

Public Testimony Sign-Up Sheet

Agenda Item ALL B Reports

	NAME (PLEASE PRINT)	AFFILIATION
1	Paul MacGregor	At-Sea Processors Assn.
2	Daniel P. King	HSCC
3	Dave Benton	MCA
4	Frank Kelly / ^{Marys Harty} / be swillish	SWAMC / North East
5	Tom Warrenchuk	Ocean
6	Glenn Reed	PSPA
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NOTE to persons providing oral or written testimony to the Council: Section 307(1)(I) of the Magnuson-Stevens Fishery Conservation and Management Act prohibits any person "to knowingly and willfully submit to a Council, the Secretary, or the Governor of a State false information (including, but not limited to, false information regarding the capacity and extent to which a United State fish processor, on an annual basis, will process a portion of the optimum yield of a fishery that will be harvested by fishing vessels of the United States) regarding any matter that the Council, Secretary, or Governor is considering in the course of carrying out this Act.

B-6

Public Testimony Sign-Up Sheet

Agenda Item B-report SSL issues

	NAME (PLEASE PRINT)	AFFILIATION
1	Dave Benton	MCA
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Executive Director's Report

Russian Delegation

As I reported over the last couple meetings, there is a visiting delegation of Russian fisheries representatives, hosted by World Wildlife Fund, who are here this week to observe our Council process and to meet with various groups of U.S. fishermen, scientists, and managers. I met with the delegation Sunday evening, they have been attending SSC and AP meetings, and I have committed the Council to meet with this delegation on Thursday evening, at approximately 5:30 pm, here in the Council meeting room following the recess of our meeting. Council and agency staff, and other interested persons, are invited to attend also. I expect the informal discussion and Q&A to last no later than 7 pm. Attached (Item B-1(a)) are some background materials related to the delegation, including a list of the delegates and their affiliation, an overview of the Russian far east fishing industry, and their itinerary for the week.

SOPPs and Budget issues

We have not received feedback from NOAA headquarters regarding our most recent SOPPs, dated October 2004. Recall that they requested all eight regional councils to submit their latest SOPPs and are in the process of reviewing those for consistency with the latest MSA provisions and other details. I understand that we will be discussing this further at our upcoming Council Coordination Committee (CCC) meeting with NOAA leadership in May, including the issue of stipends for SSC and AP members, so hopefully I can bring this issue back to you in June for resolution. I also have some minor changes I will be asking the Council to consider. Nor have we received confirmation of our 2007 administrative funding level (beyond our share of the eight-council baseline amount), so while I had tentatively scheduled a Finance Committee meeting for later this week, I propose that we hold off until June for that meeting.

Managing our Nation's Fisheries III ???

FYI, Dr. Hogarth has expressed his intent to hold another major, national fisheries conference this fall, during the week of September 24-28. The general theme would likely be MSA reauthorization, focusing on a few of the major reauthorization provisions. I have been contacted by Dr. Hogarth regarding the potential involvement of the NPFMC and its staff, given our experience in organizing the first two conferences. Planning for such a conference at this late date would be a major undertaking, and hopefully I will be able to give you more details before the end of this week.

Nominations for crab Plan Team

Based on a report last year from the crab Plan Team, the Council approved seeking additional membership on that Plan Team to bolster the expertise in crab biology, stock assessment, and associated modeling. We have received two excellent nominations: (1) Mr. William Bechtol, former ADF&G biologist and groundfish Plan Team member who is currently working on his PhD at UAF; and (2) Dr. Andre Punt, Associate Professor in the School of Aquatic and Fishery Sciences, UW, with extensive credentials in stock assessment and modeling techniques. Their letters of nomination and resumes are attached under Item B-1(b). The SSC has reviewed these nominations this week and will be forwarding a recommendation to the Council.

Pacific cod workshop

Item B-1(c) is a revised announcement for the Pacific cod stock assessment workshop being hosted by the Alaska Fisheries Science Center. It will be held April 24-25 at the AFSC, 7600 Sand Point Way NE in Seattle. Our most recent newsletter had listed the dates in the previous week.

Marine Habitat Mapping Workshop

This is just an FYI, to make you aware of a marine habitat mapping workshop that has been ongoing this week here in Anchorage. Participants include State, Federal, and international managers and researchers – the agenda for the meeting is attached as Item B-1(d).

National Offshore Aquaculture Bill

Item B-1(e) is a copy of an email sent by Dr. Hogarth to all the Council Executive Directors announcing the transmittal of the Administration's 2007 Aquaculture Bill to Congress. This includes a website for information about the initiative, or a copy of the Act (we can provide copies to Council members at your request). Dr. Hogarth intends to include this issue for discussion at our upcoming CCC meeting in May, so I can provide an update at the June meeting.

Joint meeting with Board of Fish

This is just another reminder that we meet this afternoon with the Board of Fish, starting at 1:00 pm. We will pick up where we left off on our Council agenda Thursday morning. The packet for this afternoon's meeting covers many of the same issues on our Council meeting agenda this week, and is available separately.

NEPA process

A potentially major aspect of the Magnuson-Stevens Act reauthorization involves development of new procedures for NEPA compliance, an issue I have been keenly interested in for several years. As I reported in February, a workgroup was formed which included representative from NOAA HQ, Council on Environmental Quality (CEQ), and three Council Executive Directors (as a subcommittee of the CCC). We met in late February and discussed numerous issues surrounding development of a revised procedure, and we discussed details of a 'strawman' revised procedure developed by the CCC subcommittee, which is attached as Item B-1(f). The essence of that strawman is to create a single environmental impact assessment (rather than the EA/EIS construct), which would address the general requirements of NEPA and which would be incorporated in each our analytical packages (plan or regulatory amendments), and which would utilize our existing Council process to satisfy scoping requirements and public comment.

On the surface this is not much different than what we do now; however, a key aspect of this revised procedure is that, rather than NEPA being the vehicle for all of our Council actions, we would be making MSA the primary vehicle, and incorporating the NEPA (environmental analysis) within that document. This is more than a difference in semantics, as it has implications for timing, range of alternatives, and nature of analysis. A key component of this proposed procedure is that a new NOAA Administrative Order (AO) would be developed, which would replace the existing AO for purposes of Council actions under MSA. Existing CEQ regulations for NEPA compliance would also likely need to be replaced with regulations reflecting the new AO. A version of the revised AO has been drafted (which reflects the CCC subcommittee strawman) but is on hold pending NOAA's publication of a draft revised procedure by July 12.

Because NOAA intends on gathering more public input throughout this spring, including through meetings of each of the Councils and through the May meeting of the CCC, they have not developed any alternative, revised procedure at this point. However, as mentioned above, the legislation requires publication of a draft revised procedure by July 12, to be followed by a 90 day formal public comment period. A final revised procedure would need to be published by January 12, 2008. What NOAA has done is provide a list of key questions for which they are soliciting public input (again, including this and other Council meetings), which is under Item B-1(g). At this meeting I will review both the NOAA list of questions and the CCC subcommittee draft revised procedure, both of which might be the subject of public comment. I would anticipate that the Council action at this meeting could range from specific comments relative to the 10 key questions posed by NOAA, or specific comments on the strawman procedure, to more general comments relative to the basic process, and/or general comments relative to the strawman procedure developed by the CCC subcommittee.

Although the 90-day public comment period will allow for additional input by the Council at our October meeting, I believe that it is crucial to get Council input prior to publication of a draft revised procedure. This would also allow each Councils' comments to be taken into further consideration by the CCC in May, which I hope will provide a strong perspective to NOAA before they publish a draft revised procedure by July 12.



**Sustainable Fisheries in Alaska:
Russian Governance Exchange Program**

25 - 31 March 2007, Anchorage

List of the Russian participants

**World Wildlife Fund
Kamchatka/Bering Sea Ecoregion**
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Affiliated with the World Wide Fund for Nature



Dear Members of the North Pacific Fisheries Management Council,

On behalf of World Wildlife Fund I am pleased to introduce the members of the Russian delegation attending the Council meeting on March 26-30, 2007. The purpose of their trip is to observe and participate in the Council process, to learn from the Council, and consider the Council's approach in their own conservation-based regional fishery management organization.

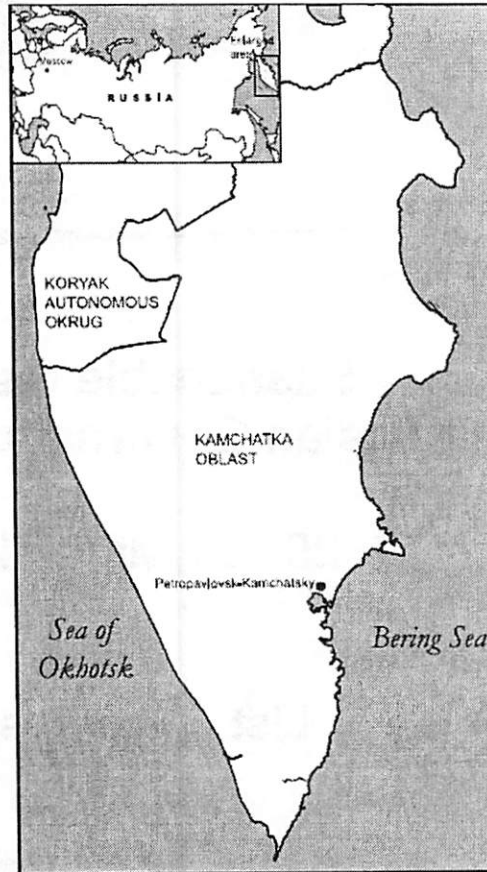
Carefully selected participants of this exchange program are highly respected experts with 10 to 30 years of professional experience in Russian fisheries management. The delegation includes high-ranking government officials from the Kamchatka and Koryak Regions, directors of leading fishing processing factories on the Kamchatka Peninsula, a renowned fisheries journalist, and fisheries staff of the WWF Kamchatka/Bering Sea Program.

This brochure provides information on the Russian delegation's professional background and special interests. I hope this information will assist you in establishing greater cooperation between the North Pacific and the Russian fisheries industries.

Best regards

Bubba Cook

Senior Fisheries Officer
Alaska Field Office
World Wildlife Fund



Source: Maksim Dubinin, 2007

The Kamchatka Region (Oblast) and Koryak Autonomous District (Okrug)

- Location: Kamchatka Peninsula, Russian Far East
- Total area: 472,300 km²
- Population: 377,900 inhabitants
- Nationalities: Russians, Ukrainians, Koryaks, Evens, Itelmens and others
- Capitals: Petropavlovsk-Kamchatsky and Palana
- Main industries: fisheries, timber, mining and ecotourism
- Major commercial species: Alaskan pollock, salmon, cod and crab



WWF's Kamchatka Salmon Conservation Initiative

The Governance Exchange Program is a part of the WWF project on salmon conservation on the Kamchatka Peninsula. The three year project supported by the Gordon and Betty Moore Foundation, aims to improve the framework for protecting Kamchatka's salmon in their marine environment by reforming salmon fishery policies, increasing local awareness of market-based sustainable salmon fisheries, creating the first Marine Fishery Protected Zone for critical salmon habitat, and strengthening anti-poaching enforcement.

In 2006, WWF launched an ambitious Kamchatka Salmon Conservation Program in the Russian Far East. Our goals are to (1) substantially improve governance and management of salmon; (2) introduce market-based incentives to encourage sustainability; (3) increase enforcement and combat illegal fishing; and (4) promote and establish protected marine areas for salmon.

Governance

In July 2006, WWF brought together a diverse group of government agencies, fishery industry representatives, indigenous peoples, and other NGOs in Kamchatka to develop and establish a Salmon Coalition. The Salmon Coalition will advise the Russian government on how to improve commercial fishery management, promote conservation and sustainable use of salmon, protect critical salmon habitat, prevent poaching, and support international and domestic market efforts for sustainable salmon products.

To further support these governance reform efforts, WWF will bring Russian officials to the U.S. in the spring of 2007 to participate in the North Pacific Fisheries Management Council process to provide ideas and options as Russia continues to improve its management regime.

Marketing

Recent efforts in Alaska to support sustainable market branding and market related educational campaigns have proven successful in reducing the demand for unsustainable products and supporting more sustainable management of other products.

WWF recently asked the Seafood Choices Alliance to assess consumer attitudes related to salmon conservation and potential interest in buying certified sustainable products. The results of the survey will support a focused marketing approach designed to promote sustainable salmon and, subsequently, salmon conservation in the Russian Far East.

Enforcement

Illegal, unreported, and unregulated (IUU) fishing, more generally categorized as "poaching," continues to threaten salmon stocks in Kamchatka and the Western Bering Sea. WWF and TRAFFIC, a wildlife trade monitoring network, prepared a sociological survey for residents of fishing communities on Kamchatka to assess opinions regarding poaching. WWF will use the results of the survey to promote strengthened enforcement and reductions in IUU salmon fishing.

Habitat Protection

WWF is looking to protect important salmon habitat in the marine environment. Thus, WWF has proposed the creation of a precedent-setting marine fisheries protected zone off the Kamchatka coast to provide for key salmon feeding habitats threatened by planned oil development on the western Kamchatka shelf. WWF is currently conducting a feasibility analysis to determine what type of protected area would be the most effective.

The Kamchatka/Bering Sea Ecoregion eagerly looks forward to continued progress with respect to the four activity categories.



Mikhail KUMANTSOV, PhD

Vice Governor on Agriculture and Natural Resources Koryak Autonomous Region

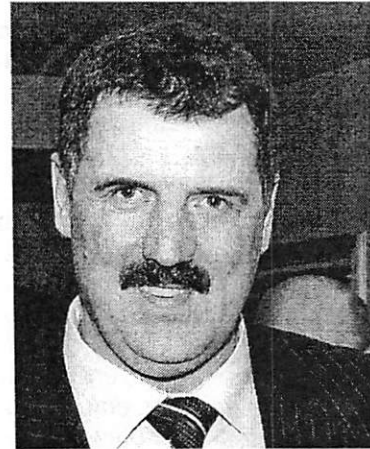
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Areas of expertise

- Coordinates Koryak Region policy for fisheries, hunting, and environmental protection;
- Coordinates governmental policy for water resources management in Koryak Region;
- Manages modernization of the Koryak Region coastal fisheries industry;
- Oversees development of administrative statutes on allocating fishing grounds in Koryak Region;
- Supervises agricultural and industrial development in the Koryak Region.

Professional involvement

- Head of the Koryak Fisheries Council;
- Head of the Koryak Commission on Pacific Salmon Fisheries;
- Head of Inter-Agency Commission on Distribution of Fishery Quotas in the Koryak Region;
- Head of the Inter-Agency Commission on Delineating Fisheries Grounds for Salmon and other Commercial Fish Species;
- Member of the Coordination Committee of

the UNDP Project "Protection and Sustainable Use of Salmon on Kamchatka."

Career overview

- Mikhail's career started in the Okhotsk Sea RybVod and MagadanTINRO, where he worked as an ichthyologist and a salmon researcher;
- After that he pursued a successful career in commercial fisheries having established the state enterprise "National Fishing Resources" and managing a trawl fishing company;
- Mikhail was appointed Vice Governor on Agriculture and Natural Resources of the Koryak Region in April 2005.

Education

- PhD in Biology and research on commercial fish species and invertebrates in marine bioresources in the Bering Sea and Chukotka.



Sergey VORONOV

Head of the Fisheries Management Department
Administration of the Kamchatka Region

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About the Fisheries Department of the Kamchatka Region Administration

- The Fisheries Department oversees development and implementation of the state fisheries policy in the Kamchatka Region;
- The Department distributes sport and subsistence fishing quotas and collects information on fisheries development in the region.

Areas of expertise

- Development of fisheries policy on the Kamchatka Peninsula;
- Policy on salmon propagation and management;
- Principles of fishery allocation.

Career overview

- Prior to his career in a public sector, Sergey worked in the fisheries industry from a deckhand to the Director of a processing factory;
- His extensive experience in Kamchatka Regional Administration includes acting as a Head of the Agricultural Council and

as a Deputy Head of the Natural Resources Committee;

- Since 2003, Sergey heads the Kamchatka Fisheries Department.

Education

- Graduated as a Specialist in Trawling from Kamchatka Technical School. After that he obtained two university degrees in Law and in Political Science.



Evgeny KABANOV

Senior Advisor on Fisheries

Municipal Administration of Petropavlovsk-Kamchatsky

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Scope of work

- Senior Advisor works under direct supervision of the Mayor of Petropavlovsk-Kamchatsky and reports on issues of environmental safety in fisheries;
- Senior Advisor coordinates work with various departments of Kamchatka Municipal Administration and Kamchatka regional authorities.

Petropavlovsk Municipality in 1997 as the Head of the Fisheries Department.

Education

- Evgeny holds Degree in Economics from the Russian Academy of Foreign Commerce.

Areas of expertise

- Environmental aspects of fisheries management;
- Enforcement of fisheries management regulations.

Career overview

- After graduation Evgeny worked for Kamchatka commercial fisheries and made a successful career rising from crew to captain;
 - After that he was elected a Kamchatka delegate and a member to the USSR Governmental Commission on Bioresources Conservation for the Central Part of the Bering Sea;
 - Evgeny started to work for the
-



Vsevolod LEMAN, PhD

Head of Laboratory for Artificial Salmon Propagation
The Russian Federal Research Institute of Fishery
and Oceanography (VNIRO), Moscow

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About VNIRO

- The Russian Federal Research Institute of Fishery and Oceanography (VNIRO) operates under the Russian Ministry for Agriculture and Fisheries. Specialists of VNIRO develop recommendations for exploration, conservation and utilization of marine resources for the Ministry.

Areas of expertise

- Artificial salmon propagation;
- Salmon ecology and assessment of salmon habitat;
- Ecotoxicology and assessment of technological impacts on fish stocks;
- Economic approaches to optimize salmon industry (commercial fishing, sports fishing and hatcheries).

Career overview

- Vsevolod has worked in VNIRO, Moscow since 1980;
- Since 2000, he has been actively involved in a number of projects in KamchatNIRO where he leads the Department of

Assessment of Anthropogenic Influence on Freshwater and Marine Biological resources;

- In addition, he is Head of the Working Group on Kamchatka Salmon Biodiversity within the UNDP/GEF Program "Conservation of Biodiversity of Kamchatka Salmon and its Sustainable Management;"
- Vsevolod organized a system of ecological monitoring at many large industrial facilities in Kamchatka. He is a member of the fisheries scientific monitoring group of the Sakhalin-1 and Sakhalin-2 Gas Drilling Projects and conducted fisheries impact assessment for the Kamchatka Gas Pipeline;
- Author of 150 scientific publications.

Education

- Degree in Ichthyology and PhD in Salmon Biology from the Moscow State University.
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Vladimir BELYAEV, PhD

Department Chief

Federal Institution "The Inter-Departmental
Ichthyological Commission," Moscow

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About the Ichthyological Commission

- The Commission is a scientific organization created in 1949 to coordinate scientific research in fisheries and to elaborate biological recommendations for the fisheries industry;
- The Commission is a governmental institution and since 1992 it has an interdepartmental status, coordinating its work with the Russian Ministry on Environment, Russian Fisheries Agency and the Russian Academy of Science;
- The Commission structure consists of 20 Scientific Councils and five Catchment Basin Departments: Azov Sea, East-Siberian, Far Eastern and North-Western Russia Departments. Scientists from over 200 scientific institutions all over Russia work for the Councils and Departments on a volunteer basis.

Areas of expertise

- Population dynamics of salmon and sturgeon;
- Marine and freshwater ecosystems
- Biodiversity conservation;
- Natural Resource Economics.

Career overview

- Since 1980 Vladimir has been engaged in various international research projects on freshwater and marine fish species (salmon and sturgeon), invertebrates and environmental protection;
- Until 2004 he acted as Director of the Regional Research Institute of Fishery and Oceanography in Khabarovsk (Khabarovsk NIRO);
- Having moved to Moscow, he headed the Nature Protection and Ecological Expertise Department under the Ministry for Natural Resources and acted as a Deputy Head of the CITES Russia;
- Author of over 100 scientific articles and 6 monographs.

Education

- PhD in Biology;
- Fluent English speaker.



Alexandr LITVINENKO

Director
Tymlatsky Fishing Processing Factory

President
Coastal Commercial Fishermen Association of the Koryak Region

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About the Tymlatsky Factory

- Tymlatsky Factory was established in 2000 for harvesting, freezing and processing various fish species, primarily all salmon. With 364 employees, the factory's profit in 2006 was \$12.5 million;
- In 2006 salmon products of the Tymlatsky Factory received the distinguished medal for "Best Fish Products 2006" at the Russian Annual Fish Exhibition;
- Tymlatsky Factory supports community assistance programs in the Tymlat indigenous settlement.

About the Coastal Commercial Fishermen Association

- Created in 2004, the Association includes 35 corporate members comprised of coastal fishing and processing businesses located in the Koryak Region. As of year 2005, the overall catch volume of the Association members was 97,540,000 tons and the overall costs of processed fishing products 1,960 million rubles (\$75 million).
- The Association focuses on financing

scientific research programs and fisheries enforcement measures in Koryakia and promotes coastal processing of salmon;

- Supports socially significant programs in the Koryak Region.

