

2012 Research Advisory Board (RAB) Meeting

IPHC Offices, Seattle WA
20 November, 2012

RAB members: David Beggs, Tony Blore, Dave Boyes, Art Davidson, Jim Hubbard, Brad Mirau, John Woodruff

Absent RAB members: Lu Dochterman, Rob Wurm

IPHC staff: Bruce Leaman, Steve Keith, Claude Dykstra, Lara Erikson, Heather Gilroy, Ed Henry, Steve Kaimmer, Tim Loher, Kirsten MacTavish, Steve Martell, Lauri Sadorus, Ian Stewart, Robert Tobin, Ray Webster, Gregg Williams

Review of 2012 fishing season by harvesters and processors

1. Canadian results

Art Davidson was the first to speak. He stated that it has been a tough year with what appeared to be a significant increase in sperm whale interactions in BC, particularly when sablefish fishing. He also noted the halibut seemed 'decent' size. Art also commented that dogfish were more prevalent on the grounds.

David Beggs stated that he fished almost exclusively in northern BC close to the AK border. He started fishing one week earlier than usual. His experience was that the 2012 season was his best fishing in the past eight years and his average size was about one-half pound larger than last year. He had very little marine mammal interactions and saw few killer whales compared to past seasons. He stated that fishing in late October has steadily increased for several years.

Dave Boyes fished in April at the City Ground (between Vancouver Island and Haida Gwaii) in about 150 fathoms. His observations were that the halibut were a bit bigger than in recent years. His average weight has been around 16 lb and it increased to 18 lb in 2012. He also did his own bait experiment, of sorts: he used squid and pollock, and only caught about 3,500 lb of halibut on about 20 skates of gear. He then switched his bait to fresh arrowtooth flounder, used about 1/3 the amount of bait, and caught 11,000 lb. He was on the southeastern side of the Charlottes in August. There, his halibut weighed on average 31 lb. Contrary to past years, he had no marine mammal interactions in 2012 (in the past it had been specifically with sperm whales). He also mentioned that the 2B harvesters are reducing their footprint each year, in that even though "good" numbers of halibut can be found on large sections of the coast, nobody wants to fish in many locations because they reach their yelloweye bycatch caps too quickly.

Brad Mirau stated that the vessels he was in contact with experienced generally good fishing until the 7.7 earthquake that hit BC at the end of October. His observation of the 2012 halibut was that they were not longer but fatter and healthier-looking fish. Brad stated that he

still has 2011 frozen product and because the frozen market for halibut is stagnant, he and his clients are always looking for an alternative to frozen halibut. Sees the fresh market as still robust.

Anecdotes from the 7.7 Earthquake off BC – All Canadian RAB members in attendance observed that fishing before the earthquake went from quite good to virtually non-existent following the earthquake. David Beggs stated that his boat fished four days after the earthquake and his halibut fishing was still good. Fishing success for sablefish didn't seem as affected. Art and Brad both said that several of the vessels that were fishing or on the water at the time of the earthquake mentioned that it felt like the vessel was going through a kelp patch. Brad also heard, anecdotally, that the fish disappeared after the earthquake. Harvesters theorize that the fish become stressed and don't bite after events such as earthquakes. Brad also mentioned that some vessels that started fishing late in the season did not catch their quota because of the earthquake. One notable event was that the 'hot springs' on eastern Haida Gwaii shut off after the quake.

2. Alaska results

John Woodruff stated that he observed an improvement in Area 2C CPUE, although not significant. Fishing in 3A was acceptable early in the season but slightly poorer than last year and by October halibut were hard to find. 3B CPUEs were bad all around in 2012. He said that whales were an issue in Adak and harvesters had to run further west. He observed more halibut in further reaches east to 2B and fewer halibut as you go west. He also mentioned that the frozen market was awful and still has way too much frozen halibut product, though the fresh market is still good. The fresh market is generally good, as tracked by ex-vessel prices. At the end of the season he was experiencing a lot of pushback – was it due to the economy or people moving to another product – he's not sure.

