

ALASKA NATIVE SCIENCE COMMISSION



SOUTHEAST ALASKA REGIONAL MEETING REPORT

Front Cover: Tlingits in Ceremonial Dugout Canoe in Haines, Alaska. Photo credit © Alaska Division of Tourism.

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A report of the Alaska Native Science Commission



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TABLE OF CONTENTS

Executive Summary	5
Background	6
Methodology.....	7
Meeting Overview	8
Key Issues and Concerns Raised by Native Participants.....	11
1. Climate	11
2. Community.....	12
3. Development/Industry/Economy	12
4. Education.....	16
5. Environment/Contaminants	16
6. Health	18
7. Language.....	19
8. Subsistence	20
9. Traditional Knowledge.....	22
10. Traditional Knowledge and Western Science.....	23
11. Wildlife.....	25
Recommendations.....	27
1. Development/Industry/Economy	27
2. Education.....	27
3. Environment.....	29
4. Health	29
5. Subsistence	30
6. Traditional knowledge.....	31
Revisiting Issues Five Years Ago.....	33
Appendix A: Participants.....	35

Appendix B: Transcriptions from Speakers37

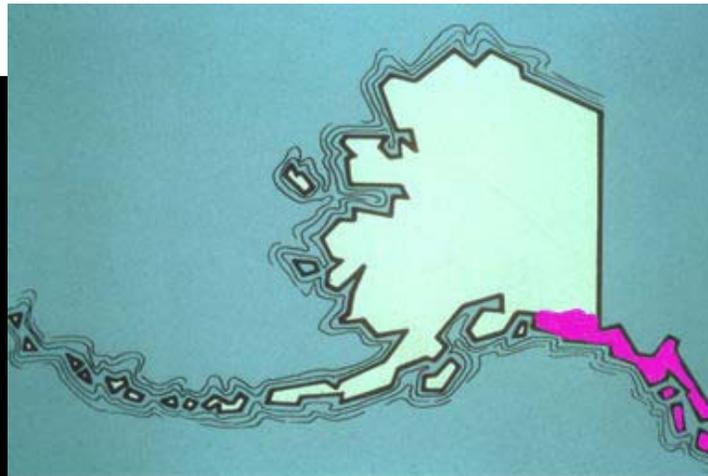
- 1. Opening Remarks-Patricia Cochran, ANSC..... 37
- 2. Presentation by Judy Ramos, “Traditional Ecological Knowledge of the Tlingit People Concerning the Sockeye Salmon Fishery of Dry Bay – Gunaxoo.”38
- 3. Presentation by Judy Ramos, “When the tide goes out our table is set”41
- 4. Presentation by Jack Lorrigan of the TASSC Gull Egg Study43

EXECUTIVE SUMMARY

On January 22 and 23, 2004, the Alaska Native Science Commission (ANSC), funded by a grant from the National Science Foundation (NSF), brought together a group of 40 individuals to discuss opportunities, interests, and needs for developing community research priorities in Southeast Alaska. These individuals included: representatives of local Southeast communities; the Sitka Tribe, Hoonah Indian Association, the Yakutat Tlingit Tribe, the SEARHC Earth Study, and ANSC board members and staff. This was the third meeting in a series conducted by the ANSC to develop future research projects and to find out the Native communities' priorities for research of interest to communities and regional organizations.

This report summarizes key concerns and research ideas for the Southeast Region of Alaska. Quotes from participants in the talking circle are organized by the topics: climate, community, development/industry/economy, education, environment/contaminants, health, language, subsistence, traditional knowledge, traditional knowledge and Western science, and wildlife. Participants also provided recommendations on development/industry/economy, education, environment, health, subsistence, and traditional knowledge.

Five years ago, the Alaska Native Science Commission held a similar meeting in Sitka to discuss changes and concerns identified by people in the Southeast communities. Participants who attended both meetings brainstormed issues that were raised in both meetings and progress that has been made in addressing them.



The communities represented in the Southeast Regional Meeting include Angoon, Hoonah, Kake, Ketchikan, Metlakatla, Sitka, Wrangell, and Yakutat.

BACKGROUND

In 1993, the Elders' Conference at the Alaska Federation of Natives (AFN) Convention, made a recommendation to have the Alaska Native Science Commission (ANSC) formed. This recommendation was passed by the full body of the AFN.

That's how we got our start. The Elders felt that our Native villages were not being fairly represented in the science and research going on in their communities. There were many instances where researchers were coming into villages but the villages didn't know what the researchers were doing. The researchers would leave and not come back. They wanted us to help make better partnerships; make researchers and communities work more effectively together. Our start was through the AFN and the University of Alaska and the NSF. NSF has funded us from the very first planning grant. They have continued to help us to grow and build some of the Science Commission programs. NSF has been visionary. It is one of the few major research organizations that funds research for traditional knowledge ("TK"). They understand that TK is as important as physical sciences. They understand the knowledge and wisdom that comes from communities--they actually fund projects to do our own research.

~ Patricia Cochran, ANSC

ANSC was created to bring together research and science in partnership with the Native community. It serves as a clearinghouse for proposed research, an information base for ongoing and past research and an archive for significant research involving the Native community.

Part of the ANSC's mission is to facilitate positive relationships among local, regional and statewide organizations and federal agencies, including, specifically in this case, NSF, and Alaska Native communities. To do so, the ANSC holds regional meetings throughout the State, and invites interested Native leaders, Elders, hunters, gatherers and young people from many communities as well as NSF-funded researchers to share their concerns, interests, and priorities for a research agenda. The main purpose of these regional meetings is to gather information about Native concerns for NSF and NSF-funded researchers.

METHODOLOGY

The regional meetings are conducted according to Native ways of knowing and Native ways of building consensus. Each regional meeting takes place over two to three days. The selection of participants (See Appendix A) to the Regional Meetings is an interactive process, involving a local steering committee from the region that assists in identifying Native Elders, culture bearers, hunters, youth, gatherers, resource managers and Native scientists. The project team notifies all regional profit and non-profit Native corporations, health corporations, tribal organizations and councils, and municipalities about the Regional Meetings and the participants representing their communities.

The meetings are held in a traditional “talking circle” format. The talking circle begins with a prayer and traditional introductions. The circle order of speakers goes clockwise in respect for the cycle of life and mother earth. These basic rules apply to the talking circle: (1) respect for confidentiality; (2) respect for each person in the circle; (3) each person is given a chance to speak without interruption or comment. The circle of speakers can go around multiple times to give those who want to share more time to do so. Then the order of speakers varies according to the topic being discussed. The circle ends with a closing prayer.



Elaine Abraham (ANSC Board) engaged in discussion with Southeast meeting participants.

MEETING OVERVIEW

The Southeast Alaska Regional Meeting was held on January 22-23, 2004, in Sitka, Alaska. On the first day, participants heard formal presentations from Patricia Cochran of ANSC, Judy Ramos of the Yakutat Tlingit Tribe and Jack Lorrigan of the Sitka Tribe of Alaska. (See Appendix B for the full text of their presentations.)

Elaine Abraham opened the meeting with a prayer followed by Patricia Cochran, Executive Director of ANSC, thanking the Sitka Tribe for permission to meet on their land. Patricia gave background information on the role of the ANSC in helping communities and western science researchers to come together and further science needs and agendas at the community level. She emphasized the importance of engaging the western scientists in working together with the local community on projects of interest to both parties. (See Appendix B-1.)

Our goal here is to help identify what your issues are from the community perspective. Today we are focusing on more than just researchers coming in to research us, but our focus is also on what we, ourselves, are doing in our communities. What projects do we have going on? What issues do we want to see raised? What problems need looking into? What are our concerns about our environment, our health, our animals, the air, water, land? We want to focus on all of the things that are important and critical to us as Native people. Our goal is to have these things identified from the community perspective, from the Native people themselves. So that's our mission here. To help put together priorities and recommendations that come from the community level.

~Patricia Cochran, ANSC

Judy Ramos, principal investigator of the Yakutat Tlingit Tribe made presentations on two of her recent studies in the Southeast region. The first report focused on the traditional knowledge of the Yakutat people concerning the salmon of the Dry Bay area. It was a collaborative effort between the Yakutat Tribe and the National Park Service. Judy was the principal investigator for the Yakutat Tlingit Tribe. (See Appendix B-2.)

One of my main focuses was on the Tlingit world view about salmon. Tlingit beliefs go back to when people were still living in darkness. They wore fur robes and after Raven stole the sun, moon and stars, he opened the box to daylight, and all the people turned into the animals of the fur robes that they were wearing. Because animals were once human-like and could understand humans, they are treated with great respect. The Tlingit people talk to an animal before killing it and explain why they have to kill it. They show the animals the same respect today that they have for generations.

~Judy Ramos, Yakutat Tlingit Tribe

The second study Ms. Ramos discussed was a subsistence survey of 139 households in Yakutat regarding subsistence use. The purpose of the study was to provide subsistence data that could be used by tribes and various different boards in regulating subsistence on federal and state land and waters. The study was conducted by the Yakutat Tlingit Tribe, with the cooperation of the US Forest Service, Juneau Forestry Sciences Lab, and the Alaska Department of Fish and Game, Division of Subsistence. (See Appendix B-3.)

When we asked them what their primary concern was, they said, protection of subsistence, to have subsistence as a priority without limits on their uses, and a priority on subsistence food. Subsistence should be year-round; it shouldn't be regulated in a time frame. They advocated stronger enforcement or policing of the management of subsistence.

Right now they have concerns about fishing because it is only on the weekends and they'd like to see it opened all week long. They felt fishing rods should be allowed. As for sport fishing, they feel the need for resident rules for subsistence salmon fishing at the Situk. Subsistence rules need to be changed to benefit the people of Yakutat. Rules have to be changed so it's a lot earlier. Sports fishing was a major concern because a lot of the fish is being taken out by sports fishermen. The charters, the local lodges and charters are taking too much of our fish, crab and shrimp. They are also afraid of the guides that are coming into town. Swarms have really moved into the area and they have taken a large chunk of our seafood. We can't get a lot of our clams, or sea urchins or anything in Yakutat anymore.

~Judy Ramos, Yakutat Tlingit Tribe

Jack Lorrigan, biologist for the Sitka Tribe of Alaska, followed Ms. Ramos with a presentation of the Alaska Sea Otter Commissions' study on seagull eggs. Gull eggs were one of the subsistence foods that had not yet been tested for contaminant content and this study investigated the safety of eating gull eggs. The study showed gull eggs from Alaska to be essentially as safe to eat as chicken eggs. (See Appendix B-4.)

