purpose and policy." And finally, the State v. Enserch Alaska Constr., Inc., 787 P.2d 624 (Alaska 1989) and McDowell v. State, 785 P.2d 1 (Alaska 1989) decisions point to the strength of the equal protection and equal access clauses of Alaska's constitution. The court has held that discrimination, for or against people, on the basis of where they live is not permissible.

Adding the Fish Harvesting Industry to Alaska's Employment Statistics

Dan Robinson
Alaska Department of Labor and Workforce Development, Juneau, Alaska

The Research and Analysis section of the Department of Labor and Workforce Development produces monthly wage and salary employment estimates as part of a state-federal cooperative program called Current Employment Statistics. These are the numbers you read or hear about every month, along with the unemployment rate, as measures of the economy's health. They are sometimes called "payroll jobs" or "nonfarm wage and salary jobs" and they constitute one of the most basic and well-known economic indicators.

We therefore know and frequently talk about how many wage and salary jobs there are in the state—a monthly average of about 310,000 in 2005—but fish harvesting jobs are not included in this number, despite their obvious importance to the state's economy.

There are two basic reasons for their conspicuous absence. First, fishing jobs are considered agricultural and because of the historical development of the program, which has existed since the early 1900s, agricultural jobs have always been excluded. (In other words, it has always been that way, which is never a particularly good excuse, but since the program rules are made by the federal government, Alaska has a very limited say in the matter.) Second, nearly all fish harvesting jobs are specifically excluded from state unemployment insurance laws—employers don't pay unemployment taxes and fishermen aren't eligible for unemployment benefits. As a result, one of the major sources of data used to estimate employment, the quarterly reports employers are required to file under state unemployment laws, is not available for fish harvesters.

But anyone with a basic knowledge of Alaska's economy knows that fishing is one of the state's important basic-sector industries—defined here as an industry that imports wealth by exporting a product or service to customers outside of the local economy —and the most important basic sector industry for much of coastal Alaska. Leaving fish harvesting out of discussions about Alaska's job market was obviously a problem.

To address the problem, the Alaska Department of Labor joined forces with the Alaska Department of Fish and Game, with some funding from the Alaska Fisheries Information Network, on a project to create fish harvesting estimates. The project had two different but related objectives: the first was to update previous studies done to estimate fish harvesting employment, and the second was to develop a methodology that best approximated the wage and salary employment estimates regularly produced by the Current Employment Statistics Program.

The core data source for the project is landings records generated from fish tickets that must be filled out when a vessel docks and sells fish. The Alaska Commercial Fisheries Entry Commission provided these records. The landings records are supplemented by federal records for the fisheries that are federally managed and not required to participate in the fish ticket system. These data allowed us to determine how many permits were being fished and how often.

The next step was to determine how many jobs were involved in different fisheries. "Crew factors" were developed by survey, industry knowledge, and general research. The idea of crew factors is to go from the number of active employers, which is what permits fished in a calendar month represent, to the number of jobs. To use an example from the wage and salary world, it is not enough to know how many McDonald's are operating in a month; that's a start, but to compile a job count we need to know how many people were working in each of those McDonald's.

So, for example, if a person holding a permit to fish for king crab with pot gear on a vessel over 60 feet made a landing in August, and that specific permit was determined to require an average of 6 crew to fish, that landing was said to have generated six jobs in August. In other words, to use language we're more familiar with in our regular employment counts, there were six people on the payroll under that permit in that month.

It's important to recognize that because the pay structure is different for wage and salary jobs—where the amount of pay is based on the amount of time worked—than it is for most fish harvesting jobs—where the amount of pay is based on the profit from the catch—the comparisons will always remain rough.

There's a lot more detail about methodology in two *Alaska Economic Trends* articles written about the estimates: December 2004 and

February 2006. More detail is not necessary here other than to say that in several ways, fish harvesting jobs are different from wage and salary jobs and we had to make, and are still making, judgment calls about how to count harvesting jobs in a way that is most comparable to our wage and salary employment estimates.

So far, the data set goes from 2000 to 2004 with preliminary 2005 numbers just recently available. The estimates for this time period tell a story that will be familiar to those who have followed the Alaska fisheries in recent years. Employment declined steeply from 2000 to 2002 (and undoubtedly the declines would extend back through the early 1990s if the project covered those years) and then bounced back very modestly in 2003 and 2004. The preliminary 2005 numbers show another small increase in employment.

In terms of fish harvesting's share of state employment (as a slice of the pie made up otherwise of wage and salary employment), it made up 2.9% of the total in 2004. When seafood processing is included, the fishing industry provided 6.6% of the state's jobs, excluding self-employment and the small group of wage and salary jobs not covered by state unemployment insurance laws.

The slices are much bigger, however, in Southeast (14%), Gulf Coast (18%), and Southwest (slightly more than 50%). As noted in the *Trends* articles, many communities in these three regions would all but cease to exist without fishing; it is their one basic sector industry and they flourish or languish depending on what happens to it.

This project has special value for a few specific reasons: first, the Research and Analysis section of the Department of Labor and Workforce Development has particular experience with estimating employment. Second, we do not see ourselves as advocates for the fishing industry. Our mission is to objectively produce and analyze data. In the long term, we are most valuable to the fishing industry and anyone else who uses our data or relies on our analyses, if we present our material without sugar coating or spin. We are not trying to convince anyone of fishing's importance relative to oil and gas or tourism or any other industry. We simply attempt to present an objective picture of Alaska's job market from the available data sources.

We understand that there are a lot of concerns in fishery management other than economic analysis, with burden on the harvesters and processors being high on that list. While acknowledging those sometimes competing concerns, the one piece of information that would remove a lot of the uncertainty in the fish harvesting employment estimates and allow deeper analysis is fish ticket reporting that included crew license numbers. We could then say more about where the crew members are coming from, how many months of the year they work, in what fisheries they work, etc. Whether the benefits of making the regulatory and perhaps statutory changes that would make that data available are worth the costs, however, is for others to determine.

Socioeconomic Impacts of Crab Rationalization on the Aleutians East Borough Communities of False Pass, Akutan, and King Cove

Marie Lowe
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On September 11, 2006, the *Anchorage Daily News* ran a story on the imminent closure of several Aleutians East Borough schools. Some schools in this region, such as those in False Pass and Akutan, are suffering from a decline in enrollment, barely meeting the state requirement of at least ten students. One mother in False Pass was quoted in the article as saying, "Families are leaving False Pass. . . . One reason: rules designed to make the crabbing industry more efficient put many locals out of work."

This presentation addresses research being conducted at the University of Alaska's Institute of Social and Economic Research (ISER) at the University of Alaska Anchorage, on the restructuring of crab fisheries and its socioeconomic impacts on Aleutians East Borough communities. The statement made by the mother in False Pass demonstrates public concern over potential impacts of the crab rationalization program enacted in 2005. This presentation provides (1) an introduction to the local effects of the rationalization program, identified through the ISER study, (2) an overview of the study communities, (3) direct impacts experienced in the Aleutians East Borough, and (4) community experience with and perceptions of the crab rationalization program.

Background to research

What is crab rationalization? NOAA Fisheries defines crab rationalization as allocating "BSAI crab resources among harvesters, processors, and coastal communities." The ISER study was commissioned in January 2006 by the Aleutians East Borough and the City of King Cove to analyze the initial and potential future impacts of BSAI (Bering Sea Aleutian Islands) crab rationalization on the communities of False Pass, Akutan, and King Cove. It was conducted by Gunnar Knapp, professor of economics at ISER, Marie Lowe, assistant professor of anthropology at ISER; and in consultation with Steve Langdon, professor of anthropology at the University of Alaska Anchorage.

The study focuses on specific impacts. It does not examine changes in efficiency for harvesters or processors, analyze general economic effects of crab rationalization on crab markets or ex-vessel prices paid to crab fishermen, or determine whether or not the fishery is safer or ecologically sound.

The major goals of the study were to (1) provide a description of the direct impacts of crab rationalization on the study communities in the first year, such as on jobs and income, (2) discuss potential indirect impacts drawn from ethnographic field research conducted in each community, and (3) put crab rationalization in the context of the range of restricted access management programs coastal Alaska communities have encountered

The methodology included a literature review with extensive examination of historical community ethnographies, analysis of state and federal data for crab fisheries, and community fieldwork. The community fieldwork component included structured interviews with key informants from each community who are involved in the fishing industry, unstructured interviews with plant managers and an outside crab boat owner/captain, informal conversations with community residents, informal conversations with processing workers, focus group interviews with community youth, and participant observation at community events, gatherings, workplaces, and homes.

Overview of study communities

Traditionally residents of the BSAI region have had to employ "opportunistic" strategies to survive in their home communities because of the vagaries of their environment. They engage in combination fishing—fishing in different fisheries and gear types to diversify their income, such as inshore salmon or halibut fishing in the summer and offshore crab crewing in the winter. They also engage in shoreside work and fleet services. The study communities—False, Pass, Akutan, and

King Cove—differ greatly in their demography, in their economies, and in their relationships to the processing industry.

False Pass has an estimated year-round resident population of 35-44 people. Three residents of False Pass held 15 permits in 2006 for halibut, herring, groundfish, salmon, and bairdi crab. There are 11 Commercial Fisheries Entry Commission (CFEC) registered vessels in False Pass with an average length of 31.1 feet. Some of these vessels are owned by seasonal fishermen who come to False Pass in the summer to fish salmon. False Pass had a processor in the community until 1981 when the Peter Pan facility there burned down. False Pass is a Community Development Quota (CDQ) designated community, and because of this status, the Aleutian Pribilof Island Community Development Association (APICDA) is currently building a small processor in the community called Bering Pacific Seafoods. According to local accounts, it will employ 6-8 people and will focus on crab, salmon, sablefish, and halibut processing.

Akutan has an estimated resident year-round population of 80 people. Eight residents held 11 registered permits in 2006 for halibut, sablefish, and groundfish (jig). There are seven CFEC registered vessels—one 32 foot, one 28 foot, one 24 foot, and four skiffs. Trident Seafoods has the largest processing operations in North America based in Akutan. It is a multispecies processor but focuses on pollock and crab processing. Akutan is also a CDQ community. In 2003, Akutan's representing CDQ organization, APICDA, developed a successful halibut quota loan program for Akutan residents. APICDA made $500,000 available for the purchase of 60,000 pounds of halibut quota, 59,000 of which was caught in 2005 (APICDA, 2006, *2005 Multi-Species CDQ Fourth Quarter Report,* Public Version).

King Cove has an estimated year-round population of 493 residents. There are 58 residents who held 119 registered permits in 2006 for halibut, herring, Dungeness crab, king crab, bairdi crab, cod, octopi/squid, and salmon. The majority of community fisheries participation in King Cove is by crewmen. There are 75 CFEC registered vessels in King Cove with an average length of 30.3 feet. Peter Pan Seafoods operates a large multispecies processor in King Cove. King Cove is a non-CDQ community and as such, does not benefit from all of the "community protections" outlined in the crab rationalization program. King Cove has a vital fishing fleet with a long history of participation in many fisheries, and there is a strong sense of community identity centered around a fishing lifestyle (see Reedy-Maschner, 2004, *Aleut Identity and Indigenous Commercial Fisheries*. Dissertation, University of Cambridge).

Direct impacts of crab rationalization

The findings on direct impacts of crab rationalization on the study communities include loss of crab fishing crew jobs, fewer boats delivering

Table 1. Estimated direct impacts of crab rationalization (changes from 2004-05 to 2005-06).

Community	Estimated Impacts
King Cove	Loss of 20 crab fishing jobs
	66% drop in households participating in fishery (18 to 6)
	79% drop in boats delivering crab to King Cove (65 to 14)
	About $1 million loss in income for 5 support businesses (pot storage, moorage, trucking, filters, bar)
Akutan	Loss of 4 fishing jobs
	About $10,000 decline in sales for dive service business
False Pass	Loss of 1 fishing job
	About $30,000 decline in sales for pot storage business

crab, and lower sales for support businesses. Table 1 outlines these impacts by community.

Community experience with and perceptions of crab rationalization

All three of the study communities have long participation in crab fisheries. Historically, local residents from these communities pioneered the crab fisheries of the 1950s. Over time, the inshore areas were fished out. The Bering Sea is a hard master and locals did not have the capital to invest in the larger boats needed for offshore crab fishing. They could not compete with the fishing operations from outside the region, but many worked as crewmen for years on these larger vessels.

If the Aleutians East Borough fishermen have the means to participate in a fishery, they will. Traditionally, residents of BSAI communities take advantage of any economic opportunity they can. However, one of the findings of this study was that for every fishery group, the number of individuals holding permits in King Cove has been declining since the 1980s (Fig. 1).

In the fieldwork component of the study, key informants were interviewed about their experiences with and perceptions of crab rationalization. Interview questions were also designed to gain greater understanding of the cumulative impacts of restricted access management in Alaska fisheries and to put crab rationalization in context within the range of programs coastal communities have encountered or might encounter in the future.