Areas of expertise

- Coastal fisheries management;
- Salmon fishing and processing technology.

Career overview

- Alexandr has worked in the fishing industry since 1995.
- He acted as a director of several fish processing plants in Kamchatka.
- Since 2004, Alexandr heads the Tymlatsky Fishing and Processing Factory.

Education

- Degree in Mechanical Engineering from the Khabarovsk Polytechnic Institute.
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Andrey GERMASH

President

“East Coast” Fishing Company (Vostochnyy Bereg)

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About the East Coast Fishing Company

- Created in 2004, the East Coast Company is involved in fishing, processing, and trading fish and shellfish products;
- “East Coast” vessels operate in the fishing grounds owned by the company along the Kamchatka coast and in the rivers of the Kamchatka Peninsula.

Areas of expertise

- Salmon fishing and processing technology;
- Commercial fisheries management.

Career overview

- Andrey started his career working as an electrician for the Kamchatka Base of Ocean Fisheries;
- In 1998, he founded “East Coast” fishing company. By 2004, he headed two fishing facilities «East Coast» and «Brig».

- Andrey strongly supports locally-based businesses. Thus, he initiated construction of a new fish processing plant in Ivashka village and Ust-Bolsheretsk town in the Koryak Region. He is actively involved in social projects supporting local communities.

Education

- Andrey holds Degree in Fisheries Management from the Far Eastern Fisheries Institute, Vladivostok.



Sergey VAKHRIN

Editor in Chief

Newspaper "The Pacific Bulletin" (Tikhookeansky Vestnik)

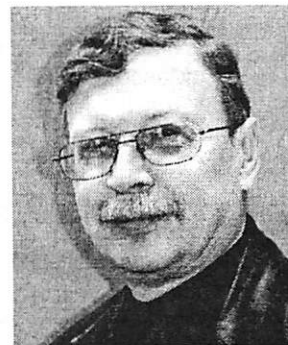
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About "The Pacific Bulletin"

- The Pacific Bulletin, a monthly professional newspaper for Russian Far East fishermen, was created in 2000. The newspaper represents Far Eastern fishermen and environmentalists and is distributed among fishing companies in the Russian Far East;
- An electronic version of the newspaper is available at the web-portal "Fish of the Kamchatka Region" - www.fishkamchatka.ru;
- In 2001, the Pacific Bulletin received recognition as "The best Russian Environmental Journal."

Areas of expertise

- Journalist with more than 25 years of experience in writing about fisheries and ecology in the Russian Far East;
- Sergey wrote three books and shot over 30 films about nature conservation and sustainable resource use in the North Pacific.

Career overview

- Until 2001, Sergey worked as a Chief Press-Officer of the Kamchatka Fisheries Agency combining this work with publishing environmental magazine "The North Pacific" and making films about Russian fisheries;
- In 2002 he founded the newspaper "The Pacific Bulletin" and a web-portal "Fish of the Kamchatka Region";
- Sergey is a Member of the Russian Association of Writers and Cinematographers;
- Sergey coordinates the Salmon Conservation Coalition created with support from WWF and the Moore Foundation

Education

- Sergey holds Degree in Russian Literature from Kamchatka Pedagogical Institute.



Konstantin ZGUROVSKY, PhD

Marine Program Coordinator
WWF Russia, Moscow

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About WWF

- Since 1994, WWF has worked in the Bering Sea and Kamchatka to restore and conserve biodiversity and improve sustainable fisheries management.

Areas of expertise

- Certification of sustainable salmon fisheries;
- Pre-assessment of MSC certification prospects in the Russian Far East;
- Satellite monitoring techniques;
- Seabird by-catch reduction;
- Environmental impacts of driftnet and long-line fisheries in the Bering Sea.

Career overview

- Konstantin's career started in the Pacific Institute of Fishery & Oceanography (TINRO), where he completed his PhD research on the distribution, migration, and reserves of western Bering Sea shrimp in 1988. He spent 18 years at TINRO, leaving as a senior scientist;
- Konstantin worked as an independent consultant on Russian fisheries for the

Russian, Japanese, Australian and Norwegian companies and acted as a deputy director of a Russian fishery company processing Alaskan Pollock, Pacific cod, herring, and salmon;

- Konstantin joined the WWF Russian Far East team in 1999 managing WWF Bering Sea Projects. He was promoted to the Marine Program Coordinator of the WWF Russia Marine Portfolio in January 2007;
- Konstantin is the author of several reports on environmental impacts of the driftnet and long-line fisheries in the Russian Far East.

Education

- Degree in Zoology and PhD in Marine Biology from the Far Eastern State University, Vladivostok;
- In 2001 completed a four-month IREX fellowship in the WWF US Headquarters in Washington DC, NOAA Center and University of Washington in Seattle;
- Fluent English speaker.



Anatoly DEKSHEIN

Kamchatka Marine Program Coordinator WWF-Russia Kamchatka/Bering Sea Program

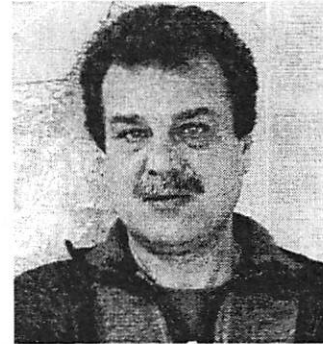
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About WWF

- Since 1994, WWF has worked in the Bering Sea and Kamchatka to restore and conserve biodiversity and improve sustainable fisheries management.

Areas of expertise

- Sustainable salmon fisheries in the Bering Sea and the Sea of Okhotsk;
- Location, distribution, biology, and ecology of salmon at sea;
- Forecasting salmon runs.

Career overview

- Before joining WWF in February 2007, Anatoly worked for 26 years in the Kamchatka Affiliate of the Russian Pacific Institute of Fishery & Oceanography (KamchatNIRO);
- During his work in KamchatNIRO Anatoly conducted research on salmon migrations and methodology of forecasting salmon runs;
- He participated in expeditions together with the US scientists on high-sea tagging of salmon and with Japanese scientists on salmon gillnet research vessels.

- Last 10 years he acted as a member of the Scientific Group on Monitoring and Managing of Salmon Fisheries in Kamchatka;
- Anatoly now coordinates the marine program for WWF in Kamchatka and the Bering Sea, working on salmon conservation, reducing seabird bycatch, and conservation of coastal and marine ecosystems.

Education

- Anatoly holds a Degree in Biology from the Far Eastern State University, Vladivostok;
- He is author of numerous scientific articles on salmon biology and commercial salmon fisheries;
- Intermediate English speaker.



WWF in the Kamchatka/Bering Sea Ecoregion

World Wildlife Fund, known worldwide by its panda logo, leads international efforts to protect endangered species and the diversity of life on Earth. Now in its fourth decade, WWF works in more than 100 countries around the globe and is supported by 1.2 million members in the United States.

Since 1994, WWF has worked in the Bering Sea and Kamchatka to restore and conserve biodiversity and improve sustainable fisheries management.

The exchange program "Fisheries Management in Alaska: Healthy Ecosystem, Robust Industry, and Strong Economy" is co-sponsored by the Gordon and Betty Moore Foundation and the UNDP/GEF Kamchatka Biodiversity Conservation Project.

For more information on WWF Kamchatka/Bering Sea work, visit our website at <http://www.worldwildlife.org/wildplaces/bs/pubs.cfm> or contact one of our program staff:

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Overview of the Russian Far East Fishing Industry¹

Distribution of commercial species

The Russian Far East, rich in natural resources, accounts for 36 percent of the entire land mass of the Russian Federation. Its vast coastline stretches from the Bering Sea, past the Sea of Okhotsk, and through the Sea of Japan. Within the waters of its 200-mile exclusive zone some of the richest marine resources in the world can be found (Figure 1).

Fishing is one of the primary industries fueling the rapidly expanding Russian Far East economy, accounting for 70 percent of the total Russian catch. Its largest ports, Vladivostok and Nakhodka, located on the southern tip of Primorsky Krai, are ice free year-round with connections to the Siberian railroad that provides transit to inland markets. These ports account for 80 percent of the marine cargo turnover in the Far East.

The average commercial catch in Russian Far East territorial waters exceeds 3 million tons. Its most productive fishing grounds are located in the Sea of Okhotsk, where 50-60 percent of the catch is taken. This area is rich in the most important species used for generating hard currency and meeting the needs of the domestic market – Alaska Pollock, all species of Pacific salmon, crab, herring, halibut and cod. The next most productive fishing grounds in the Far East are located in the Bering Sea subzone that extends from the western Bering Sea through East Kamchatka and contributes about 20 percent of total Far East catch. The most abundant species in this subzone are Pollock, Pacific cod, herring, flounder and halibut (Pacific Rim Institute 2002).

Alaska Pollock is the most abundant commercial species, accounting for over 70 percent of the basin's catch. Depending on the strength of the stocks, the harvesting capabilities of the fishing industry and the needs of the Russian people, the allowance commercial Alaska Pollock catch will range from 1.7 – 2.8 million tons (Figure 2).

Salmon contributes about 10 percent of the total catch but in terms of total value it is the next most important species. The value of this species gained significant importance over recent years with favorable returns, seen from heavy investments made in local hatcheries and other enhancement programs. The salmon catch, which can run over 190,000 tons (based on five year average), is approximately 75 percent pinks, 14 percent chums, 9 percent sockeye, 2 percent cohos, and less than 1 percent each Chinooks and salmon trout (Dolly Varden).

Over 80 percent of the salmon commercially harvested comes from the Kamchatka and Sakhalin subzones. The Kamchatka subzones account for the entire Chinook catch, about 90 percent of the sockeye, 75 percent of the coho, 40 percent of the pinks, 20 percent of the chums, and about 93 percent of the salmon trout. Sakhalin receives about 50 percent of the pinks and about 7 percent of the chums (Pacific Rim Institute 2002).

¹ Compiled by WWF Alaska Field Office. Sources:

1. The 2001/2002 Directory: of Russian Far East Fishing Companies. 2002. Published by the Pacific Rim Fisheries Program of the Institute of the North, Alaska Pacific University pursuant to National Oceanic and Atmospheric Administration Award No. Na96FM0014.
2. Article "Marine capture Fisheries in Russia" by V. Spiridonov, WWF Russia. 2005.

Structure of the USSR fisheries before 1992

Prior to the collapse of the former Soviet Union, the Russian fishing industry operated under a state-directed, planned distribution system that lacked the driving forces of a market system. With an abundance of cheap fuel and labor, all efforts went to the development of its distant water fleet. To ensure the highest productivity from its fleet of inefficient supertrawlers, directed fishing was done by scientific studies that identified the most abundant fishing grounds in the world's high seas. This plan led the USSR to become the 1989 world leader in fisheries catch, but it was at the expense of the development of much needed onshore infrastructure and utilization of marine resources within its own territorial waters (Pacific Rim Institute 2002).

Structure of the USSR fisheries after 1992

Following the breakup of the Soviet Union, governance of the fishing industry was marked by a period of instability that contributed to its downturn. First, the Ministry of Fisheries that had governed the industry was disbanded, with its responsibilities falling under the newly formed Committee for Fisheries. The Committee was an independent agency that reported directly to the Council of Ministers. There was hope that some stability might be restored when, in September 1996, the Committee became an official State Committee with the same hierarchical status and rights as a ministry.

However, that too was short-lived. In March 1997, the Russian government eliminated the State Committee for Fisheries, divided its functions, and transferred responsibility to the Department of Fishing under the Ministry of Agriculture and the State Committee for the Environment. This period, most noted for its lack of a strong governing body that could efficiently manage the resource and meet the concerns of the industry, left a devastating mark on Russia's fisheries.

Chaos in the industry did not go unnoticed. On September 23, 1998, President Putin reestablished the State Committee for Fisheries by presidential decree and restored its functions (Pacific Rim Institute 2002). Nonetheless, in 2004 the Federal Fisheries Agency under the Ministry of Agriculture again replaced the State Committee for Fisheries.

Legislation Base

Russia does not have a special federal law which regulates fisheries like the Magnuson-Stevens Act (16 U.S.C. 1801 *et seq.*) in the United States. At the federal level, marine fisheries are regulated under six separate legislative authorities that include "On the Animal World", "On Ecological Expert Review (*Ob Ecologicheskoy Expertize*)", "On the Continental Shelf", "On the Territorial Sea and the Internal Marine Waters", "On the Exclusive Economic Zone", and the Water Code.

Ministry of Agriculture

Among other tasks, the Ministry of Agriculture is responsible for management of fisheries including governance, interagency coordination of "rational use", monitoring and research, protection of stocks and their environment, and stocks replenishment (Spiridonov 2005). The Federal Fisheries Agency is a main body under the Ministry regulating fisheries (Figure 3).

The Federal Fisheries Agency

The Federal Fisheries Agency regulates the use of fish stocks as a federal property, governs the access to fishery resources, conducts stock assessments, and performs fisheries monitoring and research (Spiridonov 2005). Once an executive fishery management body (Spiridonov 2005) under the Committee for the Environment (RosKomPryrody) and the State Committee for Fisheries before (Pacific Rim 2002), the Federal Fisheries Agency now resides under the Ministry of Agriculture.

To achieve its objectives at the national level the Federal Fisheries Agency cooperates with the Federal Border Guard Service, the Ministry of Natural Resources other bodies under the Ministry of Agriculture (Figure 3). On a regional level in the Russian Far East, the Agency works closely with the following bodies to coordinate activities pertaining to management of the fisheries:

- the regional administrations;
- the Far East regional offices of the Russian Federal Research Institute of Fisheries and Oceanography (VNIRO);
- the Directorate-General on Conservation and Restoration of Fish Resources (GlavRybVod);
- the State Sea Inspection (GosMorInspektsiya); and
- the Department of Environmental Protection and Ecological Security.

The Russian Scientific Research Institute of Fisheries and Oceanography - VNIRO

VNIRO is a scientific research institute that operates under the Russian Federal Fisheries Agency in Moscow. It works closely with other regional institutes located through Russia, for example, Kamchatka Scientific Research Institute of Fisheries and Oceanography (KamchatNIRO).

The main objective of these institutes is to develop recommendations for exploration, conservation and optimum utilization of living marine resources. Their activities include:

- assessment and monitoring of fisheries resources and ecological situations of fishing areas;
- development of annual and long-term forecasts of allowable harvest levels of living marine resources; and
- development of methodologies and engineering for the rehabilitation and improvement of aquatic habitats and the quality of their living resources.

The Directorate-General on Conservation and Restoration of the Fish Resources (GlavRybVod)

Glavrybvod is a regulatory fishing agency responsible for replenishment of aquatic living resources (Spiridonov 2005). It is currently under the Russian Federal Fisheries Agency. Glavrybvod's main responsibilities are monitoring and enforcing fishing regulations on rivers, lakes and nearshore zones, and matters pertaining to hatchery and fish farming issues. Previously, Glavrybvod's responsibilities included enforcement measures at sea. These duties and their vessels have been turned over to the State Marine Inspection (GocMorinspektsiya), a branch of the Federal Border Guard Service. In the Far East, Glavrybvod has branch offices in all regions including Kamchatka and Koryakia.

The **Rybvods** are regional governmental bodies responsible for fishery management and enforcement in the Russian EEZ and some internal marine waters. Their responsibilities include:

- updating fishing rules;
- issuing fishing permits;
- control of daily reporting by vessels;
- collecting fishery statistics for a range of fisheries including recreational;
- operative management of important fisheries;
- marine mammal assessment;
- enforcement in internal waters and estuaries; and
- managing of hatcheries (Spiridonov 2005).

The responsibility of the rybvods over hatchery management remains unclear under the current government (Spiridonov 2005).

Ministry of Natural Resources

The Ministry of Natural Resources provides for management and regulation of any organisms belonging to the Animal Kingdom (Spiridonov 2005). The Department of Environmental Protection and Ecological Security is a regulatory conservation agency under the Ministry of Natural Resources. It has two working bodies responsible for the regions of the Russian Far East:

- **The State Russian Far East Marine Protection Service.** Its regional bodies, the Regional Sea Inspections are responsible for enforcement of environmental regulations at sea.
- **The Far Eastern Branch of the Department of Natural Resources.** Its Regional Committees oversee enforcement of environmental regulations that pertain to rivers, lakes and near zones (Pacific Rim 2002).

Federal Security Service and Federal Border Guard Service

Federal Border Guard Service is responsible for marine capture and fisheries enforcement. In 2003, the Russian government placed the Federal Border Guard Service under the authority of the Federal Security Service, which was once known as KGB (Spiridonov 2005).

The Federal Border Guard Service has three divisions, which are responsible for enforcement in EEZ, the territorial sea and internal marine waters:

- Onshore division - control of fishing vessels and inshore fisheries;
- Fleet division –sea patrols; and
- Marine inspections – on-board observers, patrolling at sea.

Coordination of management and enforcement

Although legislation requires coordination among the management and enforcement agencies of particular fisheries and stocks, in reality coordination remains limited. In some seasonal fisheries subject to substantial poaching, management and enforcement agencies form regional coordination committees called *putina*. However, in most cases coordination refers specifically to enforcement, which typically consists of joint patrols and involvement by governmental agencies responsible for the enforcement of fisheries-related activities. These other activities include the seafood trade monitored under the authority of the Ministry for Interior and the State Customs Committee (Spiridonov 2005).

Regional administrations

Regional administrations and municipal authorities remain excluded from the process of management. Regional and municipal authorities provide limited input on stock assessment, Total Allowable Catch (TAC) setting, regulatory review, and enforcement. In some coastal areas, the local administrations maintain a fisheries department headed or supervised by a vice-governor. These local fisheries departments develop and implement fisheries policy at the regional level and play an active role in quota allocation (via the regional fisheries councils). Along with the *rybvods* the departments collect information on fisheries development in the region. In some fisheries regulated under bilateral or international agreements, such as in the Barents Sea, regional representatives participate on transboundary management bodies like the Russian-Norwegian Commission on Fisheries.

Regional administrations also may propose regulations for endangered species and protected areas. Regional protected areas implemented by regional administrations may restrict shore-based marine and estuarine fisheries, i.e. those for salmon, whitefish, char, smelt, navaga (trout), and also seaweed and sessile organisms harvesting etc.

Recent recommendations provided in the Concept for Development of the Fishery Industry call for a greater role of the Regional Administration in the management of the coastal fishery, which includes all marine waters within the 12-mile territorial sea. However, fishery authorities have not yet implemented these recommendations (Spiridonov 2005).

Associations and unions

Associations and unions, whose membership represents fishing *kolkhozes* and commercial enterprises, are public organizations. Their main function is to represent the interests of their membership. This may include legal representation in court or other matters: public presentation in conferences, meetings etc; and participation in joint projects with other partners (Pacific Rim Institute 2002).

Fishing enterprises

This category includes open and closed joint stock companies, private companies, partnerships and joint ventures, *kolkhozes* (fishing cooperatives), and some state and municipal owned

companies. Privatization of state and municipal-owned enterprises began in late 1992, converting many the enterprises to publicly held joint stock companies.

Current Situation with the Russian Far East Fishing Fleet

In 2002, the Far East fishing industry had a fleet of over 1,700 fishing and processing vessels. Since the beginning of its economic transition in 1992, modernization of its near obsolete fleet has been the main priority for the industry. Many vessels, not feasible for renovation, were sold as scrap. New or renovated more efficient vessels are continually arriving to Far Eastern port cities, contributing to increased production. However, Russia's aggressive push to modernize its fleet has not been able to keep pace with the depreciation rate of its older, less efficient vessels.

The majority of the fleet is still primarily used for offshore activities and provides little support for the development of the Russian Far East's coastal fisheries.

The central government in Moscow as well as regional administrations have been focusing more attention on the development of this fishery to exploit its higher valued and underutilized species. This has accounted for a recent influx of small boats to the fleet. To support this major shift in focus, the Russian Far East must expedite the development of its infrastructure and support services. With the major problems of the fleet slowly being resolved, the industry will look for more funding, government as well as foreign investment, available for these projects (Pacific Rim Institute 2002).

Figure 1: Distribution of the Main Commercial Fish Species of the Russian Far East. Source: Pacific Rim Institute 2002.