The study had such a rock solid QAPP and scope of analysis, that it's become the cutting edge, state of the art seagull egg study in the Northern Hemisphere. It'll be used for reference in studies in Norway. Alaska had far less signs of contaminants. Our highest concentration was 447.62 nanograms per gram in Unalaska, and that was the highest reading we had and it's still below threshold. Norway has up to 2290 nanograms per gram, way, way above a safe level of eating in that country. So we're still safe to eat the eggs for traditional reasons. I think even safer if you do the traditional way of casting the first egg out of the nest and harvesting the second egg laid.

~Jack Lorrigan, Sitka Tribe of Alaska

After the formal presentations, this meeting was conducted in the traditional "talking circle" fashion which invites all participants to share openly in the discussion. Local community and regional Native

representatives shared concerns about the health of their culture, language and communities, the responsiveness and lack thereof by state and federal agencies to needs of communities especially as related to subsistence hunting and fishing, compensation for and recognition of need for traditional knowledge shared by Elders and Natives with researchers, and changes in wildlife they depend on for subsistence. After voicing concerns and priorities, the group focused on making recommendations on development/industry/economy, education, environment, health, subsistence, and traditional knowledge. Finally, issues raised five years ago at a similar Sitka meeting organized by ANSC were discussed.



Totem Poles in Klawock, Southeast Alaska Region. Photo credit © Alaska Division of Community and Business Development.

KEY ISSUES AND CONCERNS RAISED BY NATIVE PARTICIPANTS

Ms. Cochran invited each community representative to make a statement about concerns they want researchers and scientists to focus upon. The issues and concerns raised by the Native participants follow in their own words and are grouped in subject areas similar to those cited in other ANSC Regional Reports for comparison purposes.

I. Climate

◆ Acid Rain

“Twenty years ago, you would see the designs on those rocks and they were well marked, well defined, and they had stories that go with those rocks. In the last 20 years, the climate has changed. And I don’t know what we can do about it, but I think it’s connected with the rain. The rain is doing something to these rocks. There’s a whole cemetery here in town – all of the headstones, all of the names on the headstones, are all worn away. That’s only within the last 20 years. So I really encourage someone to look into this. What that acid rain is doing to the Tongass National Forest. The Tlingit people are one of the few tribes in this country that live within the confines of a national forest. And something is going on in this forest that concerns me and that’s acid rain. So I hope that we look at this and explore some answers or at least identify if it’s a problem at all.” (*Bob Sam, Sitka Tribe of Alaska*)

◆ Cedar Bark

“I know cedar bark we harvest that, in the Sitka Sound and it’s not reseeded. You’ll see the trees out there, but it’s not going to be cedar because of climate change.” (*Helen Dangel, Sitka Tribe of Alaska*)

◆ Glacier Melt

“Now when I fly over the Yakutat Bay area, that glacier has receded, I’d say 10-15 miles back and there are four glaciers feeding that area and there is not much ice in there. So I don’t know where the thousands of seals are going now.” (*George Ramos, Yakutat*)

◆ Swamp Grass

“We see changes in the swamp grasses we use for medicinal purposes.” (*Ruth Demmert, Kake*)

2. Community

◆ Elders as Respondents

“One of the concerns I have is that in the community of Hoonah, for one reason or another, we are inundated [with] many studies that need to be done before we can get regulations changed. Many times we have to go back to the Elders, time and time and time again and they are just getting really tired of us coming to them. They don’t speak about just one issue when they talk with us, but then each study requires that they be re-interviewed and so they get really tired of us coming to them. When they see us coming, they just say ‘I’ve had enough.’ There’s a group of them that we’ve hit probably 20 times at least in the last 2 years that I know of. I think that’s a real problem. So there is a real duplication of information.”
(Johanna Dybdahl, Hoonah Indian Association)

◆ Funding for Studies

“When I spent a few months working with the EPA’s GAP program in Anchorage, one of the things that I kept running into when I was reading the files was that almost all these communities are asking million dollar questions, so funding is an issue which I think needs to be addressed by all tribes and pursued more aggressively. Our U.S. government just sent \$87 billion over to a brand new Iraqi government, our tribal governments are however many thousand years old, and we hardly get anything from them. And we have real third-world issues in some of these communities, not only up in the interior and western coast, but down here also in some of the smaller villages. So funding is an issue.” *(Jack Lorrigan, Sitka)*

◆ Results of Studies to Communities

“I’m also very concerned about the long, long wait for the results of these studies, or we never, ever see them.” *(Johanna Dybdahl, Hoonah Indian Association)*

3. Development/Industry/Economy

◆ Cruise Ships

“My first concern is the gray water that is discharged from cruise ships in our waterways. The numbers of ships are getting smaller, but the ships are getting bigger. Another one which really concerns me would be those ships bring in ballast. I’m concerned about organisms that may be displaced and flourish in our waters, affecting marine life in that marine water.” *(Ray Nielsen Jr., Sitka)*

“My biggest concern is the cruise ship industry and its impact on the harbor seal populations which have declined by 2/3 in Yakutat Bay in the last 10 years. I try to put myself in the position of what would the seals feel like when these cruise ships come by. Imagine: I’m sitting on my home, an iceberg, I’m safe there from predators, it’s all packed in real nice, and then all

of a sudden, what's this? Something big coming. It scares me. I jump off. As soon as I hit I hear, umm, umm, I hear a thump and a thud and the prop and engines from these big tour ships. I go into a panic. I can't go upstairs, I can't stay in the water, what do I do? I stick my head up to try to figure out what I'm going to do and what's that strange smell. What is invading my home? Exhaust from diesels, exhaust from all the gas engines, and then after it goes by, what happens? Oh, man! The water – what is wrong with that water? I can't even get my mouth and my nose into it! What is it? Those cruise ships dumping into the ice all their liquid wastes! There's ice all around the boat. Nobody can – they can take pictures of it – but nobody's going to say anything because they can't see the black water and the gray water being discharged from these boats. And then what else? As I'm trying to swim around to try to find something to eat, and I can't find anything to eat because all the food is gone so what do I have to do? I can't hang out there anymore, so I have to pull out. I have to get out of there so I can survive. What would we do if something like that happened to us and our home? We would jump on a flight, on a boat, on the ferry, we'd jump on an airplane and get out of there; find someplace to go. Would we go back? No. My children, my grandchildren, my great-grandchildren, what are they going to hunt when they go up the Bay? I brought my kids up there. They all know how to hunt. They chose not to stay there. If there was ever another depression, they would come back because that's where the fish are at. That's where they hunt the seal, that's where the food is at. They will come back. But if this continues, they will have nothing to come back to.” (Walter Johnson, Yakutat)

Walter Johnson (*Yakutat*) talks about fishing with Matt Kookesh (*Angoon*) on the left.



- ◆ Farmed Fish

“I’ve been a fisherman all my life. The farmed fish is ruining our wild fish. Not only through disease, but they are bigger and faster, and the same ages as the wild fishes and they are taking the resources and actually will eventually eliminate the wild fish. The only thing that I see that is going to stop the farmed fish is if people quit eating them. Otherwise our wild fish is doomed to eventual extinction. If you have ever taken a farmed fish and compared it to a wild fish, you would know the difference immediately. First, the meat is soft. The hide is real thick and hard to cut. The flesh is just like a pink salmon, not a king. You can’t cut it, it squeezes out the side. And the taste is more like a soft mushy type of fish. It’s not firm like the wild fish is. Most people that are buying the farmed fish do not know the difference between a wild fish and a farmed fish because if they did, they would buy the wild fish and have that as a specialty food. I may exaggerate a little bit on the farmed fish, excuse me, but I’ve been a commercial fisherman all my life and I continue to do so and I don’t believe that the farmed fish of the west coast or anywhere else has any place in the wild sea.” (Walter Johnson, Yakutat/Wrangell)

- ◆ Logging

“I’d like to also add one other issue, and that has to do with the effects of the log transfer facilities that are associated with the Southeast logging operation which our community has seen and experienced to affect areas where halibut and clams and other shell fish were once gathered and are no longer harvested in that area. Crab and other things that aren’t in an abundant supply as Elders and people that remember 30 years or more back experienced. Things right around the village. Now obviously people chose the site of that village because it was an area of great abundance and what we’ve seen is that as we’ve developed as a modern community, areas immediately around the village are no longer available for the harvest of most traditional foods and one of the aspects is the timber harvesting and the storage of bark logs in the water. Where the bark settles changes the acidity of the water and covers the water destroying the natural reproductive ability of that area.” (David Belton, Hoonah Indian Association)

- ◆ Oil Spill and Commercial Fishing

“I have another problem that I feel is something pertaining to all fishermen in Southeast, Bristol Bay and all the rest of the areas. 1987 was the biggest year, the best price of fish that I had ever seen in Alaska. In 1989, the price dropped drastically, between 40 and 75% drop. The reason the price dropped was the Exxon Valdez oil spill. Now during that time, they were taking names up in Anchorage of people who were affected by the oil spill. They excluded all of Southeast, excluded Bristol Bay and North. All they included was Prince William Sound and their chain Kodiak Island. The problem with that is the price that we got for our fish in 1987 was the world price. In 1989 that price dropped and why did it drop? It only dropped because of Hazelwood and his mistake. Our fishing is still the same except that

the world quit all Alaska fish. They painted it with an oil brush. It didn't make any difference whether it came from Southeast, from Ketchikan, or Bristol Bay, from the Yukon River, Kodiak, it didn't make any difference where that fish came from. If it came from Alaska, it had Exxon all over it, according to the world price. Somewhere along the line somebody has to inform them that all commercial fishermen from Alaska have not been affected by that oil spill. There is no question in anyone's mind that we have been affected. Look at our price! Our price has never come back up to that same place where it was in 1987. In '87 we were getting \$2.80 a pound for sockeye in Yakutat. The closest we ever came to it since then is \$1.20." (Walter Johnson, Yakutat/Wrangell)

◆ Sports Fishing Lodges

"When I was doing my household survey, the biggest concern that all the households brought up was the impact of the sports fishing. All the households said that the sports fishermen are taking way beyond their limits; they are not being limited; no one is enforcing the sports fishing and they're taking more than they should. What they are seeing is that there are 4000 anglers coming into Yakutat. Four thousand salt water and fresh water anglers. Each of them takes a daily limit of 5-10 salmon. They are there for a week. That's about 25 -50 salmon. They are also allowed to take about 2 halibut a day. They are taking 2 halibut a day – if they're there a week, that's 10-14 halibut. What we see, if you ever sat at the Yakutat airport, you see boxes and boxes and boxes and boxes of salmon going out! None of those sports fishing lodges are owned by the local people." (Judy Ramos, Yakutat Tlingit Tribe)