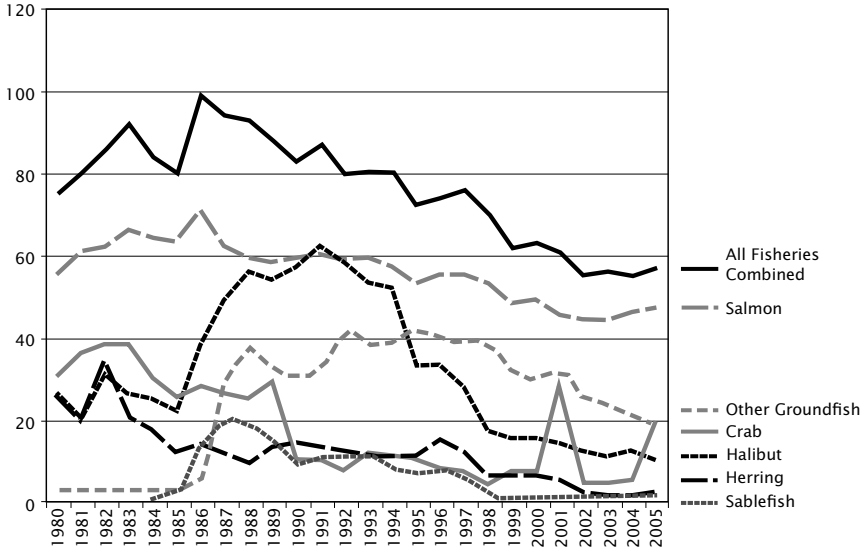

Figure 1. King Cove: number of permit holders, by fishery group. For every fishery group, the number of individuals holding permits in King Cove has been declining since the 1980s.

The mayors of King Cove and Akutan identified a list of key informants that initiated a non-random, snowball sample. All key informants had commercial fishing history and the majority had been involved in the crab industry as either crab fishermen or in fishery support services. They ranged in age from 18 to 80.

Informants were asked to numerically rate effects of the following six restricted access programs:

- Salmon Limited Entry.
- Halibut/sablefish Individual Fishing Quotas (IFQ).
- BSAI pollock co-ops.
- Crab rationalization.
- Community Development Quota (CDQ) Program.
- Future proposed rationalization of Gulf of Alaska (GOA) groundfisheries.

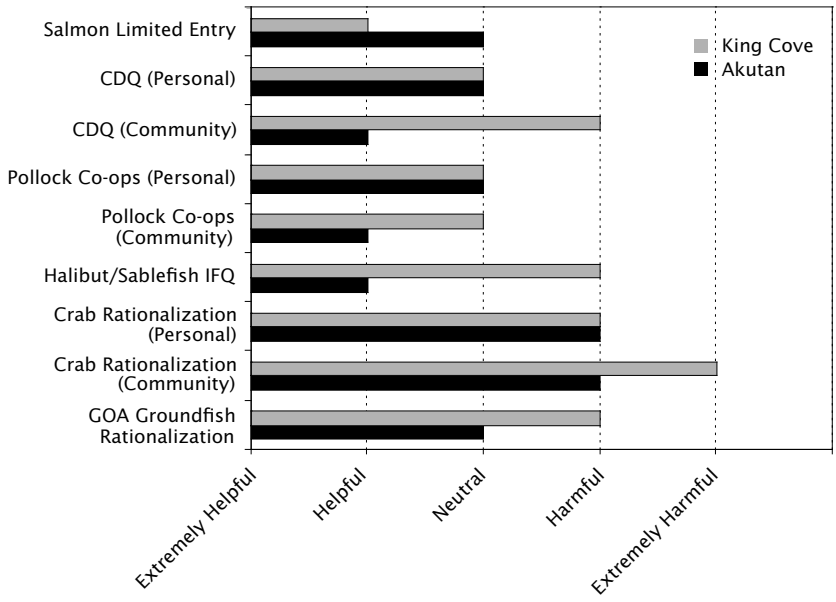

Figure 2. Average numerical ratings of restricted access programs. King Cove, n = 14; Akutan, n = 7. Only one key informant interview was conducted in False Pass with a community elder. The four active fishermen in False Pass were fishing an extension of a cod opener during the fieldwork visit. The one informant's responses were excluded here, as it is only one data point for the community. This informant's responses were similar to the average for King Cove responses.

They were asked to rate how each plan affected them personally and how each plan affected their community. Figure 2 summarizes the ratings of King Cove and Akutan respondents.

The management plan was 1 = Extremely Helpful, 2 = Helpful, 3 = Neutral, 4 = Harmful, 5 = Extremely Harmful.

Note that because of the small sample sizes and the nonrandom selection of respondents, these ratings are not necessarily representative of perceptions of rationalization by the entire population of these communities. They do, however, highlight those experiences and perceptions of a substantial part of the population of commercial fishermen in each community.

In general, informants perceive management programs that keep participation local as helpful, and those that do not as harmful. For example, King Cove informants rate Salmon Limited Entry as helpful to both themselves and their community because enough locals were

awarded permits to stay in the fishery and keep the numbers of outside competitors down. Likewise, Akutan informants rate the halibut/sablefish IFQ program as helpful because of their successful participation in the fishery through the APICDA quota loan program as described above.

Crab rationalization was rated on average harmful for both King Cove and Akutan. Informant interviews indicate that Aleutians East Borough fishermen perceive the program's exclusion of crewmen history in initial allocations as unjust. As explained above, in recent years for the currently rationalized crab fisheries, fishermen have participated as crew rather than as permit or boat owners. As one King Cove fisherman noted,

> "It didn't do anything for the guys that actually do the work. All these boat owners ended up with this quota and it was built by guys like myself; guys that were on deck all those years—they didn't get anything out it. Those quotas were built on their sweat and blood and they never gave us a damn thing. . . . I have been on the Bering Sea for 30 years; I have more dead friends than live ones. Ones that are left should have got something out of this. I would gladly give my quota back if they would re-do the whole thing and give the crewmen something. In a bureaucracy that isn't going to happen."
>
> —Rob Trumble, age 49, King Cove, awarded captain's shares but doesn't have enough to fish them.

Or in the words of another informant from King Cove,

> "It was put together by a group of too many special interests which captured the fishery for themselves—it had nothing to do with the people that participated. They keep saying it was the boat owners and the processors because they had so much invested, but not one boat owner would've made a dime if they didn't have skippers and crews . . . every day that they were out there they were just as valuable—they were more valuable than the engine of the boat really. If you didn't have a crew, you never caught a crab. I don't know one boat out there that went out without a crewmember. Or a hired skipper! A boat just cannot go without a skipper and crew. It's just high-powered interest groups that set aside a goldmine for themselves."
>
> —Ken Mack, age 46, King Cove, 27 years crab fishing history.

Of the 23 key informant interviews, 18 included fishermen who had fishing history within the BSAI rationalized fisheries. Table 2 summarizes the crab fishing history of these 18 key informants.

The two informants in their early 20s had fished in these fisheries for two years each. The 14 informants aged 30-60 fished in these crab fisheries for an average of 18 years. The remaining two informants are over 60 years old and both had fished in these fisheries for approximately 20 years from the 1950s until king crab began to crash in the

Table 2. Average years crab fishing Aleutians East Borough key informants.

Informant Age	Number of Informants	Avg Years Crab Fishing
20–30	2	2
30–60	14	18
60+	2	20

late 1970s. All of these informants participated in localized bairdi crab fisheries as well.

Aleutians East Borough fishermen think that they should have been awarded a share of the fishery based upon the historical share they received as crewmen. They depict the crab fishery "pie" as in Figure 3.

Aleutians East Borough fishermen feel that this kind of allocation would more accurately mirror the traditional way a catch was divided between participants. Under the crab rationalization program, boat owners, captains, and processors were awarded quota share. Captains received 3% of the initial quota share allocations for harvesters. Deckhands were not included in the program.

In all three study communities, informants indicated that these initial allocations exposed that the most important perceived effect might be associated with a restriction to exercise their **option** to participate in crab fisheries in the future. Restricted access in BSAI fisheries restricts their ability to pursue their traditional opportunistic survival strategy they have always employed to take advantage of their proximity to resources that are varyingly abundant.

Conclusions

Our findings reveal the following.

1. False Pass and Akutan experienced fewer negative impacts from crab rationalization than King Cove. This is primarily due to their minimal direct participation in crab fisheries as well as their status as CDQ communities and the opportunities locally available through that program.

2. Community participation in crab fisheries has been primarily in vessel crews and in fishery support industries.

3. The crab rationalization program reduced the fleet and excluded crew fishing history. This impacted jobs, income of the support industry, and community resident share in the fishery.

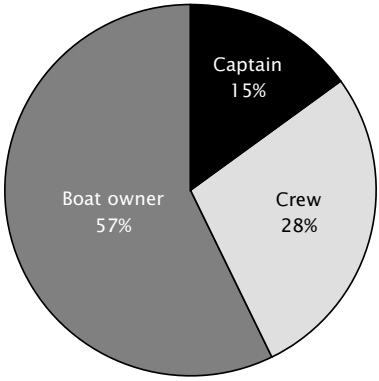

Figure 3. Aleutians East Borough fishermen's perception of the crab fishery "pie."

4. Potential long-term impacts of the program contextualized within other forms of restricted access in fisheries include the absence of entry-level participation, especially for the younger generation.

5. Traditionally, residents of the Alaska Peninsula and the Aleutian Islands have had to employ "opportunistic" economic strategies to survive in their home areas.

6. This flexibility in "combination fishing" diminishes with increasing restricted access in Alaska's fisheries and could thereby possibly threaten the future viability of Aleutians East Borough communities.

Impacts of Halibut IFQs on Kodiak Fishing Villages and the Potential of Community Quotas

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The North Pacific halibut fishery is one of the premier international examples of why restricted access, market-based fishing quota programs are becoming a gold standard in fisheries management. Many of the goals of fisheries "rationalization" have been realized since this quota program was implemented in 1995: the fleet consolidated, seasons lengthened, product price and quality increased, the value of the fishery increased, and many feel fishing is safer. However, the halibut fishery also showcases other realities of privatized access fisheries—fleet consolidation has meant loss of jobs, quota issued to only vessel owners has solidified classes of owners and non-owners and impeded upward mobility, crew members and skippers have lost labor power, entry costs have made the fishery inaccessible to many fishermen, and quota markets have led to distributional inequities (e.g., quota share has migrated out of small, remote fishing villages).

My dissertation research explores how these realities of access limitation and privatization have been experienced in Kodiak Island, Alaska. Ethnographic research in the port of Kodiak and three remote Alaska Native fishing villages suggests that halibut IFQs (Individual Fishing Quotas) are one of the factors contributing to a fundamental change in the fishing lifestyle on the island. A series of access limitation policies that began with "limited entry" for salmon in the 1970s and continue today in the form of "rationalization" of Bering Sea crab and Gulf of Alaska groundfish has changed the nature of fishing in general, and has had particularly negative impacts on fishing in small, remote coastal communities. Residents of Kodiak villages link this set of policies to the alienation of their fishing rights. While residents also

note a series of other factors that have contributed to a loss of fishing rights (e.g., salmon market price declines and the *Exxon Valdez* oil spill), access limitation and privatization are seen as primary forces driving this dramatic decline in village fishing participation. This paper briefly outlines two sets of analyses that explore the social side of fisheries access privatization—a halibut IFQ holder mail survey and ethnographic research on current fishing village trends on Kodiak Island.

Halibut IFQ Holder Survey

One of the basic research questions for this study is "Why does quota share leave small communities?" Previous research on the halibut IFQ program shows that most small communities have a net loss of quota share over time; this trend is particularly pronounced in communities with less than 1,500 people. A mail survey was developed to question IFQ holders about their reasons for buying and selling quota, their community history, and their opinions about how IFQs have changed the halibut fishery and their communities of residence. A random sample of initial quota share holders and those who have bought or sold quota from 1995 to 2004 was stratified so that about 50% of the respondents were residents of small, remote fishing communities (SRFCs). To be classified as an SRFC in this analysis a community has to have a population less than 1,500, be considered rural by the Commercial Fisheries Entry Commission, be located less than 10 miles from an Alaska coastline, and have had historic halibut landings. There are 52 communities that meet this definition.

About 14% of the total population of halibut IFQ initial quota share holders, buyers, and sellers was sampled (N = 1,100). Approximately 46% of the surveys were returned (N = 506). The basic demographics for both sets of respondents (those from SRFCs and those from non-SRFCs) are similar for some categories: the vast majority of respondents are male, the average age in both groups is approximately 42 years, about 75% of both groups are boat owners, while less than 25% are crew members. The two groups differ in average household income (SRFC respondents average about $45,000, non-SRFC about $75,000) and ethnicity (about 38% of SRFC respondents identify as Alaska Native, compared to about 8% of non-SRFC respondents).

