**NMFS Recreational Fishing Economic Constituents Meeting**

**Jan 29-30, 2014**

*Notes taken by Sabrina Lovell*

**Doug Lipton’s’ presentation**

No comments from the audience

**Russ Dunn led introductions around the room and asked for participants’ ideas on what they expected to get out of workshop.**

Mike Travis – wants to hear about the progress NMFS is making on data and analysis to support management actions

Scott Steinback – wants to get feedback on his research

Stephen Holiman – wants to find out about what is going on in other regions by NMFS staff, hear about perceptions of NMFS by outsiders

Brian Cheuvront – wants to find out what Council staff can do that is defensible regarding allocation decisions, where we are going in the future, and what Council/NMFS staff can defend in terms of data and models.

Patrick Paquette – He wants his community represented better and wants to figure out how to get the data and models to the actual rule makers. He wants to know how he can bring more of the economics to the discussions by politicians.

Matt Fuller – wants to learn about alternative survey methods

Richard Aiken – USFWS is getting ready for their 2016 FHWAR survey and wants to learn about things he can do to make the saltwater fishing section better

Jerry Leonard- wants to get feedback on his research

Dan Lew- wants to hear perspectives about how the data NMFS puts out can be used by constituents

Kristy Wallmo – wants feedback on Angler Attitudes survey

Ayeisha Brinson – wants feedback

John Whitehead – he’s on the South Atlantic SSC and feels that more economics is needed by the Council during management discussions

Brad Gentner – also on SSC of Gulf Council, wants to know how to do his job on SSC better and make management policies better.

Aaron Jenkins – wants to learn more about NMFS data and models and how to apply them in Oregon. How does NMFS choose research questions?

Dave Monti – hopes to learn how to better serve recreational anglers and wants to use the for-hire data for promoting that industry’s business in RI

Sarah Malloy – wants to take what she hears and use it to focus the work in the P.I.

James Hilger – wants feedback on his research

Cliff Hutt – wants feedback on Bait and Tackle Survey

Leif Anderson – wants feedback on his research

Forbes Darby – wants to learn how to take what NMFS is doing out to constituents

Rob Southwick – he is a major user of the NMFS data and wants to know how work is prioritized, and how NMFS/constituents can work together on projects

Mike Leonard – he represents the industry so is very interested in economics and how that can drive policy discussions, and while global interest in fisheries management is on biology, he thinks it is critical to do more on the economics side

Ken Haddad – wants to give a lot to the discussion, rather than take away the technical side back to the industry

**Angler Attitudes & Preference Survey - Kristy Wallmo and Ayeisha Brinson**

Patrick P- asks if there was any analysis by mode in terms of the preferred vs least preferred management options, in particular for the for-hire mode. Kristy replied that most for-hire anglers may not be included in the sample frame in general so that analysis by mode might not pick up much. Also, was there any breakdown by types of fisheries, i.e. Mid-Atl groundfish vs NE groundfish or striped bass, etc.? He thinks the attitudes will vary by type of fishery that the angler primarily identifies with, and if we don’t know the difference or the data doesn’t reflect that, then it won’t answer the right questions. He also wants to know if the survey was designed to answer management questions or just general knowledge. He thinks it’s the managers’ job to get the right questions on such a survey, and that there are too many holes in it to use for a specific management question.

Stephen H – suggests that if our focus is on federal rules, and the survey targeted the general angler, the results might not be that applicable for federal regulatory analysis.

Dave M – he shared the survey results with a meeting of the for-hire leadership in RI and ran an article about it in a local fishing magazine that he writes for. For-hire anglers either want to catch fish to eat (most of them) or, are interested in trophy fish. The attitudes of FH anglers may be different than the other anglers in the survey so we should be mindful of that.

Ken Haddad- It will be good to explain where the regional reporting will go. We don’t want to discredit the national view by digging deeper and showing different trends possibly, also it will be more complicated.

Jeff Gabriel – what are we doing with this data in terms of bringing it to policy makers and the industry? What are the next steps to parse this out for policy makers in terms of how they should interpret or use the data?