"We also have concern in our area regarding a commercial operation fishing lodge business that really maximizes the take of primarily salmon and halibut. They work hard at it and they have a very efficient operation that is starting to generate serious concern. You can see on this gentleman's website because he documents it in an effort to get other customers to be interested to come to his business. He brings in groups of 50 and 60 people at a time for this week long 8-day period. And they maximize the sport fishing regulations which are like, 6 salmon and 2 halibut. These folks go home with hundreds and hundreds of pounds of fish, and over the summer, literally tens of thousands of pounds of salmon and halibut. I started just adding the figures up based on numbers of customers and the quantities that he was reporting each customer was averaging in their own facts, and it was astounding. It was truly astounding, so you're not alone in that concern. For us that are keeping lists, that's a genuine concern." (David Belton, Hoonah Indian Association)

"Speaking about charter issues, that's something that's definitely a problem up there in Yakutat. Someday, it's going to be a problem in the Pribilofs and in Nome and the Aleutians. They are businesses that started with the basics here and the trend to get more competitive, get more people coming from down South. Now these charter operations are switching from their start-up species of the big salmon and halibut to shell fish and abalones and shrimps and crabs and things that you wouldn't even think of. It really puts a stress on the

resources in the region here. I think you can look at Southeast and see at some point that's going to affect the rest of the state the same way." (*Mike Miller, Sitka Tribe of Alaska*)

4. Education

◆ Cultural Education

"Are we, as individuals, doing our part to pass on what we have been taught? In Kodiak, each school has Alutiiq week once a year. Why is it we have allowed just one week a year in our education system to teach our heritage, while the rest is teaching us about farms and goats and pigs and things that don't have context in our lives? Why aren't we taking part in that education and saying, look we have to take a role as individuals?" (*Sven Haakanson Jr., ANSC Board*)

◆ Youth

"In 20-30 years, our children will be the ones sitting at the table and it will still be the same issues. It is something that we all have to understand. We're fighting for rights for our children and our children's children. Our grandparents dealt with weather conditions, not regulations. It wasn't a matter of the 9-5 job; it was a matter of what you could harvest for food in the winter. A lot of this stuff got passed down and when we pass regulations, how much is getting through to the younger generation? Here in Sitka they have the dog fish camp where they teach the younger kids. A lot of this is going by the wayside and it's hard for a lot of people to understand why our kids don't have the skills for the subsistence lifestyle. But of course they have to go for their education -- it's hard then to include the kids in subsistence activities. We're pushing them out for the better education to do better than we did." (*Larry Willard, Ketchikan*)

"I think we young people got brainwashed by today's society and technology. A lot of people my own age don't even recognize there are Native problems and issues. They really don't believe that we have a fight. They don't know. Bryan Mallot came to speak to us and he said this is real. It's not a game. Alaskans are still in trouble and we have a big fight. The fact that our rules and regulations cause resistance is a problem. I know that personally because my dad always tells me that. He says, "I'm not listening, if I'm a hunter, I'll get a seal." So you know, I think the more we hear it from Elders, the more we hear it the better, because people aren't always listening and one of these days we'll catch on." (*Viola Stepetin, ANSC Board*)

5. Environment / Contaminants

◆ Army Waste

"In Yakutat, the Forest Service did a survey on the water near the airport water supply and they found that it was 12 times over the deadly amount that was acceptable to the human body, so they had to close the airport drinking water for public consumption. That

contamination was from the early Agent Orange that was sprayed in Yakutat. We used to call it the petrified forest because it was all gray from where the planes dropped the spray in testing it. When I first got to Yakutat, there was a place where they stored these big, huge round things that had an orange powder to them, and there were close to a dozen of them underneath the warehouse, they were just in heavy cardboard containers, left out in the weather when the army pulled out. It was right across from the Fish & Game and it leaked right into the water supply. Any time it rained, you could go there and see it. Almost everyone who was alive during that time had a bout with cancer.” (*Walter Johnson, Yakutat/Wrangell*)

“Another concern was the impact of the Army; the contaminants left by the Army. We are working with the corps of engineers, but they have no money to clean up. Because so much money is being taken by Iraq or whatever, there is hardly any money left to do cleanup of the contaminants they left behind on the land.” (*Judy Ramos, Yakutat Tlingit Tribe*)

“We found out that there was a lot of lead cable laid down during World War II around these islands in anticipation of a Japanese invasion. That line is copper and steel wire wrapped with paper then wrapped with lead. It’s on the bottom, and in most instances since our bottom is so rocky it’s hard to retrieve. When they left, they left it in place so you have these columns of lead influence on the shoreline around here. It happened pretty much everywhere, so there are miles upon miles upon miles of this stuff all over this place. The cable is degrading right here at Sitka where the herring spawn takes place, and abalone, and other shell fish harvest takes place. One of the professors at Sheldon Jackson who has since passed on, said that when the lead cable comes into the oxygen zone, the lateral zone when there’s wave action, it becomes a battery which degrades the lead a little faster than if it was in a quieter setting down deeper. So when you get tidal and surge and all the oxygen moving across that lead cable breaks down into a white powder. Once it’s turned into that form, it’s too late. So it’s best to retrieve it in the whole metal form. It’s still an issue. The Army Corp of Engineers told us that since Sitka Sound had such a large volume of water, that the effect of the lead cable would be insignificant. My response to them was that, how come Congress banned lead shot in shotguns in wetlands if there is such a large expanse of wetlands, why is it important to take care of lead shot and not lead cable?” (*Jack Lorrigan, Sitka*)

◆ Contaminants

“In Hoonah there were concerns that when the power plant was moved from the center of town that transformers were buried there. In Hoonah they have an inordinately high rate of cancer. I’m not so sure it’s just the small population--I think it’s from stuff that was dumped.” (*Michael See, Hoonah*)

- ◆ Herbicides

“I think it’s Klukwan that wants to spray herbicides. They want to increase forest growth on some of the clear cut areas and knock back the shrubs. But the people of Haidaburg are extremely concerned because their traditional territory is going to get sprayed. They are worried about what will happen once that stuff runs off from the prescribed area and into streams and what it will mean for quality of the foods they gather from that area. When it gets sprayed it’s not going to stay right where it is.” *(Jack Lorrigan, Sitka)*

- ◆ Mining

“Right here in Southeast we have concerns about the mines that are coming into this area. There is a lot of it; for example, there are two in this area and one in Canada. The discharge from those mines there are a real concern for Angoon, Hoonah and Kake. Especially Dunes Pike Mine because they just increased the mine tailing and its going to be a real problem for 50 years.” *(Matt Kookesh, Angoon)*

- ◆ Toxic Waste in Deep Bays

“Yakutat Bay as we all know, you can see it. There’s a big reef right in front of the whole Yakutat Bay. Fifteen fathoms is the deepest where it comes over. It goes down to 70-90 fathoms inside which makes it a big hole. When these ships dump all their toxic wastes in the water in that Bay it settles to the bottom. Most bays have tidal action that cleans it up a little bit. Not Yakutat Bay. It’s just a big bowl where the water comes in and the tide comes in and mixes it up, but when it goes out, the only thing that goes out is up on top. The bottom stays calm. And what happens, all that toxic waste stays on the bottom. It doesn’t go anywhere, it doesn’t rinse out like in other places because it’s in a bowl. It’s our feeding bowl. That’s where our halibut, our crab, all our fish go through and that’s what we’re faced with.” *(Walter Johnson, Yakutat)*

6. Health

- ◆ Diet

“Something that has concerned me for a number of years, as we talk about taking in all these contaminants and pollutants, is that there seems to be little understanding of the traditional ways of cleansing the body of all these contaminants. Our bodies have evolved to go through a feast and famine type lifestyle. There is abundance and then there are hard times and your body adapts to that. Now we’re all getting big because it is constant feast. We don’t have famines anymore. We used to use sweat lodges, and fast for whatever religious reason which would let the body cleanse itself. [This would allow] the body [to] get rid of everything that it had taken in over a year or so, but we don’t do that anymore. This stuff comes into the body so we need a mechanism for it to leave the body, if we allow it to.” *(Jack Lorrigan, Sitka)*

- ◆ Lindane

Lindane is an issue that has been raised by a number of organizations. In short, it is a very strong pesticide that is used in a lot of public health products; primarily to treat head lice and scabies and things like that in schools. My understanding as I learned more about it is that many of these products are used quite heavily in the villages and in remote areas where this can be a very severe problem. What we're finding scientifically now is that lindane is a very serious health risk, and we're putting it on our children. Schools are using it." (David Belton, Hoonah Indian Association)

7. Language

- ◆ Parents Involvement

"We need to get the parents involved [especially] the younger parents, because two generations lost their speakers, even folk gatherers. So they've been asking for a culture camp also. I learned these things from my grandmother, she took my hands and told me, "stand right here, you'll learn because there will come a time when you will have to be doing these things and teach them also." (Ruth Demmert, Kake)



Totem Carver from Ketchikan, Southeast Alaska Region. Photo credit © Eric Luse, Alaska Division of Tourism

- ◆ Teach the Language to Adults

“To get or create an interest for the youth, the bottom line is teaching the language to adults. The parents are the key to the children. But a lot of parents, like myself, are embarrassed because we don’t know how to speak the language. So there’s a barrier right there to learning knowledge. But I think once the adults, the parents and the children learn, everything else will fall in place. We’re doing everything already, the songs, dance, arts, but we’re bypassing the language, and I think if we concentrate on language, for everybody, then traditional knowledge will come back.” (*Matt Kookesh, Angoon*)

- ◆ Two Worlds

“I find it a very difficult sometimes to try to balance the two worlds that we live in. My uncle used to say to me, our language is going to be lost. Our way of life is going to be lost. It is with regret that I have to say I did not teach my children their language. When I look back at it from the first part of the 1900’s we did lose a lot of our language, so our young people cannot speak their language.” (*George Ramos, Yakutat*)

8. Subsistence

- ◆ Regulations

“There are regulations in place today in the very places that my forefathers used to go to hunt and fish for their subsistence, which require us to pay \$300 to stay in that area. What am I going to tell my children and my grandchildren? “This used to be your land, but you can’t go there anymore. It belongs to the Wrangell National Park or Greenpeace.” So I look at this time and again, “I’m a prisoner in my own land” and it’s sad. I have to keep fighting because they won’t recognize that we think of subsistence as a way of life.” (*George Ramos, Yakutat*)

“Juneau has the dilemma too because they give us subsistence halibut, but then they set this boundary which I know a lot of the local Natives are fishing grounds since we want to go out and fish halibut, our good spots are inside that boundary. And the people from Juneau have a further boundary. They have to go almost all the way to Hoonah in order to set their subsistence gate. A lot of the Native people, like a lot of the Elders that have a subsistence license, cannot go that far. They call on us younger people to go fish their licenses for them for their harvest.” (*Larry Willard, Ketchikan*)

- ◆ Deer

“There’s a huge problem on Prince of Wales Island with deer. The ferry runs back and forth and it’s going to happen all over Southeast Alaska. Not enough deer for the people. If we have a bad winter in Sitka, people in Angoon and all the rest of them are going to be in bad shape. There are simply not enough deer to go around. The only reason we’ve been able to skate by is because we haven’t had any severe winters. On Unit 2, we took some action last year to restrict that to non residents – or non-subsistence users. We’re going to see more of that.