The analysis of these survey data is currently under way. Some initial findings suggest that, compared to non-SRFC residents, respondents in SRFCs have strong, multigenerational ties to their communities, a majority believe that halibut IFQs have had a negative impact on their communities, and few would support managing more fisheries with IFQs. A majority of both groups prefer IFQs to halibut derbies, agree that IFQs are changing the fishing lifestyle, and conceptualize IFQs as a type of private property.

Kodiak Village Fishing Trends

I conducted 12 months of detailed ethnographic fieldwork in three Kodiak villages: Larsen Bay, Old Harbor, and Ouzinkie. In addition to research questions explored in my survey work (why quota share is leaving small communities), this research explores how these impacts of fishing access limitation are experienced locally. Three main trends are apparent from initial analysis of my field research. First, the fishing villages on Kodiak Island are depopulating. Within the past twenty years, there has been about a 50% decrease in the year-round populations in each study community. Current residents attribute these declines to decreased fishing access and profitability and limited educational opportunities for youth.

A second trend is the significant decrease in fishing involvement. This decrease has been pronounced as it has occurred over just one generation. Over 75% of households in each village have been previously involved in commercial fishing; currently, less than 25% are involved. On this change, one Ouzinkie resident remarked:

> "[Fishing] used to mean everything. Now really there are only three active boats. [Ouzinkie is] not really a fishing village since IFQs and all that. It still is in its own mind a fishing village. They consider themselves fisher people even though they don't really fish."

Declines in fishing involvement have led to a third important trend in these communities—the younger generation has become detached from commercial fishing. People have referred to youngsters (roughly under 25) as the "lost generation." Their parents and grandparents grew up as fishermen; however, most no longer participate in commercial fishing. Many village fishermen tell stories of their own childhood; young men grew up knowing that they would one day be boat owners and captains. Older fishermen remark with sadness that most young people today cannot realistically share that same vision.

Limiting access to commercial fishing has played a significant role in each of these trends. Other factors, particularly low salmon prices, have also contributed decreased fishing participation and village depopulation. Overall though, when discussing how their communities have changed in recent decades, village residents link a set of fisheries management policies that limit fishing access to a fundamental change in their lifestyle and their ability to fish and continue to fish. More recently people have begun expressing their resistance to this set of policies collectively, often disparagingly using the term "ratz," drawing on rodent metaphors to counter the positive, common-sense connotations of fisheries "rationalization."

As fisheries access limitation and privatization policies gain widespread approval internationally, it is increasingly important that the social impacts of such policies are properly evaluated. As demonstrated

in the halibut fishery, many management goals can be realized with fisheries access privatization; however, this access privatization is fundamentally changing fishing lifestyles and is impacting the future of fishing communities in Alaska. So-called fisheries rationalization, guided by the goals of economic efficiency, represents certain social values. These values are often mistaken for fact-like common-sense in policy and economics literature. Fisheries managers should be challenged to evaluate the distributive outcomes of such programs, and indeed to repoliticize this common-sense mentality of rationalization. Many patterned distributive outcomes of such policies can now be predicted (e.g., fishing rights tend to leave small communities, crew are disadvantaged by rationalization, increased costs make it difficult for an entry class of participants). Rather than ignoring these social impacts as "unintended consequences," managers should design policies that help mitigate these predictable (and as often voiced, undesirable) social impacts.

Gulf of Alaska Community Quota Program: Status and Issues[1]

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Emilie Springer
Research Associate, University of Alaska Anchorage, Institute of Social and Economic Research, Anchorage, Alaska

The Gulf of Alaska Community Quota Entity (CQE) Program is designed to make it possible for small, fisheries-dependent communities in the Gulf of Alaska to purchase an fish halibut and sablefish fisheries quota and assist their economies due to a loss of individual fishing quota (IFQ). The CQE program was proposed by the Gulf of Alaska Coastal Community Coalition in 2000 and authorized by the North Pacific Fishery Management Council in 2002. Regulations for the program were issued by the National Marine Fisheries Service in 2004. The Alaska State Legislature authorized a loan program for CQE organizations to purchase quota share through SB 387 in 2005.

The University of Alaska Anchorage Institute of Social and Economic Research (ISER) has begun research related to the Community Quota Entity Program. The purpose of the research is to determine the status of the program in various communities and to identify issues with the program. Research includes a questionnaire and interviews with key persons in each community and with organizations such as the Gulf of Alaska Coastal Community Coalition, the Chugach Regional Resources Commission and the Southeast Intertribal Council (GOAC3, CRRC, SEITC). Interviews were also conducted with state and federal officials involved in the CQE program. Research was conducted by Dr.

[1] The research reported here has been funded through the "Understanding Alaska's Choices" program at the Institute of Social and Economic Research. A final report will be available in 2007.

Steve J. Langdon and Emilie Springer, initiated in June 2006 with ISER's Understanding Alaska's Communities fund.

Topics covered in a questionnaire included individual awareness of and involvement with the CQE program, the nature of the CQE organization, funding and financing availability for the program, and community plans for catching and processing of quota. Research also gauged the interest in the program in the communities, the potential economic significance of the program, issues associated with program implementation, and suggestions for the program.

All but one of the communities expressed awareness of the program, although several had limited knowledge or only recent knowledge. Over 75% of the communities have considered the program and approximately half the communities have spent a substantial amount of time and money looking into the program. A few communities are not interested for various reasons.

To date, nine communities or organizations have been certified by the National Marine Fisheries Service to purchase quota. CRRC, GOAC3, and SEITC have made substantial efforts to find a way to make the program work. However, the bottom line is that as of December 2006 only one CQE had successfully purchased and fished halibut quota and none had purchased and fished sablefish quota

The CQE program's primary issue to date has been lack of funds for purchase of IFQ. CQEs have explored a wide variety of sources including one municipality that earmarked community tax revenues to go toward CQE purchase of IFQ. The State of Alaska–authorized loans for CQEs to purchase IFQ are available through the Division of Investments. The IFQ purchase can be used as collateral for the loan but other types of collateral may be accepted to reduce the down payment required. The following terms and conditions apply to State loans available to CQEs:

- Interest rate set at 2% above prime, not to exceed 10.5%.
- Interest is fixed at the time of loan approval.
- Maximum loan term is 15 years.
- Maximum amount for a loan secured by Quota Shares is 65% of purchase price.
- Maximum loan is $2 million for each eligible community and the total balance outstanding on all loans made to a community under Section E of the Commercial Fishing Loan Program is $2 million.
- Borrowers are responsible for all direct costs incurred in obtaining loans including survey, inspections, appraisals, and title insurance.

CQEs have also looked at a variety of public and private funding sources with little success. To date loan terms have been prohibitive, including the amount of match required (State loan requires 35%), the term for repayment is considered too short, and interest rates have been too high to make purchase of IFQ possible.

Additionally, the current price of quota share is too high to "pencil out" profitably and little quota share is available to buy. The CQE program is being treated as a business rather than a community development project. Limiting regulatory provisions such as blocks and use of skiffs, etc., are making it difficult for the CQE program to work.

Some recommendations that might make the program more effective include

- Add additional quota and make direct allocation to community quota entities.
- Provide $50,000 start-up funding based on the plan.
- Provide grants, not loans.
- Reduce match required for loan program.
- Provide grace period of 5-7 years for repayment.
- Award quota like the Bering Sea community development quota program.
- Create a rural equalization program.
- Develop an apprentice program in which you need to participate as a way to get quota—free up quota to allow entry for apprentices.
- Collect small 500 pound unused blocs and assign them to CQE.

Respondent comments

During the course of interviews concerning the CQE program, a variety of comments were provided, some of which speak to the circumstances in communities, some of which speak to the program, and some of which express feelings in villages toward state and federal governance institutions. Four categories of comments were identified, and a selection of quotes from the interviews by category are provided below.

Need for earnings opportunities

> "We need a method for guys to make money and it's really important to get guys fishing opportunities. The cost is stopping us; the cost is extremely frustrating." Jack Wick, Larsen Bay.

"We need this program because we have no form of employment! This would be a great opportunity to get other people in our community and keep our young people." Pete Kompkoff, Chenega Bay.

Need for entry opportunities in fisheries, especially for young people

"Our allocation program provides half the quota for new, younger entrants. It is an extremely important element of the program in our view." Brian Templin, Craig.

"It would be of interest to young people who haven't thought of commercial fishing. They would start to look at it as a viable job opportunity. Then, if they like it, they would look into getting their own boat." Melanie Green, Nanwalek.

Need for program to change to meet its objectives

"The concept is beautiful but the mechanics are not workable. The program would have to be completely changed in order for it to work." Herb Wright, Point Baker.

"As it sits now, it is set to fail. The price of IFQ is so great that it is virtually impossible to make money." Bill Wilson, Metlakatla.

Frustration and alienation

"[North Pacific Fishery Management Council] knows the dilemma and they have to do something about it. They need to make it work. But my opinion is that everything is planned to fail for us." Jack Muller, Ouzinkie.

"People who grew up in the coast communities had salmon, crab, halibut, whatever available to them and should still have it available. It is not right that we have to buy into this. It is God given for the people who live here." Ivan Lukin, Port Lions.

General conclusions

- Opportunities for entry into fisheries are virtually nonexistent but they are the most available jobs in villages.
- There are strong small-scale fisheries capability in the villages due to the deep subsistence heritage of using marine resources.

- The traditional pattern is for broad participation by many.
- The program was authorized in order to meet National Standard 8—"take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities."
- The evidence suggests strongly that the Community Quota Entity Program has not fulfilled National Standard 8 and is in need of major modification to accomplish these critical objectives.

Acknowledgments

We would like to thank all of the respondents who took time to answer our questions, share information, and provide their perspectives. We would like to thank the conference organizers and sponsors for making discussion of these issues possible. We would also like to thank Fran Ulmer, ISER director, for authorizing this research. We look forward to talking with others in the near future to learn more about this important program, and its operation and future.

Defining Your Community's Goals for Fish/Fishing/ Seafood: Models for Community Organizations

Torie Baker
Cordova City Council Fish Committee member, Assistant Professor, Marine Advisory Program, University of Alaska Fairbanks, Cordova, Alaska

For the today's panel, I'd like to briefly take a fish tour of Cordova, and then discuss a recent exercise we've gone through to have a more integrated public discussion about fisheries issues and topics.

Cordova is located on the southeast rim of Prince William Sound, about 130 air miles from Anchorage. The population doubles in the summer from its permanent base of 2,400.

There are 958 households of which 50% have one or more members involved in commercial fishing. There are some 600 Alaska Commercial Fisheries Entry Commission permits held by an estimated 345 residents; over 60 boats are involved in federal halibut and sablefish harvesting. We have 80 vessels that deliver halibut and blackcod into Cordova as compared with 600 vessels delivering salmon.

We are fortunate to currently have four major processors and a smaller custom processor located with facilities in Cordova; 6-8% of the Copper River gillnet fleet is involved in direct marketing activities. Eight million pounds of federally managed fish and about 20 million pounds of salmon flow through Cordova annually. Cordova has one daily Alaska Airlines flight with additional freighters leased during the early Copper River season. We have two year-round barge companies moving fresh, canned, and frozen fish product, and the summer ferry is used to move salmon and early-season fresh halibut into Whittier/Anchorage and Valdez for transshipping to the lower 48 states of the U.S.

Sport fishing is growing as a part of Cordova's economy. US Forest Service and Alaska Department of Fish and Game (ADFG) manage sport

fish locally. In 2000, some three thousand sport licenses were sold locally, half to Alaska residents.

Cordova resident subsistence harvest is documented by ADFG. Ninety eight percent of households participate in subsistence harvest; of the 180 pounds average annual per capita harvest, 85% of an individual's harvest is fish.

Cordova has the classic weak major or home rule charter governing system and is not currently part of a borough. The city council and mayor are elected with a paid city manager, attorney, and clerk hired by the council. Cordova has six standing boards and commissions including harbor, parks and recreation, planning and zoning, library, and health services. The school board is elected and is a separate entity but closely tied with the city council via the city's contribution to the school annual budget.

Currently Cordova has six ad hoc committees dealing with many topics: boat lift, fish, building of a Cordova community center, formation of a Prince William Sound borough, personnel, and developing the annual public ferry schedule.

Ad hoc committees are established by resolution of the city council; members are appointed by the mayor and approved by the council. There is a council member liaison appointed to each board, commission, and ad hoc committee.

Each ad hoc committee member, as with boards and commissions, signs and takes an oath of office. All boards follows the Open Meetings Act especially as it pertains to public meeting notice and distribution of the agenda. Other than in an emergency, all meetings require a 24-hour public notice.

The fish committee was established by a council resolution in April 2003. There are six appointed members. The committee currently includes a representative from the Prince William Sound Aquaculture Association, an ADFG sport biologist, the Alaska Marine Lines station manager, a University of Alaska Fairbanks Alaska Sea Grant faculty member, a recently retired cannery manager, and the local fishermen's association. Since its inception, the committee has met 10 times, and minutes and resolutions are on file at the city clerk's office.

The fish committee chair participates in this forum, known as the mayor's monthly roundtable. Department heads and committee representatives meet informally over a sandwich at our council room once a month. Everyone present simply reports on what's been going on over the last month and any future plans or events. This forum has been very useful.