Tony Blore said the harvesters he dealt with had huge depredation problems with vessels getting hammered by whales in Area 4. He observed that even without depredation, fishing was down a bit from last year. He noticed a real shift in Area 3B whereby long-term harvesters did relatively okay. Hired skippers, on the other hand, did more poorly than last year and brought back halibut that were under average in size. He saw 75-95% or more of the halibut brought in as 10-15s – very small fish. In 3A, specifically Portlock, there appeared to be a dramatic drop in catch rates and size of halibut. A lot of whale interactions occurred here too. In the eastern end of 3A long-term skippers did very well during the summer months. The average 3-5 day trips returned about 40,000 lb of halibut. In 2A, the trawl IQ program was in its second year. For the first time ever, in Tony's memory, whale depredation on blackcod was observed on the West Coast. The whales didn't appear to stay with the boats, as though they were just moving through. This type of behavior corresponds with the whale migration south. The 2B boats that he dealt with did better overall than last year. Tony's overall summary: lower CPUE and sizes.

Jim Hubbard started fishing on June 1. He started fishing in 3B, focusing on larger fish. He said it was hard work in 2012 catching about 2,000 – 2,500 lb of halibut per day, down from the usual 5,000 lb per day of halibut in recent years. In July he experienced much better fishing averaging 40,000 lb trips. In 3A he observed that the migration up the edge from

deeper water was 2-3 weeks later than usual. He only did one trip here in June with decent fishing. He found the halibut around Middleton to be small. He said fishing in July was spotty – catching 16,000 lb one day and only 5,000 lb the next day. He also fished sablefish in southern 2C – Frederic Sound, Chatham, Clarence. He said there are more halibut there than he has ever seen – had to shake a lot of big halibut off his lines. Around Clarence, the halibut were larger than usual and they're typically large to begin with. He saw a lot of halibut in shallower waters compared to what they normally see. He didn't fish in the spring because nobody wanted to buy halibut.

New issues raised by RAB members

John Woodruff's list:

1. Whale depredation -- Wants to know what impact whale depredation has on the fishery and how is that accounted for in the stock assessment model? Impact on fisher's behavior? Bruce explained that any mortality is 'seen' by the assessment model but it would not be correctly attributed unless the source is specified (as in directed removals or bycatch). It should be part of fishing mortality since it occurs on fish already captured. In essence, if the mortality is happening but it is not correctly attributed, then the perception of stock productivity will be lower than if the mortality were identified correctly. If harvesters react to depredation by changing locations, then there could be a change in the components of the stock that are impacted by fishing.
2. Repeat capture of smaller fish. Is there an impact of cycling through U32 halibut? This is something on which the staff has no information and the staff will consider how to approach this estimation. It could involve a tagging program in conjunction with population modeling. It is also something that could (should) be examined within an MSE framework, though it would involve assumptions about repeat encounter rates, in the absence of any research results.
3. Increased presence of dogfish on halibut grounds – Is competition by dogfish on halibut grounds a signal of ecosystem stress (in areas where dogfish were not seen before)?
4. Trawlers – Trawl pressure in Portlock area is so intense that nobody catches fish anymore and dogfish are moving in. Some of the trawl fisheries are only justifiable with the bycatch they bring in. Some harvesters are still scraping by within three miles of the coast but > three miles and out there are no longer any flatfish.
5. Size of fish – Industry standard is lower relative to size. Some buyers will pay less for 10-15s because of cost recovery issue with size-at-age. This has a huge impact on what the market is looking for – it's possible to buy Russian halibut fillets in the 10-15 size range for 70% of the cost here in the U.S. Can buy \$9-\$10/lb frozen halibut coming from Asian markets. If the size limit is lowered even more, they run the risk of competing with fillets that are the same size as a petrale fillet, which is also far less expensive.

6. Conversion factors for heads – John stated that if the staff’s proposed project is approved, Icicle would be happy to provide space, scales, and any other assistance.

Tony Blore’s list:

7. Decrease in size-at-age – Worried about fishery-induced evolution. Are small fish producing smaller fish? Have we stepped into Mother Nature’s arena? Are we being so selective that fish are adapting to our fishing pressures and not growing as large? Bruce provided some commentary on this and noted that it will be a component of looking at the size-at-age issue in proposed research.
8. Fish quality – frozen vs. fresh. There appears to be lower quality standards in the frozen market than the fresh market. If the product does not meet the standards for the fresh market, it should not be frozen. Jim Hubbard thinks that quality has decreased with an increase in hired skippers in Alaska – they don’t have decent crew members since they don’t get paid as well. While in Kodiak, Jim was the only skipper/owner out of 15 vessels tied at the dock. Brad stated that a strong frozen market is very supportive of a fresh market by propping up the price of fresh fish. In 2011, Aero Trading froze more fish than they ever had in the past. In hindsight, this was a huge mistake since fresh product was sold at a lower price than frozen and the frozen remained in storage for longer. Frozen-at-sea product can get a \$0.05-0.10 premium. David Beggs suggested paying more for high quality fish and less for poor quality – in essence, don’t offer the same price if the quality is different. Brad related a bad experience in doing what David Beggs suggested. He said that he no longer pays more for higher quality. He expects high quality and pays the price offered when he gets the quality he wants. If the quality does not meet his standards, then he pays a lower price. He firmly believes quality is the responsibility of both the harvesters *AND* the buyers.

David Boyes’ list

9. Halibut case study – David would like to see a study where the practices and quality of halibut from BC was compared to other nations. He thinks there should be more emphasis on management science. There’s an urgent need to know all removals by all sectors in all areas: whale depredation, high-grading, wastage, bycatch. A “best practices” approach should be used by all users. He also wonders why Alaska does not use a similar system to the BC integrated management which has proven biological and economical efficiencies. Need to create proper incentives.

Issues from previous meetings

Bait study – Ray gave a brief presentation on the results of the bait study. Findings showed that pollock caught more fish than chum and pink salmon but this varied across areas, and pollock also returned significantly more bait. Jim Hubbard stated that, from his experience, pollock is more robust to sand fleas which might explain some of the results. Pollock had less bycatch than other baits. David Beggs mentioned that performance of bait is related to competition in the fishing area. He also noticed, in his experience, that different baits perform differently at different depths. He suggested setting different mixes of bait depending on the area that is being fished. Dave Boyes

noticed that when he used pollock, it didn't thaw as quickly as other bait. RAB members were also curious about the effect on yelloweye rockfish bycatch. The staff noted that they believe the bait study should be repeated, to address concerns about temporal variability.

Hook modification study – Steve Kaimmer reviewed his study from the summer. He noted that the hypothesis that a 'whisker' hook would reduce rockfish catch didn't seem to be valid, as larger rockfish had aggressive hook attacks which overcame any resistance offered by the whisker wires.

Mushy halibut – only seven reports have been received in 2012, to date. All reports state that the halibut seem underweight and the fish exhibit an obvious declined physical state. Reports have been received throughout the Gulf, with all but two coming from the Cook Inlet area. Of note, the two reports were from a western Gulf processor – the first reports of mushy halibut from a processor. Typically, reports are from sport catches in nearshore waters.

Ichthyophonous – Claude talked about background on the subject (there was no official presentation). He talked about the percentage of fish afflicted in Prince William Sound. It was declared an epizootic in that area. It is not yet known how or if the parasite affects halibut. Another unknown is the mode of transfer between individual fish. At this time, it is estimated that there is a 33% incidence rate coastwide.

Review of ongoing studies

South of Humbug Mtn – Gregg reviewed the sport fishery issues in this area off southern Oregon and northern California. Management policy is being dealt with by the Pacific Council but IPHC has an interest in including this area into the assessment/apportionment. This brings the idea of expanding the assessment survey into this area into the discussion. The staff has proposed extending the survey to 40° N on an experimental basis in 2013, much the same as the Puget Sound survey in 2012.

Archival tags – Tim talked about the beta-release tags. He mentioned how the batteries magnetized and impeded correct functioning of the tags, in essence, rendering them useless. He's hoping to have new functioning tags for release next summer in southern 4A and Area 2C.

2013 Proposed Research

MSE – Steve Martell gave an overview of MSE. He talked about the creation of the MSAB and who should be involved in the process, i.e., academia, industry members (harvesters and processors), managers, even port samplers. He emphasized how this process will synthesize a huge amount of input and data from several different sources.

Length-weight relationship project – Heather gave a brief summary of the L-W project that is planned for the 2013 season. She explained that the plan is to have the port samplers weigh and measure individual halibut throughout the season, coastwide, to look at

length and weight relationships and how they vary amongst seasons and areas. In early 2013, the intent is to do a pilot and iron out the methods at the start of the season. The project will also include an element of determining head-on and head-off weight conversion factors.