It's going to happen here in Sitka. Sitka sits on the bubble. It is a community that is rated non-subsistence by the Federal Subsistence Board, and it has to prove its subsistence characteristics to the board to be allowed to participate. That's on the hot seat." (*John Littlefield, Sitka*)

◆ Fish

"There is also a problem with the dog fishery. At certain times of the year there is a huge influx of dog fish into our community. That was one of the concerns people kept telling me about. There are a lot of dog fish. If you put a hook or line down, all you'd catch is dog fish. People said the run is about a mile wide column of dog fish that comes through here and eats everything in sight." (*Judy Ramos, Yakutat Tlingit Tribe*)

"There's been an article running on one of the local stations here about farmed fish from British Columbia and Chile. One of the things that disturbed me was a comment that farmed fish would be so available they would eventually replace the natural stocks because anywhere there is a farmed fish plan, there's tremendous detriment to the local stocks. If eventually the wild stock died off in a stream, then there would be no need for habitat protection. No need for water quality standards, or timber management since it would no longer be needed for a wild race of fish that no longer come back. That seemed to me the mentality of some of the people that were allowing these farms to go on. I think that would impact us around here quite negatively." (*Jack Lorrigan, Sitka*)

"The Fish & Game put a weir in a river. The reason for it is good. They say they count the fish as they go up into the lake. There's somebody out there counting the fish. If there are not enough fish going up river, they're supposed to shorten the commercial fishing season, but they are not doing that. The lake I'm talking about was good. When they put that weir across the river, there were a hundred thousand sockeyes in that lake. The number dropped down to 80,000, 60,000, 50,000, 30,000, 20,000, 15,000 down to 10,000 sockeyes and they still have that weir across the river! So what's happening? There's a little bay before you get to the river where the sockeyes school up when they open the commercial fishing season. And in one day they wipe out all the sockeyes that school up there. There's nothing going up the river, everything's wiped out. That weir is still there. The fish that don't get taken in the little bay, know how to get up the river. They come in on an incoming tide, they get to the weir, and they're stopped. On this river are sport fishermen, a whole bunch of them lined up all over the place. So the fish come in on a tide and they go back out on the tide, so the sport fishermen get another chance at them. Next tide coming in, they do the same thing. The sport fishermen still get them. So the sport fishermen get three tries at that one sockeye going in and out. If that weir wasn't there, the fish comes in on the tide and it goes up to the lake. The sockeye has to spawn in the lake. Not in the river." (*Paul Jackson, Sitka*)

- ◆ Lack of Time

“I think a lot of the things that we’ve lost is through assimilation. Years ago, if you wanted to eat you had to go hunting, you had to go fishing, you had to go out and get your food. Now we are becoming more like the white people, going to work at a 40-hour a week job, and trying to maintain the lifestyle that is expected of what they consider to be ‘average’ people. To many people, subsistence is becoming a hobby. The only time they do it is on weekends. The more white we become, the less subsistence there is going to be. That’s what I believe because there is not enough time for it. Subsistence is not a part-time thing. It takes a lot of work. You can’t just do it on weekends.” *(Mike See, Hoonah)*

- ◆ Sea Otters

“The sea otters have a big impact on our village and our food because there are a lot of sea otters. They eat all the shell fish and crab and we can’t get sea urchins or gumboots anymore.” *(Judy Ramos, Yakutat Tlingit Tribe)*

- ◆ Subsistence Defined

“Even the term subsistence is not our own – the definition is what you need to live. And how can any person – I challenge anybody here – how can you tell me what I need to live? How can you base what I need to live? So how can they put limits on what I do? I go out and I provide food for about six families that I take care of all the time, and sometimes when I go seal hunting, I’ll provide food for as many as 13 families at a time.” *(Mike See, Hoonah)*

9. Traditional Knowledge

- ◆ Elders Dying

“Larry identified an issue that we’re seeing in other regions as well, and that is the passing of the Elders, whereas the younger people aren’t carrying on the traditions. We see that in, for example, with polar bears. We’ve mapped about a 39% decline on a yearly basis of the take of polar bears because the old hunters have passed on and the younger people aren’t utilizing polar bears like we used to. It’s an issue that not only lies in Southeast, I think it’s statewide, that the younger people are not carrying on some of the traditions on subsistence and the use of subsistence resources.” *(Charlie Johnson, ANSC Board)*

- ◆ Nature’s Calendar

“I just want to say that nature has a perfect calendar. You know herring spawns in the springtime, and just about the time some young salmon are migrating into the sea, after a good spawn, especially in Sitka Sound, you’ll see the whole ocean water is cloudy. Take a quart jar and scoop off the water. If you have good eyes you can see the young herring. The salmon does not have to chase those young herring. They ingest it just as they breathe the water and

they grow fast. Nature is perfect in keeping that salmon into the ocean. Just about the end of the summer salmon season, you'll see bundles of kelp drifting around Icy Strait Point, drifting out to sea. If you row up to one of those bundles of kelp and splash it, you'll see all the young salmon using it as a hiding place, drifting out to sea. Where the homing instinct comes from we don't know. The Lord made them that way. Salmon will keep returning if the environmental calendar is not upset." *(Mark Jacobs Jr., Tlingit-Haida)*

◆ Youth Not Interested

"The young people are no longer interested in going out and doing the things that their ancestors did. We find that [to be] a very big problem here in Southeast Alaska. Our young people have no interest in what we do which our ancestors have done in the past. All these things that we do as Native people, the non-Native can see the value of that, but the young people cannot. How do we get these young people interested in what we want to teach them? We have teachers, we have people who can teach, but we don't have the students, the young people who are interested in what we should be teaching them. So we're falling down, we're declining as people who can do these things, and we find that all over Southeast, and I've seen it here in Sitka where we have some very fine teachers. But the students aren't there. How do we get these young people interested in what we're doing? A celebration was created to get the interest of the people – not only the young people, but everyone. But now that's fading away. It's no longer used as a teaching tool. It is used as a show. We have to take these things into consideration, when we have the opportunity to get the interest of the young people, I think we should grab it. And we're not doing that. When I was a kid, we used to have a free smoke house. It was a great big smoke house where they put up everything that we were able to put up for the winter. That was what we called a supermarket of the Tlingit food. Because everything that was edible was put up for the winter. The young people would go out and get all these different things, and bring them into the smoke house. Then our people would take over and smoke it and dry it and put it up." *(Paul Jackson, Sitka)*

10. Traditional Knowledge and Western Science

◆ Documentation

"My issue is documentation of the results so that we have credibility in the scientific community." *(Doug Dobyms, Sitka Tribe of Alaska)*

◆ Intellectual Property Rights

"I'm a walrus hunter and I work with polar bears. About 25 years ago, I took a U.S. Fish & Wildlife "walrus" expert out and we went walrus hunting. I showed him how the seals tell us where the walrus are even though you can't see them or hear them. And I showed him that, the ringed seals will tell us where the bearded seals are and they will tell us where the walrus are. And this has been passed down from generation to generation. It was in the old days

when the uncles taught me that. In the old days, when they just had paddles and sails. It was a very dangerous activity, so you wanted to be able to find the walrus as quickly as possible. The way it is that the walrus will be in an area here, and about 2-3 miles out will be bearded seals and then about five miles out will be ringed seals. So if you keep running into ringed seals, you know you have to take a left or a right. And then if you run into bearded seals, you know you're on your way to the walrus. And that was real important in those old days when you only had paddles. They had to be able to find them quickly and that was traditional knowledge that they discovered. Well after I showed him that, about six months later, there was a paper issued in one of the publications that this guy had discovered a special relationship between ringed seals, bearded seals, and walrus. And that it was the first time it was ever discovered. I was so angry I went to the regional director and guess what, he got fired! But he still would not retract the paper! He still claims that he discovered it. We have so many instances of that, where we have shown these researchers something and, you know, if he had even said he was confirming something that Native people had told to him in a scientific paper that would have been acceptable. But no, he discovered it on his own he said!" (*Charlie Johnson, ANSC Board*)

◆ Respect

"I want to talk about respect. The Tlingit culture is built around respect. Respect for all things, living and dead. Just because something dies doesn't mean you no longer respect it. You respect everything. We don't shoot animals to hang the head on a wall. We don't catch the fish until there are no longer any fish. We don't cut down trees until there are no longer any trees there. We have respect for all these things. We even talk to the trees before we cut them down, out of respect for that tree. We will take the life of a tree. That's a living thing. It's a living thing just like we are. That tree deserves to live just like you. And then you cut it down. We tell the tree people, when we cut you down, we will treat you well. We'll make a big canoe out of you and we will dedicate you. We'll treat you well. So when that canoe is finished, you dedicate it, you give it a name, just like a human being. Out of respect for that tree. When that canoe is no longer of any use to you, you get the opposite warranty – you chop it up and cremate that canoe. Just like you would a human being. This is out of respect. Respect for all things. What I'm getting at is that trophy hunters that come up here and hunt moose. They are looking for the biggest moose there is, and they get a big moose. Whether they use the meat or not, I do not know. That's a lot of meat. They have killed the biggest moose. Now that herd will decline because they have killed the biggest moose in that herd. So all that it will produce is small, sickly moose. So the wolves are put on this earth to kill small sickly moose. So that's what they're doing, is killing off the small, sickly moose. So now people want to wipe out the wolves. They want to kill all the wolves so the trophy hunter can once again shoot the biggest moose. To wipe out all the wolves! They're there for a reason. Everything we have on this earth is there for a reason, including us. We're here for a reason. So everything that is there, the wolves, that kill the small sickly moose, what will we do about these things?" (*Paul Jackson, Sitka*)