Formation of the committee was sparked by the need of the council to vet salmon revitalization grant proposals coming from various community groups seeking council endorsements. Two other issues dealt with by the committee have been to comment on retention or replace-

ment of sonar transducer substrate on the Copper River and to review a resolution submitted by the local fishing organization regarding economic impacts of an Alaska Board of Fish decision.

The committee has also addressed two North Pacific Fishery Management Council (NPFMC) issues: halibut charter IFQ (Individual Fishery Quota) and Gulf of Alaska groundfish rationalization options, both of which are very complex and not very well localized within the community. There is not a significant sport charter presence in Cordova, and, due to Cordova's peripheral participation in cod harvesting, groundfish rationalizaton currently lacks high visibility among local citizens.

In summary, some strengths and challenges with this form of committee structure are as follows:

1. There is no staff assistance other than meeting notification.

2. Topics discussed always have a political aspect—as one committee member put it, "the mayor is probably the last to know," so committee members describe their work as more reactive than proactive. This reactivity combined with no staff assistance is probably most notable in the NPFMC arena.

3. Time commitment by members is probably no more than with any other public activity. But often, when issues have deadlines, the committee has trouble getting resolutions into the council packets on time. Therefore, often committee reports are presented orally to the city council by a committee member; recommendations are not always clearly recorded, but this does afford a question-answer exchange between the council and a committee member.

4. The mayor attempts to reflect the broader community in the composition of the committee; committee members appreciate seeing other sides of fisheries issues and topics.

5. Understanding federal policy issues and giving effective advice to the council continues to be overwhelming for committees. The committee feels expansion in the number of seats might be useful in sharing the load, short of assigning staff or hiring lobbyist assistance.

Yukon River Drainage Fisheries Association

Jill Klein
Executive Director, Yukon River Drainage Fisheries Association, Anchorage, Alaska

The Yukon River is 2,300 miles long from the headwaters in Yukon Territory, Canada to the mouth at the Bering Sea in Western Alaska. More than 50 communities along the river in Alaska and Canada rely on salmon. The Yukon river salmon fishery provides food for people, healthy lifestyles for fishing families, food for dogs, transportation, recreation, cultural preservation, cash, and a livelihood.

The Yukon River Drainage Fisheries Association (YRDFA) was formed in 1990 for a number of reasons. Different regions of the Yukon River were in conflict with each other, salmon returns were low, and poor prices for commercial fish were a problem. Also, the United States and Canada were organizing to enter into negotiations as part of the Pacific Salmon Treaty for salmon resources on the Yukon River.

YRDFA acts as a connector of all the elements that go into sustainable salmon management. Fishermen and their local knowledge are connected with each other and with management. Organizational tenets of YRDFA, when it was formed, were (1) to establish communications between all user groups—subsistence, commercial, personal use, and sport—and the management agencies, including state, federal, and tribal governments that have jurisdiction over any activity that affects fish stocks in the Yukon River drainage, whether direct or indirect; and (2) to take whatever actions are necessary to ensure that all fish stocks in the Yukon River drainage are managed in such a manner as to provide for a stable and healthy fishery in the future. YRDFA's mission statement is

> "the Yukon River Drainage Fisheries Association (YRDFA) is a non-profit association of subsistence and commercial fishers with a mission of providing a collective voice for the people of the Yukon River to ensure the long-term sustainability of the river, its cul-

tures and economies by promoting healthy, wild salmon fisheries on the Yukon River."

YRDFA's goals are to

- Provide a forum for river-wide communication and solve problems through stakeholder collaboration in fisheries management.
- Conserve Yukon River wild salmon throughout their life cycle.
- Strengthen long-term economic viability of Yukon river fishing communities.
- Sustain subsistence fisheries and traditional cultures.
- Build capacity for YRDFA, its membership, and Yukon river fishing families.

YRDFA's board of directors come from Yukon River communities and represent fishing districts. YRDFA's membership is open to the public. Subsistence fishers, commercial permit holders, processors, recreational users, and other stakeholders are encouraged to join. Board members are nominated and members vote to elect a board member for their district. The YRDFA board of directors meet annually in a Yukon River village and work by consensus to make decisions that affect the salmon fishery.

YRDFA incorporates fishermen into fisheries management by state and federal agencies. YRDFA board members and staff have built working relationships with state, federal, and tribal entities. YRDFA has affected management plans as well as directed funding and research efforts. Through salmon management teleconferences, YRDFA brings upriver and downriver fishers together with managers during the fishing season.

Important issues facing the Yukon River salmon fishery include river-wide collaboration, sustainability of the fishery, fishing times, commercial fisheries development, marketing, salmon interception, and climate change. River-wide collaboration of stakeholders at private, state, federal, and tribal levels leads to multiple meetings, different outcomes, and divergent voices. YRDFA works to bring these voices together to solve complex problems at the state and federal board meetings.

Supporting the sustainability of the fishery, YRDFA works to balance subsistence and commercial harvests with conserving salmon runs for future generations. For example, subsistence windows are when parts of the river are on fishing schedules, while others are allowed to fish 24/7 if it is a harder area to catch fish. Windows are not coordinated with nature for drying fish, but people understand the need to move fish upriver for subsistence, border passage, and escapement.

YRDFA works to market salmon at a river-wide level by incorporating processors into a marketing association. We also work on quality programs for icing and bleeding fish. YRDFA promotes commercial fisheries in order to support the economy of rural Alaska villages. Commercial fisheries are the only source of income for many villages, and they assist local people in their subsistence hunting, and fishing activities.

We also work hard to reduce the amount of bycatch of Yukon River chinook salmon caught in the Bering Sea/Aleutian Island pollock fishery.

YRDFA's vision is that twenty years from now the Yukon River be a thriving ecosystem with salmon. We see sets of management policies and protocols that are the product of integrated work by all stakeholders and are keyed to sustainability. This can be achieved by continued involvement by communities in salmon management, as it is their lives that are most dependent on the resource.

Strategies for the Next Generation: Fishing as a Long-Term Economic Source for Alaska's Coastal Communities

Kris Norosz
Government Relations, Icicle Seafoods, Petersburg, Alaska

The commercial seafood industry is the primary economic engine in many of Alaska's coastal communities. The industry provides employment opportunities and revenues that are critical to the economic viability of our communities. Therefore, changes to the industry and the world in which we operate can have dramatic and far-reaching impacts for Alaska's residents.

Since the adoption of the State of Alaska's limited entry program over three decades ago, the fishing industry has changed considerably due to new resource management programs, technological advances, and global economic conditions. Currently, fewer fishery resources are available through open access, the value of access privileges has significantly increased, and the fleet of permit holders is aging. Some of these conditions are within our power to control, while others are not.

As the present generation of harvesters nears retirement age, how can we retain these jobs and businesses in our community? Can we provide a graceful exit for those wanting to retire and a viable opportunity for those who want to enter? Are young Alaskans interested, capable, and equipped to take over? Are the necessary tools available to make the transition? What do we need to consider when formulating future programs?

The future economic viability of Alaska's coastal communities may hinge on whether we are proactive or reactive to the changing conditions affecting our seafood industry. The contributions by Andy Ruby, Eric Rosvold, Rachel Donkersloot, and Linda Behnken address some of the issues.

Bristol Bay Economic Development Corporation Supporting the Future of Fishing in Bristol Bay

Andy Ruby
Regional Fisheries Coordinator, Bristol Bay Economic Development Corporation, Dillingham, Alaska

I have been involved with the Bristol Bay fishery in some fashion or another most of my life; but that's not so unusual in the company I keep. To my mind, what may be more unique about myself and my job is the opportunity that I have to work with the fishermen and communities in the region. And, I am fortunate to work with people who are just as committed as I am—people like my boss, Robin Samuelsen, who has been involved at the state and federal level to implement policy decisions that take into account our residents at every step of the process.

The federal Community Development Quota program for Western Alaska has become an important factor in our efforts to reverse the disasters that have befallen Bristol Bay residents via the collapse of the salmon industry. The CDQ program was created in 1992 and is primarily funded through an allocation of 10% of the available Bering Sea fish species such as pollock, crab, halibut, and flatfishes. The proceeds are used to provide economic opportunity and development where very little existed previously. Bristol Bay Economic Development Corporation (BBEDC) is one of six CDQ groups and represents 17 coastal communities from Port Heiden on the Alaska Peninsula to the village of Ekwok on the Nushagak River. Most observers agree that the CDQ groups have played a key role to date in restoring hope and pride in their local and regional fisheries again.

Although we have gone through a lot of changes and growing pains since our beginnings, BBEDC remains committed to protecting and sustaining our regional fisheries. We have developed several programs that look to address the problems and issues head on.

Those include our Bristol Bay permit brokerage program, which has evolved into a satellite office for the Commercial Fisheries Entry Commission during the summer months due to state funding cuts that have forced CFEC staff out of the bay. (CFEC used to station temporary staff in Dillingham and/or King Salmon at ADFG offices during parts of June and July to handle the increased volume of permit transactions such as last minute renewals and emergency transfers. This was in support of the influx of fishermen for the short window sockeye fishery. CFEC eventually quit this activity a few years back and no longer send staff to Bristol Bay, in large part due to state budget cuts. BBDEC now works with CFEC staff by phone, fax, and email to do that same service for the fishermen.) Another one is our interest rate assistance program that helps resident fishermen pay their annual interest costs associated with boat and permit loans.

Our tax assistance program has brought a large number of our residents current with the IRS and pumped a large amount of refunds back into individual pockets that may have been lost otherwise. We also have implemented programs to improve the quality of our fish by providing chilling products like slush bags and insulated totes.

And we have initiated "Bristol Bay Wild," which is a quality certification program designed to improve the handling and quality of salmon by requiring participants from the fisherman and tender to the processor to adhere to a set of harvesting guidelines to assure a premium quality fish product into the marketplace. Over the past two years several millions pounds of salmon have left Bristol Bay in boxes adorned with the Bristol Bay Wild logo. In time, as the program gets more market recognition, it will be available for use by entrepreneurs in Bristol Bay to use to market and sell their own product.

This year we created a new subsidiary company called Bristol Bay Ice. It currently includes our ice barge, the *Bristol Maid,* which is outfitted with the latest in ice-making technology to provide ice to fishermen on the fishing grounds in an effort to improve the quality of our fish at the point of harvest. The ice barge was operated in a partnership capacity with Norquest Seafoods and was stationed in the Egegik fishing district this past summer. It was constructed with the help of a sizeable grant from the Alaska Department of Commerce, Community and Economic Development and BBEDC funding. The barge has the ability to make 40 tons of ice per day and store up to 65 tons onboard.

BBEDC contributed over $250,000 during the past two years to help form the Bristol Bay Regional Seafood Development Association. BBRSDA will be an independent organization from BBEDC, and will replace the old ASMI 1% tax on fishermen. The difference is that the BBRSDA will exist solely to improve the value of Bristol Bay seafood products. The application to form the organization was approved by the state in June 2005. The vote to approve the 1% assessment tax was approved

in spring 2006 by salmon drift permit holders. Set net permit holders are currently conducting an assessment vote of their own, and they are looking to join the drift fleet in the BBRSDA. We will know the results of that vote in early November. [Note: Bristol Bay setnetters did not approve the assessment.]

The 1% tax on drifters began June 10, 2006, and that money will be available by next year. Nominations for drift permit board seats are now being solicited and we expect an elected board to begin management of the association by this spring. Again, the BBRSDA money will be used to promote and market Bristol Bay fishery products exclusively.

We are also working to develop a fisheries loan program that will provide financial incentives (primarily lower interest rates on loans) to make it more attractive for Bristol Bay residents to own limited entry permits. The concept remains difficult to implement given that the Division of Investments and the Commercial Fisheries Agriculture Bank (CFAB) are the only two institutions in Alaska who can take title to limited entry permits. Should the loan fail, the program has to follow either DOI or CFAB loan requirements that are tied to predetermined terms and interest rates. The dilemma of permits outmigrating to nonresident owners remains a serious problem. Some figures suggest that our Bristol Bay residents have lost control of more than 240 drift permits from a total of about 1,850 since the inception of limited entry in 1976. This equates to a monetary loss of approximately $176 million dollars to the communities in Bristol Bay. Add in set permits and the numbers become even more staggering. We recognize the problem and are currently working with several organizations to come up with some answers.

Part of my task as a regional fisheries coordinator for our communities is to encourage fishermen and residents to become more involved. I try to provide them with the information that they need to make informed decisions. As most of you are aware it is not always easy for fishermen to change hats and become activists and politicos, but that has become a necessary part of calling yourself a fisherman nowadays. The Alaska Board of Fish will be meeting in Dillingham in December to consider proposed regulatory changes to the Bristol Bay fishery and I have been working to keep our residents up to date on those proposals and what impacts they could have. I have also been encouraging them to draft comments to the board addressing their view of those proposals, and to make sure they have an opportunity to be heard at the meeting if they so choose by making them familiar with the process before they show up.

