

**Pribilof Islands Collaborative Annual Meeting – January 19, 2008**  
**Westmark Hotel - Anchorage, Alaska**  
**Summary of Meeting Discussions / Q & A**

**The Bering Sea Ecosystem (ecosystem indicators, climate change, acidification)**  
**Douglas DeMaster (Director, Alaska Fisheries Science Center, NOAA Fisheries)**

**POLLOCK:**

- As populations reach carrying capacity you would expect lower than average recruitment levels.
- Trends that we begin watching start with 1 year olds.
- In 2007, the 1 year old year class is strikingly larger than in the previous 5 years.

**CRAB STOCKS:**

- Snow Crab distribution is based on the same regions where bottom trawl surveys take place; the shift to the north has not yet been plotted.
- If a stock is less than 50% of its BMSY, then it is considered overfished, whether or not the reduction is due to fishing.
- Blue king crab fisheries were closed in 1999 and the population appears to not be recovering.
- The re-stocking crab program through UAF is working hard to develop technology to rear red king and blue king crab. 2007 was a good year in terms of support and techniques. Getting permits to capture blue king crab was challenging, but did happen. Larvae have not been released because all the rearing issues have not been worked out. The plan is to develop a protocol for release in Kodiak in a few years – after we have looked at all the habitat issues. We also need to genetically mark each crab so that we can identify if those caught are hatchery reared or not. They would most likely be released at the settlement stage, not larval stage.
- Although surveys were done in the right areas, at the right times, right whales have not been seen since 1996 when we saw 1-2 whales. Prior to that, they had been seen every year for the previous five years.
- Whale sightings during bottom trawl surveys are always recorded, but there are no records on right whales.
- Fin and humpback whale populations in the area are doing well. There are not so many Minke whales.
- Distribution of survey effort by the agency in the coming years. As the biomass gradually progresses northward, we are hoping to receive additional funding to cover the movement north of snow crab, Pollock, etc... We did expand north in 2007, and we aren't certain we will have funding to expand in 2008. We expect to have to cut back survey effort due to budget cuts.
- We don't know what subtle changes in pH exist in specific spots. We need to be looking at the impact of 1/10 of a unit because we anticipate that the impact of a 4/10 unit change will be dramatic.
- Letters of support in terms of work on acidification and loss of sea ice will help with funding this research.
- Funding of marine science in Alaska has fallen way back relative to where we were in 2005.
- As the natural variability swings from cold to warm, it will swing back in a pretty major way that we've never seen before due to the warming of the rest of the arctic with global climate change. The currents trap water around the islands which may cause cooler water around the islands.

## **Trends in Seabirds**

**Vernon Byrd (U.S. Fish and Wildlife Service)**

- BSIERP is complementary to BEST and will be trying to address some of the ecosystem questions we have.
- Sea duck prey is not obvious. Fish-eating seabirds primarily eat pollock, sand lance when available and historically, capelin. They also eat the normal suite of silvery fishes – cods, smelt too. Least auklets feed on copepods.
- Arctic foxes are native and prey on some nesting seabirds. Ledge nesters are not subject to fox predation. Gulls occasionally prey on nests, but do not nest on the Pribilofs.
- Data have been analyzed to understand strong relationships between juvenile pollock and fish-eating seabird reproductive success in a given year. We've tried to run analyses, but because directed surveys haven't happened, it isn't clear. Early season diet does change a lot from year to year. Diet during poor laying years includes a large proportion of copepods. Years with fish availability are good laying years. Kittiwakes build nests when they don't lay eggs.
- Budget projections for USFWS for seabird work – haven't had resources in years. Nationally, USFWS got an increase.
- We don't see least auklets using inland areas on St. Paul, as they do on St. George. That is not the only place where somewhat removed talus slopes are used by least auklets. St. Paul has quite a bit of overgrowth which may deter them.
- We looked at the effects on bird populations by harbor development - which was done without much negative effects. There may be a local boat traffic impact, but not a broad effect.
- Pribilofs used to be 5<sup>th</sup> largest bird colony in N. America. If there has not been a full bird count since 1977, there should be. This should be incorporated into the discussion for the research center.