“Scientists coming in goes back about eight years. Traditional Knowledge, goes back a heck of a lot longer than eight years. I’ve been hunting and fishing all my life and I don’t have a degree. I don’t have anything to prove that I’ve been out there hunting all this time. But I don’t think there is any scientist that can outhunt me, or outshoot me, or out-fish me. Each person has their own specialty, and for our traditional knowledge, you have to recognize the fact that we’ve been out there doing these things all of our lives. It is a little bit hard for us to take when somebody comes in (some of these “professional people”) and start talking to us and we start telling them about what’s going on and they think we’re bragging and all we’re doing is stating some facts that we know. They more or less shut you off, turn away from you and won’t let you finish. Just because we didn’t go to school doesn’t mean we don’t know anything.” *(Walter Johnson, Yakutat/Wrangell)*

11. Wildlife

◆ Management

“I am on the re-authorization committee of the IPCMM, which means Indigenous Peoples Council for Marine Mammals. We have worked out language with the U.S. Fish and Wildlife and the National Marine Fisheries relating to co-management. There are a couple key issues we’re adding to the MMPA. That is the ability of a tribal organization to manage before depletion. As it is presently, a coastal Native has the right to hunt as long as the species is not listed as depleted. What we would like is for a tribe to be able to develop its own regulations in its own territory for the conservation of these marine mammals. For example, you might issue an ordinance to say that you don’t want any seal hunting during a specific time, like during pupping, or in a specific area. The way the law is now, you cannot issue such an order. So we want to be able to, as we call it, manage before depletion.” *(Charlie Johnson, ANSC Board)*

“The other marine mammal issue is the growing sea otter community. We’re not going to let them come in there and compete with us. It’s bad enough we’re competing with commercial traffic. So our concern is that there is no control over these marine mammals and there’s no plan to control them.” *(Matt Kookesh, Angoon)*

“The problem with otters: What limits us from hunting otter is the lack of a market. There is really no way to move a lot of hides. They breed faster than we can shoot them. There’s no reason to shoot them for no reason. There are some people who have some success in moving them, but there’s not enough demand to keep up with what’s being produced out there. Traditionally, the indigenous population had leather clothing or whatever, but they’d wear it out, so they’d have to get another one. Now you buy anything made with otter or whatever, it’s a novelty and you keep it and pass it down through the family, and it’s just one article. Historically, you used to wear this stuff out. You’d throw it away when you were done with it. The hair was gone off it, or it started to stink or whatever, you go get another one. We don’t do that anymore. I mean we have polyester and nylon and rayon to replace all

that fur use. That's another problem, that the trapping industry has been hurt by the anti-fur movement, of course, but that's probably where a lot of it comes from because they are reproducing faster than we can use them, and we don't use them the way we used to use them." (*Jack Lorrigan, Sitka*)

"I'm worried, that the decline in the seal population in Glacier Bay is going to drive the regulations to restrict or limit seal hunting in other parts of the state where there is no comparable decline in the populations." (*Mike See, Hoonah*)

◆ Harbor Seals / Genetic Studies

"I think my main concern in Southeast is the genetic studies that are being done on harbor seals. The reason I'm concerned about that is: there are five stocks of harbor seals in Southeast Alaska that are coming out of the genetic studies. What that is going to do if there is a crash in one area they can exceed potential biological removal (PBR) and therefore be restricted. A lot of these genetic studies being done are only reported to regional groups. I saw a little bit of it at the Harbor Seal Commission, which I'm a part of. These genetic studies need to be reported to the National Marine Fisheries Service, but not to the Alaska Scientific Review or Marine Mammal Commission. They also need to be reported to the communities because the pressure that is going to come to these communities is that they are going to have to develop management plans, and rebuild stocks. We don't have the capability of doing that. Yet, in order for us to control our harvest, if there is ever a crash in these small areas, we're going to have to do what Sitka Tribe is doing. Sitka Tribe is in the process of developing a management plan." (*Matt Kookesh, Angoon*)

◆ Seals / Tagging

"I've always opposed satellite tagging because it seems pretty traumatic to the seals. I realize satellite tagging is a real big help, but I just don't agree with it. I think if any satellite counting needs to be done, it needs to be done by Native people. We're the ones that should be the biologists. We're the ones that should be doing all that work." (*Matt Kookesh, Angoon*)

RECOMMENDATIONS

Participants brainstormed the following recommendations:

1. Development/Industry/Economy

- ◆ Make improvements to cruise ship industry

“Try to encourage a lot of different technologies. There were some of the older ships we used to work alongside because I used to work sometimes in this industry, we’d be alongside of them, and we’d see water, slap, slap, slap, from the vibration of the engines, and the newer gas turbine ships have cleaner emissions, they’re a lot bigger, so there’s a trade off there. But the smoke is a lot better. So encouraging the new technologies and keeping the older ships out of the area is a step in the right direction.” *(Mike Miller, Sitka)*

“Hoonah is in the process of trying to get cruise ships to come in there. I was wondering about looking into a study to show what conditions are now, so that we can then monitor and track the effects of having the cruise ships come in. I’d like to see us have something to compare with.” *(Mike See, Hoonah)*

“An additional aspect for your consideration might also be, and I’m thinking of what they are just now doing in Glacier Bay, is how much will we allow for this industry to continue growing? Do we want to start addressing some limits?” *(David Belton, Hoonah)*

2. Education

- ◆ Incorporate culture and language in public school curriculum

“One thing that’s happening in Hoonah is the incorporation of cultural, language, and natural resource focused programs into the curriculum. Something like that would start by interested parents and community members attending a school board meeting and making that an item for consideration by the school board. They would be the ones then to implement it down the chain of command through the superintendent and the principals and the teachers.” *(David Belton, Hoonah)*

- ◆ Give credit for Native dancing

“One of the things that the Anchorage School District is doing is they have incorporated a cultural program where Native students get credit for going to do Native dancing at the Heritage Center and they get credit for doing other things. A lot of them don’t realize the importance of getting their diploma, finishing their math, reading, English, and they really struggle with that. Part of the reason, I think is that a lot of them don’t have encouragement at home; they don’t have family support; and that’s the biggest reason they’re dropping out of high school. So one of the things I see as a young person, that we can all do, is just give

constant encouragement even if you don't know the young Native person. They really need that. Just a few words will go a long way with someone struggling with no peaceful life at home. They can actually get through high school if they have supportive people around them." (*Viola Stepetin, ANSC Board*)

◆ Model HSC Seal Program

"One good example of outreach to youth is the Harbor Seal Commission Seal program. This spring we had the meeting here in Sitka and we went out and got a couple seals. Then we went to the schools and had classes about the seals. John would speak to the traditional use of the seal and then we had a biologist that came and talked about the biology and taught the students how to take samples and all that good stuff. The kids got their little gloves on and took samples for Fish & Game. You could tell right away at least several of the kids were really interested. But if it reaches one or two kids, it's worth it." (*Mike Miller, Sitka*)

◆ Offer more internships

"One thing which I tried to hit on a little bit yesterday, if you have funding to do a bit of an outreach, whether it's through tribal governments or universities or schools would be to get some more intern positions. You [ANSC] have one, which is a good concept, but to expand that with more youths, not only interested, but maybe pursuing the concept that they actually can have a role. Just take whatever level you're doing that, but growing it, not only for this group but for other statewide groups to learn how to interact and use the traditional knowledge. Learn it and then use it in a meaningful way to change things." (*Mike Miller, Sitka*)



Tlingit dancers wearing bear ears headdress and button blankets in Prince of Wales Island, South-east Region of Alaska. Photo credit © Alaska Division of Tourism.

- ◆ Offer classes for adults

“I can’t speak fluently either, but I can understand very well. I think one way to get our kids to learn Inupiat would be to offer a class for parents and children to go to together and just have informal conversations with people who speak fluently.” *(Taqlik Hepa, ANSC Board)*

3. Environment

- ◆ Restrict ballast and other waste

“We need to restrict the amount of gray water, ballast and other waste that’s dumped in bays and harbors with deep bottoms and shallow mouths. We can’t regulate the tidal action, so the only thing we can regulate is the amount that’s dumped in. Hoonah has one of the best harbors in Southeast Alaska. At one time it was completely closed up, except for a small opening at one end. All the fish died in the harbor. They opened up one end of the harbor now so that there’s a flushing action. The only thing you can change is what goes in, because you can’t change the tide.” *(Mike See, Hoonah)*

4. Health

- ◆ Gather data on lifestyle and diet

“The EARTH study that I’m working with is looking at the disparities between non-Natives and Natives in Alaska and the Lower 48. If everybody gets involved and starts providing some of the information that we are looking for about how traditional lifestyles and diet are factoring into health and wellness, we’ll have that information which we don’t have. We don’t have a baseline for that kind of health information. That’s something to be a part of when you get an EARTH study. It stands for Education and Research Towards Health.” *(Teri Rofkar, Sitka)*

“Pursue some studies of how to get rid of some of the pollutants or contaminants we ingest that cause us ailments.” *(Jack Lorrigan, Sitka)*

“Lindane is a topic that is getting more and more attention and might be worth looking into further.” *(David Belton, Hoonah)*

“Another recommendation would be to continue your contaminants study to monitor the health of all the different resources. We need to identify how to get funds to continue to monitor taking samples for nutritional evaluation.” *(Taqlik Hepa, ANSC Board)*

- ◆ Promote nutritional value of subsistence or Native foods

“We need to promote the nutritional value of subsistence or Native foods. That will bring added benefits to our nutritional and our healthy well being as well as our cultural well being.” (*Taqulik Hepa, ANSC Board*)

5. Subsistence

- ◆ Study harvest practices / diet across state

“I would like to see how people’s gathering across the state is changing. Is it going up or down? I do a lot of seal hunting and just within my years of seal hunting, they say the harvesting of seals has declined. I found a lot of that is because the Elders are dying off and the younger people are no longer eating seal. They’d rather go to McDonald’s. The nutritional value that they are losing – not to mention the experience of harvesting – is a great loss to all of us.” (*Larry Willard, Ketchikan*)

“The Harbor Seal Commission looked at the decline of harbor seals from 2000 to 2002. That study showed a 36% decline of take by Alaska Native hunters across Alaska. I broke it down a little further and I broke Southeast out. Southeast had a 39% decline in harbor seal harvest in 2002 from 1992. So it is a concern. A lot of our people are starting to change their diet and I think this organization [ANSC] here or somebody needs to look at the evidence that’s there. It seems like this organization [ANSC] might be better suited to the task of looking at the change in diet of our people.” (*Matt Kookesh, Angoon*)

- ◆ Use Mountain Goat Wool

“I work with Mountain Goat wool. It’s a resource that’s very abundant. Even now, even the way the hunting is going on, it is a resource that isn’t used a lot. For good reasons, a lot of times the guys that are doing the hunting have all they can do to pack the meat out, much less the hide too, so I barter with the hunters right now. I do get the rawhide, but I think it’s a resource I wanted to bring awareness of to this group. I do raven’s tail weaving which is used for Chilkat as well. It could be used for a lot of things, like the kiviut is now.” (*Teri Rofkar, Sitka*)

- ◆ Ensure that tribal ordinances become federal ordinances

“Enforcement of tribal wildlife management regulations: What we want the feds to do, and we’ve worked out language to do this as well, is that if your tribe develops an ordinance to manage before depletion, then that becomes a federal ordinance. The feds then will enforce

that ordinance on anybody that hunts in your territory. Without that language, a tribe can only enforce on its own members.” (*Charlie Johnson, ANSC Board*)

6. Traditional knowledge

◆ Ask Elders now

“If you have any questions that you want to learn about the Tlingit people, ask the Elders now because our Elders are passing away very fast. People who have the knowledge are leaving us and there’s no way that we can ask them once we bury them. So we have to get into high gear and do all this studying among our people who have that knowledge. I would like to ask people who have that knowledge to meet, to get together. That’s what our ancestors used to do. When they had a problem, you know they would get together with all the leaders. All the clan leaders would get together and they would talk about what is the problem. And that’s how they used to solve them. So we’re going to have to go back to having our leaders get together.” (*Paul Jackson, Sitka*)



Paul Jackson (*Sitka*) speaks about giving young people culture. George Ramos (*Yakutat*) and Judy Ramos (*Yakutat Tlingit Tribe*) are pictured on the left.