This season the Bristol Bay sockeye harvest will top out at over 28 million fish. That is at least 16% larger than last year and about 15% higher than the 20-year average. Our fishermen were very disappointed in the current average bay-wide price of 55 cents a pound, but considering the onslaught of farmed fish from Norway and Chile in the global

marketplace, that price is about what we were told to expect by the processors going into the season. However, new market opportunities are opening up domestically and in Europe, particularly for frozen and fresh fillets. While the fact remains that many of our residents have lost the means to continue to participate in the fishery, in general I would say we are mostly optimistic about the future, and BBEDC's role in that future will be critical. I think that, all in all, we see real opportunities in Bristol Bay. Those opportunities are due in large part to the healthy and abundant returns in our sockeye fishery provided by the pristine and unpolluted areas of the Bristol Bay watershed and the Bering Sea, and by the strong and unwavering fishing tradition and heritage among our people and communities of Bristol Bay.

Graying of the Fleet: Community Impacts from Asset Transfers

Eric Rosvold
Fisherman, Petersburg, Alaska

Fishing rights, as administered by the state and federal governments, have created a "wealth" issue. It has made financing entry into commercial fishing, in the traditional sense, difficult for a new generation of fishers wanting to operate as sole proprietors. Local fishing businesses may have a net worth of four or more times than before fishery rights were established. The ease of selling parts and pieces of that fishing business for retiring owners threatens coastal communities with the potential loss of that economic activity. Currently, there is no methodology to sell the entire business to a partnership because of limitations established by state and federal laws governing those fishing rights.

My involvement in this issue began after the advent of the individual fishing quota program. It was necessary for me to purchase additional quota shares to keep my fishing business viable. The value of the fishing rights soon exceeded the cost of my vessels and equipment. Working with CFAB (Commercial Fishing and Agriculture Bank), fish companies, and other banks in financing those purchases, I realized the potential degree of difficulty in selling the business as a whole entity.

Value of the fishing business

The value of fishing rights on a typical fishing vessel is $4.5 million.

Fishing vessel, equipment, and gear	$785,000
Fishing rights	$4,515,095
Gross value	$5,300,095

In a typical fishing vessel season, I fish seven months a year and employ four to five crewmembers. We longline a medium amount of IFQ,

Gross value and income calculation

Item	Value	Market value	Catch, lb.	Net lb.	Ex-vessel price	Gross income
58 × 20 foot combination fishing vessel	$575,000					
Seine equipment: winch, block, skiff, seine	$75,000					
Longline equipment: hauler, shelterdeck, gear	$75,000					
Crab equipment: hauler, gear	$60,000					
Equipment value	$785,000					
Limited entry permits						
Salmon seine	$40,000		1,200,000		$0.15	$180,000
Southeast Alaska Tanner, brown crab	$150,000		30,000		$3.00	$90,000
Federal longline IFQ						
Southeast Alaska sablefish	$640,211	$11.00	58,201	36,667	$4.00	$146,667
West Yakutat sablefish	$1,184,942	$11.00	107,772	67,865		$271,459
Central sablefish	$1,184,942	$11.00	107,772	67,865		$271,459
2A halibut	$840,000	$21.00	40,000	40,000	$4.00	$160,000
3A halibut	$475,000	$19.00	25,000	25,000		$100,000
Value of fishing rights	$4,515,095					$949,585
Gross value of fishing business/equity	$5,300.095					
Gross fishing income	$1,219,585					

and also seine and crab. I have three months available to pursue other opportunities, and two months for maintenance issues.

To sell to a buyer

Sale price	$5,300,095
Down payment	$1,325,023
Annual payment	$450,324

Traditional profit and loss for buyer

Gross fishing income	$1,219,585	
		Share
Traditional owner share seine	$72,000	0.40
Traditional owner share crab	$36,000	0.40
Traditional owner share longline	$256,388	0.27
Gross share before expenses	$364,388	

Expenses

Insurance	$20,125
Communication expense	$2,500
Repair and maintenance vessel and equipment	$34,000
Licenses and permit fees	$2,500
Moorage, crane rental, utilities	$4,500
Warehousing	$3,000
Professional	$3,600
Operating supplies	$4,888
Total expenses	$74,613

	Traditional	Return on equity
Net share before taxes	$288,776	5.45%
Annual payment	$450,324	
Net cash after payment	<$161,549>	

Selling the fishing business

Owner's easy way out

An owner's easy way out of fishing is to sell the fishing business in pieces via a broker. The fishing business, now disassembled, essentially leaves the community in which it was established. The trickle down effects from these sales impact repair and supply businesses, local and fish taxes, and crew jobs. This can result in families leaving town.

Alternative approach

A solution to this that may support community development is if one or more buyers form an LLP/CDP (Limited Liability Partnership/Community Development Plan) to purchase the business, allowing, for instance, an existing crewmember to become an owner. The current owner would hold a sales contract, with a participating financer providing some funds and managing the financing details. The LLP/CDP holds all the assets and is tied to the community in which it is registered.

Alternative profit and loss for buyer(s)

		Share
Future owner share seine	$90,000	0.50
Future owner share crab	$45,000	0.50
Future owner share longline	$664,710	0.70
Gross share before expenses	$799,710	

Expenses	
Insurance	$20,125
Communication expense	$2,500
Repair and maintenance vessel and equipment	$34,599
Licenses and permit fees	$2,500
Moorage, crane rental, utilities	$5,400
Warehousing	$3,000
Professional	$3,600
Operating supplies	$4,888
Total expenses	$75,613

	Future	Return on equity
	$724,097	13.66%
Annual payment	$450,324	
Net cash after payment	$273,772	

In order to use this approach, regulatory changes are needed in state and federal programs to allow fishing rights ownership by LLP/CDP and to properly collateralize lending. Federal and state systems don't allow multiple owners of shares, nor of limited entry permits. The federal side would need rule changes through the council process and the state side, changes to the constitution.

From the seller's perspective, the seller holding the sales contract minimizes the immediate tax burden on the sale. This allows sale of the entire business within the community in which it operates. Participation financing from an outside institution lessens the risk to the seller.

From the new owners' perspective, fishers are able to partner, combining assets and talents, and sharing risk and all fishing rights, proportionate to their ownership share. This enables the owners to more easily establish collateral with financers. The partners can determine who needs to be onboard during fishing.

From the community perspective, this keeps the fishing business intact locally, retaining the character of the community and the economic activity associated with that business. It appears to be in keeping with the original intent of federal and state fishing access programs.

This alternative scenario will have owners taking a large share.

Crew shares decrease under the alternative scenario.

	Traditional	Future	5 crew		5 crew	
Crew shares Seine	$108,000	$81,000	$21,600		$16,200	
			3 crew		3 crew	
Crew shares Crab	$54,000	$40,500	$18,000		$13,500	
			5 crew	4 crew	5 crew	4 crew
Crew shares Longline	$693,197	$284,876	$138,639	$173,299	$56,975	$71,219
Crew share total	$855,197	$406,376	$178,239	$212,899	$86,675	$100,919
Owner % of gross income	24%	60%				
Crew % of gross income	70%	33%				

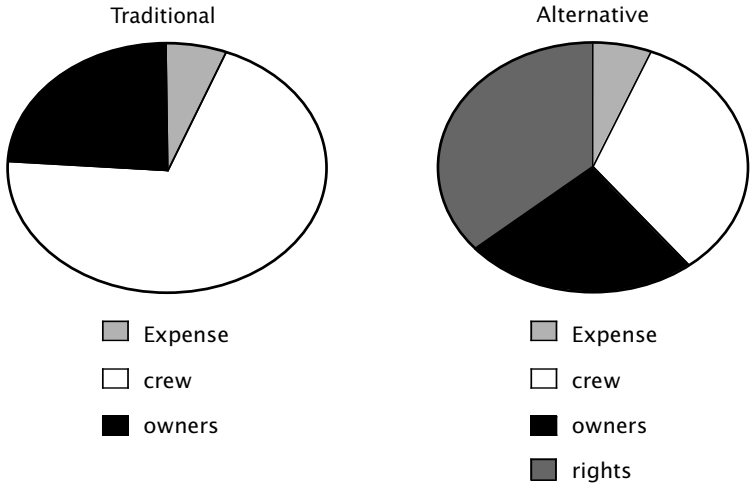

Figure 1. Crew share/fishing rights.

Conclusion

In conclusion, the economics are there to purchase quota and make payments. Although the crew may have a lesser share of the pie, the lesser share is still more than enough to live on.

Youth Emigration and Reasons to Stay: Linking Demographic and Ecological Change in Bristol Bay, Alaska

Rachel Donkersloot
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The start of the twenty-first century did not relieve Bristol Bay fishing communities of the environmental-economic uncertainties of the late 1990s. Shifting overseas economies, the precarious position of wild salmon in international markets, and a noticeable decline in red salmon returns persisted well after the declared economic crises of 1997-1998 (e.g., Gilbertson 2003). Rapid environmental-economic decline served as a catalyst for significant demographic change and socioeconomic hardship in Bristol Bay. It also reignited highly controversial debates surrounding nonrenewable resource development in the region (Northern Economics 1999; see ADEC, Bristol Bay Economic Overview, for a discussion of economic and social impacts).

This study looks closely at shifting levels of youth emigration in relation to recent fisheries-related economic decline in a rural Bristol Bay fishing community. The purpose of the study is to draw attention to some of the ways in which young men and women respond to environmental-economic stress. In addition to environmental-economic factors, special attention is given to the gender and ethnic identity of local high school graduates to better understand the ways in which these variables interact and influence young people's life-paths. By comparing out-migration rates of local high school graduates prior to and following the 1997-1998 economic disasters, this study provides a snapshot of recent migration behavior and asks if and how environmental-economic stress impacts the life-paths of young people from the community. The findings presented here are from a larger project undertaken in 2004 (for complete study see Donkersloot 2005).

Youth emigration and "female flight" are quintessential tropes in studies on fishing communities in particular and rurality in general (Hamilton and Seyfrit 1994b, Dahlstrom 1996, Corbett 2007). To understand the significance of what is happening in Bristol Bay, the following highlights trends documented elsewhere.

- When comparing the migration intentions of urban, suburban, and rural youths, rural students have much higher rates of intended out-migration. A nationwide survey of 10,000 high school students documents that rural students are not only willing to move away from home, they prefer it (see Cobb et al. 1989).
- In general, studies show that young people, females, and the more educated and better skilled are the most likely to migrate away from rural, natural resource–dependent communities (see Hamilton and Seyfrit 1994b, Hamilton et al. 1996, Hamilton et al. 1998, Hamilton and Otterstad 1998b).
- Studies focusing on rural Alaska adolescents suggest that high school girls, more so than boys, aspire to attend college and live most of the rest of their lives outside their home region. Specifically, Alaska Native women are much more likely than Alaska Native men to move to urban areas and pursue a college education (see Hamilton and Seyfrit 1994a).

In sum, rural youth emigration in and beyond Alaska is a recurrent, selective, and highly gendered process. Important here is recognition of the ways in which migration discourse devalues staying. This is evident in the oft-cited term "brain drain" (or "skill drain"), which implies that it is the "better" individuals who "get out." Staying is primarily perceived as a circumstance, not a choice or preference.

Methods

This study analyzes the influence of three independent variables on the dependent variables under study (see below). The independent variables are gender, ethnicity, and time period (year of high school graduation). Students are grouped into categories according to these variables. For the purpose of this study, the independent variable "ethnic identity" indicates one's chosen ethnic identity and is best understood as a reflection of one's sociocultural identity.

In the summer 2004 I interviewed nearly every household (n = 89) in the Bristol Bay Borough from which a child had graduated between 1994 and 2003. Using the 1997-1998 fishing crises as a marker for the beginning of economic decline and environmental stress in Bristol Bay, I divided graduates into two groups according to year of graduation. The

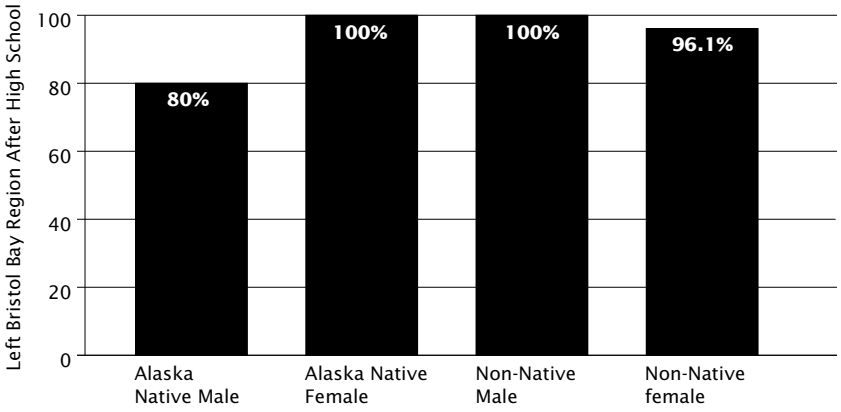

Figure 1. Out-migration of Bristol Bay high school graduates, pre-fishing crisis outcomes.