## **Rat Prevention**

**Joe Meehan (Alaska Dept. of Fish and Game)**

- City of St. Paul and USFWS worked together to implement some of the strictest regulations. This was used as a template for ADF&G. We haven't addressed reaching out to other local entities yet. It would be a good idea to reach out to other local entities. Finding the resources for enforcement is a challenge, but local communities could deputize their harbor dept. or have their local police enforce state regulations.
- Shipping companies bringing cargo to communities within Alaska are a concern; big concerns about contacting small scale international shippers / putting ads in shipping journals.
- WWF has been introducing rat monitoring on Commander Islands in Russia. NAS is developing risk assessment for shipping safety which will incorporate rat prevention.
- Requests for rat prevention kits have gone way up after the winter publicity.
- Doing rat prevention in communities like Dutch Harbor, Adak and Kodiak is pretty critical in keeping Pribilof Islands rat free.
- Long term plans and how regulations will be enforced in places like St. Paul is still being addressed. Education and working with commercial entities to understand the financial repercussion, and working with insurance companies to ensure this is a requirement for insurance coverage would also help. Insurance companies have an incentive since they would be at least partially liable for expenses due to a rat spill.

## **Marine Debris**

**Phil Zavadil (St. Paul Ecosystem Conservation), Karin Holser (Pribilof Isl. Stewardship Program)**

- Marine Debris workshop in Anchorage – Feb 14-15, 2008 – Egan Center (AK Forum on the Environment): many of these recommendations could be put forward at this workshop.
- The workshop will be 1) overview of local programs; 2) talks by experts – including metal and plastics recycling, toxicity, ecology; 3) breakout sessions to tackle suite of 7 items that have been identified as critical.
- St. George will be giving a presentation at this workshop.
- Nets, packing bands, fish lines, weather balloons – we haven't yet quantified what we're finding.
- Recycling facilities in the ports would be a great way to deal with pieces of net that come off during net repair. This would give fishermen the tools to keep debris on their boats.
- It is illegal to dump any plastic product overboard. Foreign fleets are also subject to MARPOL regulations, however, we don't know what level of education and enforcement they are implementing.
- Opportunities for working with int'l fleets – we have some interaction with Russian fishing authorities; donut hole collaborative group – haven't yet elevated this to the level that we need to.
- Need to solve the problem of what we do with these materials once we secure them. – There is a recycling organization that will accept this material for a fee of \$1/lb, not including transport to Oregon.
- The recycling group will be at the February workshop.
- If we sorted materials on the boats, the cost would likely be reduced. It is the untwining that is so costly.
- Work the fishing industry/youth angle. The native community never gets the attribution they deserve - and that should happen.
- We should develop a working group between industry and community groups to solve this problem.
- Earmarks are ending. Funding now comes to programs through NOAA funneling money down to the region.
- Project on the Pribilof Islands started with industry funds. We then got funding from Congress to Marine Conservation Alliance (made up of all fishing industry groups in the area).
- The momentum of cleanup efforts in St. Paul, and youth assistance, varies annually due to weather and timing. There is always a small scale effort each summer.
- The two leading types of debris are packing bands and trawl nets. Working intensively with fleets for a few years through cutting packing bands will go a long way toward reducing debris. There was significant success in Antarctica with an effort to target proper disposal of packing bands on fishing vessels.

## **Trends in Marine Mammals (northern fur seal, sea lions)**

**Thomas Gelatt (National Marine Mammal Lab, NOAA Fisheries)**

- Pup mortality has remained fairly low/stable – based on those that are found on land. We don't know what is happening at sea.
- Impregnation rate shown was for St. Paul. We do not have this information for St. George.
- Most females breed right after they pup.
- Walleye/pollock food source data goes back to 1980s.
- There should be an effort to synthesize the direction of relative information on fur seals that we have.

- Scientists too often refer to native observation as anecdotal; this hinders partnership potentials.
- In 1980s, we witnessed big, old females in packs of 100 traveling together. When popn declined, the number of scouts also declined and there was more predator exposure because the animals were now foraging in larger groups.
- Spew data are hard to get, therefore, there is not scat and spew data comparing Bogoslof with St. Paul. Visits to Bogoslof are also less frequent.
- There are good ways to correlate foraging distances with biomass/ stock survey data.
- Sample sizes are relatively small, but we are seeing animals moving about with brand re-site data.
- We have some population estimates. Determining how much biomass in the Bering Sea needs to be set aside is not clear and simple. We can begin to get there in regional areas. One of the challenges is whether we can do anything with the results.
- In regards to the fur seal decline, it is difficult to determine if it is a winter or summer problem. We don't know much about what happens at sea.
- Transient orca predation on fur seals is a source of mortality – there is some work studying this on the Pribilof Islands. We will simultaneously be tagging females to see where they are going.
- More tagging work is being done to look at survivorship over time of breeding females. This will help to look at the correlation between breeding females and pups.