“The best thing we’ve found is to give these young people culture, our culture. We know our culture. Give them that culture. Tell them stories; history of our people; a history of our people is something that we should tell as often as we can. These things are dying out. People that are able to tell these stories will not stay very much longer. Walter Austin used to say, ‘if you have something to ask me, ask me now. When they bury me, I will not be able to answer you.’ So you have to ask these Elders. Don’t give up. Don’t give up going to the Elders, because they have a way of doing it, if you stick a tape recorder in front of them and tell them to say something, they won’t do anything. So there’s a way to approach these Elders to get them to talk. And you start off with coffee or tea, or a cookie. Come on, let’s go have coffee. You start them off that way. Get acquainted with them and then learn.” (*Paul Jackson, Sitka*)

◆ Keep our culture alive

“We have to start with ourselves first and move to make that happen. It’s really

challenging for me because I try to go to these villages to get people to say, “Look, our culture’s not dead, our culture is still alive.” But we’re putting it into this TEK [traditional ecological knowledge]. We’re categorizing it into something that doesn’t work. It’s just another way of pigeon-holing our Elders, our traditions, and our way of life and living. We have to make our lives part of our life, not put them in a book. The only way our cultures and our heritage can be passed on from generation to generation is the same way it has been. Our Elders should be teaching our kids; and we should be learning from our Elders.” (*Sven Haakanson, Jr., ANSC Board*)

◆ Record stories and teachings

“There are a lot of things that have been lost in regard to the cultural aspects of subsistence. Because subsistence is not just the taking of harvest, it’s your whole culture. And so one of the projects we’re doing this year, is to record all those Elders stories and teachings. That presents another problem because this information really belongs to the villages. So what we’re doing is taking it back to the villages and asking them to look at it and then asking them if we can present this in the schools to the children. In most cases, they say yes. But some of that information is very personal and so we get into the intellectual property rights. Some of that information could be misused, so it’s a very delicate issue that we’re addressing.” (*Charlie Johnson, ANSC Board*)

REVISTING ISSUES FIVE YEARS AGO

Elaine Abraham, ANSC Board Chairman, began this discussion by reviewing similar issues that were raised at this meeting and the one held five years ago by ANSC. The issues are:

- ◆ Need for a marine buffer zone for subsistence
- ◆ Increased use of sea otters
- ◆ Control of sea otters
- ◆ Passive tourism
- ◆ Education of outsiders
- ◆ Educate ourselves and educate our youth
- ◆ Respect for Elders
- ◆ Protect intellectual property rights
- ◆ Bridge traditional knowledge with science
- ◆ Bring back traditional knowledge
- ◆ Conduct a baseline study which includes a traditional knowledge survey (what resources were here and in what abundance when the system was healthy)
- ◆ Commercial versus subsistence activities
- ◆ New tourist lodges

Specific comments were:

“The one we left out from the report five years ago is the spiritual relationship with our resources. It came out loud and strong in this group, mostly in Tlingit.” *(Elaine Abraham, ANSC Board)*

“I find it kind of disconcerting that five years later, we still have the same problems. It’s a thing we have to keep fighting for and you have to fight hard. One thing that you have to keep in mind, you’ve all heard the squeaky wheel gets the grease, but you have to temper that, because sometimes squeaky wheels just get replaced. It’s a matter of just being out there and keep talking. We have to keep fighting for what we want.” *(Mike See, Hoonah)*

“I do think we’ve been making slow progress over the last few years. I think about the [Alaska Native] Science Commission and where we were when we started ten years ago. The

difference in the way western scientists react to Native communities now and to traditional knowledge is huge. Five years ago people did not think that traditional knowledge belonged anywhere near science. They didn't believe that it had any credibility or that it was as important as part of western science. Now there's a whole belief and understanding that our traditional knowledge is really long term information; it is living information and it is totally relevant. So I think we have made some real strides.

"I think we have had some impact on some of the tourism and the fishing industry. We've been able to get some of the regulations changed. We have worked a lot with DEC; with the federal regulators; and with EPA, trying to get some of the standards adjusted so that they better fit our communities. So they are not things that we feel, or that you see, but they are things behind the scene that have really changed. For instance one of the things that we heard about the last time that we were doing these regional meetings was salmon that were swimming round and round in circles like they were crazy or something. People all over the state mentioned it. So we asked researchers about it. We learned that it was a thing called "whirling fish disease" and it really is an issue. It's a parasite that causes the fish to swim round and round in circles and it is a problem. The thought is that a lot of those parasites were coming from people outside, sports hunters and fishers who were coming into our streams without cleaning their equipment or boots. So now the state recommends that people who are coming into the state clean all of their boots; clean their equipment; and wash and dry them for at least 2 weeks before they come to Alaska. So, as I said, they're not really big things that you see, but some things are starting to have an effect. The more people who are saying the same things the more attention it gets. When you have 3,000 people across the State of Alaska saying exactly the same thing, you start getting the attention that's necessary. So I hope that's what we can try to do. It's little steps, but at least there are steps being taken. So we hope that from the recommendations that we can help to improve that record." *(Patricia Cochran, ANSC)*

APPENDIX A: PARTICIPANTS

NAME	ORGANIZATION/COMMUNITY
Abraham, Elaine	Alaska Native Science Commission, Board
Belton, David	Hoonah Indian Association
Brinkman, Todd	University of Alaska Fairbanks, IGERT
Cochran, Patricia	Alaska Native Science Commission
Cropley, Abby	SEARHC Earth Study
Dangel, Helen	Sitka Tribe of Alaska
Demmert, Ruth	Kake
Diehl, Trisha	KSCT - TV
Dobyns, Doug	Sitka Tribe of Alaska
Dybdahl, Johanna	Hoonah Indian Association
Ettl, Nancy	Alaska Native Science Commission
Enloe, Cheryle	Sitka Tribe of Alaska
Godduhn, Anna	University of Alaska Fairbanks, IGGRT
Haakanson Jr., Sven	Alaska Native Science Commission, Board
Hample, Cheri	SEARHC Earth Study
Hepa, Taqulik	Alaska Native Science Commission, Board
Hope, Gerry	Sitka Tribe of Alaska
Jackson, Paul	Sitka
Jacobs Jr., Mark	Tlingit - Haida
Jimmy, Irene	Sitka Tribe of Alaska
Johnson, Charles	Alaska Native Science Commission, Board
Johnson, Walter	Yakutat (Originally from Wrangell)
Kookesh, Matt	Angoon
Littlefield, John	Sitka
Littlefield, Roby	Sitka
Lorrigan, Jack	Sitka
Miller, Mike	Sitka Tribe of Alaska
Moran, Jeff	Metlakatla
Moreno, Dan	Sitka Tribe of Alaska
Nielsen Jr., Ray	Sitka
Nothstine, Gregory	Alaska Native Science Commission, Board
Petrivelli, Alice	Alaska Native Science Commission, Board
Ramos, George	Yakutat
Ramos, Judy	Yakutat Tlingit Tribe

Rofkar, Teri	Sitka
Sam, Bob	Sitka Tribe of Alaska
See, Michael	Hoonah
Stepetin, Viola	Alaska Native Science Commission, Student Board Advisor
Walker, Anne	Alaska Native Science Commission, Board
Willard, Larry	Ketchikan

APPENDIX B: TRANSCRIPTIONS FROM SPEAKERS

I. Opening Remarks-Patricia Cochran, ANSC

“About five years ago, we held a meeting here in Sitka much like this one, to solicit information from local hunters, fishers, gatherers and elders on traditional knowledge and on the environment, about the changes that were occurring here in the Southeastern area. That meeting generated a report that is available for your review during this meeting, and on our website. For those of you that would like to have copies of it, we have copies that we can mail to you. At that time, part of what we were trying to do was to help researchers and scientists understand what the issues are in our communities, from our people’s perspective, so that the research they do could actually respond to issues as seen by the community people.

“Our goal here is to help identify what your issues are from the community perspective. Today we are focusing on more than just researchers coming in to research us, but our focus is also on what we, ourselves, are doing in our communities. What projects do we have going on? What issues do we want to see raised? What problems need looked into? What are our, concerns about our environment, our health, our animals, the air, water, land? We want to focus on all of the things that are important and critical to us as Native people. Our goal is to have these things identified from the community perspective, from the Native people themselves. So that’s our mission here. To help put together priorities and recommendations that come from the community level.



Patricia Cochran (ANSC)

“The Alaska Native Science was formed (now more than 10 years ago), so that we Natives would not always be the people who were being researched. That was a major issue here in Alaska. We had thousands of scientists and researchers coming into our communities from every direction to study us. We never knew what the results were. We never knew what they were doing. We were never involved in helping establish the issues to be discussed. So our people asked that the Science Commission be formed so that we could create partnerships between communities and researchers. We could start building our own people as the researchers. We recognize our elders and our traditional knowledge as our PhD’s. Our people know the science of the land, the environment, and the animals and everything, just as well as the people with their degrees. The reason the Science Commission was formed was to help communities have more impact and more say over what goes on in research and science in their communities.