"pre-fishing disaster" group includes graduates between 1994 and 1998 (n = 66). The "post-fishing disaster" group is composed of 1999 to 2003 graduates (n = 75). The primary dependent variables of interest here are out-migration (left community during period under study) and to a lesser extent, return migration (left and returned to community during period under study). Information concerning educational outcomes (college attendance rates and college dropout rates) of local youths was also collected but is beyond the scope of this paper (see Donkersloot 2005 for discussion of educational outcomes).

Approximately thirty graduates between 1994 and 2003 are exempt from the project because their families had moved away from the community and could not be contacted for interviews. There are less than ten households in the community that could have been included in this study, but due to various circumstances were not. Given the high percentage of households and students included in this study, outcomes illustrate a very accurate picture of youth life-paths during this period. It is important, however, to recognize the small size of the population under analysis. Because of this, I rely primarily on percentages to illustrate patterns.

Findings and discussion

Bristol Bay students who graduated prior to the 1997-1998 fisheries crises show high levels of out-migration, indicating a strong preference to live outside of the community (even during good fishing years). Most young people do not find future life in the community appealing,

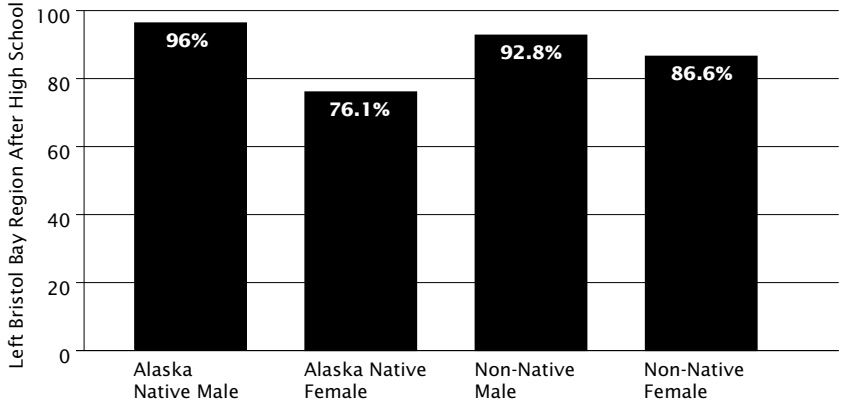

Figure 2. Out-migration of Bristol Bay high school graduates, post-fishing crisis outcomes.

a sentiment confirmed several times throughout the interview process. Collectively, 94% (62 out of 66) of pre-fishing disaster graduates left the community after high school. Of the four students who did not emigrate after high school, three are Alaska Native males (Fig. 1).

Post-fishing crisis results reveal a major shift in the out-migration of female graduates that does not fit well with existing literature. The most significant finding in changes in out-migration rates of graduates, is a 23.9% drop (from 10 out of 10 pre-crisis to 16 out of 21 post-crisis) in the out-migration of Alaska Native females (Fig. 2). Declining levels of female out-migration overall are indirectly linked to fisheries decline. A drop in female emigration corresponds more directly to a noticeable increase in non-marital fertility rates (Fig. 3). Non-marital fertility is based on the achieved fertility of unmarried females.

- Since the 1997-1998 fishing disasters, the number of young females who have had a child outside of marriage has nearly tripled (3 out of 36 pre-crisis females to 14 out of 36 post-crisis females).
- Birth rates jumped from 5.75% pre-crisis to 38.1% post-crisis.
- Of the seven post-crisis females who did not emigrate, five were single mothers.

As these females enter into motherhood at a relatively young age, the security and familiarity of home and importance of being near a support network of family and friends deters girls from leaving the

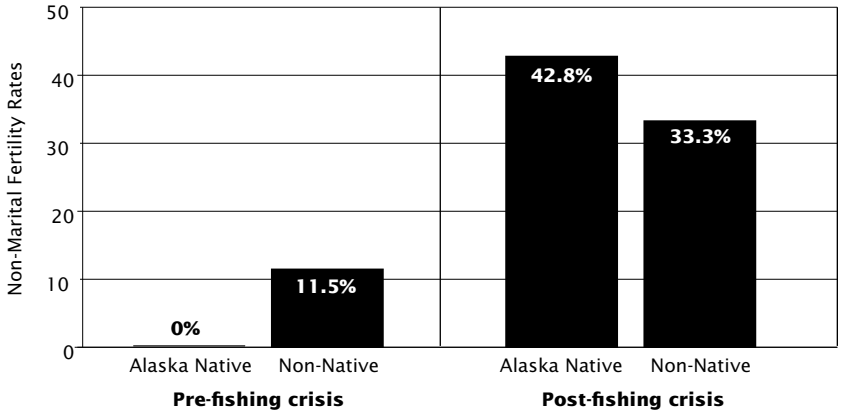

Figure 3. Non-marital fertility rates.

community. Having a child in tow obviously alters life plans as well as perceptions of what is both a feasible and desirable future. Additionally, caring for a child only makes the transition to an unfamiliar place more difficult and ostensibly less attractive.

It is not my intention to directly link a rise in young mothers to a decline in the local fishing economy. I would rather argue that it is the cumulative effects of several interrelated factors of which environmental-economic stress is a critical underpinning. Certainly there are other non-fisheries-related factors that need to be taken into account when explaining the life-paths of local youths that cannot be fully addressed here. This should not weaken an argument for the importance of environmental-economic decline, rather only hint at the complexity of the issue. The links between the instability of the fishery and the repercussions felt in local institutions, particularly school and household, and the ways in which these intersect and bear down on young people's social worlds, merits more attention and generates important questions. What does a fishing disaster actually look like from the vantage point of a tenth grader? What changes is she seeing and experiencing in community life, school, and home? Are students in the post-crisis period, particularly females in this case, less enthusiastic or less clear about future plans? Are they more willing to engage in high risk behaviors? Are they under-prepared for the challenges of life outside the community? Perhaps more importantly, how well prepared are they for the entirely different set of challenges that come with life at home (see for example Jamieson 2000, Glendinning et al. 2003). Last, it is important to be attentive to the powerful force of peer influence. These young girls are not only classmates and age-mates, they are also cousins, sisters,

and friends who surely influence the aspirations, attitudes, and actions of each other.

A brief summary of return migration rates concludes this section and rounds out the discussion of out-migration. Although the majority of Bristol Bay graduates leave the community after high school, some (approximately 17%) find their way back home. Of the 128 graduates who left the community after high school, 22 returned during the period under study.

Alaska Native males make up nearly half (10 out of 22) of all returnees, in part because some left with the intention to return. Three out of the ten Native males who returned left the region to pursue vocational schooling and returned immediately after completion of the program. All three come from fishing households and continue to participate in the family fishing operation. These, however, are the infrequent cases where graduates planned to permanently settle down in the community and did so.

Between 1994 and 2003, only two Native females returned to the community. Thirty-one percent (7 out of 22) of all returnees returned home after dropping out of college. Fifty-four percent (12 out of 22) of returnees have no college education. Only one female of the seven who returned had been to college. Non-marital fertility rates also help to explain female return rates.

Conclusion

Studies suggest that staying and/or returning are the unintended consequences of failure to leave or make it "outside" (Dahlstrom 1996, Laoire 2001). Should we interpret Bristol Bay trends this way? Shifts in levels of female out-migration are in part attributed to the realities and obligations of motherhood. But what else can we learn from young people's life-paths? What factors facilitate and hinder emigration from rural Alaska, and how do these affect young men and young women differently? (see for example Laoire 2001). Understanding how young people perceive and experience life in our rural fishing communities is imperative to understanding how young people's social well-being and quality of life is shaped by the opportunities and experience of home and leaving. As community members, researchers, and policy-makers we need to have a better understanding of the individual reasons, motivations, and barriers shaping young people's life-paths. The social consequences of fisheries decline can be long-term, far-reaching, and sometimes overshadowed by the magnitude of other issues (e.g., sustainability of resource). It is important that we broaden our discussions to include the unexpected and elusive human-environment links that ultimately shape life in our fishing communities.

Resources

ADEC. Alaska Department of Commerce, Community and Economic Development, Division of Community Advocacy. Community Database Online, www.commerce.state.ak.us/dca/commdb/CIS.cfm.

Cobb, R., W. McIntire, and P. Pratt. 1989. Vocational and educational aspirations of high school students: A problem for rural America. Research in Rural Education 6(2):11-15.

Corbett, M. 2007. All kinds of potential: Women and out-migration in an Atlantic Canadian coastal community. Journal of Rural Studies, doi:10.1016/j.jrurstud.2006.12.001.

Dahlstrom, M. 1996. Young women in a male periphery: Experiences from the Scandinavian north. Journal of Rural Studies 12:259-271.

Donkersloot, R. 2005. Ecological crises, social change and the life paths of young Alaskans: An analysis of the impacts of shifting patterns in human-environment Interaction in the fisheries-dependent region of Bristol Bay, Alaska. Master's thesis, University of Montana.

Glendinning, A., M. Nuttall, L. Hendry, M. Kloep, and S. Wood. 2003. Rural communities and well-being: A good place to grow up? Sociological Review 51:129-56.

Gilbertson, N. 2003. The global salmon industry. Alaska Economic Trends, October 2003:3-11.

Hamilton, L., and O. Otterstad. 1998. Sex ratio and community size: Notes from the North Atlantic. Population and Environment: A Journal of Interdisciplinary Studies 20(1):11-22.

Hamilton, L., and C. Seyfrit. 1994a. Coming out of the country: Community size and gender balance among Alaskan Natives. Arctic Anthropology 31(1):16-25.

Hamilton, L., and C. Seyfrit. 1994b. Female flight? Gender balance and out-migration by Native Alaskan villagers. Arctic Medical Research 53(2):189-193.

Hamilton, L., C. Duncan, and N. Flanders. 1998. Northern Atlantic fishing communities in an era of ecological change. Nor'easter 10(1-2):28-31.

Hamilton, L., R.O. Rasmussen, N. Flanders, and C. Seyfrit. 1996. Out-migration and gender balance in Greenland. Arctic Anthropology 33(1):89-97.

Jamieson, L. 2000. Migration, place and class: Youth in a rural area. Sociological review 48:203-23.

Laoire, C.N. 2001. A matter of life and death? Men, masculinities and staying 'behind' in rural Ireland. Sociologia Ruralis 41(2):220-236.

Northern Economics, Inc. 1999. Impacts of the 1997-1998 Bristol Bay fishing disasters. Professional Consulting Services in Applied Economic Analysis. In association with KEA Environmental, Inc and HDR Alaska, Inc.

Designing Limited Access Fishery Management Programs

Linda Behnken
Executive Director, Alaska Longline Fishermen's Association, Sitka, Alaska

Let me start by inviting all of you to sit back for a minute and picture the future fisheries of Alaska—and even better, the nation—as you would like them to look. I expect you would not be present at this symposium if you do not envision thriving coastal communities with residents actively engaged in healthy sustainable fisheries—as access privilege holders, owner/operators, skippers, crewmen, processors, and owners of other related small businesses. You would want the profits and resource rents of the fisheries to largely remain in the adjacent coastal communities; to maintain the mentoring of crewmen to owner/operators, the traditional transfer of knowledge and commitment to conservation from parent or elder to child. You likely also picture a creative and competitive processing/marketing sector that actively involves the fishermen and local residents while sustaining the coastal economy.

Does that sound too good to be true? I want to believe it is not. But certainly to realize the vision, some dramatic changes need to be made in how fisheries are managed. Managers need to stop writing fishery plans that favor fast paced or capital intensive systems, with a small sliver set aside for those who follow a different tradition, and instead design management programs focused on fostering sustained or expanded participation by independent community-based fishermen.

What does that mean? Think for minute about the existing barriers to the vision I just described. To my mind, they are absentee ownership, high capital costs to compete for product or afford entry, and consolidation of the fleet, the ownership of access rights, and resource profits. If the goal of management is to remove these barriers, then the vision of healthy communities becomes possible.

Certainly there is no single formula that can be applied in every fishery. But there are common cornerstones or standards. An ad hoc group of fishermen working together during this reauthorization of the Magnuson-Stevens Act have identified the following as the standards that should guide future management.

1. Establish clear and measurable conservation and management objectives. Ensure that these objectives include

    a. The sustained participation of coastal residents as access privilege holders.

    b. An entry level affordable to those who live in coastal communities.

    c. Tying access privileges to the waterfront—active fishermen hold access privileges and are aboard the vessel when shares are harvested or are substantially involved in the fishing operation as vessel owner.

    d. Open and competitive markets.

2. Schedule regular program reviews to assess achievement of program objectives.

3. Modify programs and/or access privileges if objectives are not being met.

I would emphasize the importance of the last point: the opportunity, if not responsibility of managers to modify programs **and/or allocations** if objectives are not being met. This modification process could lead to a re-assignment of shares similar to the New Zealand drop through system, where participants accept a reduction of shares at a specified time or make changes required by new regulations, or an incentive program where shares are modified to encourage or reward behavior that furthers program objectives. Under either approach, the program does not sunset, but managers retain the responsibility and the authority to redirect programs that are compromising either the resource or the coastal economies that depend on that resource. This authority provides for positive change; it also helps to control the value and therefore cost of access privileges.