Species Common to Russian Far East

Alaska pollock
 Atka mackerel
 Jack mackerel
 Clams
 King crab (Kamchatska)
 Snow crab
 Hair crab
 Flounder
 Goby
 Halibut

Krill
 Lingcod (greenling)
 Other mollusks
 Pacific herring
 Pacific cod
 Chinook (king) salmon
 Chum (dog) salmon
 Coho (sävar) salmon
 Pink (humpback) salmon
 Sockeye (red) salmon
 Salmon trout (dofy varden)

Sardines
 Saury
 Scallops
 Sea cucumber
 Seaweeds
 Shrimp
 Smelt (sand lance)
 Squid
 Turbot
 Wachs cod (navaga)

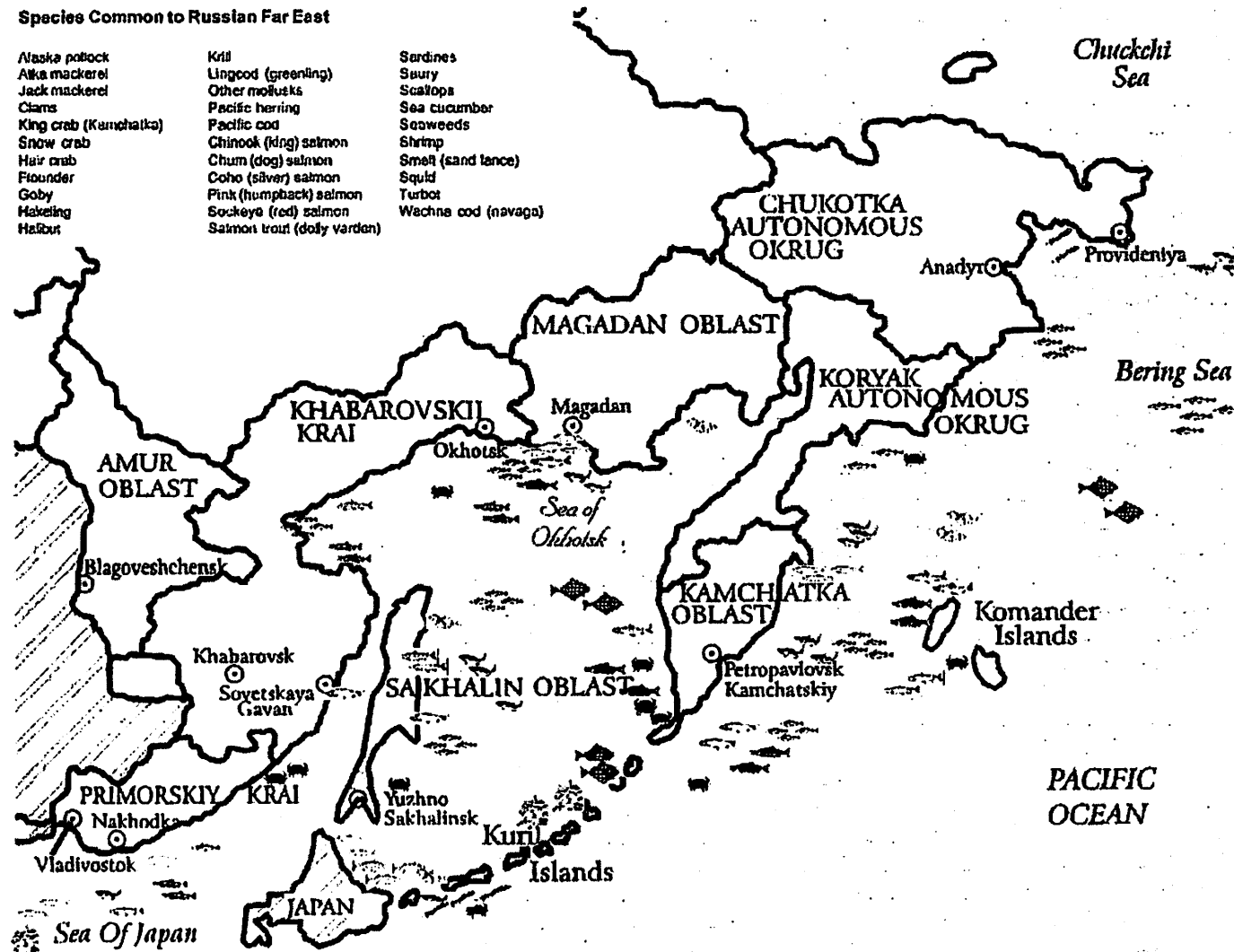


Figure 2: Fishing season for major commercial fish species in the Russian Far East. Source: Pacific Rim Institute 2002.

Russian Far East Territorial Waters Fishing Seasons for Major Species

Bering Sea

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Salmon						■	■	■				
Pollock				■	■	■	■	■	■	■		
Cod				■	■	■	■	■	■	■	■	
Crab				■	■	■		■	■	■	■	

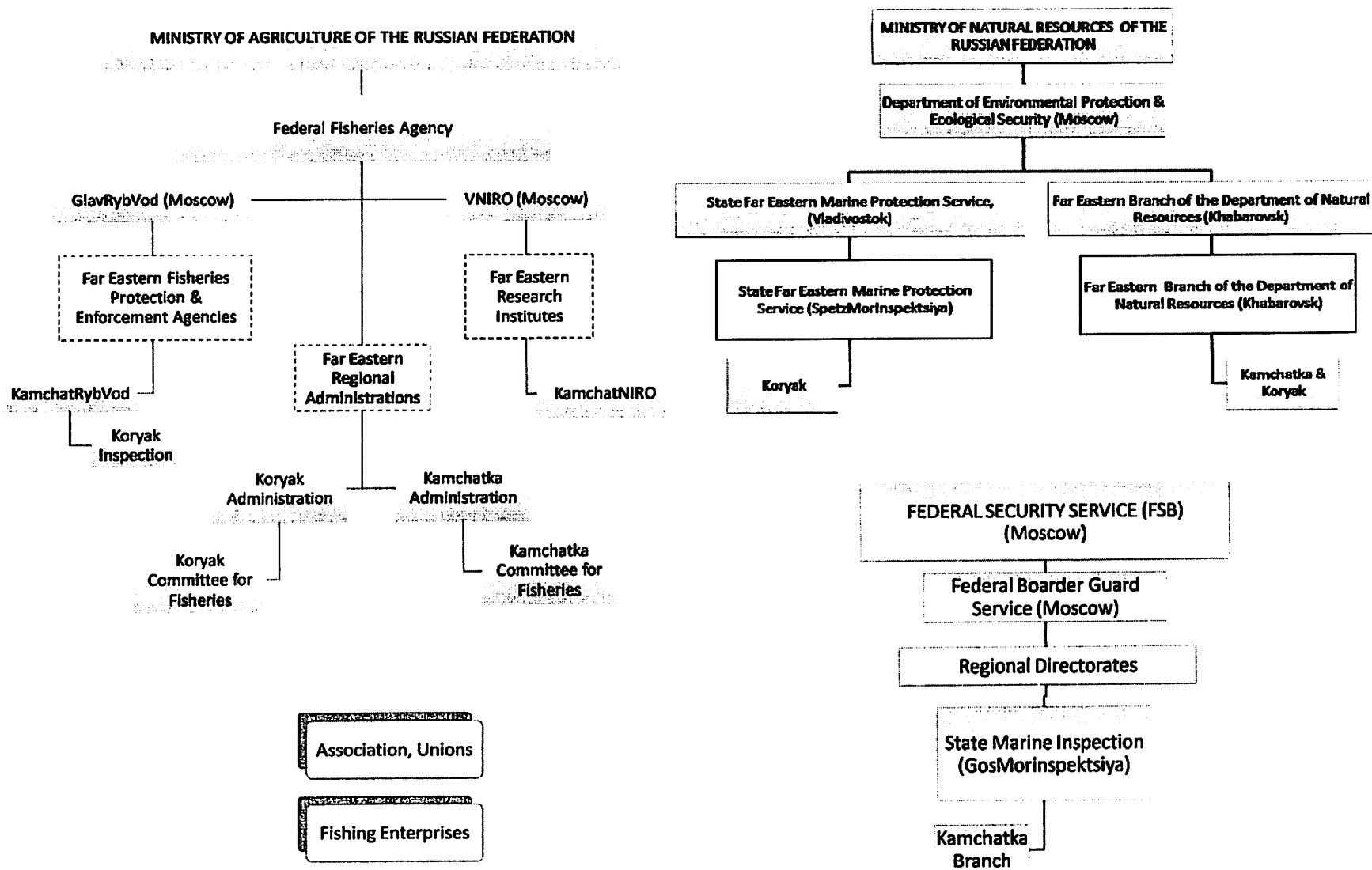
Sea of Okhotsk

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Salmon						■	■	■				
Pollock	■	■	■	■	■							■
Cod	■	■	■	■	■	■	■	■	■	■	■	
Crab	■	■	■	■	■	■		■	■	■	■	■
Herring			■	■	■	■						

Japan Sea

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Salmon						■	■	■	■	■		
Cod	■	■	■	■	■	■	■	■	■	■	■	■
Crab				■	■	■	■		■	■	■	
Herring										■	■	■
Flounder	■	■	■	■	■	■	■	■	■	■	■	■
Saury								■	■	■	■	
Shrimp				■	■	■	■	■	■	■	■	

Figure 3: Structure of the Russian Federal Institutions Involved in Marine Fishery Management and Enforcement in Russia. Modified from Pacific Rim Institute 2002.



**WWF Russian Governance Trip
Tentative Schedule as of Wednesday, March 07, 2007**

<i>Date/Time</i>	<i>Location</i>	<i>Activity</i>
<i>Saturday, March 24</i>		
6:30 pm	Anchorage airport	Arrival of a group from Vladivostok Transfer to Hilton Hotel
<i>Sunday, March 25</i>		
3 am	Anchorage airport	Arrival of a group from Moscow Transfer to Hilton Hotel
until 10:30 am	Hilton Hotel	Breakfast
11 am – 4 pm	Chugach National Park	Trip to Chugach National Park
12 pm – 1 pm	Chair 5 Restaurant	Lunch
1 pm – 5:30 pm	TBD	Free time
5:30 pm – 7 pm	NPFMC Office, Room #306	Introduction by Chris Oliver, NPFMC Executive Director
7 pm	Golden Corral	Dinner
<i>Monday, March 26</i>		
until 9 am	Hilton Hotel	Breakfast
9 am – 12 pm	FavCo Facility	Meet with salmon industry representatives to discuss fishing and processing technologies. Tour of FavCo with Greg Favretto.
12 pm – 1 pm	TBD	Lunch
1 pm – 5 pm	2749 C Street, Anchorage, AK 99503	Meeting with a manager of the “B & J’s Alaska Outfitter” commercial fisheries gear shop
6 pm	Komogoro Japanese Restaurant	Dinner
<i>Tuesday, March 27</i>		
until 8 am	Hilton Hotel	Breakfast
8 am – 12 am	King Salmon Room in Hilton Hotel	Attend and participate in SSC meeting.
12 pm – 1 pm	TBD	Lunch
1 pm – 5 pm	Dillingham/Katmai Room in Hilton Hotel	Attend and participate in Advisory Panel meeting.
(4:30pm) - 5:30 pm	TBD	Dinner
5:30 – 6:30 pm	King Salmon Room in Hilton Hotel	Meet with representatives of <u>indigenous tribes and NGO’s</u> to discuss management challenges and

		successes in the Council process.
Wednesday, March 28		
until 8 am	Hilton Hotel	Breakfast
8 am – 12 am	Aleutian Room in Hilton Hotel	Attend and participate in the Council meeting.
12 pm – 1 pm	TBD	Lunch
1 pm – 5 pm	Alaska Enforcement Office	Meet with State and Federal fisheries enforcement personnel to discuss enforcement challenges related to the Council process.
5:30 – 7 pm	Dillingham/Katmai Room in Hilton Hotel	Meet with <u>Federal government officials (NMFS SF, Enf, etc.)</u> to discuss management challenges and successes in the Council process.
8 pm	TBD	Dinner
Thursday, March 29		
until 9 am	Hilton Hotel	Breakfast
9 am	ADF&G Anchorage Offices	Meet with ADF&G salmon fishery managers to discuss salmon conservation and management.
12 – 1 pm	TBD	Lunch
1 – 5 pm	TBD	Available for independent meetings and participation with the Russian/American Business Center.
5 – 7 pm	Aleutian Room in Hilton Hotel	Meet with <u>Council members and staff</u> to discuss management challenges and successes in the Council process
8 pm	TBD	Dinner
Friday, March 30		
until 9 am	Hilton Hotel	Breakfast
9 am – 12 pm	ADF&G Elmendorf Hatchery	Tour Elmendorf Salmon Hatchery Facility.
12 pm – 5 pm	TBD	Lunch and free time
5 pm - 7 pm	Dillingham/Katmai Room in Hilton Hotel	Meet with <u>fishing industry representatives</u> to discuss management challenges and successes in the Council process.
7 pm – 9 pm	Willow Room in Hilton Hotel	Reception thanking the Russian participants and Council (30 persons)
Saturday, March 31		
4 am	Anchorage Airport	Departure at 6 am



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AGENDA B-1(b)
APRIL 2007

School of Fisheries and Ocean Sciences
Juneau Center, 11120 Glacier Highway, Juneau, AK 99801

March 8, 2007

Ms Stephanie Madsen, Council Chair
North Pacific Fishery Management Council
605 West 4th, Suite 306
Anchorage, Alaska 99501-2252

Dear ~~Madam~~ Chair:

Stephanie

I am writing to nominate Mr. William Bechtol as a member of the NPFMC Crab Plan Team. He is one of our advanced graduate students, currently pursuing a PhD in Fisheries degree. His major advisor, Professor Gordon Kruse, is traveling out of the country and unable to write himself, so with his encouragement I am submitting his nomination.

Mr. Bechtol is well suited to a position on the plan team. For his dissertation research, he is conducting a retrospective analysis on the collapse, and failure to rebuild, of the red king crab resource in the Gulf of Alaska near Kodiak. Prior to entering the PhD program, Bill worked over 20 years for the Alaska Department of Fish and Game as a biologist specializing in research on and management of marine fisheries. During that time he also served for 10 years on the council's Gulf of Alaska Groundfish Plan Team, so he is well acquainted with the council process, and the role that the plan teams play in the development and review of both stock assessments and EA/RIR/IRFA documents. In addition the expertise derived from his own professional background, Mr. Bechtol brings special skills in numerical modeling and analysis of population dynamics that he has acquired as a graduate student.

Thank you for your consideration of this nomination and please contact me if I can provide additional information.

Sincerely

William W. Smoker (Bill)

William W. Smoker, Professor
Director of Fisheries

Encl: W. Bechtol, Curriculum Vitae

William R. Bechtol

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Education:

2005-present PhD student in Fisheries, University of Alaska
1990 Masters of Science, Fisheries, University of Alaska
1979 Bachelor of Science, Wildlife Science, University of Washington

Professional Experience:

Research Project Leader, 1995 to present, Alaska Department of Fish & Game (ADF&G) Commercial Fisheries Division. Primary responsibilities included supervising the assessment and research of commercial groundfish and shellfish in Cook Inlet, Prince William Sound, and state waters of the northern Gulf of Alaska. Designed and implemented surveys to assess crabs, groundfish, scallops, cucumbers, urchins, and clams using bottom and midwater trawl, longline, dredge, SCUBA, jig, acoustic, rake, and remotely operated vehicle (ROV) gears. Coordinated sampling programs; development of age-structured models; and development of fisheries regulations and management plans.

Regional Groundfish Biologist, 1989-1995, ADF&G, Commercial Fisheries. Primary responsibilities included research and management of commercial groundfish fisheries in Cook Inlet, Prince William Sound, and state waters of the northern Gulf of Alaska. Designed and implemented pot, trawl survey, and onboard observer sampling programs; herring egg deposition surveys using SCUBA; SCUBA surveys of log transfer facilities; development of fisheries regulations and management plans.

Fisheries Biologist, 1980-1989, ADF&G, Fisheries Rehabilitation Enhancement and Development (FRED) Division. Designed and implemented limnology surveys, particularly concerning juvenile sockeye rearing in barrier lake systems of lower Cook Inlet and the outer Kenai Peninsula; mark-recapture surveys to assess survival from different juvenile salmon rearing strategies; and aerial surveys to assess salmon escapements; and jig, line transect, and mark-recapture surveys, including use of SCUBA, to assess pelagic and demersal rockfish resources along the outer Kenai Peninsula.

Fisheries Technician, 1979, Fisheries Research Institute. Participated in studies of side-scanning and upward-scanning hydroacoustic estimation of sockeye salmon escapement to the Kvichak River, Alaska. Primary responsibilities include adjustment and monitoring of acoustic equipment.

Additional Professional Activities:

North Pacific Fisheries Management Council – 1994-2005 - Served on the Gulf of Alaska Groundfish Plan Team to review stock assessments and recommend allowable biological catch for groundfish resources managed under the Fishery Management Plan for the Gulf of Alaska.

American Fisheries Society, Alaska Chapter - Chapter president 1999-2000; Executive Committee, 1990-1992, 1998-2001; Chapter Secretary/Treasurer 1990-1992; service on the Environmental Concerns, Wally Noerenberg, and Past Presidents Committees.

Additional Certifications - American Fisheries Society Certified Fisheries Scientist; NAUI Master Diver; NOAA Working Diver; NOAA Divemaster; PADI Rescue Diver; ADF&G Local Dive Safety Officer and ADF&G Dive Safety Control Board 2001-2005; UAF Scientific Diver 2005-2006; UAF Dive Safety Control Board 2006-present; ADF&G FRED Division Award for Meritorious Service 1986.

PUBLICATIONS:

Refereed Publications

- Bechtol, W.R., and C. Trowbridge.** 2005. Refining management for Prince William Sound sablefish. Pp 99-113 in: G.H. Kruse, V.F. Gallucci, D.E. Hay, R.I. Perry, R.M. Peterman, T.C. Shirley, P.D. Wilson, B. Wilson, and D. Woodby (eds.). Fisheries assessment and management in data-limited situations, Alaska Sea Grant College Program, University of Alaska Fairbanks, 958 p.
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- Anderson, P.J., J.E. Blackburn, W.R. Bechtol, and J.F. Piatt.** 1997. Synthesis and analysis of Gulf of Alaska small-mesh trawl data, 1953 to 1996, and Gulf of Alaska forage fish ichthyoplankton analysis, 1972 to 1996. Appendix L in: Duffy [ed], Exxon Valdez oil spill restoration project annual report, APEX Project Alaska Predator Ecosystem Experiment in Prince William Sound and the Gulf of Alaska; Restoration project 96163L A-P, annual report.
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- Bechtol, W.R., and R. Morrison.** 1997. Development and management of the sablefish, *Anoplopoma fimbria*, fishery in Prince William Sound, Alaska. pp: 261-267 In: Proceedings of the International Sablefish Symposium, 1994, NOAA Technical Report, NMFS 130, Seattle.
- Bechtol, W.R., and H. Yuen.** 1995. Abundance and composition of flatfish in Kachemak Bay, Alaska. pp. 497-521 In: Proceedings of the International Symposium on North Pacific Flatfish, Alaska Sea Grant Report 95-04, Fairbanks.

Selected examples of ADF&G publications

- Bechtol, W.R.** 2005. A bottom trawl survey for crabs and groundfish in the Southern, Kamishak, and Barren Islands Districts of the Cook Inlet Management Area, June 20-25 and July 10-17, 2000. Alaska Department of Fish and Game, Division of Commercial Fisheries, Fishery Data Series 2A05-40, Anchorage..
- Berceli, R., C.E. Trowbridge, and W.R. Bechtol.** 2005. Prince William Sound Area king and Tanner crab review, 2004. . Alaska Department of Fish and Game, Division of Commercial Fisheries, Special Publication Number 05-03, Anchorage, 29 p.
- Gustafson, R.L., and W.R. Bechtol.** 2005. Kachemak Bay small-mesh trawl survey, 2000. Alaska Department of Fish and Game, Fishery Data Series No. 2A05-54, Anchorage.

- Bechtol, W.R., R.L. Gustafson, and J.L. Cope. 2003. A survey of weathervane scallops in Kamishak Bay, Alaska, 2001. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 2A03-31, Anchorage, 34 + vi.
- Bechtol, W.R. 2003. Assessment of weathervane scallops near Kayak Island, Alaska, 2000. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 2A03-22, Anchorage, 48 + viii p.
- Trowbridge, C.E., and W.R. Bechtol. 2003. Review of commercial fisheries for Dungeness crab, shrimp, and miscellaneous shellfish in Lower Cook Inlet: Report to the Alaska Board of Fisheries. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 2A03-09, Anchorage, 34 + v p.
- Berceli, R., C. Trowbridge, M.A. Lambdin, and W. Dunne, and W.R. Bechtol. 2002. Review of groundfish fisheries in the Prince William Sound Management Area: 2002 report to the Alaska Board of Fisheries. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 2A02-33, Anchorage, 36 + vi p.
- Bechtol, W.R., Trowbridge, C., and N. Szarzi. 2002. Tanner and king crabs in the Cook Inlet Management Area: stock status and harvest strategies. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 2A02-07, Anchorage, 38 + vii p.
- Bechtol, W.R. 2001. Relative abundance of sablefish and other groundfish caught on longline gear in Prince William Sound, 1998. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 2A01-15, Anchorage, 54 p. +vi.
- Gustafson, R.L., and W.R. Bechtol. 2000. Kachemak Bay littleneck clam assessments, 1996-1997. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 2A00-25, Anchorage, 49 p.
- Trowbridge, C., N. Szarzi, and W.R. Bechtol. 2000. Review of commercial, sport, and personal use fisheries for miscellaneous shellfish in Lower Cook Inlet: Report to the Alaska Board of Fisheries. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 2A00-13, Anchorage, 39 p.
- Bechtol, W.R. 2000. Preliminary evaluation of multiple data sources in an age-structured model for weathervane scallops in Kamishak Bay, Alaska. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 2A00-03, Anchorage, 23 p.
- Bechtol, W.R. 2000. Rockfish assessment in Prince William Sound, Alaska. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 2A99-34, Anchorage, 36 p.
- Bechtol, W.R. 1999. Prince William Sound walleye pollock: current assessment and 2000 management recommendations. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 2A99-33, Anchorage, 29 p.
- Bechtol, W.R. 1999. A bottom trawl survey for crabs and groundfish in the Prince William Sound Management Area, 16-26 August 1997. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 2A99-24, Anchorage.
- Bechtol, W.R. 1998. A synopsis of life history and assessment of Cook Inlet rockfish. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 2A98-40, Anchorage, 35 p.
- Bechtol, W.R., and L.K. Brannian. 1996. Forecast of the Kamishak herring stock in 1996. Division of Commercial Fisheries Management and Development, Regional Information Report 2A96-01, Anchorage, 31 p.
- Bechtol, W.R. 1995. The Pacific cod fishery in Cook Inlet: Report to the Alaska Board of Fisheries. Alaska Department of Fish and Game, Division of Commercial Fisheries Management and Development, Regional Information Report 2A95-35, Anchorage, 22 p.