### **Canyon Research**

**Michelle Ridgeway, George Pletnikof**

- Bob Stone did some analyses of coral data – these findings will be submitted to MSS this week, then published.
- Hoping to have NOAA or University scientists to analyze the benthic data and map the different habitat types and substrate.
- Fishing impacts were seen as deep as 1000 meters. There were more trawl grooves in shallower water, but they were present on each transect – more on horizontal surfaces, with some areas showing broken corals.
- Surveys on shelf break outside of canyons, to determine variations between inside and outside canyons. Didn't get too much onto the shelf break, but most of the corals are only found at specific depths – likely not on shelf breaks.
- Long line gear damage was found in Zemchug Canyon at somewhere between 450-600 meters.
- Red lasers were used to quantify and scale each frame; fishing impacts will be quantified using the same methods. Data for each taxonomic group and for the overall assessment will hopefully be conducted by NOAA and, if that is not possible, by independent scientists.
- We would like to better understand the geomorphology and physiographic features of the canyon in next steps.
- Transects ran 2-4 km each; 35 transects = approx 60 km of surveys.

### **Ecosystem Interactions (ECOPATH Modeling)**

**Kerim Aydin**

- We have estimates of how much fur seals eat. If the foraging range is bounded by an ellipse at 50 nautical miles from the islands, they would eat more fish than are available. If the foraging is spread out over 100 nautical miles, there would be enough food to sustain the fur seals and the ecosystem.

## **Economic Development Activities on St. George**

**Larry Cotter (APICDA)**

- Shoreside processing plant (cost = \$3.5M with \$2M grant to offset); However, there may not be crab or cod to process in St. George within the next year or two.
- Lodge (\$2.5M) should fit 25-26 people; focus on birding, marine mammal ecotours, reindeer hunting and fishing. Green facility, using wind power – with surplus energy for up to 40% of St. George energy needs.
- St. George and St. Paul should work together to build/seek funds for an inter-island ferry system.
- Unlimited reindeer hunting (vs. limited hunting) may be worth looking at – they are invasive and if their population reaches too high, it could severely impact the whole ecosystem.
- Storm in 10/04 knocked a large part of the break channel. The channel is now fixed. The entrance channel will be dredged this spring/early summer. A new breakwater would be preferable.
- There was an old processing plant which didn't work. Having a new facility in the harbor would be a better place for it.
- The old hotel is a great facility which is generally full in the summer. The lodge would not be competition – it would be an entirely different clientele and facility.

## **Economic Development Activities on St. Paul**

**Simeon Swetzof Jr. (Mayor, St. Paul)**

- 2008 should be a good year for St. Paul – based on the quota for crab, halibut and other species.
- Without crab rationalization, there is no stabilization on the islands.
- Working with TDX to get city's wind turbines up and running – waiting for grant application reviews.
- Concerns about running out of fuel necessary for winter road maintenance.
- Trident and Icicle did not operate last year, resulting in a loss to the community of \$1M.
- Received \$600K Denali Commission grant to build a small boat harbor – out to bid early spring 2008; completion by 2010.
- Crab rationalization effects on the community – reduction in population, application for disaster relief since 2000.
- Working to allow multiple owners in a single building – counting on 90/10 processor split quota.
- Built a new fire station this fall.

## **Shipping Safety**

**Ed Page**

- SPOT sends email reports every 10 minutes telling geographic position.
- Bering Sea is 3<sup>rd</sup> most closed water body in the world. Within a couple months, we will get a tracking system on the Pribilof Islands.

## **Changes in Fisheries Management**

**Lori Swanson**

- Can't say the specific volume and species of biomass being taken off the bottom. Working on classifying to species – currently down to genus.

- Amount of halibut allocated to incidental bycatch is 3400 metric tons. Amendment 80 divides this between head and gut fleet and everyone else. Of that, 50 tons per year will go to the long line fishery.
- For St. Paul to get an increase in quota, it has to come from the bycatch.
- Canadian bycatch programs may be more successful than our programs. Coop members can't exceed their own bycatch unless they trade with someone else in their coop. We can't trade across sectors. Lori's program was designed after Canada's program. Here, it is about the coops vs. the government.

## **Research Center**

### **Bruce Robson, Steve Insley**

- Contract for this involved (1) initial findings & (2) formalizing report.
- Growing slowly over a long period of time, plus having a clear plan are the most viable/safe strategies.
- Need long term stability: (1) Long Term Research through NSF – not very realistic OR (2) Field station through UAF – preferred recommendation for moving forward.
- Add more written points to the report to show why this should be on Pribilof Islands – look at where species migrate and how great the economic repercussions are.
- Meso-scale approach.
- Joint venture with Russia to sample entire Bering Sea – true value to establish research or conservation zone that is larger than what currently exists.
- Darwin concept and BASC concept ideas make sense.
- Need working group to wrestle with this.