Perhaps an example would be helpful. Consider a fishery that over the past decade has de-evolved to a race for fish with compressed seasons that require relatively large boats to remain competitive. Let's say, for example, that few of these large boats are based in Alaska's coastal communities and many of them are corporate owned with hired skippers. Traditional management has always rewarded vessel owners and current participants with limited entry rights, whether those

rights come in the form of licenses or quota share. Such an approach is certainly defensible and consistent with the Magnuson-Stevens Act. However, nothing in the Act requires that shares or licenses be issued such that the existing fleet composition is frozen in time. **Management systems with the goal of preserving an entry level accessible to coastal community residents and keeping shares tied to the working waterfront can include incentives that transition the fleet to one that sustains coastal economies.** For example, managers could establish that at the end of three years, quota share holders would be required to be on board vessels while fish were harvested or forfeit 20% of their holdings. The 20% could be reallocated to owner-operators or made available to new entrants. Managers might recognize that the fishing gear currently in use is less than ideal for conservation or economic reasons (i.e., too expensive to be cost effective for community-based fishermen) and could provide quota incentives similar to that just described to transition the fleet to a different gear.

While some of these ideas are a departure from current practices, fishery managers in Alaska have in some cases designed policy to achieve sustained community involvement. The sablefish/halibut IFQ (Individual Fishery Quota) program includes a number of provisions to keep shares tied to the waterfront, including a requirement that second generation catcher-boat quota share holders be on board the vessel when shares are harvested and be living breathing people. The same program includes vessel size classes and a block system to maintain fleet diversity, limit consolidation, and preserve an entry level. While the programs could certainly be improved from the sustainable community's perspective, the successful elements are worth noting.

The Southeast dive fisheries provide another example and a different approach to gearing management to favor community-based fishermen. The dive fisheries were becoming increasingly dominated by nonresident highly capitalized operations. Along with imposing a moratorium, the Alaska Board of Fisheries established a two to three month season with weekly two day openings that run from 8 am to 3 pm on one day and 8 am to noon on the following day. These changes ended the pulse fishery and encouraged participation by coastal community residents both as harvesters and processors.

In conclusion, there is no one management system applicable to all fisheries. However, there are standards and guidelines that must direct fishery management decisions if coastal fishing communities are to survive. Management systems that lead to compressed seasons and demand high capital costs to enter or remain competitive will drain access opportunities from coastal communities. Systems that maintain an affordable entry level, prevent absentee ownership, and slow the pace of harvest will facilitate the sustained participation of independent community-based fishermen and the vitality of coastal economies.

"Brain Flow"

McKie Campbell
Commissioner (former), Alaska Department of Fish and Game, Juneau, Alaska

Thank you for the opportunity to address your conference again this year.

I'm sure that many of you thought that an error had been made in the title of my presentation. You probably thought that I meant "Brain Drain," not "Brain Flow." Though ADFG is experiencing brain drain, the title of this presentation is Brain Flow because with ADFG, the fishing industry, and community partnerships, we can all experience the benefits of "Brain Flow" to counteract the effects of brain drain.

First, the bad news: ADFG is experiencing serious brain drain that affects the quality of the services we want to provide and that you all deserve. This is due in part to the anticipated transition to a new administration. It is possible that a number of folks serving in key positions will not be retained under a new administration. Every governor deserves to have his/her own commissioner, but below that, our department relies on a number of people who provide a vital service to the state and to our agency. There could be very large holes in the knowledge and experience of the department as a result of the transition.

The second imminent cause of brain drain is the end of the retire/rehire program. As you're probably aware, the legislature has passed several iterations of the retire/rehire program, but the final version expires at the end of this calendar year. For a variety of reasons, ADFG relied heavily on that program, and we are now faced with about 35 folks "turning into pumpkins." I strongly believe that none of us is irreplaceable, but I also believe that individual excellence makes a difference. We are blessed at ADFG to have many excellent individuals.

There is a complicated system of administrative hoops through which we hope to be able to retain some of these critical folks, particularly those who are involved in the Pacific Salmon Treaty, Yukon River Salmon Agreement, and enforcement training. I believe we will be suc-

cessful in saving a half-dozen or more positions; but even if we are, Alaska will be losing some great people at the end of the year.

The third reason for the brain drain is due to normal retirement, particularly the end of the 20-year retirement. From 1976 to 1982, ADFG biologists were in the same retirement program as Fish and Wildlife Protection. The rationale for their inclusion was a study that found that the most dangerous state job was the ADFG biologist. In fact, we have a plaque at our headquarters office of members of the department who died in state service. The last of those folks and others who are eligible to retire under the subsequent program are exceeding the number of years necessary for retirement. Notice that I said the number of years necessary for retirement as opposed to retirement age, because many of these people are at the peak of their knowledge and skill, and are, in my view, too young to be considering retirement.

The fourth reason that we're steadily losing good people is inadequate salaries. A number of years ago Alaska's state salaries were competitive; that is no longer the case. I recently attended the annual meeting of the Association of Fish and Wildlife Agencies. In attendance were the heads of all fifty state fish and game agencies. Fish and wildlife together are the largest employment sector by a huge margin in Alaska. Tourism is second, and in large part, is dependent upon the fish and wildlife that we manage. For many folks, our fish and wildlife resources are why we live here.

Therefore, it stands to reason that Alaska should have the best fish and wildlife management agency in the country. In many ways we do, but back in the seventies, ADFG was the premier fish and wildlife agency; it was clearly acknowledged as the top department in the country and it paid the best salaries. If you were a young person graduating with an advanced degree in fisheries or wildlife management, Alaska was where you wanted to come. Now, however, salaries are no longer competitive with many other state agencies, tribal groups, and particularly with the federal government. This problem exists from the top to the bottom.

It is increasingly difficult to retain or attract highly qualified directors. During my short tenure back with the department I had an excellent candidate and his wife and four children come to Juneau, spend multiple days searching for housing, and turn down the job because he simply couldn't afford to live here. I have lost two directors and will lose a third shortly, all of whom went or are going to jobs that are far less demanding, but pay far better salaries. In the middle, we've lost and are losing a number of mid-level employees who are going to work for the federal government.

Jim Wendland, an excellent fish and wildlife Tech IV in our Anchorage office, is leaving to take a job as Mat-Su's assistant dogcatcher. In that position, not only will he make more money than he is

making now, he will make more than his boss is making; he will make more than his boss's boss is making.

Now it's time to talk about the good news.

We are attempting to address it through a market-based pay analysis by the Department of Administration. To the extent we are successful, however, it will compress the pay grades at the top of the scale. Without this raise, it will be even more difficult to attract and/or retain top quality directors.

For any current directors who leave during the transition, this raise will make a minimal difference. This change is anticipated to assist the incoming administration, as it will make a real difference in their ability to retain or hire good people.

All of the directors of ADFG put in very long hours, dealing day in and day out with stressful challenges. I'm personally grateful to each of them for their extraordinary dedication and professionalism. The state needs to have the resources to be able to hire and retain the best person for each job.

When I was with ADFG a decade ago as deputy commissioner, I began an initiative that attempted to attract and mentor young Alaskans into fish and wildlife management positions. While it was included in transition documents, it wasn't picked up as an action item by the existing administration. I have renewed that commitment to seek out young Alaskans, to make them aware that ADFG has good summer jobs and promising career paths, and to partner with others who share our goal of growing our own fish and wildlife managers.

One such partnership is with the University of Alaska and Herb Schroeder. Herb was instrumental in the development of the Alaska Native Science and Engineering Program (ANSEP). This very successful program is increasing the number of Native Alaskans and rural students in the science, technology, engineering, and mathematics fields utilizing faculty and peer mentoring, study groups, and collaboration. ADFG is working with ANSEP to add fisheries to its successful curriculum.

To close, I want to talk about heart. People work at ADFG because they care about Alaska. They care about its fish and wildlife resources. They share a commitment to the folks in our state dependent upon those resources, and their love of using those resources is one reason they stay in Alaska.

Fish and wildlife management is not an "interchangeable" career. Those who become involved generally stay involved, and they do so because it's their passion. We need to work together to keep the heart in our fish and wildlife management agencies, and hence, the heart of our communities—our fish and wildlife resources.

Financing Strategies for Communities

Glenn Haight
Fisheries Development Specialist, Alaska Department of Commerce, Community & Economic Development, Juneau, Alaska

Government efforts and programs established to assist the failing Alaska salmon industry, in the late 1990s and through 2006, provide useful examples for community and local governments looking at financing strategies to boost their local economies.

Approaching economic development strategies

Economic development is a government (local, state, federal, other) effort to propel an economy to obtain a certain optimum status. Economic development employs government resources to accelerate the development.

As communities begin to channel resources to deal with an economic crisis, or propel its optimum growth direction, it is critical to maintain "community development" as a priority. Economic development is slowed and often stopped in a community bound by social distress. The quality of life aspects that government handles—providing and improving education and mitigating social harm—are critical components of any successful economic development strategy.

Fundamental elements of economic development include the following three resources: financial, physical and human. Of the three, supporting human resources by nurturing and developing a stable workforce is one of the greatest challenges and needs in Alaska's rural communities. Education beyond a standard curriculum may be necessary to make local opportunities relevant to tomorrow's workforce.

Problem recognition and analysis

For any government looking to engage economic development strategies, it must first understand its industries. The problems facing the salmon industry were first widely discussed and debated in the mid-1990s through state-sponsored forums and summits. These events served to educate policy makers about the business environment and what market conditions were negatively impacting the industry. This economic exploration can only be done with extensive input from the impacted industries. Educating policy makers through economic analysis and reports is important to develop awareness of the issues.

Solutions for the salmon industry were developed through the Legislative Salmon Task Force, a joint legislative and industry task force, and further economic studies. With an understanding of problems, goal setting occurred at local, regional, and state levels. And with goals in hand, public funding was secured.

In this, a succinct take-home lesson is the importance of lobbying. Once goals are established, buy that plane ticket to Washington D.C. or Juneau and gain access to top policy makers within government. When doing so, first become familiar with existing programs these policy makers can use to channel funds and assistance toward the strategies. Second, look at specific programs that might be tweaked or created to address the problem.

With ample analytical and public support for improvements to the salmon industry, significant federal dollars—estimates run over $100 million—were dedicated to the salmon industry. Funding dedicated to solve the salmon industry challenges were channeled through federal sources such as USDA's Cooperative State Research, Education & Extension Service and Food & Nutrition Programs, and U.S. Department of Commerce Saltonstall-Kennedy funds, Pacific Coastal Salmon Treaty Recovery Fund, and disaster aid.

Looking back at the elements of economic development, significant funds were directed at physical investments for the salmon industry. Types of fisheries-related physical investments (aside from the natural resources) include infrastructure projects such as roads; utilities such as power, water, sewer; docks and harbors; airports; and communications. Harbor infrastructure includes cranes, pumps, and net repair locations. Ice, cold storage, fisheries quota ownership, and processing facilities can also be essential elements of economic development governments may choose to support (Fig. 1). Figure 2 shows the locations of nonprofit projects in the Alaska Revitalization Strategy.

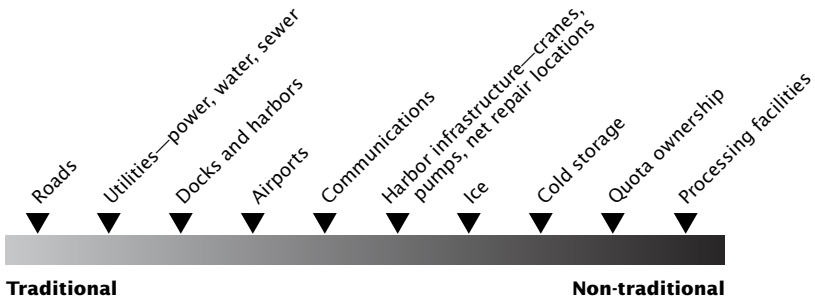

Figure 1. Types of fisheries-related community investments, ranging from the more traditional to the less traditional.

Figure 2. Locations of nonprofit projects in the Alaska Revitalization Strategy.

Nonprofit projects in the State of Alaska salmon revitalization strategy.