Vincent-Lang, D., and W.R. Bechtol. 1992. Current status and recommendations for the future management of the lingcod stocks of the Central Gulf of Alaska: A report to the Alaska Board of Fisheries. Alaska Department of Fish and Game, Anchorage, 48 p.

Other Selected Publications

W. Bechtol, J. DiCosimo, and L. Brannian. 2000. Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis for Plan Amendment #60 to the Fishery Management Plan for the groundfish fishery of the Gulf of Alaska to prohibit non-pelagic trawl gear in Cook Inlet. North Pacific Fishery Management Council, 605 W. Fourth Ave., Suite 306, Anchorage, AK 99501, 52 p.

DiCosimo, J., B. Bechtol, S. Meyer, K. Brix, A. Smoker, and D. Stockel. 1997. Environmental Assessment/Regulatory Impact Review for Amendment 46 to the Fishery Management Plan for the groundfish fishery of the Gulf of Alaska to revise management authority of pelagic shelf rockfish. North Pacific Fisheries Management Council, 605 W. Fourth Ave., Suite 306, Anchorage, AK 99501.

Anonymous. 1994. S. Phillips [ed.]. Report of the nearshore rockfish workshop, March 1 & 2, 1994, Portland, Oregon. Pacific States Marine Fisheries Commission, Portland.

Bechtol, W.R. 1990. Foraging strategies of juvenile sockeye salmon (*Oncorhynchus nerka*) at high rearing densities in Leisure Lake, Alaska. M.S. thesis, University of Alaska, Fairbanks, 70 p.



UNIVERSITY OF WASHINGTON

28 February 2007

Ms Stephanie Madsen
North Pacific Fishery Management Council
605 West 4th Ave., Suite 306
Anchorage, AK 99501-2252

Dear Ms Madsen,

Re: Nomination to Serve on Crab Plan Team

I would like to nominate myself to serve on the Crab Plan Team of the North Pacific Fishery Management Council. My expertise is in the development and use of methods of fisheries stock assessment and the evaluation of fisheries management strategies using the Management Strategy Evaluation approach. I have applied the types of assessment procedures that have been applied in recent years to crab stocks in the North Pacific to rock lobster populations in the Southern Hemisphere. I have also published extensively on the subject of size-structured stock assessments and the scientific aspects of the management of species assessed using size-structured stock assessment methods. However, I am also very familiar with the methods of stock assessment applied to groundfish, highly migratory and coastal pelagic species, as well as to marine mammals. I have applied and reviewed the use of fisheries assessment techniques in the U.S., Australia, New Zealand and South Africa, as well as for international fisheries Commissions (IWC & ICCAT) and the UN Food and Agriculture Organization.

I am presently an Associate Professor in the School of Aquatic and Fishery Sciences, University of Washington, where my primary teaching responsibilities involve teaching techniques in quantitative fisheries science and advising graduate students. One of my graduate students is currently conducting a Management Strategy Evaluation for Gulf of Alaska pollock in collaboration with scientists at AFSC. My research at UW focuses on stock assessment. As part of this research, I developed the software that has been used by assessment authors to provide part of the scientific basis for rebuilding analyses for overfished groundfish species off the U.S. west coast.

I attach a recent copy of my Curriculum Vitae. Many thanks for considering my nomination.

Yours sincerely

A handwritten signature in black ink, appearing to read 'A. Punt'.

André E. Punt

Curriculum Vitae: André Eric Punt
FEBRUARY 2007

EDUCATION AND EMPLOYMENT

- 1982 Matriculated Bergvliet High School ('A' aggregate).
1983 - 1985 B.Sc. UCT (Distinctions in Applied Mathematics, Computer Science,
 and Mathematics, and Degree with Distinction).
1986 B.Sc. (Hons) UCT (Computer Science - 1st class).
1987 - 1988 M.Sc. UCT (Applied Mathematics - Degree with Distinction) Thesis
 title: Model selection for the dynamics of Southern African hake
 resources.
1989 - 1991 Ph.D. UCT (Applied Mathematics) Thesis title: Management
 procedures for Cape hake and baleen whale resources.
1987 - 1992 Research Officer in the Benguela Resources Population Modeling
 project of the Benguela Ecology Programme, FRD based in the
 Department of Applied Mathematics, UCT.
1992 - 1994 Research Associate at the School of Fisheries, University of
 Washington.
1994 - Resource Modeller, Division of Marine Research, CSIRO.
2001 - 2005 Research Associate Professor, School of Aquatic and Fishery Sciences,
 University of Washington.
2005 - Associate Professor, School of Aquatic and Fishery Sciences,
 University of Washington.

TEACHING EXPERIENCE

- 1987 - 1991 Lectured parts of AMA 218S (Introduction to Biological Modeling).
1988 & 1991 Lectured parts of SMS 201F (Calculus of Several Variables and Vector
 Analysis).
2001 Planned and lectured FISH 512 (Age Structured Models) with Ray
 Hilborn.
2002, 2004-5 Planned and lectured FISH 458 (Fisheries Stock Assessment).
2003 Planned and lectured workshops on Visual Basic and AD Model
 Builder.
2003 Planned and lectured FISH 507 (Numerical Computing for Fisheries
 Assessment and Management).
2004 Planned and lectured FISH 507 (Age Structured Models) with Ray
 Hilborn.
2004 Acted as faculty mentor for Lucy Flynn who taught FISH 497 (Visual
 Basic Programming with Excel).
2005-7 Planned and lectured QSCI 381B (Introduction to Probability and
 Statistics).
2006 Planned and lectured FISH 558 (Advanced Fisheries Stock
 Assessment).

During 2001-2006, I have also given guest lectures / participated in the following
courses: FISH 210, 323, 444, 458, 475, 512, 522, 558, 578 and QERM 597.

STUDENTS SUPERVISED

I currently chair the Committees of the following students:

1. Jason Cope: "Stock assessments and emerging fisheries: Population dynamics of Northeast Pacific nearshore fishes as they relate to the goals of U.S. west coast Nearshore Fishery Management Plans" (Ph.D.)
2. Melissa A Haltuch: "Modeling human, climate, and habitat impacts on Pacific northwest groundfish" (Ph.D.)
3. Rod. Towell: "Northern fur seal population dynamics on the Pribilof Islands, Alaska" (MS)
4. Doug Kinzey: "Multispecies stock assessment with predator-prey interactions" (Ph.D.)
5. John Brandon: "Incorporating environmental indices in marine mammal stock assessments" (Ph.D.)
6. Teresa A'Mar: "A Management Strategy Evaluation exploring the National Standards of the MSFCMA with respect to the robustness of decision rules used for North Pacific groundfish, with applications for the U.S. Gulf of Alaska walleye pollock (*Theragra chalcogramma*) fishery" (Ph.D.)
7. Gavin Fay: "Spatial modelling for monitoring and management of marine metapopulations" (Ph.D.)

I also co-supervise a Ph.D. student (Mr Bruce Taylor) at the University of Melbourne (2001-) and a Ph.D. student (Ms Robin Thomson) at the University of Tasmania (2004-). I am a member of the Committees of the following UW students:

1. Alex da Silva (Ph.D.) [2001 -
2. Stephani Zador (Ph.D.) [2002 -
3. Ian Taylor (Ph.D.) [2002 -
4. Judith E. Little (Ph.D.) [2003 -
5. Juan Valero (Ph.D.) [2003 -
6. Arni Magnusson (Ph.D.) [2003 -
7. Eva Dusek (MS) [2005 -
8. Carey McGillard (MS) [2005 -
9. Allan Hicks (Ph.D.) [2006 -
10. James Murphy (Ph.D.) [2006 -
11. Jordan Watson (MS) [2006 -
12. Kristen Broms (MS) [2007 -

Students with completed degrees

Chaired

1. Gavin Fay: "A Bayesian stochastic metapopulation model for Steller's sea lions in Alaska" (MS student; SAFS, 2004).
2. Teresa A'Mar: "Quantifying Error and Uncertainty in Fishery Stock Assessment Models" (MS student; QERM, 2004).

Committees

1. Gakushi Ishimura (MS) [2001-2003] (thesis title: "Bioeconomic model approach for a fluctuating fish stock: Bioeconomic assessment of harvest strategies for the Pacific whiting fishery").

2. Brandon Chasco (MS) [2002–2004] (thesis title: “Run Reconstruction and in-season forecasting of sockeye salmon in Chignik, Alaska”).
3. Carolina Minte-Vera (Ph.D.) [2001–2004] (thesis title: “Meta-Analysis of Density-dependent Somatic Growth”).
4. Trevor A. Branch (Ph.D.) [2001 – 2004] (thesis title: “Individual quotas as a management tool for multispecies fisheries”).
5. Lucy Flynn (MS) [2003 – 2005] (thesis title: “Quantification and Prediction of Bristol Bay, Alaska, Sockeye Salmon (*Oncorhynchus nerka*) Run Timing”).
6. Tim Miller (Ph.D.) [2003 – 2005] (thesis title: “Estimation of Catch Parameters from a Fishery Observer Program with Multiple Objectives”).
7. Ian Stewart (Ph.D.) [2002 – 2006] (thesis title: “Stock assessment with an evaluation of structural uncertainty, and model performance applied to English sole”).
8. Eric Ward (Ph.D.) [2003-2006] (thesis title: “Incorporating model selection and decision analysis into population dynamics modeling”).

ACADEMIC ADMINISTRATION EXPERIENCE

2001 - present Planned and co-ordinated the UW-NMFS mini-workshop series
 2001 - 2003 University of Washington Faculty Senator
 2002 - present Quantitative Committee, SAFS
 2003 Chaired the Marine Ecology Position Search Committee
 2005 – present Member: Recruitment, Admissions, and Scholarship Committee

PROFESSIONAL ACTIVITY

Appointments (major committees)

1. Member: Scientific Committee of the International Whaling Commission, 1990 – present
2. Chair: Southern Shark Fishery Assessment Group (Australia), 1995 – 2001.
3. Member: Northern Prawn Fishery Assessment Group, Australia (Australia), 1996 – 2000.
4. Scientific Member: Southern Shark Fishery Management Committee (Australia), 1997 – 2001
5. Member: IUCN Standards and Petitions Committee, 1998 - present
6. Member: Pacific Fishery Management Council Scientific and Statistical Committee, 2001 – present
7. Participant: Working Group on Integration of Marine Protected Areas and Fishery Science and Management, 2004 – 2006.
8. Member: PSMFC Panel on “Strengthening Scientific Input and Ecosystem-Based Fishery Management for the Pacific and North Pacific Fishery Management Councils”, 2005.
9. Member: North Pacific Research Board Science Panel, 2005 – present
10. Member: North Pacific Research Board Ecosystem Modeling Committee, 2006 – present
11. Honorary Associate, Center for Marine Science, University of Tasmania, 2005 - present
12. Editorial Boards: *Fisheries Research*, *Population Ecology*
- 13. Associate Editor: *Journal of Applied Ecology*
14. Guest Editor: *Fisheries Research* - Special Issue on GLMs, GAMs and GLMMs in fisheries

Peer reviewer

I review 2-3 papers per month. The journals for which I have reviewed manuscripts since 2001 are: *African Journal of Marine Science*, *AFS Symposium Series*, *Aquatic Living Resources*, *Bulletin of Marine Science*, *Canadian Journal of Fisheries and Aquatic Sciences*, *CCAMLR Science*, *Ecological Modelling*, *Ecological Applications*, *Environmental Biology of Fishes*, *Fish and Fisheries*, *Fisheries Research*, *Fishery Bulletin*, *ICES Journal of Marine Science*, *Journal of Applied Ecology*, *Journal of Cetacean Research and Management*, *Journal of Northwest Atlantic Fisheries Science*, *Journal of Zoology*, *Limnology and Oceanography: Methods*, *Marine and Freshwater Research*, *Marine Ecology Progress Series*, *Marine Mammal Science*, *New Zealand Journal and Marine and Freshwater Research*, *Population Ecology*, *South African Journal of Marine Science*.

Since 2001, I have reviewed grant applications for: Cooperative Institute for Marine Resources Studies; Florida Sea Grant College Program; Foundation for Research and Development (Australia); Great Lakes Fishery Commission; JIMAR, Pelagic Fisheries Research Program; Natural Environment Research Council (UK); North Pacific Research Board; Pacific States Marine Fisheries Commission.

Awards

1. Jamieson Memorial Bursary - awarded on the basis of matriculation symbols (South Africa – 1983).
2. Jacob Burlank Scholarship - awarded to the top student in Mathematics II who intends progressing to Mathematics III (South Africa – 1984).
3. Roderick Noble Scholarship - awarded to the B.Sc graduate from UCT with the most outstanding academic record throughout his/her undergraduate career (South Africa – 1985).
4. Southern Life Book Prize - awarded to the top student in the B.Sc. (Hons) Computer Science class (South Africa – 1986).
5. Myer Levinson (EMDIN) Scholarship - awarded to the UCT student who is most successful in his/her B.Sc. (Hons) degree and who intends furthering his/her research in the year following the award of the scholarship (South Africa – 1986).
6. Croll Memorial Scholarship - awarded to the UCT student who is most successful in his/her B.Sc (Hons) degree and who intends furthering his/her research in the year following the award of the scholarship (South Africa – 1986).
7. South African College Croll Scholarship - awarded on the basis of examination results to a UCT student who intends furthering his/her research in the year following the award of the scholarship (South Africa – 1988).
8. S2A3 Medal - awarded by the South African Association for the Advancement of Science for the best M.Sc. dissertation in the Sciences at UCT (South Africa – 1988).
9. K. Radway Allen Award - awarded for an outstanding contribution in fish or fisheries science (Australia - 1999).
10. COFS Distinguished Teaching Awards (USA – 2003 & 2005).

Recent (2000-2006) invited talks / keynotes addresses

1. Invited speaker: Stock assessment techniques for hermaphroditic marine fisheries, St Petersburg, September 2000.

2. Invited speaker: DFO Fisheries Management Studies Working Group, Dartmouth, 25-29 June 2001.
3. Invited speaker: Life Histories, Assessment and Management of Crustacean Fisheries, La Coruña, 8-14 October 2001.
4. Invited speaker: DFO Workshop on Implementing the Precautionary Approach in Assessment Advice, Ottawa, 10-14 December 2001.
5. Keynote speaker: Elasmobranch Fisheries: Managing for Sustainable Use and Biodiversity Conversation, 24th Annual NAFO meeting, Santiago de Compostela, 11-13 September 2002.
6. Invited speaker: Oregon Chapter American Fisheries Society, 39th Annual Meeting, Eugene, 26-28 February 2003.
7. Invited speaker: American Fisheries Society, 133rd Annual Meeting, Quebec, 11-13 August 2003.
8. Invited speaker: Pre-conference Workshop on Assessment and Management of Deepsea Fisheries, Dunedin, 27-29 November 2003.
9. Keynote speaker: Deep Sea 2003 Conference, Queenstown, 1-5 December 2003.
10. Invited speaker: World Fisheries Congress, Vancouver, 2-6 May 2004.
11. Keynote speaker: 2004 World Conference on Natural Resource Modelling, Melbourne, 12-15 December 2004.
12. Keynote speaker: ICES Symposium on Fisheries Management Strategies, Galway, 27-30 June 2006.

INTERNATIONAL SCIENTIFIC MEETINGS ATTENDED

1. IWC Comprehensive Assessment Workshop on Management Procedures, Lowestoft, February 1989 (Invited participant).
2. ICSEAF Ad hoc Working Group on Stock Assessment Methodology, Madrid, June 1989 (South African delegate).
3. ICSEAF Ad hoc Working Group on Revision of Statistical Standards, Madrid, June 1989 (South African delegate).
4. IWC Comprehensive Assessment Workshop on Management Procedures, Oslo, February 1990 (Invited participant).
5. IWC Scientific Committee meeting, Noordwijk, June 1990 (Invited participant).
6. IWC Comprehensive Assessment Workshop on Management Procedures, Tokyo, December 1990 (Invited participant).
7. Benguela Tropic Functioning Symposium, Cape Town, September 1991.
8. Benguela Ecology Programme Workshop on Seal-fishery Biological Interactions, Cape Town, September 1991.
9. ICCAT SCRS meeting, Madrid, November 1991 (US delegate).
10. Workshop on Risk Evaluation and Biological Reference Points for Fisheries Management, Halifax, November 1991.
11. Conference - "Hake: Fisheries; Products and Markets", Bremerhaven, November 1991.
12. IWC Comprehensive Assessment Workshop on Management Procedures, Copenhagen, March 1992 (Invited participant).
13. IWC Scientific Committee meeting, Glasgow, June 1992 (Invited participant).
14. Marine Linefish Symposium, Durban, October 1992.
15. IWC Scientific Committee meeting, Kyoto, April-May 1993 (Invited participant).
16. ICCAT Bluefin Stock Assessment Session, Madrid, September 1993 (US delegate).

47. Workshop - EU Concerted Action "Evaluation and comparison of methods for estimating uncertainty in harvesting fish from natural populations", Madrid, January 2000.
48. Review of Japanese Research Programme in the North Pacific, Tokyo, February 2000 (Invited participant).
49. IWC Scientific Committee meeting, Adelade, June 2000 (Invited participant).
50. Workshop - EU Concerted Action "Evaluation and comparison of methods for estimating uncertainty in harvesting fish from natural populations", Reyjavik, August 2000.
51. Pacific Management Council, September 2000.
52. Workshop – Stock assessment techniques for hermaphroditic marine fisheries, St Petersburg, September 2000 (Invited participant).
53. Workshop – Review of assessments for Cape hake and rock lobster (BENEFIT programme), November 2000 (Invited participant).
54. IWC Workshop on the Development of an Aboriginal Subsistence Whaling Management Procedure, Seattle, December 2000 (Invited participant).
55. Review of NZ rock lobster assessment, Wellington, June 2001.
56. DFO workshop on Intensive Fishery Evaluations, Halifax, June 2001 (Invited Speaker).
57. IWC Scientific Committee meeting, London, July 2001 (Invited participant).
58. ICCAT workshop on bluefin tuna mixing, Madrid, September 2001 (US delegate).
59. Ecological Modelling Workshop, Hobart, August 2001 (Invited participant).
60. Conference - Life Histories, Assessment and Management of Crustacean Fisheries, La Coruña, October 2001 (Invited speaker).
61. 2001 BENEFIT workshop, Cape Town, November 2001 (Invited participant).
62. DFO Workshop on Implementing the Precautionary Approach in Assessment Advice, Ottawa, December 2001 (Keynote speaker).
63. January 2002 Workshop on North Pacific minke Implementation Simulation Trials, Seattle, January 2002 (Invited participant).
64. Fourth Workshop on the Development of an Aboriginal Subsistence Whaling Management Procedure (AWMP), 23-26 January 2002, Invited Participant.
65. IWC Scientific Committee, Shimonoseki, April–May 2002 (Invited participant).
66. IWC Modelling Workshop on Cetacean-Fishery Competition, La Jolla, June 2002 (Invited participant).
67. ICCAT bluefin tuna assessment session, Madrid, July 2002 (US delegate).
68. Conference - Elasmobranch Fisheries: Managing for Sustainable Use and Biodiversity Conversation, 24th Annual NAFO meeting, Santiago de Compostela, September 2002 (Keynote speaker).
69. Workshop - An Ecosystem Approach to Fisheries Management in the Southern Benguela: Introducing the Concept and Looking at Our Options, Cape Town, December 2002 (Invited speaker).
70. BENEFIT Stock Assessment Workshop 2002, Cape Town, December 2002, (Invited participant).
71. IWC Workshop of North Pacific Implementation Simulation Trials, Seattle, January 2003 (Invited participant).
72. Testing of Spatial Structure Models Workshop, Scripps Institution of Oceanography, San Diego, January 2003 (Invited participant).
73. Workshop to Develop Improved Methods for Providing Harp and Hooded Seal Harvest Advice, Woods Hole, February 2003 (Invited participant).