## **Steering Committee Response to Research Center**

- UAF researchers can be contacted directly to assess their interest OR it can be done at the administrative level.
- UAF researchers have been contacted.
- First confirm our focus and come to agreement, then line up supporters, then seek funding.
- Would like to know agency thoughts (esp. USFWS, NMFS) /support of center and their participation in the center. It would be difficult to make this happen without their support.
- USFWS: It is clear that the Pribilof Islands will be a center for research with or without a formal center. Don't see USFWS providing significant funding to the center, however there would likely be funds associated with research work.
- UAF would be a sensible angle to take for funding. No ownership role, but certainly a user and body of long term monitoring data.
- Combination of the BEST and BSIERP Programs will fund about \$30M of research in the Pribilof Islands. This is a good time to move forward, but USFWS is uncertain how best to proceed.
- The idea is very appealing – it is ultimately a question of organizational and funding ability. Recommend early on retention of expertise through someone like the Foraker Group.
- Traditional Knowledge and Wisdom Center would make this a full partnership with the native communities on the islands.
- Funding is the ultimate issue. Looking at what is happening to NOAA's budget is a good thing to keep in mind. Pollock conservation research center is a virtual research center. Money is provided through UAF, so that additional infrastructure is not required. This is a good option to consider.

### **ID focus / mission**

- Ecosystem scale research – can the research currently being conducted, benefit from a research center?

### **Infrastructure, assets, needs**

- St. George Island Institute is already in operation.
- Housing for researchers
- Access to 4-wheelers

### **Funding sources, partners**

- UAF Field Station
- Could be multiple universities; their voting powers based on the funding they each provide.
- International research center
- These ideas are already happening on a small scale on St. George –work up from there.
- Need consensus from: (1) Groups, companies on islands (2) PIC, (3) potential users
- St. Paul supports and wants refinement. Don Young put in for facilities on St. Paul and this should be revisited
- All intra- and inter-island issues must be resolved prior to going to outside supporters.

### **Questions to address**

- NOAA, NMFS, USFWS - what relationship do these groups have with PIC?
- To whom does the working group report?

### **Research Center Working Group:**

**Steve MacLean**, Larry Mercurief, Mike Levine, Mike Catsi (SWAMC), Heather McCarty, Karin Holser, Andrew Trites, Bruce Robson, Steve Insley, Everett Anderson

1. Work with interest groups on the islands to address what they agree they want that doesn't exist now.
  2. Talk to potential users to see what they need, want to see.
  3. Bring this all back to the PIC for further evaluation.
- St. George Traditional Council has seen the needs for access to lodging/4-wheelers and has been addressing these needs. St. George is full for the summer – there is need for more.
  - Need a clearing house source for list of needs: better lab space, lodging, 4-wheelers – this needs list will help in generating funding plan.
  - \$200M has gone to sea lion research – if Pribilof Islands had only 5% of that income, it would be huge. We need to address why it is strategic to have center in the Pribis.
  - Working Group should report to the PIC
  - Local entities could organize their own working groups and report back to PIC
  - Survey entities to determine what they could use on the islands to further facilitate research (adding lodging?)
  - What do people want that isn't already there? The communities need to come back to the PIC and answer this question with set deadlines for decision.

### **Opportunities for PIC to advance our work and achieve funding:**

- Windows of opportunity between January and mid-March to influence appropriations:
  - Sen. Stevens can bring forward our ideas, if we raise them. There are 13 appropriation committees.

- NOAA's piece of the pie keeps shrinking. Joining Friends of NOAA would give NOAA a larger piece of the pie to fight for what we are all looking for.
- There is also a NOAA support letter where we can get our issues.
- Letters from members of congress for their favorite projects are critical for getting funding. We need to get our programs into these letters.

**Forward Moving PIC Actions:**

- Letter of support for NOAA research budgets for work that has gone on in the Bering Sea (Discuss with Doug DeMaster). – **Paul MacGregor and Heather McCarty**
- Marine Debris issue will be a good vehicle for hammering out good action plans. – **Shelly will email PIC mailing list / Karin Holser**
- Following through with the Research Center by developing a working group. – **Work Group will facilitate an effort among island interest groups to ID needs; specific detailed interviews with users – Steve MacLean/Shelly Morgan**
- Establish date for next PIC Meeting in St. Paul – **Margaret Williams**