Size-at-age for halibut – Bruce talked about this project. IPHC is submitting a proposal to the NPRB, in collaboration with UAF, UW, and NMFS. This project will include the re-aging of selected historical otoliths, ecosystem effects, environmental drivers, bioenergetics modeling, and integrated growth modeling by Gordon Kruse (UAF Juneau), a graduate student, and Steve Martell. USGS might also be looking for some funding from NPRB to look at the effects of *Ichthyophonus* on growth and size-at-age.

Other topics of discussion

Whale Depredation – Jim Hubbard reviewed his use of a sonic deterrent. Also discussed was the use of an attractant, which would be placed at a location away from the fishing activity. David Boyes noted that most 2B fishers haven't had much exposure to whale depredation. IPHC could be a conduit for distributing information on avoidance/behaviour around whales. Bruce commented that we could put SEASWAP's flier up on our site, or provide a link. Ian commented on the effect of depredation on the assessment.

Size limit reduction – Steve Martell discussed his recent findings about the effect of reducing the size limit. This led to discussion of 'maternal' effects, i.e., the biological benefits of eggs from larger females. Bruce noted that while this is possible, the existing research indicates that the maternal effect is quite small, and it is difficult to isolate maternal effects from overall fishing mortality effects.

Ecosystem stress – The RAB returned to this topic and discussed the appearance of dogfish as a potential indicator of stress on the system. Bruce noted that some aspects of this issue may emerge in the ecosystem component of the proposed size-at-age research.

PHIs – The topic of prior hook injuries (PHIs) came up with regards to the multiple recapture of fish, especially U32 halibut. The PHIs are reported in the RARA each year and have not shown any long-term decline; indeed, Area 4 PHIs have increased.

RAB Membership Discussion

Structure and Function of the RAB

The discussion opened with the following questions posed to RAB: "What do you think we should be doing?" and "What do you think of what we are doing?" Bruce followed up with an explanation of a proposed Science Review Board and how it would interact with RAB.

General comments made by the RAB members were:

1. The RAB is functioning fine with the objectives as currently set out
2. "I have enjoyed the debate/discussions during RAB meetings"

3. One RAB member felt the Performance Review was influenced by the particular Annual Meeting attended by the reviewers, which was not a very normal meeting on many levels. In that sense, the review was more issue-driven than concept-driven. Also, this RAB member gets the views of the fishermen through his experiences on the RAB.
4. The best dialogue comes from the informal discussions which occur at RAB. It helps him appreciate what goes on behind the scenes.
5. One suggestion was to expand the group, as this may help attendance (which was unusually low this year). It may also be time to expand the membership to other sectors, such as sport, and tribal/First Nations.
6. Other suggestions included adding a keynote speaker, or having more (though short) staff presentations.
7. One RAB member stated that the IPHC needs to decide what they want out of the RAB process. Is it advice? Recommendations? Review?
8. Bruce noted that the meeting helps the staff stay grounded, so it's very beneficial to staff. One staff member commented that he gets very inspired by the RAB discussions and many of his research proposals come directly from the discussions at the RAB meeting.
9. Every RAB member felt quite happy with the format of the RAB meeting, as it is currently structured.

Research ideas/directions

Several specific topics were advanced by RAB:

1. The effect of repeat captures of smaller fish on survival and population dynamics.
2. Sport fishery discards and mortality rates.
3. *Ichthyophonus* – next steps?
4. Depredation – Two aspects: (1) education, so people can feel they are part of the solution, and (2) reporting, to see if patterns can be identified which would lead to solutions.

Miscellaneous topics

1. Elog proposal – staff involvement with a project being pursued by ALFA. Heather outlined the joint participation in the eLog proposal and the potential benefits to the Commission.
2. AK observer program – Gregg outlined the changes coming in 2013 for the AK program. There was a broad discussion on the generally lower level of coverage of the trawl fishery that would result from the proposed implementation; many RAB members felt that the new program would be a step backward in bycatch estimation on trawlers.
3. Past harvest rates in Area 2B – a request by Dave Boyes who wanted to know how past estimates of exploitation rate compared with those in from the current assessment with the corrected retrospective problem.
4. “Fleet-as-areas analysis” – Ian briefly discussed the fleet analysis approach. The intent here is to use a greater portion of the historical data, even if its area

representation might be restricted, in order to develop a greater spatial component of the model. This will require some model development to test potential scenarios.