17. Modelling of Fisheries Management Strategies, Dublin, February 1994.
18. IWC Scientific Committee meeting, Puerto Vallarta, May 1994 (Invited participant).
19. ICCAT Albacore Research Program Final Meeting, Sukarrieta, May 1994 (South African participant).
20. Global Trends in Fisheries Management Conference, Seattle, June 1994.
21. ICCAT Bluefin Stock Assessment Session, Fuengirola, September 1994 (US delegate).
22. ICCAT SCRS meeting, Madrid, November 1994 (US delegate).
23. North Pacific Symposium on Invertebrate Stock Assessment and Management, Nanaimo, March 1995.
24. IWC Scientific Committee meeting, Dublin, May 1995 (Invited participant).
25. IUCN / WWF Threatened Species Meeting, London, May 1996 (Invited participant).
26. NRC Stock Assessment Workshop, Los Angeles, May 1996 (Invited participant).
27. IWC Scientific Committee meeting, Aberdeen, June 1995 (Invited participant).
28. ICCAT albacore species meeting, Taipei, August 1996 (South African delegate).
29. 5th International Conference and Workshop on Lobster Biology and Management, February 1997.
30. Workshop on Harp Seal - Fishery Interactions in the Northwest Atlantic, February, 1997 (Invited participant).
31. Review of Japanese Research Programme in the Antarctic, Tokyo, May 1997 (Invited participant).
32. Workshop on Research and Management of the Namibian Fur Seal Population, Swakopmund, June 1997.
33. American Fisheries Society Annual Meeting, Monterey, August 1997.
34. IWC Scientific Committee meeting, Bournemouth, September 1997 (Invited participant).
35. Workshop on Research and Management of the Stocks of Cape hake off Namibia, Swakopmund, October 1997 (Invited participant).
36. IUCN Criteria and Categories Review Scoping Workshop, London, March 1998 (Invited participant).
37. IWC Scientific Committee meeting, Muscat, April 1998 (Invited participant).
38. Conference - "Confronting Uncertainty in the Evaluation and Implementation of Fisheries Management Systems", November 1998.
39. Workshop - EU Concerted Action "Evaluation and comparison of methods for estimating uncertainty in harvesting fish from natural populations", Key Largo, January 1999.
40. IUCN Criteria and Categories Review: Marine Workshop, Tokyo, January 1999.
41. American Fisheries Society Endangered Marine Fishes Workshop, Gloucester, March 1999.
42. IWC Scientific Committee meeting, Grenada, May 1999 (Invited participant).
43. Workshop - EU Concerted Action "Evaluation and comparison of methods for estimating uncertainty in harvesting fish from natural populations", Nantes, May 1999.
44. IUCN Criteria and Categories Review Workshop, Cambridge, June 1999.
45. 17th Lowell Wakefield Fisheries Symposium, Anchorage, November 1999.
46. IWC Workshop on the Development of an Aboriginal Subsistence Whaling Management Procedure, Seattle, November 1999 (Invited participant).

74. Oregon Chapter American Fisheries Society, 39th Annual Meeting, Eugene, 26-28 February 2003 (Invited Speaker).
75. American Fisheries Society, 133rd Annual Meeting, Quebec, 11-13 August 2003 (Invited Speaker).
76. 21st Lowell Wakefield Fisheries Symposium, Anchorage, 22–25 October 2003.
77. Pre-conference Workshop on Assessment and Management of Deepsea Fisheries, Dunedin, 27-29 November 2003 (Invited Speaker).
78. Deep Sea 2003 Conference, Queenstown, 1-5 December 2003 (Keynote speaker).
79. BENEFIT Stock Assessment Workshop 2003, Cape Town, January 2003 (Invited participant).
80. World Fisheries Congress, 2-6 May 2004, Vancouver, Canada.
81. Fifth Workshop on the Development of an Aboriginal Subsistence Whaling Management Procedure, 21-24 March 2004, Seattle (Invited participant).
82. IWC Scientific Committee, Sorrento, June-July 2004 (Invited participant).
83. Working Group on Integration of Marine Protected Areas and Fishery Science and Management, Santa Cruz, 6-8 October 2004 (Invited participant).
84. BENEFIT Stock Assessment Workshop 2004, Cape Town, 6-11 December 2004 (Invited participant).
85. 2004 World Conference on Natural Resource Modelling, Melbourne, 12-15 December 2004 (Keynote Speaker).
86. Intersessional Workshop on the *pre-Implementation Assessment* of western North Pacific Bryde's Whales, Tokyo, 21-25 March 2005 (Invited Participant).
87. Scientific Committee of the International Whaling Commission, 30 May – 10 June, 2005, Ulsan, Korea (Invited Participant).
88. Working Group on Integration of Marine Protected Areas and Fishery Science and Management, Santa Cruz, 27-29 June 2005 (Invited Participant).
89. Working Group on Integration of Marine Protected Areas and Fishery Science and Management, Santa Cruz, 17-19 October 2005 (Invited participant).
90. First Intersessional Workshop on the Western North Pacific Bryde's Whales Implementation, Shizuoka, 25-29 October 2005 (Invited Participant).
91. MCM/NRF/Industry SA Rock Lobster International Stock Assessment Workshop, Cape Town, 29 November–3 December 2005 (Invited Participant).
92. Second workshop on the Testing of Spatial Structure Models (TOSSM), Potsdam, 17-21 March 2006 (Invited Participant).
93. Working Group on Integration of Marine Protected Areas and Fishery Science and Management, Santa Cruz, 21-22 April 2006 (Invited participant).
94. IUCN Standards and Petition Sub-Committee, Charlottesville, 13-14 May 2006.
95. First Intersessional Workshop on Progress Towards a Bowhead Whale Implementation Review, Seattle, 24-27 April 2006 (Invited Participant).
96. Scientific Committee of the International Whaling Commission, St Kitts, 26 May – 6 June, 2006 (Invited Participant).
97. Western Pacific workshop on policy, enforcement and sustainable trade for the CITES Appendix II listed humphead/Napoleon wrasse, *Cheilinus undulates*, 5-7 June 2006, Hong Kong (FAO Participant).
98. ICES Symposium on Fisheries Management Strategies, Galway, 27-30 June 2006 (Keynote speaker).
99. Working Group on Integration of Marine Protected Areas and Fishery Science and Management, Santa Cruz, 17-19 July 2006 (Invited participant).
100. Second Intersessional Workshop on the Western North Pacific Bryde's Whales Implementation, Yokoham, 10-14 December 2006 (Invited Participant).

101. Second Intersessional Workshop to Prepare for the 2007 Bowhead Whale Implementation Review, 12-17 January 2007, Seattle (Invited participant)

Announcement

- What:** Workshop on technical issues involved in the assessments of the Pacific cod stocks in the Bering Sea, Aleutian Islands, and Gulf of Alaska
- Why:** To review recent progress in these assessments and discuss possible improvements
- When:** 9:00 a.m. – 5:00 p.m., April 24-25, 2007
- Where:** Alaska Fisheries Science Center, 7600 Sand Point Way NE., Seattle, WA (Bldg. 4)
- Who:** Authors of the Pacific cod assessments, other scientists involved in Pacific cod research, and anyone interested in the technical issues associated with these assessments.

Background

For many years, the assessments of the Pacific cod stocks in the Bering Sea (BS) and Gulf of Alaska (GOA) have been based on length-structured or age-and-length-structured models (the assessment of the Aleutian Islands (AI) stock has been based on a simple extrapolation of the Bering Sea assessment, derived from the ratio of survey biomasses between the BS and AI). The models attempt to fit a mathematical description of the respective stock's dynamics to data obtained from the AFSC bottom trawl surveys and the commercial fisheries. The stocks in both the BS and GOA are currently estimated to be above the respective biomass levels associated with maximum sustainable yield. However, the estimated strengths of the last several year classes in both areas have been below average, meaning that the stocks in both areas are projected to decline. Furthermore, there is a significant amount of uncertainty surrounding the model estimates of biomass, in part because the values of the trawl survey catchability coefficients in the two areas have been difficult to estimate.

Although all BSAI and GOA groundfish stock assessments are reviewed annually by the AFSC, the Plan Teams, and the Scientific and Statistical Committee, the circumstances surrounding the Pacific cod assessments have led the AFSC to seek additional review this year by offering a workshop on some of the technical issues associated with these assessments. The workshop will involve presentations by the authors of the Pacific cod assessments and other AFSC scientists. Presentations may include, but will not necessarily be limited to, implications of alternative model configurations and different data sets from fisheries, surveys, and tagging studies. The structure of the workshop will be informal, and time will be provided for discussion by all participants. However, it should be understood that the workshop is intended to be technical rather than educational in nature. The objective of the workshop is to ensure that the assessments developed in 2007 provide the best possible inputs for the 2008 harvest specifications, so emphasis will be placed on analyses that can be conducted during this year's assessment cycle. Suggestions for improving the Pacific cod stock assessments are welcome.

For further information, contact:

Pat Livingston

Director

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(206)526-4172

Marine Habitat Mapping Workshop for Alaska

April 2-4, 2007
Sheraton Anchorage Hotel
Anchorage, Alaska

Agenda

Monday, April 2

7:15 am

Registration and Coffee

8:15

Welcome, introduction, Alaska marine environments
Clarence Pautzke (North Pacific Research Board)

8:30

Marine habitat mapping: What is it and why do managers need it?
Doug Woodby (Alaska Dept. Fish & Game)
Jon Kurland (NOAA NMFS Habitat Conservation Division)
David Witherell (North Pacific Fishery Management Council)

9:10

Multibeam echo sounding as a tool for fisheries habitat studies
Larry Mayer (Center for Coastal and Ocean Mapping, University of New Hampshire)

9:50

Multibeam surveys for marine habitat: What can be expected from a multibeam survey?
Doug Lockhart (Fugro Pelagos, Inc.)

10:30

break (20 min)

10:50

NOAA NOS hydrographic charting in Alaska, and applications to habitat mapping
CDR Gerd Giang (NOAA NOS Office of Coast Survey)

11:30

Bathymetric LIDAR surveys for marine habitat: What can be expected from an airborne bathymetric LIDAR survey?
Carol Lockhart (Fugro Pelagos, Inc.)

12:10

lunch break (1 hr 30 min)

1:40

What you should and should not expect from towed high-frequency side scan sonar, compared to other forms of acoustic remote sensing
Lloyd Huff (Center for Coastal and Ocean Mapping, University of New Hampshire)

2:20

High-resolution multibeam, sidescan, and subbottom surveys of seamounts, submarine canyons, deep-sea fan channels, and gas seeps using the MBARI AUV *D. Allan B.*
Dave Caress (Monterey Bay Aquarium Research Institute)

3:00

Small-boat surveys in shallow water

Rob Hare (Canadian Hydrographic Service, Pacific Region)

3:40

break (20 min)

4:00

Surficial geology: The third dimension in habitat mapping

Vaughn Barrie (Geological Survey of Canada - Pacific)

4:40

Systematic seafloor habitat mapping of the British Columbia coast

Jim Galloway (Canadian Hydrographic Service, Pacific Region)

5:30 - 8:00 pm

POSTER SESSION and RECEPTION (abundant refreshments provided)

Tuesday, April 3

7:30

Coffee

8:00 am

Conducting visual surveys with a small ROV in shallow water: Lessons learned in San Juan Channel, Washington

Bob Pacunski (Washington Dept. of Fish & Wildlife)

8:40

Use of a shallow-water ROV in the northern Gulf of Alaska

Mike Byerly (Alaska Dept of Fish & Game)

9:00

Sampling strategies and sources of uncertainty associated with visual surveys of demersal fishes and habitats using the occupied submersible *Delta*

Mary Yoklavich (NOAA NMFS Southwest Fisheries Science Center)

9:30

A review of habitat-based submersible surveys in the Gulf of Alaska and the role of habitat mapping in fisheries management and research in Alaska

Victoria O'Connell (Coastal Marine Research, Sitka)

10:00

break (20 min)

10:20

Rockfish live on rocks and trawls get stuck on rocks: The development of new methods to monitor populations of West Coast groundfish and their habitat using the SeaBED AUV

Nick Tolimieri (NOAA NMFS Northwest Fisheries Science Center)

11:00

Underwater video sleds from simple to complex: A series of versatile and cost effective tools for habitat mapping

Chris Rooper (NOAA NMFS Alaska Fisheries Science Center)

11:20

Video supervised numerical classification of acoustic data from Glacier Bay, Alaska

Guy Cochrane (U.S. Geological Survey)

12:00

lunch break (1 hr 30 min)

1:30

Video analysis, database management, and statistical analysis

Brian Tissot (Washington State University)

2:10

Marine benthic habitat classification: What's best for Alaska?

Gary Greene (Center for Habitat Studies, Moss Landing Marine Laboratories)

2:50

Twenty years of fish-habitat studies on Heceta Bank, Oregon

Brian Tissot (Washington State University)

3:30

break (20 min)

3:50

Do large scale multibeam survey programmes improve our knowledge of seafloor habitats? The example of the Irish National Seabed Survey (INSS)

Anthony Grehan (National University of Ireland)

4:30

Application of geoscience information to marine environmental management at the scale of continental margins: Australia's representative marine protected area program

Peter Harris (Geoscience Australia)

5:10

Summary

Steering Committee

5:30

end formal sessions

Wednesday, April 4

8:30 - 11:00

Working groups, discussion/writing assignments

11:30 - 12:00

Reports from working groups

Subject: 2007 National Offshore Aquaculture Bill

From: Bill Hogarth <Bill.Hogarth@noaa.gov>

Date: Mon, 12 Mar 2007 14:40:38 -0400

To: Paul Howard <Paul.Howard@noaa.gov>, Wayne Swingle <Wayne.Swingle@noaa.gov>, Robert Mahood <Robert.Mahood@noaa.gov>, Miguel A Rolon <Miguel.A.Rolon@noaa.gov>, Chris Oliver <chris.oliver@noaa.gov>, Donald McIsaac <Donald.McIsaac@noaa.gov>, Kitty Simonds <Kitty.Simonds@noaa.gov>, Dan Furlong <Dan.Furlong@noaa.gov>

CC: Alan Risenhoover <Alan.Risenhoover@noaa.gov>, Galen Tromble <Galen.Tromble@noaa.gov>, James Burgess <James.Burgess@noaa.gov>, Michael Rubino <Michael.Rubino@noaa.gov>, Kate Naughten <Kate.Naughten@noaa.gov>, Samuel Rauch <Samuel.Rauch@noaa.gov>, carrie selberg <carrie.selberg@noaa.gov>

Dear Councils:

As many of you already know, earlier today, U.S. Department of Commerce Secretary Carlos Gutierrez announced the formal transmittal of the Administration's 2007 National Offshore Aquaculture Act to Congress. I plan to include aquaculture on the upcoming Council meeting agenda so that we can discuss the new bill. The Councils will play a strong role in shaping this national effort to expand aquaculture production and implement the Act. I would like to highlight the intent of the Act as complementing rather than superseding existing resource management authorities, so it specifically provides for coordination and consultation with other federal agencies, coastal states, and the Fishery Management Councils.

If enacted, the Act will create a regulatory framework that allows for safe and sustainable offshore aquaculture operations. We believe that this bill is the first step toward addressing the regulatory uncertainty that is widely acknowledged as the major barrier to the development of offshore aquaculture in the United States. Regulatory certainty is important to the offshore aquaculture industry, as well as to those who are concerned about the potential impacts of offshore aquaculture.

The 2007 Act also makes clear that there is a strong role for the public in shaping this national effort to expand aquaculture production and in shaping and implementation of the Act. The Act also addresses many of the concerns that we heard from stakeholders over the last two years regarding environmental requirements, permitting, and the role of states. A copy of the 2007 Act and background information is available at www.aquaculture.noaa.gov

As we move ahead with this legislation, I will actively seek your input and your support for its implementation. I will host a constituent briefing to highlight major provisions of the 2007 Offshore Act on Thursday, March 15, 2007, from 3:00 p.m. to 4:00 p.m. EDT, at the U.S. Department of Commerce, Room B841A. The briefing is open to the public.

If you plan to attend, please RSVP by e-mail to Robert.C.Hansen@noaa.gov by 5:00 p.m. EDT Wednesday, March 14th. The public entrance for DOC is on 14th Street.

If you are unable to attend but would like to call in, please send an e-mail to Robert.C.Hansen@noaa.gov by 5:00 p.m. EDT on Wednesday, March 14th, and the call-in number with additional instructions will be sent to you.

I look forward to hearing from you.

DRAFT Proposed 'Revised Procedure' for MSA/NEPA Compliance

**(February 28, 2007 draft as proposed by the subcommittee of the Council
Coordination Committee (CCC))**

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) was recently amended with explicit direction to the Secretary of Commerce to "revise and update agency procedures for compliance with NEPA". Moreover, the revised MSA specifically states that such procedures "shall integrate applicable environmental analytical procedures, including time frames for public input, with the procedures for preparation and dissemination of FMPS, plan amendments, and other actions taken or approved pursuant to this Act (the MSA)...", and that "the updated agency procedures promulgated in accordance with this section shall be the sole environmental impact assessment procedure for FMPs, plan amendments, regulations, or other actions taken or approved pursuant to this Act (the MSA)". The revised procedure proposed herein envisions a single environmental review procedure, and a single environmental impact assessment (EIA), that pertains to all FMPs, amendments, or regulations promulgated through the regional fishery management council (RFMC) process under MSA. The distinction between an environmental assessment (EA), and environmental impact statement (EIS) becomes moot, as does the determination of 'significance'. This is because the single environmental assessment procedure (EIA) will be the same for any actions taken under MSA, and will generally be designed consistent with the higher standards typically associated with preparation of an EIS, in order to better ensure compliance with the underlying intent of NEPA. While it is envisioned that the level of analysis will be dictated by the issue at hand and the information at hand, this approach allows for the development of some tiers, related to the significance of the action (no impact, minor impact, major impact, for example), which may be created to frame the range of alternatives and necessary level of analysis.

It is proposed that the appropriate way to achieve this revised procedure is to develop a new NOAA Administrative Order (AO) which would be specific to fisheries actions under the MSA. NOAA and possibly CEQ regulations would be amended as necessary to reflect the application of this revised procedure. This new AO will specify the procedures to be used to integrate the environmental impact assessment (EIA) of proposed fishery management actions within the existing MSA process, in a manner which meets the NEPA requirements, and thereby achieve functional equivalency relative to the NEPA statute. The MSA process will be the vehicle for promulgating all fisheries actions, but will include measures necessary for NEPA compliance, as well as requirements of all other applicable Acts and Executive Orders, all incorporated into a single document. This Order would not affect any other existing regulations, Orders, or Acts, including the existing AO216-6, as it pertains to other NOAA line offices, which are promulgated under authorities other than the MSA.

Philosophy of proposal:

1. All actions approved or taken pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSA) must comply with the National Environmental Policy Act (42 USC 4321-4347).
2. MSA actions, under this approach, need not necessarily comply with *existing* CEQ regulations (40 CFR 1500-1508), which govern the procedural provisions of the Act (NEPA). However, *new CEQ regulations may need to be developed* to reflect the new AO.

3. NOAA's environmental review procedures for implementing NEPA (NAO 216-6) must be replaced or rewritten with new procedures specifically for MSA actions, in the form of a new Administrative Order, but which include key CEQ regulatory provisions.
4. The single analytical process will be based on development of an environmental impact assessment (EIA), rather than make any distinction between an EA or EIS (and there is no need to determine whether 'significant' effects on the quality of the human environment will occur). The higher standard of the EIS model will be the default, though range of alternative and level of analysis would depend on the issue at hand and the information at hand. Some definition of tiers (no impact, minor impact, major impact, for example) may be included to frame the analytical requirements.
5. The Secretary cannot comply with timelines specified in the MSA, if the NEPA process commences only upon receiving the Council's proposed plan. Therefore, to implement the provisions of PL109-479, that the NEPA and MSA timeframes be consistent, the Council FMP development process (MSA) needs to be the primary vehicle for identifying alternatives and conducting the requisite analyses. The EIA (NEPA document) will be incorporated within the overall MSA analytical document.

Solution

- Develop a single environmental impact assessment (EIA) procedure to be used for all MSA actions.
 - Categorical exclusions for actions that have no environmental impact may still be utilized.
- Proposed Procedure will replace the CEQ regulations and NAO 216-6 as procedure for complying with NEPA for MSA actions.
 - Procedure will capture the substance of the CEQ regulations regarding analytical content and opportunities for public review and input.
 - Procedure will modify NAO 216-6 procedure to replace CEQ/NOAA's public involvement and notice requirements with the MSA public involvement procedure.
- Procedure and sample analytical format **attached**.
- Proposed new administrative order will specify the detailed new procedures.

Changes to CEQ regulations:

- Amend CEQ regulations as necessary to state that 40 CFR Parts 1500-1508 will not apply to actions approved or taken pursuant to the MSA (or revise with regulations which mirror the new procedures).
- For MSA actions, the newly developed, integrated procedure defined here will be the functional equivalent of the provisions of NEPA as implemented by CEQ regulations.
- Issue revised CEQ regulations consistent with provisions in the new AO.

Changes to NAO 216-6:

- Amend NAO 216-6 to state that administrative order does not apply to actions approved or taken pursuant to the MSA.
- Issue new administrative order and/or procedural regulations, as appropriate, specifying procedure for satisfying NEPA compliance for MSA actions (as contained in the new AO).
- RFMCs should be identified as partners in preparing the EIA to satisfy NEPA procedures.
- Remove references to fishery actions from NAO 216-6.