Component	Community	Status
Docks and harbors	Dillingham, Adak	
Ice production	Angoon	Looking for an operator
	Valdez	Leased to private operator
	Haines	Still under construction
	Kuskokwim	Operated by the CDQ organization
	Bristol Bay	Leased to private operators
	Cook Inlet Salmon Branding	Leased to private operators
	Pilot Point	Repairs to existing machine.
Harbor infrastructure	Bristol Bay	Forklift
	Valdez	Crane and fish pump
	Juneau	Crane
Cold storage	Ketchikan	Voted down at the borough level
	Petersburg	Built and began operation in September
	Wrangell	In the planning stages
Processing facilities, equipment	Coffman Cove	Equipment leased to local operator
	Wrangell	Equipment leased to local operator
	Metlakatla	Freezer equipment for community-owned facility
	Elfin Cove	Buying station
	Yukon Delta Fisheries Development Association	Equipment leased to its for-profit salmon operation
	Valdez	Fish meal plant, ultimately rejected
	Cordova	Fish meal plant, ultimately rejected
	Kotzebue	Two grants for processing equipment and facility improvements

Some general observations

Public vs. private competition

There has been significant controversy over public vs. private sector investment and operation when moving into icing projects and others. Projects that involve handling the fish tend to be more difficult for governments to manage. In general, greater success is found in turning assets over to the private sector, which brings its own controversies.

The public process is slow. Nontraditional investments (ice, cold storage, etc.) that are found in fisheries are often bogged down in the

public process and are difficult to launch. When comparing public vs. private investment, investments that compete in the open market stand a greater chance of success if they are conducted with private investment and offer substantial rewards for the investor.

Community-led development?

Here are some things to think about. What is the nature of the investment? Is it a traditional government investment such as a road, dock, or airport extension? Does the investment begin to move into the realm of running a business? Does it compete with the private sector as in the case of, for example, an ice machine, cold storage facility, processing plant? How does investment cover costs—through an existing tax base, or fee-based, or does it attempt to operate at a profit? Who will manage the investment—a government entity, a nonprofit, or will it be leased to a business?

Here are some strategies for community-led development projects. Use caution when approaching a "business" investment. Ensure that the project does not take an unfair competitive advantage over a private business. Governments and nonprofits often have deep pockets and will subsidize these activities. This can put a damper on innovation and productivity, which may work in short-term, but long-term changes in the market may put impacted stakeholders at a major disadvantage

Local governments are often pressured to provide an economic base when it is not feasible. Approach this with caution. Developing the conditions that support economic activity is essential.

The Commercial Fishing and Agriculture Bank

Lela Klingert
President, Commercial Fishing and Agriculture Bank, Anchorage, Alaska

What is CFAB?

CFAB (Commercial Fishing and Agriculture Bank) is a private, member-owned cooperative, which operates under its own statute (AS 44.81). CFAB opened its doors in March 1980. CFAB lends exclusively to Alaska residents who are involved in or provide support to the commercial fishing, agriculture, tourism, and resource-based industries of Alaska.

CFAB makes a wide variety of types of license and permit loans including IFQ (Individual Fishing Quota), Crab Quota, CQE (Community Quota Entity), and LLP (Limited License Program). In fact, CFAB is the only private lender that can take an Alaska Limited Entry Permit as collateral. We also provide financing for vessels, whether for the purchase, upgrade, or renovation of a vessel, as well as engine and gear loans. CFAB can also make loans for working capital, lines of credit, or any type of loan where the proceeds will be used for a business-related purpose or to refinance an existing loan with another lender where the original purpose of the loan was for a business-related purpose.

Financing options for the next generation

The following discussion focuses on loan participations and is meant for discussion purposes only. The actual structure of any loan participation would be dependent on the individual circumstances of those involved.

Both the fisher/seller and CFAB provide varied expertise when structuring this type of financing. The fisher/seller brings the assets, knowledge of the buyer and community, as well as experience. CFAB provides the expertise in the lending arena such as that of loan documentation, loan servicing and/or collection, and lien perfection on collateral

including limited entry permits. In addition, using CFAB to service the loan allows the seller to keep it an arm's-length transaction.

How do loan participations work? Once the fisher decides to sell and has determined a sale price and located a buyer, the buyer would complete a loan application and submit it to CFAB for their review. CFAB would then review the application and determine their risk threshold. The parties would then discuss the options available.

How the loan would be structured would depend on the short/long-term financial needs of the seller and the overall financial strength of the buyer. Loan participations can provide a great deal of flexibility and the options are too numerous to list here. Loan participations are an excellent way for the existing members of Alaska's commercial fishing fleet to assist tomorrow's generation in getting their operation started, while receiving a good return on their investment.

Once the buyer, seller, and CFAB have agreed on the terms, CFAB would then prepare the loan documents, secure the collateral, and then disburse funds to the seller. The buyer would then make their payments directly to CFAB and CFAB would service the loan and forward the seller/participant's portion of those payments to the seller/participant. If all goes well the buyer would continue to make their payments until the loan was paid in full.

Tables 1 and 2, and Fig. 1, outline how a $500,000 sales transaction could be structured.

Plan ahead

What can today's crewmember do, to become tomorrow's captain? Start planning—it is never too early to start saving. Take business classes that provide you with money management training (making the money is only half the battle). Research your options and the fisheries you are interested in, and don't forget one of the best resources available—those who are already there. The fishermen you see in your community did not get where they are today overnight.

Table 1. Loan terms and payments for a $500,000 sales price. Total annual payment for the first 12 years is $46,000.

Party	Loan percentage	Years	Percent interest	Annual payment	Total
CFAB	30%	12	7.25% (variable)	$18,500	$135,000
Seller/loan participant	70%	20	6% (fixed)	$27,500	$315,000

Table 2. Application of $46,000 payments.

Payment	Interest	Principal	Total	Principal balance owing after payment
CFAB	$11,137.50	$7,362.50	$18,500.00	$127,637.50
Seller/loan participant	$18,900.00	$8,600.00	$27,500.00[a]	$326,400.00

[a]Check to seller/loan participant is $26,941.89; loan servicing fee is $558.11.

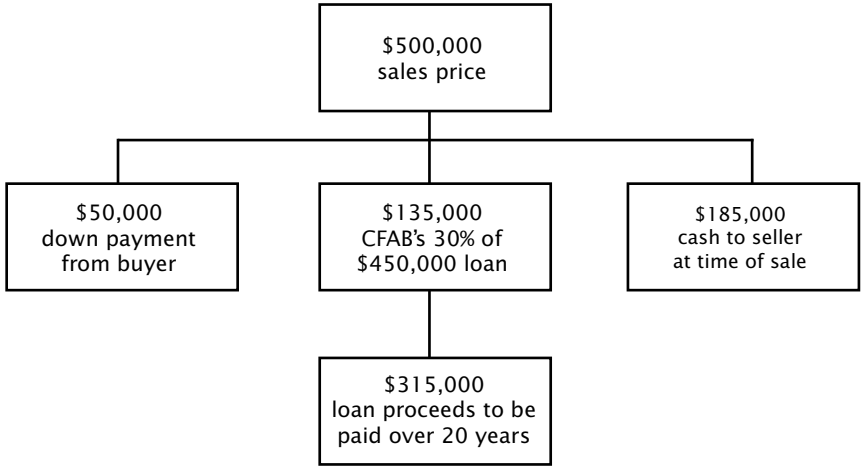

Figure 1. Cash to seller at closing; sales price is $500,000.

Financial Strategies for the Future: The Private Lender and the Fishing Industry

Bond Stewart
Southeast Alaska Business Banking Manager,
Wells Fargo Bank, Ketchikan, Alaska

Wells Fargo Bank is committed to the future of the fishing industry in Alaska. We strive to provide the right financial advice and solutions for commercial fishermen. Wells Fargo has a statewide presence with 50 banking stores in 27 communities, including the fishing hubs of Kodiak (2 banks), Bristol Bay (2), southern Southeast (7), Prince William Sound (2), and the Kenai Peninsula (4). In other words, we know Alaska. We've served Alaskans for 90 years and we're here to stay. We get to know you, your business, and your long-term goals.

Strategies and next steps for a successful fishing business, from a financial perspective include the following.

- Formulate a business plan that includes a description of the target fisheries, i.e., a business summary, a market analysis and potential competition, and a budget for initial and recurring expenses.
- Take a look at your financial situation. Start-up capital. Is your down payment already saved? Do you have a plan of how to cover it?
- Consider the risks of taking on debt. The assets you pledge are potentially at risk.
- Research insurance and legal needs and costs.
- Maintain good personal and business credit behaviors.
- Build equity in assets rapidly and avoid long-term financing pitfalls.

Financial education resources are available and can help you. Wells Fargo offers a comprehensive, free financial education program called Hands on Banking. Other resources include your local economic development organizations, the Alaska Small Business Development Center, and the Small Business Administration (SBA) Alaska. Wells Fargo is the #1 rated SBA lender in Alaska and a national SBA leader.

Financial solutions to reach your next stage in developing a successful fishing business include loans and lines of credit that can be used to finance new fishing vessels, capital for seasonal and short-term expenses, fishing gear, and equipment. IFQ (Individual Fishing Quota) financing programs are also available, as are some government-sponsored programs such as the Bureau of Indian Affairs, Small Business Administration, and AIDEA (Alaska Industrial Development Export Assistance). Insurance companies and services that are available to fishermen include the Accordia of Alaska partner brokers in Alaska and Washington who are commercial fishing insurance specialists.

Tax exempt financing can be an option for commercial fishermen. This can include purchasing public land, utilizing financing from Community Development Quota groups (CDQ), property improvements, and tribal entity developments. However, tax exempt financing is available largely for government agencies and nonprofit corporations. Generally, this type of financing has customized rates and terms for qualified entities.

Working Group Discussion Notes

At the end of each day of the conference "Alaska's Fishing Communities: Harvesting the Future," small groups facilitated by steering committee members met and addressed some of the common concerns and questions raised.

The working groups focused on a variety of questions and themes.

- How can collective goals for a community be balanced with individual residents' goals?
- Are intergenerational transfers of assets, industries, and access important, and if so, how can they be facilitated?
- What communication and logistics issues should be addressed in developing community goals?
- Are quota shares/community shares useful, and if so, when?

Discussion on the themes included the following topics.

How can collective goals for a community be balanced with individual residents' goals?

- Structure of the communities and competing interests are important factors; for community sustainability programs "one size does not fit all."
- Sectors within communities are factors—different commercial fisheries and vessels, processors, different classes, and support services.
- Different types of resident engagement (owners, skippers, crew, processing workers—some are better represented than others in the process; some are virtually invisible). Seasonal residents also complicate the picture.

- Who represents the community? What communities should be represented? (Just Alaska? The Pacific Northwest? Etc.)
- Where do communities fit into the process—are they on the same level as gear groups or sectors, or are they different entirely?
- Cooperative management and respecting grounds knowledge is an important step.

Are intergenerational transfers of assets, industries, and access important, and if so, how can they be facilitated?

- Apprenticeship requirements as in Maine.
- Develop a buyback program that makes unused permits affordable to new entrants.
- CDQs (Community Development Quotas) are a source of funds for new entrants but also limit purchase of product to members. Is there a way to convert this model to the Gulf of Alaska?

What communication and logistics issues should be addressed in developing community goals?

- Community roundtables can help.
- Cultural differences within and between communities.
- Better socioeconomic analysis at state and federal level needed.
- State system is underfunded, but there is the community advisory program (Fish and Game advisory committees) and nothing equivalent at the federal level.
- Participation in North Pacific Fishery Management Council (Council) process costs $100,000 to get your issue through.
- Length of time to act, state versus federal. This is a double-edged sword; the Board of Fisheries deals with issues in 5-10 days, the Council takes much longer to act and so is harder for volunteers to engage—but more deliberation and information is used in the decision making.
- With whom do you communicate? There is no ombudsman on the regulatory side even if community is unified.
- Paradox of too much and too little information being available.

- Cost of travel is prohibitive and/or logistics are difficult (and sometimes insurmountable).
- Burden is on the limited time and energy of volunteers.
- Difficult to keep up with the issues; minutes of meetings not detailed enough (podcasts?).
- Whose burden is it to ensure public input? Government? Communities? ("No one from the Council has come to my community.")
- Government attempts at communication in the villages have often failed.
- Fisheries is but one issue among many to keep up with.
- Trust issues.

Are quota shares/community shares useful, and if so, when and how?

- Are there ways to tie participation rights to communities? Community provisions/protection measures may be seen as running counter to the overall direction of a quota share system (i.e., engineering inefficiencies) to accomplish policy goals.
- Control of access rights can be made temporary to at least some degree. Limited duration systems could partially address community impacts.
- How can communities ensure they have a place in future "rationalizations"?
- You can't protect communities unless you properly fund resource management.
- Main opportunities for community access to resources: idle permits, process of Gulf of Alaska rationalization.
- Different type of benefits—different type of system (but can work with different provisions).
- Community provisions/protection measures may be seen as running counter to the overall direction of a quota share system ("engineered inefficiencies" to accomplish policy goals).
- Community/small vessel/small owner provisions need to be designed into the structure up front before quota share values soar.

- Initial windfall through allocations is problematic.
- Haves and have-nots are created ("embrace your crew"—they are the future of the fishery).
- Village IFQ (Individual Fishing Quota) holders hurt by fee system and penalties.
- Staggered implementation would allow transition time to understand program and its benefits.
- Meaningful owner/operator provisions would help communities (best interests of owner versus best interests of community).

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