“Everything is on the website. That’s one of the things we try to do is make everything accessible. We’ve been doing these regional meetings across Alaska for over 10 years now and we’ve done every region in Alaska. We’ve been to the Arctic, the Interior, the YK, we’ve been all over the state. When you want to

know whether or not something that has happened in Southeast might be happening in the Arctic, our website and reports from these regional meetings are good resources. The issues and changes identified in meetings are in a very searchable database.

“For instance, you can go to the website and ask ‘what do the Native people from Southeast know about harbor seals?’ and you will get back the information that we learned from people around this table. You can ask about people in the Arctic and what they know about whaling. It can tell you who the whaling captains are. There is a community resource directory in there that will tell you who the people are if you want to contact someone with a specific expertise or knowledge, such as who are the whalers in Barrow.

“You can also find a list of all the different corporations in Alaska, a list of all of the tribes in Alaska. There is a list of all the health corporations. We have tried hard to make this an information base so people within the communities won’t have to go all over trying to figure out who to contact. There is a list there of all of the research that is going on by the National Science Foundation. All of the NSF research that is happening in all of Alaska is listed there. We started with NSF because that’s where we get the majority of our funding from, but now we’re trying to bring in the information from EPA, the National Institutes of Health, and all of the other organizations doing research to get it all in one place so people don’t have to go in a million different directions to find out who is doing what. Slowly but surely we are building that database so it’s all in one place.

“This clearing house approach was one of the things that was raised in the Sitka meeting five years ago. People really wanted there to be some place where they could just go to one point and find out what’s happening in research in the state. So we’ve been all over the last 10 years trying to build that up. I think people would be really impressed to see the things that we have on the website now. The website, for those of you who don’t know, is www.nativescience.org. It’s on your paper there, so you’ll have it. The “nativescience” one is the one that all of those directions. The www.nativeknowledge.org website is the one that has all the regional meetings. They are two really big sites, so we split them. The native knowledge is the one that would have all the information from southeast and all the other regions.

“So today we want to pick up where we left off five years ago and see what things have changed. We also want new information to share with the world and within our own Native communities so that the folks from Nome, Barrow and the Interior can find out what the folks in Southeast are doing and vice-versa.

“To begin this process we are going to hear from some of our people who are doing research within our communities.”

**2. Presentation by Judy Ramos, Yakutat Tlingit Tribe, of her research project:
“Traditional Ecological Knowledge of the Tlingit People Concerning the Sockeye
Salmon Fishery of Dry Bay – Gunaxoo.”**

“I want to start by talking about the traditional knowledge survey I did of the Yakutat people concerning the salmon of the Dry Bay area. This was a collaborative effort between the Yakutat Tlingit Tribe and the National Park Service. I was the principal investigator for the Yakutat Tlingit Tribe. Rachel Mason worked with me for the National Park Service in Anchorage. This study was also coordinated with

another study I was doing which was traditional territories and subsistence use areas with the National Forest Service.

“This study came about because there was a drastic decline of the salmon in the East River area. From 1999 to 2000 there was no commercial opening of the sockeye salmon in the East River. The local stakeholders got together because they were concerned about the sockeye decline. This included the Park Service, Fish & Game, the City, the Forest Service, and the Yakutat Tribe. They pulled together a long-term project to study the Dry Bay area. The objective of the study was to document traditional knowledge on salmon.

“We had the data on management and utilization of the lower Alsek River watershed. We used this information to compare the clan based management styles of the Tlingit and contemporary methods. Our purpose is to present this information in a manner that connects traditional knowledge with western science, and shows the relevance of both to the issues.

“I started from the viewpoint of the Northwest Coast history. If you look at Southeast Alaska, there is a cave there which dates our people back to 9000 years ago through radiocarbon testing. A bone sample extracted from a male shows that he was almost over 9000 years old. Whenever I talked to any of the elders about the Dry Bay area, they would always talk about the mythologies in the area. This gave me a lot of trouble working in the scientific area because this was not traditional science. But on the other hand, I was lucky in this study in that I was able to document the traditional spiritual stories about the Yakutat area.

“One of the landmarks of the Dry Bay area is associated with Raven and with the man who killed his sleep with the Thunderbirds as well as other historical events. Dry Bay is where Raven opened the Box of Daylight and tricked the king salmon into coming on shore. There is a sand dune there which is the footprints of raven where he pulled up the ark with all kinds of food and animals. Bear Island is the stranded whale which is the whale that Raven came out of. There are many other landmarks that are part of our mythology and part of our history.

“The Dry Bay geological area is very active. It is 50 miles south of Yakutat and to the north is the Canada/Alaska border and Mt. St. Elias area. To the south is the Gulf of Alaska. The part on the west side of the Bay was added to the Glacier Bay National Park. This area has one of the highest rates of uplift in the nation and the world. It is almost 4.2 centimeters a year in one of the areas down there. It has also been flooded many times because when the glaciers went across the Alsek River it was dammed by the Lowell Glacier in about 1725 and formed a lake which is 200 meters deep and 100 km long. In about 1850 when the ice dam failed, it released a volume of water six times that of the Amazon River and destroyed a very old village in that area. A 1958 earthquake caused about 30 million cubic meters of rock to fall into the Lituya Bay and caused a water surge that rose 1690 feet in the inlet.



Judy Ramos (Yakutat Tlingit Tribe)

“One of my main focuses was on the Tlingit world view about salmon. Tlingit beliefs go back to when people were still living in darkness. They wore fur robes and after Raven stole the sun, moon and stars, he opened the box to daylight, and all the people turned into the animals of the fur robes that they were wearing. Because animals were once human-like and could understand humans, they are treated with great respect. The Tlingit people talk to an animal before killing it and explain why they have to kill it. They show the animals the same respect today that they have for generations.

“We have a lot of variety of animals and plants that we harvest beginning in January which include: fish, seals, king salmon, and clams. In springtime we get hooligan, herring eggs, halibut, steelheads, smelt, moose, bear and king salmon, and in summer we have seaweed, bird eggs, all kinds of plants, and in July and August, berries, salmon and cloudberry, and in the fall we get salmon, moose, wild ducks, wild rice, and back to our winter food of clams. So we have a lot of variety of food that we depend on in all seasons.

“We have many different types of fishing methods we use. In the old aboriginal times it was by means of spears and traps and in the Yakutat area we found several fish traps in the Lost River area. These traps were called either the Brown Bear Trap or the Raven trap. They were box-like shapes about 20 feet wide and almost two times as long, with a catwalk on top. One trap would have enough to supply all the people of Diyaguna’et for the winter. When the owner of the trap had taken enough for his household he would let the others have the rest. These traps were used to fish for coho and for sockeye salmon.

“Tlingits who occupy a given geographic area are known as “kwaan”. All Tlingit society is divided into reciprocating, exogamous moieties, named Raven and Eagle or Crow and Wolf. Each moiety consists of many clans and each clan is divided into houses.

“The Gunaaxoo Kwaan which is the Dry Bay people, have two major moieties. The first is the Raven which is divided into two clans: one is the Lukaax.adi and the other is the L’uknax.adi. The other moiety is the Eagle and they are divided into two clans, one is the Shungukeidi and the other is the Kaagwaantaan. Those are in the Dry Bay area. The Lukaax.adi were originally from the Athapascan from Canada and joined the Tlingit Ravens and remnants of the Xatka’ayi. And from the Hoonah came the Qakexwte Man – the man who killed his own sleep. From Chilkat the Teikweidi married a Shungukeidi and the other members of this clan came into the Yakutat area.

“These clans have territories and responsibilities. The clans have hunting and fishing rights to certain defined areas. Fishing streams are very important. They also own sealingslands, patches of clover, herbs, berry areas, and trees. Territory rights are validated at potlatches where the story of how they acquired title to areas is retold or related to an oratory song and guests who accepted the hospitality would be witness to the validity of the claims to both territory and crests.

“The clan leader knew his duty was to protect the clan’s hunting and fishing territories, he determined when, where, and with what weapons his people and others might hunt or fish and how many animals each man might take. Sectionals were not only to ensure a fair distribution, but also to protect animals during the breeding season.”

3. Presentation by Judy Ramos of her project : “When the tide goes out our table is set” Subsistence Harvest Assessment, Yakutat, Alaska

“This other study I want to share with you was more of a scientific study. It was the subsistence mapping study I did. I coordinated this with Bob Schroeder from the Forest Service and Mike Turek from the Division of Subsistence.

“This study started in 1997 when we worked with many of the Southeast communities. The idea was to provide subsistence data that could be used by tribes and various different boards in regulating subsistence on federal and state land and waters.

“This study was conducted by the Yakutat Tlingit Tribe, with the cooperation of the US Forest Service, Juneau Forestry Sciences Lab, and the Alaska Department of Fish and Game, Division of Subsistence

“We did a survey of about 139 households which was almost 60 percent of Yakutat. Our goal was 140 interviews, but we were too exhausted to even do one more household. There were two of us working on these surveys. We had detailed questions on harvest locations, harvest methods, how many in a harvest taken, exchange of subsistence harvest with others, in all these areas. We included demographic, attitude and other questions. We mapped all the harvest areas and included a marine mammal survey for those that used seal. So each survey took over two hours for each household.

“There were 377 people in this survey out of an estimated population of 635. There were 232 Native respondents and 135 non-Native respondents. The population included male, female, youth, elders and adults. Native households averaged 3 people; non-Native households averaged 2.3 people. Native households have resided longer than non-Natives. Non-Native households have more single individuals. Native households have more nuclear families.

“We asked the person how much of your meat, fish and birds is subsistence. As you can see, for one third of the population, subsistence foods make up more than 25% of their protein. Sixteen percent of the population gets 25-50% of their protein from subsistence foods; twenty-eight percent get 51-75% of their protein from subsistence foods and fifteen percent got 75-99% of their protein from subsistence resources. When asked how much they spend on food in the store, they spend about \$550 per month.

“In response to our employment questions, we learned that government is the highest employer in Yakutat. The permanent fund provides over half the community’s “other” income, and it accounts for eleven percent of the total community income. The average household earns \$40K per year and the Native households had higher levels of “other income” mostly from corporation dividend that we received in 2000. House members had an average of 1.8 jobs and worked on an average of 9.7 months. So a lot of people are unemployed in winter and are employed during the summer.

“Only 2.6 percent of Native households went on to graduate school versus 16 percent of the non-Native households. Native households harvest an average of 1,274 pounds; non-Natives harvest 154 pounds on a per capita basis. When you think of all the food that is harvested and divide it up evenly, Yakutat

residents harvested 384 pounds per person in 2000. Eighty-five percent of all Yakutat residents do some subsistence harvesting.