Changes to the Operational Guidelines for the Fishery Management Process

- Revise to incorporate process as described.

Practical effects of proposed process

- The Council shall complete a scoping process to identify the range of reasonable alternatives to accomplish the Council's management objective and to identify the issues which should be examined to evaluate the merits of those alternatives. In completing the scoping process, the Council shall solicit public comment.
- After completing the scoping process, the Council shall identify a reasonable range of reasonable alternatives to accomplish the Council's objectives. The Council shall explain its reasons for selecting those alternatives and for rejecting any other alternatives which may have been identified in the scoping process.
- After selecting the range of reasonable alternatives, the Council shall evaluate the ecological, social, economic, health, aesthetic and cultural effects of each alternative on the affected environment. The Council shall also evaluate the cumulative impact on the environment of each such alternative. In developing the required analyses, the Council shall solicit public comment regarding the effects of each alternative.
- After completing the evaluation provided for above, the Council shall review the analysis and may select a preferred alternative, or combination of alternatives, to accomplish the Council's objective. The Council shall explain the purpose of, and need for, the action and the reasons for selecting the alternative adopted by the Council. The Council shall solicit public comment on the analysis and the alternatives, including the preferred alternative if identified.
- After considering the analysis and public comments, the Council shall select a preferred alternative for recommendation to the Secretary for approval pursuant to the MSA. The submittal package to the Secretary shall include the necessary environmental analyses (EIA) required pursuant to 40 C.F.R. Part 1500 (*or the necessary revised regulations*).
- The Secretary shall review the FMP and NEPA documents (EIA) to determine if the requirements of MSA and NEPA have been satisfied. If not, the Secretary shall disapprove the FMP or FMP amendment. Practically, the EIA and other analyses would be evaluated concurrently and jointly throughout the development process by both the Council and appropriate NMFS personnel, to ensure that MSA, NEPA, and other requirements have been satisfied.

New process

Steps in MSA-NEPA analytical process		MINIMUM timeline to be specified in procedure
RFMC initiates analysis	<ul style="list-style-type: none"> - develops purpose and need - develops alternatives 	1 st RFMC meeting (may take several meetings to refine problem statement and alternatives depending on complexity and controversy of analysis)
Public input	<ul style="list-style-type: none"> - scoping commences with RFMC/NMFS action to initiate analysis - public notice of proposed analysis in RFMC agenda, and in RFMC newsletter/ website - public comment invited as written letters to RFMC or oral testimony at RFMC meeting 	
Initial Review Draft	<ul style="list-style-type: none"> - RFMC/NMFS prepare draft analysis that addresses MSA, NEPA and other analytical requirements (see outline) - may be distributed at or before RFMC meeting, depending on size and complexity of analysis; RFMCs/NMFS should try to circulate document 14 days before start of meeting (mailing, website) 	before/at 2 nd RFMC meeting
RFMC reviews IR draft, approves for public review	<ul style="list-style-type: none"> - RFMC will consider scoping comments (on the purpose and need and the alternatives) and comments on the draft document - RFMC will approve draft for public review (perhaps following staff alterations to the document) 	2 nd RFMC meeting (may also take multiple meetings and iterations of draft before document is ready to be released for public review)
Public Review Draft distributed <i>(functional equivalent of CEQ Draft EIS)</i>	<ul style="list-style-type: none"> - mailed to RFMC, any affected agencies, or interested persons who have requested document - public notice of availability announced in RFMC agenda (published in FR); posted on RFMC website 	distribution to occur a minimum of 23 days before first day of meeting at which final action is scheduled
Public comment	<ul style="list-style-type: none"> - public comment accepted as written letters to RFMC or oral testimony at RFMC meeting 	minimum 23 days (RFMC/NMFS may specify a longer comment period or an end date for accepting written letters)
RFMC Final Action	<ul style="list-style-type: none"> - RFMC will consider public comments - RFMC will respond appropriately to issues raised in public comment - RFMC decision on recommended action 	3 rd RFMC meeting (RFMC may request further analysis in response to public comment before they are ready to take final action)
Secretarial Review Draft <i>(functional equivalent of CEQ Final EIS)</i>	<ul style="list-style-type: none"> - Document will include RFMC/NMFS response to written public comment on the public review draft - NMFS will follow existing procedure to check document for legal compliance (NEPA and other laws) 	after 3 rd RFMC meeting
Transmission to SoC/HQ	<ul style="list-style-type: none"> - RFMC transmits Secretarial Review Draft to Secretary - ?NMFS files document w/ EPA as Final EIS 	begins 90 day approval timeline
SoC decision on amendment	<ul style="list-style-type: none"> - SoC concurrently signs Record of Decision 	within 90 days of transmission

Sample Format for Analytical Document Supporting Fishery Action Under MSA

Title page

(equates to CEQ 'cover sheet')

- Identify title of analysis; responsible agencies; contact person with contact information; designation of draft, public review draft, etc; one paragraph abstract; date by which comments must be received

Table of Contents

Table of Figures and Tables (as appropriate)

List of Acronyms and Abbreviations (as appropriate)

Summary

- Identify objectives or purpose of action *(equates to CEQ 'issues to be resolved')*
- Identify alternatives and brief comparison of impacts under the alternatives (summary table often works well) *(equates to CEQ 'major conclusions')*
- In Secretarial Review Draft, describe RFMC's recommended action, identify how factors were balanced among alternatives to enter that into the decision, identify environmentally preferable alternative, and state whether all practicable means to avoid or minimize environmental harm from recommended alternative have been adopted, or why not
- In Secretarial Review Draft, include areas of controversy including those raised by the public

Problem statement

(equates to CEQ 'need for action')

Purpose or objectives of action

Alternatives for proposed action

- explore range of reasonable alternatives
- include a no action alternative (defined as status quo)
- identify the preferred action if possible
- if appropriate discuss why alternatives may have been eliminated from detailed study (this discussion may instead be appropriate in an appendix)

NEPA effects analysis (as appropriate)

- environmental consequences of the alternatives (including direct, indirect, and cumulative effects, and describing any adverse environmental effects which cannot be avoided should the proposal be implemented)
- discuss affected environment as necessary to understand environmental consequences

EO 12866, Regulatory Impact Review analysis (as appropriate)

- description of the affected fishery
- economic analysis of the expected effects of each alternative relative to the baseline

Analysis of consistency of action with MSA, National Standards

Regulatory Flexibility Act analysis (as appropriate)

- description and estimate of the number of small entities affected by the proposed action
- estimate of the economic impacts on small entities

EO 12898, Environmental Justice analysis (as appropriate)

- assess whether there are disproportionately high and adverse human health or environmental effects on a minority population, low-income population, or Indian tribe from the proposed action

List of preparers, list of agencies/persons consulted

List of those to whom analysis is distributed (for the Public Review Draft)

References, Index (as appropriate)

Appendices (as appropriate)

NEPA Compliance in Implementation of Fishery Actions Under MSA

NEPA Process – Environmental Impact Statement				Proposed MSA EIA approach
	NEPA Statute	CEQ Regulations	NOAA NEPA procedures (216-6)	
Notice of Intent	--	1501.7	5.02d (p.15)	
		- agency shall publish NOI in FR	- agency shall publish NOI in FR	- No NOI. Differs from CEQ regulations.
			- NOI shall include proposed action and alts, logistics of scoping process, contact info for RPM	
			- NOI initiates formal scoping process - written and verbal comments must be accepted during identified comment period - 30 day min formal comment period from date of NOI	- no 'formal' comment period. Scoping commences at time when Council initiates an analysis and determines draft alternatives - written comments will be considered by RFMC at any time; opportunity for oral comments during RFMC meetings - at minimum, public has 23 days to comment as analysis will be announced on agenda, which is published in FR
		- publish retraction if EIS does not go ahead	- RFMC newsletter announces if analysis does not go forward	
Scoping	--	1501.7	4.01w (p.9), 5.02d (p.15)	
		- agency shall invite participation	- solicit comprehensive public involvement and interagency and Indian tribal consultation	- RFMC/NMFS will solicit public comment on proposed analysis in RFMC newsletter and on website
		- agency shall eliminate from study issues that are not significant		- RFMC will consider comments and revise problem statement and alternatives accordingly
		- agency may hold scoping meetings	- scoping may be satisfied by meetings, or request for comment on documents; or discussion papers	- RFMC meetings will provide opportunity for public input

NEPA Compliance in Implementation of Fishery Actions Under MSA

NEPA Process – Environmental Impact Statement				Proposed MSA EIA approach
	NEPA Statute	CEQ Regulations	NOAA NEPA procedures (216-6)	
EIS content	102(C)	1502.10	5.04b (p.19)	
	Include: - environmental impact of proposed action - adverse environmental impacts of proposal - alts - relationship between local short-term uses of environment and long-term productivity - irreversible/irretrievable commitments of resources of proposal	- cover sheet - summary - TOC - purpose/need - alts - affected environment - environmental consequences (to include all elements required by statute) - list of preparers - circulation list - index	- cover sheet and TOC - purpose/need - summary - alts - affected environment - environmental impacts of proposed action and alts including cumulative impacts - circulation list and list of those consulted - index and appendices as appropriate	- include all these elements in analysis, as well as other requirements of MSA and other laws/ executive orders - see sample document format for a fishery action analysis
Draft EIS	--	1502.9		
		- draft statements shall satisfy to extent possible the requirements established for final statements in 102(C)		- RFMC/NMFS will prepare a Public Review Draft of the analysis that will satisfy to extent possible the requirements established for final statements in 102(C)

NEPA Compliance in Implementation of Fishery Actions Under MSA

NEPA Process – Environmental Impact Statement				Proposed MSA EIA approach
	NEPA Statute	CEQ Regulations	NOAA NEPA procedures (216-6)	
Filing and Distribution of Draft/ Final EIS	102(C)	1506.9, 1502.19	5.04c (p.20)	
			<ul style="list-style-type: none"> - preliminary review of D/FEIS by NEPA coordinator 1 week before package is submitted so changes can be incorporated - NEPA review package (D/FEIS and transmittal memos) to NEPA coordinator for clearance signatures min. 5 days before filing with EPA 	<ul style="list-style-type: none"> - EPA filing requirements will only apply to Secretarial Review Draft (functional equivalent of CEQ Final EIS). No NOA for Draft EIS. Differs from CEQ regulations.
	<ul style="list-style-type: none"> - [final] statement shall be made available to President, CEQ, and public 	<ul style="list-style-type: none"> - file statement with EPA, who will give to CEQ (counts as President) - distribute to affected and interested parties at same time as EPA 	<ul style="list-style-type: none"> - 5 copies to EPA by 3pm each Friday - at same time, copies of D/FEIS and transmittal letter should be sent to interested parties - EPA publishes NOA 1 week later 	<ul style="list-style-type: none"> - Public Review Draft will be circulated to the RFMC, interested entities and persons, minimum 30 days prior to the first day of the RFMC meeting at which final action is scheduled to occur - Draft will be accessible to the public on RFMC website and available by request
Comments on Draft EIS	--	1506.10, 1503.1	5.04c.6	
		<ul style="list-style-type: none"> - comment period for DEIS is minimum 45 days from NOA 	<ul style="list-style-type: none"> - date of NOA determines start of review period - public comment period on DEIS is min. 45 days 	<ul style="list-style-type: none"> - Public Review Draft will be available for a minimum of 30 days before RFMC final action. Differs from CEQ regulations.
		<ul style="list-style-type: none"> - agency shall request comments of appropriate Federal, State and local agencies, Indian tribes, affected public and organizations 		<ul style="list-style-type: none"> - RFMC/NMFS will consult with affected Federal, State and local agencies and Indian tribes (some of whom are represented on RFMC) - RFMC/NMFS will request comments from public and specifically any persons or organizations who express interest

NEPA Compliance in Implementation of Fishery Actions Under MSA

NEPA Process – Environmental Impact Statement				Proposed MSA EIA approach
	NEPA Statute	CEQ Regulations	NOAA NEPA procedures (216-6)	
Final EIS	--	1503.4	5.04c6	
		- all comments or summaries thereof must be attached to FEIS regardless of merit	- must include all substantive comments or summaries of comments received during the public comment period of the draft EIS	- RFMC/NMFS will include all written comments on the Public Review Draft in Secretarial Review Draft (functional equivalent of CEQ Final EIS)
		- agency must assess comments individually and collectively, and respond appropriately (5 ways)	- comments must be responded to in an appropriate manner	- RFMC will consider all comments, written and oral, on both drafts and respond appropriately
		- must state response in FEIS		- RFMC response to written comments will be included in the Secretarial Review Draft
Record of Decision	--	1505.2, 1506.10	5.04c.7	
		- agency shall prepare a concise public record of decision	- ROD will be made available through appropriate public notice (but not necessarily FR)	- RFMC will include recommendation to Secretary of Commerce on the MSA action as part of the Secretarial Review Draft
		ROD shall: - state the decision - identify all alternatives, including the environmentally preferable alternative, and how factors were balanced to enter into the decision - state whether all practicable means to avoid or minimize envtl harm from selected alt have been adopted, or why not		- RFMC will address these elements in its recommendation
		- no decision may be recorded until later of 90 days after NOA for DEIS or 30 days for NOA of FEIS	- ROD may not be recorded until min 30 days from NOA for FEIS	- NEPA analysis (EIA) will be submitted with MSA action, and ROD will be finalized along with SOC decision on MSA action

NEPA Compliance in Implementation of Fishery Actions Under MSA

NEPA Process – Environmental Impact Statement				Proposed MSA EIA approach
	NEPA Statute	CEQ Regulations	NOAA NEPA procedures (216-6)	
Termination	--	--	5.01c, 5.04c.8	<ul style="list-style-type: none"> - proposed MSA action, including NEPA analysis (EIA), may be terminated at any stage - RFMC newsletter announces if analysis does not go forward
			<ul style="list-style-type: none"> - environmental review process may be terminated at any stage - termination must be announced in the FR and explained in writing to EPA - for supplemental NEPA documents, must notify CEQ if process stops after draft SEIS but before final 	
Public Involvement	--	1506.6	5.02b (p.13)	<ul style="list-style-type: none"> - public involvement keystone of RFMC process – MSA requires regular, open meetings; timely public notice of time, place, and agenda of meetings; interested persons may present written or oral comments - RFMC meetings/agendas noticed in FR, documents available on RFMC websites (or by request) - RFMC meetings held regularly - public invited to comment on any RFMC agenda item
		<ul style="list-style-type: none"> - agencies shall make diligent efforts to involve the public in preparing and implementing NEPA procedures 	<ul style="list-style-type: none"> - RPMs must make every effort throughout process to encourage participation of affected Fed, State, local agencies, Indian tribes, and interested persons 	
		<ul style="list-style-type: none"> - agencies shall provide public notice of hearings/mtgs, documents - in cases of national concern notice to include publication in the FR 	<ul style="list-style-type: none"> - RPM must provide public notice of NEPA hearings/mtgs, documents 	
		<ul style="list-style-type: none"> - hold hearings/mtgs where appropriate - solicit appropriate info from public 	<ul style="list-style-type: none"> - public involvement may be solicited through hearings/mtgs and through comments as appropriate 	
Agency Responsibility	--	1506.5	2.02 (p.3)	<ul style="list-style-type: none"> - procedure should reflect that RFMCs are partners in preparing NEPA analyses and complying with NEPA procedures
		<ul style="list-style-type: none"> - EIS shall be prepared directly by or by a contractor selected by the lead agency, or by a cooperating agency 	<ul style="list-style-type: none"> - NOAA NEPA coordinator will review and provide final clearance for all NEPA envtl review documents - a designated RPM will carry out specific proposed actions in the NEPA process 	

NEPA Compliance in Implementation of Fishery Actions Under MSA

NEPA Process – Environmental Impact Statement				Proposed MSA EIA approach
	NEPA Statute	CEQ Regulations	NOAA NEPA procedures (216-6)	
Categorical Exclusion	--	1508.4	5.05, 6.03d.4	
		- category of actions which do not individually or cumulatively have a significant effect on the human environment and which therefore require neither an EA nor an EIS	- actions that individually and cumulatively do not have the potential to pose significant effects to the quality of the human environment - examples given	- same as NOAA procedure
Emergency Actions	--	1506.11	5.06	
		- when emergency circumstances require an agency to take action with significant environmental impact without observing these regulations, the agency should consult with CEQ	- if timelines associated with EIS limit attaining the objectives of the emergency action, the NEPA Coordinator may consult with CEQ about alternative arrangements for NEPA compliance	- same as NOAA procedure

Magnuson-Stevens Fishery Conservation and Management Reauthorization Act Environmental Review Procedures

Request for Comments: The National Marine Fisheries Service (NOAA Fisheries) is soliciting public comment on the environmental review provisions required by the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act (MSRA) (Pub. L. 109-479). Section 107 requires NOAA Fisheries to revise and update agency procedures to comply with the National Environmental Policy Act (NEPA). It further requires that NOAA Fisheries consult with the Council on Environmental Quality (CEQ) and the Regional Fishery Management Councils (Councils), and involve the public in the development of the revised procedures. The MSRA provides that the resulting procedures will be the sole environmental impact assessment procedure for fishery management actions.

The relevant part of the MSRA reads as follows

(i) ENVIRONMENTAL REVIEW PROCESS.—

(1) PROCEDURES.—The Secretary shall, in consultation with the Councils and the Council on Environmental Quality, revise and update agency procedures for compliance with the National Environmental Policy Act (42 U.S.C. 4231 et seq.). The procedures shall—

(A) conform to the time lines for review and approval of fishery management plans and plan amendments under this section; and

(B) integrate applicable environmental analytical procedures, including the time frames for public input, with the procedure for the preparation and dissemination of fishery management plans, plan amendments, and other actions taken or approved pursuant to this Act in order to provide for timely, clear and concise analysis that is useful to decision makers and the public, reduce extraneous paperwork, and effectively involve the public.

(2) USAGE.—The updated agency procedures promulgated in accordance with this section used by the Councils or the Secretary shall be the sole environmental impact assessment procedure for fishery management plans, amendments, regulations, or other actions taken or approved pursuant to this Act.

(3) SCHEDULE FOR PROMULGATION OF FINAL PROCEDURES.—The Secretary shall—

(A) propose revised procedures within 6 months after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006;

(B) provide 90 days for public review and comments; and

(C) promulgate final procedures no later than 12 months after the date of enactment of that Act.

(4) PUBLIC PARTICIPATION.—The Secretary is authorized and directed, in cooperation with the Council on Environmental Quality and the Councils, to involve the affected public in the development of revised procedures, including workshops or other appropriate means of public involvement.

NOAA Fisheries is required to publish proposed procedures by July 11, 2007, for a 90-day public review period, and to promulgate final procedures by January 12, 2008.

To inform the development of the new procedures, NOAA Fisheries is soliciting public comment on the following topics:

- 1) In the context of fishery management actions, how should NOAA Fisheries, in consultation with the Councils and CEQ, revise and update agency procedures for compliance with NEPA?
- 2) What opportunities exist to improve efficiencies in the NEPA process that may not have been applied in the past?
- 3) How should the Councils and NOAA Fisheries ensure that analysis is conducted on an appropriate scale for various types of fishery management actions? What criteria should be developed and applied to ensure that the level of analysis is commensurate with the scope of the action?
- 4) Should NOAA Fisheries consider eliminating the distinction between an environmental assessment (EA) and environmental impact statement (EIS), and instead, rely solely on an integrated environmental impact analysis?
- 5) How should a “reasonable” range of alternatives be defined for purposes of the new procedures?
- 6) What opportunities, if any, exist to develop a more effective scoping process? Should scoping occur at Council meetings and should Council meeting agenda notices serve as a traditional Notice of Intent to prepare an environmental analysis?
- 7) Should the environmental analysis for different types of fishery management actions be developed on a different scale based on the action’s duration or effect?
- 8) What key features of the current NOAA NEPA process or of CEQ’s regulations should be modified in the new procedures?

- 9) How should emergency actions be treated under the new procedures?
- 10) To what extent does the public feel that shorter comment periods (e.g., a minimum of 30 days) could affect your ability to participate effectively in the NEPA process?

Dates and Addresses: Comments should be directed to NEPAprocedures@noaa.gov and must be received by COB on April 20, 2007.

Links to Council Activities: The Councils may develop proposals on their own and discuss them at public meetings. For those members of the public interested in participating through the Council process, currently scheduled meetings and proposals include:

- Council meetings [Under Construction]
- Council proposal/s [Under Construction]

Other Sources of Information:

- The MSRA (Enrolled version):
http://www.nmfs.noaa.gov/sfa/2007reauth_notsigned.pdf
- Redline Version of MSA as amended:
[http://www.nmfs.noaa.gov/msa2007/MSA_Amended%20by%20Magnuson-Stevens%20Reauthorization%20Act%20\(1-31-07%20draft\).pdf](http://www.nmfs.noaa.gov/msa2007/MSA_Amended%20by%20Magnuson-Stevens%20Reauthorization%20Act%20(1-31-07%20draft).pdf)
- CEQ's NEPA regulations:
http://www.nepa.gov/nepa/regs/ceq/toc_ceq.htm
- The NEPA statute:
<http://www.nepa.gov/nepa/regs/nepa/nepaeqia.htm>
- NOAA's NAO 216-6:
http://www.corporateservices.noaa.gov/~ames/NAOs/Chap_216/naos_216_6.html

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on it. We did a hearing up in his district, and listened to the concerns of a lot of the fishermen in the communities that are impacted by this law. Unfortunately, all of the things that we originally set out to take care of are not included in this bill, but where we end up on this, I believe it is a bill that is better than current law. It is a stronger bill. It is something that addresses many of the issues that have been raised over the last several years in hearings and meetings that we have had in trying to improve the Magnuson-Stevens Act.