If you take all the harvest and break it down, most of our food is salmon and other fish which is mostly halibut. We see that Native households have higher numbers of species that they share and exchange. Salmon is the fish most commonly contributed to potlatches. Seventy-five percent of the total harvest of food is harvested by 25% of the households. So 25% of the people get almost all the subsistence food.

“We compared the harvest studies of '84 and '87 and learned that the harvest of coho salmon went down; the harvest of sockeye, clams and crab and hooligan has also declined. The other important point is that the top ten species provides 85% of the total subsistence harvest. So, fish and other marine sources account for 8 of the top 10 species in all the time periods in Yakutat. Subsistence orientation is toward marine resources.

“The more preferred species of salmon are Chinook, coho, and sockeye. Fifty-one point 8 percent of the households use setnets. The average household harvests 68.7 salmon with a total weight of 294 pounds. Seventy-four percent of the salmon is taken from the Situk River.

“Sixty-four percent of the households harvested non-salmon fish in 2000. Halibut had the highest participation at 50.4 percent, followed by eulachon at 28.8 percent and lingcod at 25.2 percent. Rod and reel was the gear used by the largest percent of responding households. Non-native households harvested 58.14 lbs more per capita than Native households, mostly halibut.

“Forty-five land mammals were harvested. 82 large mammals, 45 moose, 22 deer. 27 large mammals were harvested by non-Natives, 55 by Natives. 269 small mammals were harvested, mostly the snowshoe hare. All the snowshoe hare were gotten by one guy. Small mammals are harvested by this one non-Native guy. There are not many people who use the small mammals, only about 11 percent of the households. Marine mammals are hunted mostly by Natives. They harvest about 239 marine mammals. Yakutat is one of the highest harvesters of the harbor seals. 131 sea otters were harvested, but they were harvested for fur only.

“Fifty-one percent of the households use and 34 percent of the households harvest migratory birds which includes gulls, terns and ptarmigan. Thirty four thousand pounds of marine invertebrates were harvested – this is shrimp, crab, octopus, gumboots, cockles. Seventy-two percent of the households harvest seafood. Seventeen thousand pounds of vegetation were harvested. This is 13,000 pounds of berries; 1500 pounds of plants, 2000 pounds of seaweed and these average about 74 pounds mean; or 27 pounds a person. The estimated value of these harvests is about \$1.5 million for the community. This contributes quite a bit to the community.

“We asked respondents if their harvesting has changed. Seventy-five respondents said yes. Twelve said they are doing more, 63 said they are getting less and 61 respondents said no. We asked them if they are harvesting their usual amount of food. Fifty-two said yes, 32 are getting less salmon; 18 did not get moose; 14 did not get berries.

“When we asked them what their primary concern was, they said, protection of subsistence, to have subsistence as a priority without limits on their uses, and a priority on subsistence food. Subsistence should be a year-round; it shouldn’t be regulated in a time frame. They advocated stronger enforcement or policing of the management of subsistence.



Photo by Dr. Dolly Garza

“Right now they have concerns about fishing because it is only on the weekends and they’d like to see it opened all week long. They felt fishing rods should be allowed. As for sport fishing, they feel the need for resident rules for subsistence salmon fishing at the Situk. Subsistence rules need to be changed to benefit the people of Yakutat. Rules have to be changed so it’s a lot earlier.

“Sports fishing was a major concern because a lot of the fish is being taken out by sports fishermen. The charters, the local lodges and charters are taking too much of our fish, crab and shrimp. They are also afraid of the guides that are coming into town. Sea Otter have really moved into the area and they have taken a large chunk of our seafood. We can’t get a lot of our clams, or sea urchins or anything in Yakutat anymore.

“Thirty percent of Yakutat residents have cancer or so many are concerned about the contamination left behind by the Army and would like to see a study done.

“I like to close with a quote from Dr. Walter Soboloff: *Your food comes from the land and sea. To abuse either may diminish its generosity. Use what is needed.*”

4. Presentation by Jack Lorrigan, Sitka Tribe, of the TASSC Gull Egg Study

“Five years ago, when we had this roundtable, one of the concerns I raised was about gull eggs. Seeing seagulls sitting on top of land fills, dumps and carrion gave me concern about what they eat and how that would eventually be passed on to whoever eats seagulls.

“Lianna Jack and Donna Willoya of the Sea Otter Commission got a grant from EPA to study contaminants in subsistence food. They canvassed the Native communities as to what food would concern the most people around Alaska. Studying harbor seals was one idea because it seemed like everyone from Southeast all the way up north uses them. The other possible subject was halibut, but both sea otters and halibut had had some research done on them, but nobody had done any work in Alaska or the Pacific Northwest on seagull eggs. And seagull eggs are traditional food all the way around the coast, pretty much except Barrow.

“Enoch Scheidt from Kotzebue also had a concern about sea gull eggs because he said that when he would go gather the eggs and stack them on top of each other, the shells would crack, and that never used to happen before, so he was wondering why the shells were so thin, or not as stable as they used to be. So,

the Sea Otter Commission went ahead and developed a study plan for sea gull eggs. This information is available from Lianna Jack at the Sea Otter Commission, they've already got it congealed into a package, and it's easy to read. I'm just passing this information on to you because, like I said, five years ago, there were community concerns, and this study kind of developed out of that.

"After the study was completed, the report was presented in each of the communities that submitted eggs for study. Those communities included Sitka, Togiak, Unalaska, Kotzebue, and Mekoryuk. What I'm doing here today, with commission from Lianna, is to pass it along to communities in Southeast that have not heard it yet.

"We looked at herring gull, glaucous wing gull, and glaucous gull eggs. It's hard to tell because they mix on the rookeries together. When you come up to one nest in a rookery, they all fly off and you may have all three species right there. Their eggs are so similar in pattern that it would take a bird enthusiast who really knew how to discern what egg you had, but for all intents and purposes, when people go to harvest the egg, they really don't care."

"In Sitka the traditional way of harvesting eggs was to go to a rookery and throw the first batch of eggs over the cliff into the ocean, and then come back the next morning and there would be new eggs there. Those would be fresh eggs with good yolks, no eyeballs, no beaks, no legs, no feathers, a regular egg with yolk it.

"What we wanted to know, was whether these seagulls are passing on anything to the people. And so the Commission developed a QAPP (Quality Assurance Project Plan). The reason for the QAPP is for protection. For instance, if you had a responsible party that you knew or suspected had dumped some pollutants in the water and you wanted to study the effects of that pollutant, you had to have a very rock-solid study plan. That plan defines who is studying it, why they are studying it, what they are going to do with the samples, and what your chain of custody will be from the point when you collect the sample and send it off for analysis. You have to make clear if the lab you send it to has a quality assurance plan, because once it's out of your custody, the lab has the responsibility to make sure that nobody is adding or subtracting something from the sample that could change the results. All this is because, and there have been clear occasions when a party that was responsible for dumping a pollutant, has a lawyer sitting there waiting to tear your plan apart. If they find a chink anywhere in that armor, your claim is no good and all that work is wasted. So the quality assurance plan is crucial for studies like this, for credibility, for defensibility in litigation. It's protection for those kinds of issues where somebody or other may question your tactics or methods. If they can't discredit your work, they have to accept it. It will be information that will be valuable, it will be presentable, it will be used for reference in the future, because it was defensible.

"So the Commission did a painstakingly good job of developing a QAPP. The results of this, I'll tell you later, are phenomenal. So we collected 15 eggs from each community. We took a training course in Anchorage where we learned how to saw the eggs in half with a little jigsaw so we barely score the egg and peel it apart and then you send part of your sample in a sample jar with a preservative; you seal it and tape it and send it off to the lab. Then the lab receives the sample jar, the tape should not be breached or twisted in any way to show that nobody has messed with it. They take it and do their analysis of it. What we were

looking for was man-made contaminants like PCB's and dioxins; methyl mercury, lead, and hexachlorol benzene--you don't want to eat this stuff.

"We monitored the rookeries for a while because we were told different times that the eggs would be there. Some people had stopped collecting or didn't remember exactly when eggs were being laid. In Sitka, the time was around June 5th that the eggs were there. So in June our eggs got collected and sent off. I think it was just a little later, a week or two before the eggs, for the sun to reach all these spots around Alaska, within a two-week time frame, all the eggs were being laid in Alaska. The eggs were sent to Anchorage and then they went for analysis. We put them in samples, and then we mixed them up and looked for the dioxins or the contaminants that we were worried about.

"The reason we were looking for some of these contaminants is that even though Alaska is not a major producer of pollutants, Alaska is a cold air mass normally, which means that everything that is produced along the equator or temperate zones goes up in the atmosphere and comes along and falls out on us. Cold air falls and warm air rises, so it just circulates like a pump and falls out on our communities, and comes to us. You hear stories about it showing up in salmon, it's falling on the ocean and plankton is picking it up which means the salmon pick it up, it's coming, it's not going away.

"PCBs were used for insulation for transformers for electrical outlets. You've all seen the little posts on top of telephone poles. The big gray boxes usually had PCBs as a coolant to keep them from getting too hot. They don't break down very readily, and they are carcinogenic pollutants. Dioxins are used in a number of things; bleached paper probably has a little bit of it in it because it is a form of chlorine. The mercury comes from mining and it comes from everything we've been doing in digging up the plants. It goes into a dust form and comes around to us. So, the seagulls will sit on a dock, they'll sit on a carcass, they'll sit wherever they want and eat. And when the female seagull goes to lay the egg, she evacuates all the fat cells in her body to create, again, to get those eggs their high protein, their high calorie units, so the chick will have a lot of energy to grow and develop quickly. All these compounds go to the fat cells. So usually it's that first egg the female lays that will have the highest levels of fat and therefore contaminants.

"We did our study of the eggs that we collected and, to make a long story short, although there was some level of the compounds we were looking for, the levels were far below the dangerous threshold. The other thing to note is that since the traditional way gathering eggs is to throw the first egg overboard, you get rid of the first egg on the first shot, the second and third egg or whatever should have even lower levels of contaminant in it, when you go to harvest it. That's the good news.

"We figure Unalaska had the highest concentrations of just about everything, probably from the military use there. They are still below the danger level, when you figure about 35 eggs a year for consumption in Unalaska. If they do it traditionally, where they throw the first egg overboard and let the seagulls lay again, they probably have even less. I read somewhere that seagulls can lay up to seven times, so there really should be no shortage of them if you eat the eggs, because they will just lay again. But you don't want to exhaust them either unless you want to get rid of them.

"The study had such a rock solid QAPP and scope of analysis, that it's become the cutting edge,



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