I also want to particularly mention two of the Members on our side of the aisle, Mr. GILCREST and Mr. SAXTON, who worked extremely hard in trying to craft a bill that would fit with the concerns and needs of their constituency. As well as that, Chairman DON YOUNG, former chairman of this committee, chairman of the Transportation Committee, obviously has always put a great deal of effort and work into fisheries issues, and his work will continue into the future in trying to improve this law.

But I want to thank Mr. RAHALL for all the work not just on this legislation but all the work that he has done over the last 4 years. It has been a great experience for me having an opportunity to work with him. Over the last 4 years, I believe that we have passed more legislation out of the Resources Committee than all the rest of the committees combined. And during that time period we had one bill that went through on a party-line vote, and other than that we were able to work out bipartisan compromises on everything. He and I didn't agree every single time, but we were able to work out something so that we had a bipartisan bill moving, and I appreciate all that he did as my ranking member and I wish him nothing but luck in the future.

Mr. RAHALL. Mr. Speaker I yield myself such time as I may consume.

I was going to wait until the very end to respond, but I want to say to the gentleman from California (Mr. POMBO), the distinguished chairman of the House Resources Committee, that it has truly been an honor to work with him during his tenure as chairman of our committee. The gentleman has fought hard for those principles that he has believed in. He has accomplished a great deal during his tenure here. I commend him for his tenacity, and he truly has been a fighter for that which he believes. As he has said, we have not agreed on every issue, but we have had our respectful disagreements and we have worked in good faith as well. I believe we have during his tenure as chairman.

I do welcome the incoming ranking member, Mr. YOUNG. I have served on both the Transportation and Infrastructure Committee and the Resources Committee for my entire tenure in this body. Thirty years we have worked together, and now I am glad to have him as the ranking member on

my committee and may he stay that way for a long, long time.

Mr. Speaker, at this time I yield 3 minutes to the gentleman from New Jersey (Mr. PALLONE), who has been a true leader on this issue and fought very hard for this legislation.

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Mr. PALLONE. I want to thank our ranking member, Mr. RAHALL, for all his contributions in getting this to the floor this evening. I know it was not easy to get us here to achieve the consensus that we have tonight. I would also like to thank on the other side of the aisle obviously our chairman, Mr. POMBO, and Mr. YOUNG as well. I know this will be the last day, I guess, that we have this opportunity, Mr. Chairman, but I want to say that throughout your tenure as the chairman of the Resources Committee, I could always count on you to be honest and forthright about everything. And even though oftentimes we did disagree, there were many times when we agreed on different matters. So I want to thank you for your tenure and obviously look forward also to the gentleman from Alaska (Mr. YOUNG) as our ranking member. He is another person who speaks his mind and certainly manages to get things done.

I want to support this legislation. I think that it is a very important and comprehensive bill that updates our Nation's fisheries management laws, but I want to mention two provisions that are critically important to my constituents in New Jersey at the Jersey shore. First, it includes legislative discretion allowing the Secretary of Commerce to extend the rebuilding time frame for summer flounder. I, along with many of my colleagues from New Jersey, particularly Mr. SAXTON, strongly believe that existing law gives NMFS the administrative flexibility to avoid making drastic cuts in next year's summer flounder quota, but the service consistently refused to use that flexibility. We are thus granting a legislative extension of the rebuilding time frame to force the administration to take action and avert drastically low quotas for this important fishery. While the resulting quotas will still be the lowest ever, this language will avoid a dramatically low quota that could have resulted in a virtual shut-down of the entire fishery.

I am also glad to see that this bill contains a provision intended to improve data collection from the recreational sector. Anglers in my district have long known that the MRFSS system is widely inaccurate in estimating recreational landings and is completely inappropriate for use in stock allocation decisions. The language in this bill will help by requiring the secretary to improve the program to ensure accurate data collection and incorporate the results of a recent National Research Council report. I am also glad that the provision prevents a fee from being imposed until at least 2011, pre-

empting an administration proposal to implement a license that could have cost up to \$35 annually for the right to fish.

I will acknowledge that the overall bill is far from perfect. There are provisions in here that I am not completely happy with. And there are other items I would have liked to include. But I know that neither the fishing nor the environmental community are completely happy with every single word, and probably that means it is a very good bill.

This bill does represent an overall improvement in the management of our Nation's fisheries and strikes a balance between conserving stocks and ensuring productive fisheries. It is my fervent hope that this bill will bring some greater sense into a fisheries management system that to the average angler seems confusing at best and completely irrational at worst. We here in Congress have a duty to closely examine the outcomes of this law and closely oversee its implementation by the administration.

Again, I thank all my colleagues and particularly our chairman and ranking member.

I forgot to mention the gentleman from Maryland (Mr. GILCREST), and I apologize, for all your work in putting this together. Thanks again, too, WAYNE.

Mr. GILCREST. Thank you, Mr. PALLONE.

I want to yield now to the part of the country that has the largest fishery, to Congressman DON YOUNG.

Mr. YOUNG of Alaska. I thank the gentleman for yielding. Everybody has been thanked on the floor. I double that.

This is a good piece of legislation. It has been a long time coming. I want to thank the ranking member, of course, Mr. GILCREST and Mr. OBERSTAR, and the chairman. This bill will do good for our oceans and for our fisheries. Although it is far from being perfect, we expect to have this finalized tonight and, as has been mentioned before, because it originated in Alaska, the 200-mile limit, the Magnuson-Stevens Act, we will continue to work to improve it. Because it is very, very important that we keep our fisheries sustainable and also to make sure that our oceans are not only protected and conserved but provide the food that is necessary for this Nation of ours.

Again, a lot of work was done, but I can tell you frankly it was the staff on both sides of the aisle, especially on this side, as has already been mentioned. Dave Whaley, who actually used to have hair before he started working on this bill. He doesn't have it anymore. Bonnie Bruce. She is still, I think, relatively attractive and she has been through agony for all types of activity to get this bill done.

I again thank the people that understand the importance and the staff does the majority of work on this. We did do it. The Senate side did it. Now it is the

House side's turn to do what is right for the oceans.

Mr. Speaker, while I support this legislation, there are several provisions which need further explanation.

Section 107 provides that the Secretary of Commerce, in consultation with the Regional Councils and the Council on Environmental Policy, shall revise the procedures for compliance with the National Environmental Policy Act. Those procedures shall integrate NEPA's environmental analytical procedures with the procedures for preparing and approving fishery management plans and amendments under the Magnuson-Stevens Act and shall conform the timelines for NEPA compliance with the timelines for the approval of fishery management plans and amendments established under the Magnuson-Stevens Act. The only way those requirements can be met for plans developed by a Council is to use the Council's plan development processes. That means NEPA procedures must be integrated into the Council process which will be the vehicle for identifying the problem to be addressed, identifying the reasonable alternatives to address that problem, identifying the preferred alternative, and examining the environmental consequences, positive and negative, of the preferred alternative and the reasonable alternatives. After the Council completes its processes, the Secretary will have the final responsibility for determining if NEPA has been complied with and may disapprove the plan, plan amendment, or regulation pursuant to section 304(a)(3) of this act.

In addition, there are a number of provisions in this legislation which deal with the amount and type of information which needs to be submitted to the Secretary by a variety of entities and how that information is to be treated by the Secretary. It is important that proprietary information, confidential economic information, personal information such as tax forms, and other sensitive information be maintained in a manner which does not compromise an individual or a company's reasonable expectation for privacy. The Secretary must develop regulations for the use and the protection of such information which weighs the need for the information for management purposes with a reasonable person's expectation for privacy.

I am also concerned that the provision requiring that harvest levels be set to prevent overfishing not be interpreted to shut down entire fisheries if one stock of a multi-species complex is experiencing overfishing. The purpose of the act is to provide a healthy fishery resource, but it is also to promote commercial and recreational fishing and support communities dependent on the fishery resources. The act should not be used as a tool for stopping all fishing activities in U.S. waters. The keys to achieving these goals are balance, flexibility, and common sense by the fishery managers. The provisions dealing with ending overfishing, rebuilding overfished fisheries, and setting harvest levels to prevent overfishing all need to be taken in the context of the National Standards and need to be viewed with an eye toward balance, flexibility, and common sense.

Mr. RAHALL. Mr. Speaker, I yield 2 minutes to the gentleman from Oregon (Mr. DEFAZIO), a valued member of our committee.

Mr. DEFAZIO. I would first like to engage the ranking member in a colloquy.

The bill requires the Pacific Council to develop a rationalization program within 24 months from date of enactment. The Pacific Council has been working on a comprehensive ground fisheries management program for more than 3 years and is on target to complete that process by 2008. As I understand the bill, the Pacific Council can continue the development of its groundfish management program without having to restart the process. Is that correct?

Mr. RAHALL. If the gentleman would yield.

Mr. DEFAZIO. I would yield to the gentleman.

Mr. RAHALL. The gentleman from Oregon is entirely correct. It is my understanding that the bill would permit the Pacific Council process to continue. We recognize that the Pacific Council has made substantial progress and do not intend to disrupt their efforts to develop and implement an appropriate groundfish management program, consistent with this act.

Mr. DEFAZIO. I thank the gentleman.

Reclaiming my time, there is also another provision in this bill which is long overdue. We have had extraordinary closures of the salmon season on the west coast this year, despite the fact that there are quite a number of plentiful runs of salmon, because one run, the Klamath River, is very, very unhealthy. Over the last 5 years, this administration has done nothing to begin to improve the health of the river. This legislation will begin some of the mitigation restoration activities to restore the health of that fishery which is critical so that we can begin to continue to harvest other salmon species which are more plentiful and not in trouble.

For that and a number of other provisions in the bill, I am very supportive of the legislation.

Mr. RAHALL. Mr. Speaker, I yield 3½ minutes to the gentleman from Massachusetts (Mr. FRANK).

Mr. FRANK of Massachusetts. Mr. Speaker, I would ask for a colloquy.

One of the key provisions in this is the requirement that the Regional Fishery Management Councils develop annual catch limits based on the Science and Statistical Committees. This annual catch limit provision has the potential to contribute in important ways to the process of improving science. But it is vital that in analyzing the options and preparing recommendations, the committees consider a wide range of scientific opinion to ensure that the management plans that are based on their work represent the best possible scientific understanding of the current state of the relevant fisheries as well as projections for the future.

Is it the ranking member's, soon to be chairman's, understanding that the Science and Statistical Committees will in fulfilling their role under this legislation consider this broad array of scientific opinion and sources?

Mr. RAHALL. Mr. Speaker, will the gentleman yield?

Mr. FRANK of Massachusetts. I yield to the gentleman from West Virginia.

Mr. RAHALL. I appreciate the gentleman's question. I would say that he is entirely correct. In order to help ensure that affected stakeholders have the maximum degree of confidence in the management measures developed by the councils and that those measures are as effective as possible, it is vital that the Science and Statistical Committees operate in an open manner that is receptive to a full spectrum of scientific opinion. Accordingly, it is our expectation that under this legislation, the Science and Statistical Committees would gather information and prepare recommendations in a way that takes into account the research and expertise of a wide range of scientists.

Mr. FRANK of Massachusetts. I thank the gentleman for this and I thank him for also inserting a provision that would make sure that if there is a referendum on quotas that the working fishermen, not just the permit owners, could vote in our region.

But having said that, I want to say that rarely have I seen such a distinguished and thoughtful and intelligent group of my colleagues get something kind of wrong. Let me emphasize it in this way. We heard how there is a special provision here for flounder, where summer flounder are concerned, then there can be flexibility in rebuilding. And I have to ask the question, why is it not the case that what is sauce for the cod is sauce for the flounder? When did the flounder become the exalted species? And if you really, Mr. Speaker, believed in the principles of this legislation, why have you floundered in applying this uniformly? Why did you make this exception for the flounder?

The problem is partly procedure. This bill was developed mostly in the Senate. I appreciate the good work of the chairman of the committee, Mr. POMBO. He and his staff, Mr. Whaley, worked very hard with us to get this kind of flexibility for all species. And Peter Kovar of my staff worked very hard on it and we had frankly, I thought, a pretty good bill coming out of the House. Then the election came, and I understand that it had consequences, and we are winding up with the Senate bill plus an exception for flounder.

I don't object to the exception for flounder. I object to the fact that it is an exception. And I hope I will hear at some point why the flexibility in rebuilding flounder makes sense when no other flexibility for any other species is involved.

I will make a prediction, Mr. Speaker. Let me say in this, I believe that we have here an overreaction and that many of my environmentalist friends have an inability, an unwillingness to recognize that some of the hardest-working, most dedicated, practical environmentalists in this country, the

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Improving Seafood Harvesting Labor Data Collection in Alaska Fisheries

Prepared for the

Southwest Alaska Municipal Conference

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Executive Summary

This report examines the importance of seafood harvesting labor data, outlines a roadmap for improving that data for SWAMC's constituents, and identifies roadblocks likely to prevent the development of comprehensive system for collecting seafood harvesting labor data.

Alaska's seafood harvesting and processing sector provides more direct jobs than oil and gas, mining, agriculture, and forestry plus their associated primary processing industries combined (Northern Economics, Inc., 2003). In some regions areas of the state, such as the Aleutians and Pribilof Islands, Bristol Bay and Kodiak regions, jobs in the seafood industry account for around half of all employment. These jobs are generated in fisheries under state management, fisheries under federal management, and jointly-managed fisheries, which are primarily fisheries in federal waters managed by the State of Alaska under federal delegation.¹

Problem Statement

As shown in Figure ES-1, crewmembers differ from other groups involved in harvesting and processing seafood in terms of the amount of data collected on their activities, and these differences result in less overall information being available for stakeholders. For example, individuals working in Alaska's shore-based fish processing sector are wage-and-salary employees. This classification means that the number of processing jobs is recorded in the annual average monthly employment statistics reported by the Alaska Department of Labor and Workforce Development. Commercial fish harvesters are exempted from unemployment insurance and other employment reporting requirements because these crewmembers are classified as self-employed. Consequently, detailed information on harvesting workers is generally not available for most Alaskan fisheries. Currently, we know the number of crew license holders by community each year. We do not know:

- The number of active crew license holders by community or in total each year
- The number of active crew license holders by fishery
- The number of days active crew license holders work in total, by community, or by fishery
- The income of active crew license holders in total, by community, or by fishery

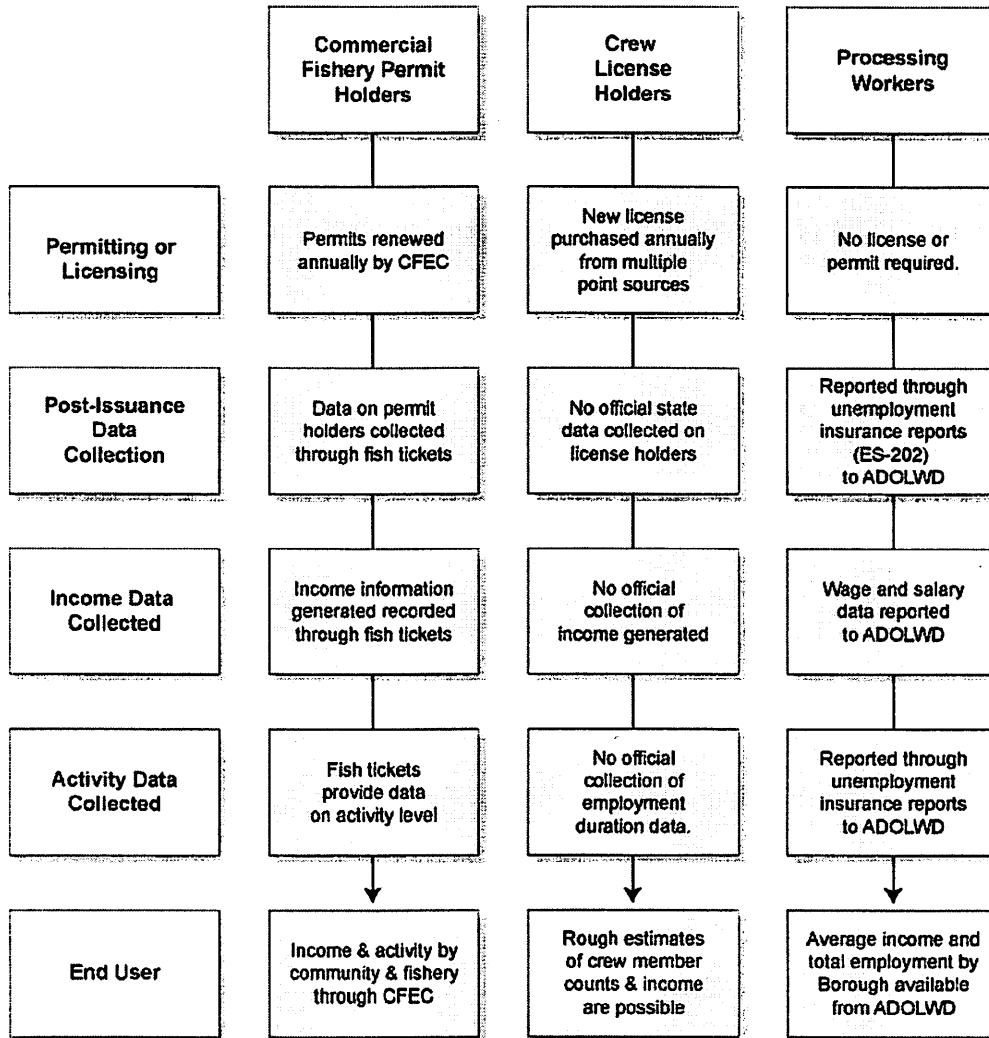
At the same time, this information is available for permit holders. Thus, those dependent on crew data for public policy-making must make do with lesser quality data.

The dilemma created by the lack of adequate seafood harvesting employment is succinctly summarized in a recent report issued by the Alaska Department of Fish and Game:

...crewmembers cannot be linked to a particular fishery or area because their licenses are general to all commercial fisheries. Using the existing data, it is not possible to know if the crewmember fished at all, where they fished, how much they fished, how many crew fished from a vessel, or how much they earned. Because crewmember identification is not recorded on fish tickets, it is not possible to associate crew sizes or crew earnings with a particular fishery or area using fish ticket data (Shirley 2005).

¹ The federal government has primary jurisdiction over EEZ groundfish, halibut, and most sablefish fisheries, and joint jurisdiction is found in king crab and tanner crab fisheries in the areas from Dutch Harbor to Norton Sound, as well as the Southeast Alaska Chinook troll fishery. The state manages inshore (non-EEZ) sablefish fisheries in Southeast Alaska and a portion of the Pacific cod fishery, with primary jurisdiction over all other fisheries.

Figure ES-1. Seafood Harvesting and Processing Data Flow²



The lack of crew data has real world implications for SWAMC constituents as well as for the crewmembers themselves. During key informant interviews, constituents indicated that the largest problem arising from the lack of seafood labor harvesting data was difficulty applying for federal grant monies and programs. Constituents indicated repeatedly that improved seafood harvesting labor data are needed simply to place constituent communities on equal footing with communities that are not dependent on the seafood industry for labor and, therefore, are able to provide accurate descriptions of their communities to grant reviewers. Additionally, interview participants indicated that equivalent data are needed to place crewmembers on equal footing with permit holders when it comes to proving their historical participation in fisheries. This type of proof is often critical when applying for federal programs or when trying to influence fisheries management decisions.

² We note that confidentiality rules affect the development of aggregate reporting standards by community, fishery, borough, or census area.

Project Goals

The overarching goal of this project is to outline the hurdles in creating improved seafood harvesting labor data systems and to determine what facets of an improved system are most important to stakeholder groups. Specific objectives of the project include the following:

- Further explore the issues associated with seafood harvesting labor data
- Collect information on current data collection and past estimation efforts
- Define unfulfilled organizational needs for seafood harvesting labor data
- Suggest new data collection methods or systems that would eliminate the unfulfilled needs
- Evaluate potential systems from multiple perspectives and identify the positive and negative attributes of each system as well as the potential hurdles to implementing each system

Project Process

The project involved a multi-step process to accomplish the objectives outlined above. The process began with client meetings and culminated in a work group session of seafood harvesting labor data stakeholders and the recommendations contained in this report.

The aim of the first phase of the study involving meetings with the client was to define all the issues related to the collection of seafood harvesting labor data in Alaska fisheries. Concurrently, the study:

- Examined the current state of seafood labor harvesting data
- Identified sources of past and current estimates of seafood harvesting labor in Alaska fisheries, examined the strengths and limitations of the various sources, and presented the results in a comparative format.

After reviewing current seafood harvesting labor data and efforts to improve that data, the study conducted a series of key informant interviews with the goal of adding depth to our understanding of the human cost of problems with seafood labor harvesting data. Additionally, the information gathered in these interviews formed the basis for the initial action options presented to the work group of seafood harvesting labor data stakeholders.

When the study completed the steps above, SWAMC convened the work group. The results of the study were communicated to work group participants in a document that SWAMC provided to each participant prior to the work group session.

Results of the Work Group Session

Work group participants did not reach a clear solution to the issues discussed in this report. While participants generally acknowledged the need to improve fisheries employment data, they did not agree on:

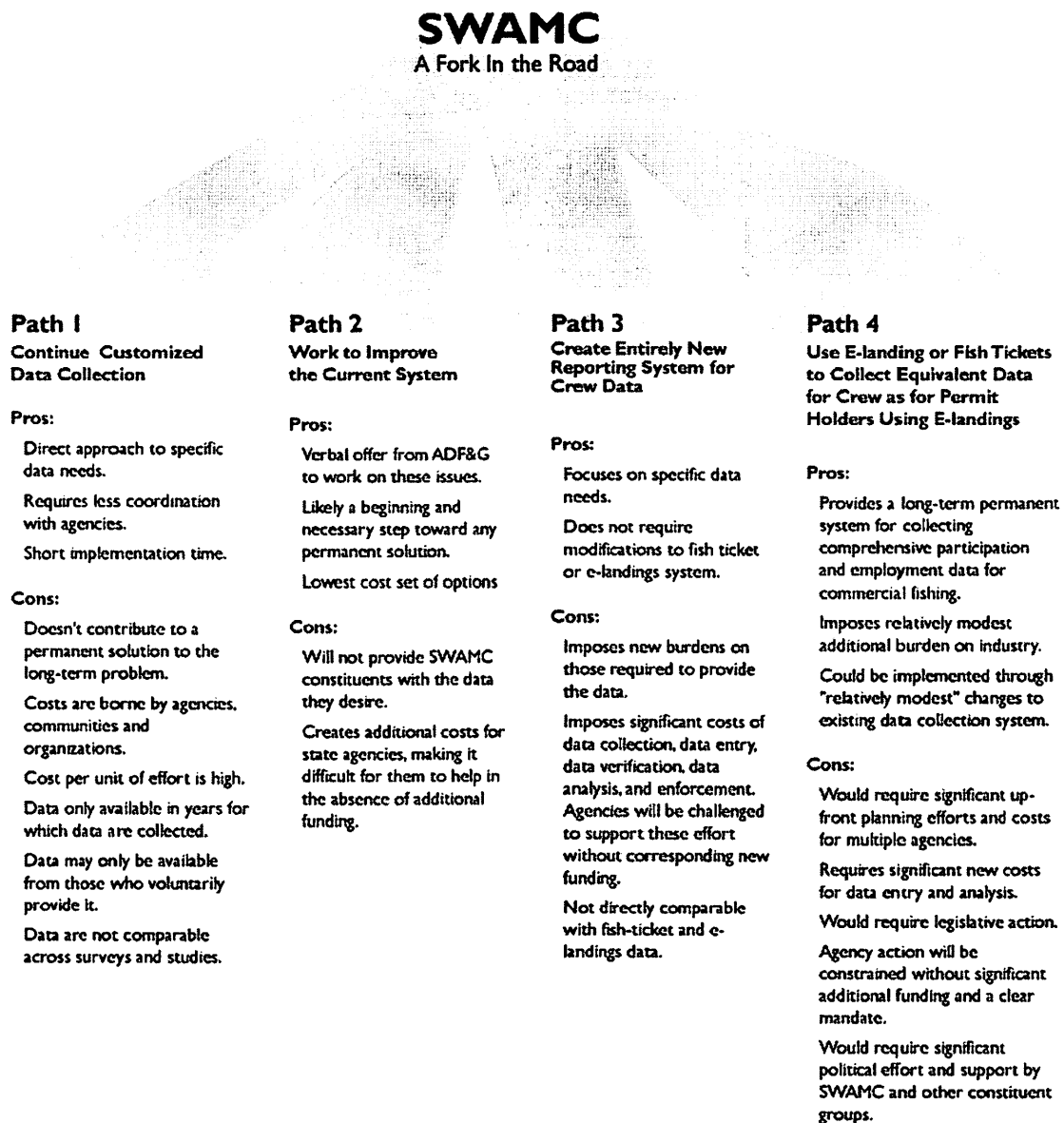
- How much change is needed
- Whether the change needed could be accomplished by upgrading the current system or would entail creating a new system

However, the work group session identified several options for improving Alaska fisheries employment data, and described the advantages, disadvantages, practical challenges and uncertainties associated with each option. In addition, convening the work group served to initiate a

discussion of these options among a variety of stakeholders, including agencies and individuals who would play a key role in implementing any of the options.

Based on the work group discussion and our past experience with the process by which changes have been brought about to systems of data collection, analysis and dissemination, we see four broad "paths" which SWAMC and others might pursue to achieve the goal of improved fisheries employment data. We discuss these paths below. Each of these four paths comes progressively closer to meeting SWAMC's needs and objectives, but also would require progressively greater commitment, coordination, and effort by SWAMC and other organizations. In moving forward, SWAMC needs to decide which of these paths will best serve its short and long-term needs. Figure ES-2 summarizes these paths.

Figure ES-2. Four Paths to the Goal of Improved Fisheries Employment Data



Path One: Continue Customized Data Collection Efforts (Status Quo)

The first path is essentially the status quo path. Under this path, there would be no changes to the current system with regard to regular fisheries-related data collection, analysis and dissemination. Rather, agencies, communities and organizations desiring more employment data than the system currently provides would collect that information through ad hoc studies and surveys—as is currently done.

There are some advantages to this approach in that it does not require any broad-based, long-term planning or development of consensus among different agencies. Studies can be implemented within a relatively short period of time and tailored to collect the specific data needed.

The essential drawback to this approach is that it doesn't solve the long-term problems that SWAMC has identified. There would continue to be significant gaps in fisheries employment data; the costs of additional data collection would continue to be borne by individual agencies, communities and organizations, with a high cost per unit of effort; the additional data would only be widely disseminated if the people who collected it chose to do so; and data would not necessarily be comparable across surveys and studies.

Path Two: Work to Improve the Current System

Making minor modifications to the current system based on crew licenses is the easiest path to getting better employment data. Specific potential improvements include collecting more information with crew licenses, improving the completeness and accuracy of data obtained from crew licenses, and expanding analysis of crew license data. As discussed in Section 6, the work group identified key questions related to the completeness and accuracy of the data presently obtained from crew licenses, as well as what might be involved in addressing these issues. Answering these questions is critical to establishing the extent to which employment data could be improved by changes to the existing crew license system.

The work group discussion also revealed that more fundamental changes to the fisheries employment data collection system (Path 3 or 4) would require incurring additional costs as well as addressing these key questions. Work group participants from state agencies indicated that any substantial new efforts requiring more personnel or materials would also require some new level of funding or the scaling back of other agency efforts. While agencies acknowledge the need for change, they also recognize that legal, policy, and budgetary frameworks constrain their ability to respond.

Path Two is unlikely to meet the needs of SWAMC, other constituent groups, or management agencies for comprehensive information on seafood harvesting employment by fishery and community. Further, even relatively small changes would impose at least some additional costs on the agencies that administer the current system and would require investment of political effort on the part of supporting stakeholder groups.

Path Three: New Reporting System for Crew Data

A third path involves the creation of an entirely new reporting system for the specific purpose of improving crew employment data. Examples of potential approaches include (but are not limited to) regularly-scheduled fisheries employment surveys, an annual permit holder report, or an annual crewmember report. Regional solutions are also possible, such as requiring permit holders in the Bristol Bay salmon fishery to list crew numbers on fishing district registration cards—this would provide information on employment and participation, but only for a specific fishery.

The advantages of developing a new crew employment reporting system, either statewide or regionally, is that it could be tailored to meet specific data needs and would not require changes to existing, complex systems such as crew licensing, fish tickets, or eLandings.

However, there are numerous disadvantages to this path. Any new reporting system would impose additional burdens on those required to provide the data, and would impose significant costs on the agencies responsible for data collection, data entry, data verification, data analysis, and enforcement. Agencies would be hard pressed to develop and implement a new data collection system without a substantial increase in funding. Surveys are expensive, difficult to conduct correctly, and typically collect limited information. Further, data collected by a new system may not necessarily be directly comparable with fish ticket and eLandings data.

Path Four: Create a System Collecting Equivalent Data for Crew as for Permit Holders

This path would go beyond the minor modifications of Path 2 but stop short of developing an entirely new system as with Path 3. It would provide a system for collecting essentially the same information for crew as is presently collected for permit holders in Alaska fisheries—thus providing a way to collect comprehensive information about participation and employment information for all persons participating in Alaska fisheries. This could be done by recording crew identifiers—permanent crew license numbers—on eLandings records and/or fish tickets. In effect, the collection of crew employment information would be built into the system at its most basic level.

This path would impose a relatively modest burden on fishery participants. However, implementing such a change would require significant up-front planning efforts for multiple federal and state agencies, and would require significant new costs for data entry and analysis. It would require legislative action to implement, and agencies would be unlikely to support it without significant additional funding and a clear mandate. As previously noted, these agencies acknowledge the need for change, but they also recognize the legal, policy, and budgetary frameworks that constrain their abilities to respond. SWAMC and other stakeholders interested in change must also recognize these and establish goals that enable state and federal agencies to address these issues. This path would likely require significant political effort and support by SWAMC and other constituent groups.

How to Keep Building Momentum

In whatever direction SWAMC chooses to move, it is clear that a key component of success will be building and maintaining momentum. We believe the following recommendations will help SWAMC continue to move forward. As shown in Figure ES-3, moving forward is a multi-step commitment.

Pick a Path and Decide What Information is Most Important—The Best Information is also the Most Difficult to Acquire

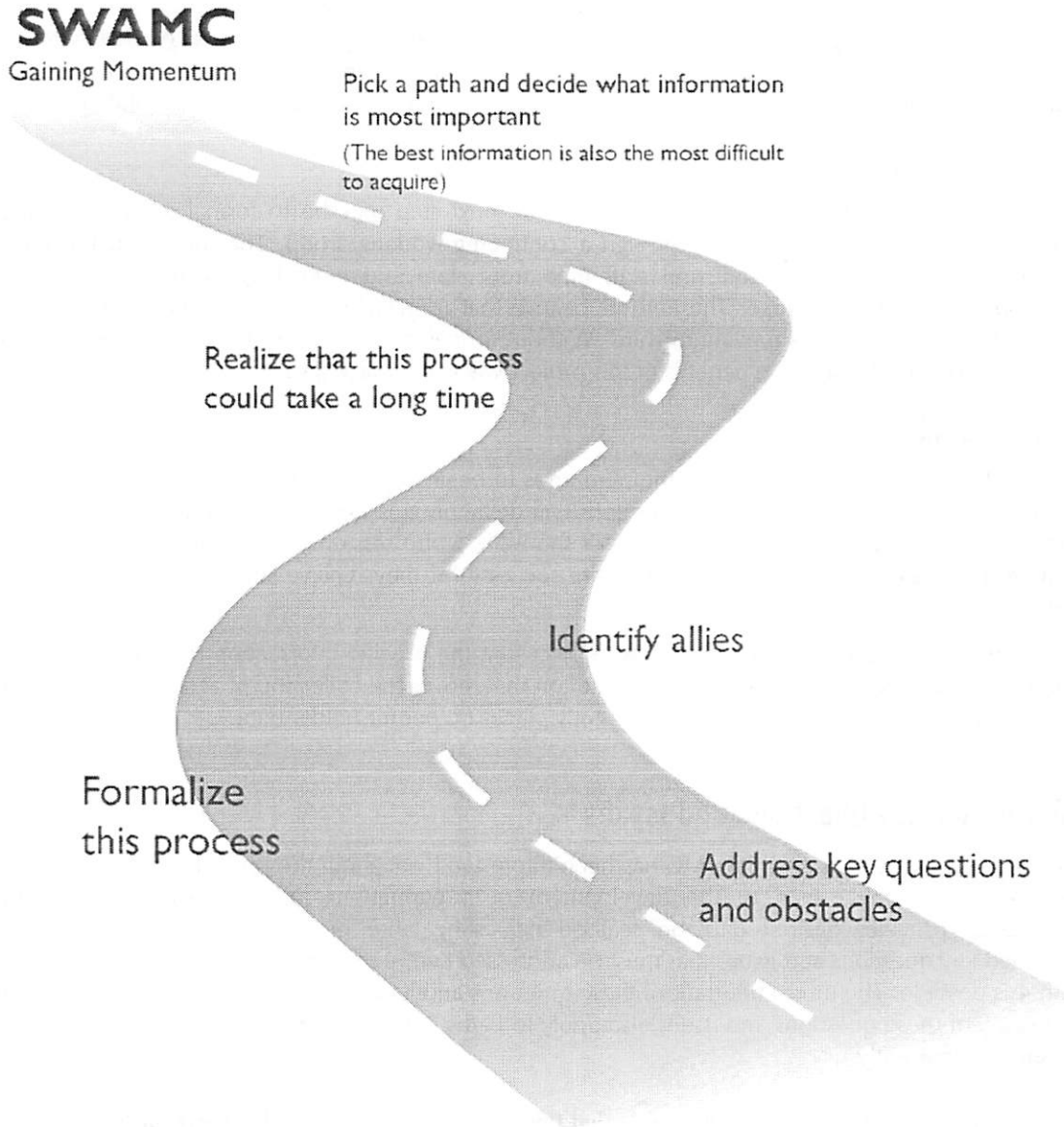
By commissioning this project, SWAMC has already taken the first steps toward adopting this recommendation. This project affirmed that SWAMC and its constituents need reliable annual data on seafood harvesting labor on a fishery and community level. The project also affirmed that the best information will be the most difficult to acquire because it requires the greatest time and money. It is now in SWAMC's hands to decide whether the pursuit of a long-term solution that meets constituent needs is worth the effort it will take to change the current system.

Realize that This Process Could Take a Long Time

SWAMC needs to realize that the path toward an acceptable permanent solution could take a long time. Work group discussions clearly showed that these sessions were simply the first step in what is

likely to be a lengthy process. Changing the fishing employment data collection system will require long-term coordinated efforts that start by convincing key stakeholders that the system needs to be changed.

Figure ES-3. Steps to Building Momentum



Identify Allies

SWAMC and its constituents need to identify allies that can assist them in this process of changing the fishing employment data collection system. One benefit of the work group session was that faces and names came together. Additionally, the session clarified stakeholders' needs. The stage is now set for SWAMC to work on identifying stakeholders that would make good partners in this process and build bridges to those stakeholders. Again, the work group session was a positive start along this road;

however, SWAMC must also work toward recruiting from outside the work group. Work group size limits and other factors prevented the involvement of potential allies in this initial meeting.

We also suggest reaching out to potential allies outside of Alaska. For example, Jon Isaacs, the work group moderator, noted that staff members of the NOAA Fisheries Pacific Regional Office are facing many of the same crew data collection issues. Identifying allies on a national level could help force change through the federal system.

SWAMC legislators and other legislators interested in fishing employment data issues will be key allies in the process of change. Participants in the work group session repeatedly indicated that state and federal agencies do not have a legislative mandate (or funding from the legislature) to address these issues. We believe that a legislative mandate will be a key component of a permanent solution.

Formalize the Process

Once allies have been identified and recruited, the next step may be to formalize the process of improving fishing employment data through a continuing working group. The more that this group can secure commitments of staff and staff time from state and federal agencies, the higher the likelihood of long-term change. The authors believe that formalizing the process is the best way to ensure that this issue keeps moving forward. Without formal commitments and regular meetings, the process is likely to stall and the benefits of this project will likely waste away.

Begin Eliminating Obstacles

Another key step toward maintaining momentum is to begin addressing the key questions and issues outlined in the section below. These questions will delay progress toward a permanent solution until they are addressed. ADF&G representatives at the work group session made verbal commitments to explore these issues. Their efforts will be more successful if they receive support from a formalized working group and the legislative branch.

That said, it has been clear throughout the project that the specific information desired by SWAMC will only be provided by a clear, long-term solution that moves the collection of accurate crew data to the same level of effort that government currently places on permit-holder data.

Addressing Key Questions and Issues

The study group believes that SWAMC has been interested throughout the project in either Path 3 or Path 4, which would lead to the development of a permanent solution that accurately and consistently provides desired data on seafood harvesting labor on an annual basis. This study identified key questions and issues that must be addressed before the long-term solution envisioned in Path 4 is possible. The most important of these questions and issues are discussed briefly below. Note that many of these questions and issues also apply to Paths 2 and 3, and that Paths 2 and 4 could be pursued concurrently.

There are differences in perceptions about what the current system is capable of accomplishing

There was disagreement among work group participants about what the current data collection system based on crew licenses is capable of accomplishing. Some participants who had worked with the data in the past indicated that they believed they firmly understood the limitations of the current system, and concluded that it was not possible to achieve the kind of employment data that are needed solely by improving the current system (Path 2). Others said that they felt the capabilities and limitations of the current system are not completely understood, and that changes to the system might

address many of the perceived data gaps. Clearly, key stakeholders must agree about the capabilities and limitations of the current system and the need for an improved system before significant progress can be made.

Thus, a key effort to resolving this issue is finding a mechanism that generates a consensus on the need for significant change. The work group session was a first step in building that mechanism. By the end of the work group session it was clear that many parties recognized the current system's limitations. That said, unofficial acknowledgement in a small work group is not the same as official and public recognition. The latter will be needed to move any substantial effort for more extensive change (Path 3 or 4) forward.

We need to clarify implications of confidentiality laws and inclusion of crew information on fish tickets

Several of the long-term options discussed during the work group session included the idea of including crew identifiers on fish tickets or eLandings records as a way of recording crew participation in fisheries. This change would be at the heart of most approaches to Path 4.

While there was broad support in the work group session for this concept, several participants raised concerns about confidentiality issues. The key question is whether including crew identifiers and other information on fish tickets and/or eLandings would necessarily give crew legal access to information on the fish tickets and, if so, to what information. This question will have to be answered by legal counsel and may require a court decision in the long run. If crewmember data are treated in the same manner as vessel owner data, crewmembers will not automatically have access to harvest and price information included on fish tickets. However, if crewmembers are treated like permit holders, they would have access to harvest and value data that they are not currently able to access. Thus, there are important unanswered questions regarding the use of fish tickets to record crew data:

- Will crew be able to access fish ticket data beyond their own participation?
- What is the functional effect of allowing access to more than just participation data?
- Is potential access by crewmembers to more than participation data a political obstacle that would stop forward progress in developing any new system of data collection?

Path 4, which involves including unique crew identifiers to fish tickets and/or eLandings, raises a variety of practical issues relating to how difficult this change would be. Examples of these issues include, but are not limited to, the following:

- Can fish tickets physically hold more information? Some participants indicated that the fish ticket has reached its functional limit in the amount of information it can collect.
- How much time and effort would be required of permit holders and/or crew to include this information?
- What additional burden would be placed on processors who, at present, bear responsibility for the accuracy of the information on fish tickets?

These issues were raised by the work group, and were cited as potential arguments against this approach. Without more information, the extent to which they are valid or significant concerns is unclear.

We need to ensure accuracy and completeness of current data first

The work group expressed varying levels of faith in the accuracy and completeness of data currently collected from crewmembers. However, there was consensus within the work group that a logical and

prudent first step in any process to improve crew data collection would be to ensure that the current system collects accurate and complete data. One fact that came to light during the work group session was that license holders are not required to show photo identification when purchasing a license. While checking an individual's driver's license or other means of identification would seem to be a logical step in ensuring the accuracy of collected data, there was some concern from ADF&G work group participants that vendors would be unwilling to demand that applicants provide some means of personal identification.³

The work group discussed several steps to ensuring the accuracy and completeness of current data:

- Checking the photo identification of crew license applicants to ensure that data recorded on licenses are accurate
- Automating the current license application system to include better online options and encourage more online participation
- Creating a professional crew license containing a barcode that could be used to record participation in fisheries

Understand how the current vendor system is important to stakeholders

The work group repeatedly heard concerns about the current vendor system for issuing commercial crewmember licenses. The system is composed of many small and large retail vendors. Licenses are recorded on paper and copies are forwarded to ADF&G for data processing. Although this low-tech approach makes licenses easy to acquire and replace even in the most remote locations, it requires extensive labor both for the vendor and ADF&G. Key questions that need to be answered include:

- Is the state willing to allow the vendor system to change? Does the system serve the licensing program or does the licensing program serve the vendor system?
- How expensive would it be to replace or modify the vendor system with a system that would issue more durable licenses that can interact with modern technology?
- Would there be long-term cost savings by replacing paper licenses that need hand data entry with an all electronic system?

In recent years, licenses have also been available on the Internet. If an applicant purchased a license in previous years, the Internet application automatically completes the applicant's address if he or she enters the exact name and birth date used in prior years. Thus, ADF&G is already using an option that could affect the current vendor system. The authors note that if the system is capable of retaining an individual's address from year to year than it also might be capable of retaining a permanent identification number from year to year.

³ The same vendors also sell recreational fishing licenses and photo identification is required to purchase these licenses.