James – even the shore based fisherman are targeting federal fisheries in the West Coast and PI, in regards to Stephen H’s earlier comments. Pinniped interactions are a big issue in CA and one of the main findings from the regional analysis.

Stephen H – was there any attempt to forecast these results or to compare them from other previous surveys that asked similar questions? A lot of the results are logical and could have been forecast

Ayeisha – said they asked for input from regional coordinators so they could add that comparison to the discussion they are now having with the RCs. Kristy said there was no attempt to forecast or do a comparison initially.

Rob S – he’s glad the survey was done and finds it useful, so thanks. He also reviewed the draft instrument but did not review the scope or the sample size, which he thinks would have been good to see ahead of time. He can use the results for decisions facing state agencies and asked if he can get the raw data or have some specific analysis done on it. If there is another survey in 2018, he offered to collaborate on it.

Mike L – a lot of the results support what was already suspected or known, but not actually validated. It’s good to have the data to back up those claims. There are a lot of diverse opinions shown by region and type of angler, no one size fits all approach, and we will need to dig deeper and explore some of that diversity.

Forbes – the information can be both dangerous and valuable at the same time. Data may need a user’s manual going over we communicate the results, our path forward, and the recommended uses and limitations.

Mike T – were the response rates typical? Was the sample representative or is the data affected by survey response bias? Did we do a nonresponse test? Can we use the sample characteristics against a known population?

Ken – did NMFS think about starting regionally and then going up to a national level?

**Economic Impact Case Studies -Jerry Leonard**

Aaron – What were the breakouts in terms of OR vs WA, in terms of sample size? What percent of the industry was owner/operator?

Jerry – they were about equal, but not enough to do state level breakouts. Owner operators were about 85%.

Patrick- were there any limited access fisheries during the survey time frame?

Jerry – only salmon in WA and that the number of licenses in it were about the same from many years, incl. inactive licenses.

Jerry – now NMFS is doing a better job getting the economic data into the hands of the Council at the beginning of the council process.

Stephen – in the SE/Gulf for-hire data is used by the Councils and goes into regulatory documents or public meeting handouts.

Russ asked if data is used at the front end to develop alternatives.

Stephen – usually not, because surveys like these just convey the facts, and are not used to look at alternatives under consideration, rather they are used to analyze the alternatives.

**For-Hire Cost and Earnings Studies -James Hilger and Jerry Leonard**

Sherry – would like to hear more on the open-ended opinion questions on the For-hire CA and NW surveys. Did people want payment to complete the survey? In the SE people expected payment after a survey done in the Gulf provided large payments for complete surveys. Thinks it is important to collect data on refusals.

Stephen – do Councils on west coast want an efficiency analysis?

James – the fleet leadership wanted the efficiency analysis to estimate the impacts of different regulations or economic conditions.

Mike T – does James have a behavioral model (James says he does).

Rob S – can anyone get the IO-PAC MODEL? Also thinks that the outreach for these two surveys, as described, was very good.

Jerry says that there are no incentives given, it’s all voluntary. Says he received only a few upset calls from industry about the survey.

Aaron – in the Northeast for-hire study, what was interesting was that there was how the results showed the share of household income from charter income. Will that also be done with the west coast surveys?

Dave M – you can’t run charters all year in the Northeast, so it’s a seasonal business and therefore the owners have to have other jobs.

Patrick – the business model for a 6 pack vessel is not profitable, so they need another job. He hopes the study’s catch information on how these part time vessels contribute to the local economy even if they are seasonal. Also asked if any of the surveys capture the bait and tackle businesses that many charter operations also run. (answer by Jerry – no).

**Valuation Case Studies – Dan Lew and Scott Steinback**

John Whitehead- regarding Dan’s presentation, none of the studies referred to have combined Stated Preference and Revealed Preference in the same paper. SP studies give an estimate of the value of changes in bag limits; it would be nice to combine these with revealed preference data to see how the results might change. For the MA Angler Valuation Survey – this is a very cool project. A paper by Hausman critiqued the difference between Willingness to Accept and Willingness to Pay in empirical studies, and the Bishop and Heberlien paper showed similar gaps between the two measures. The question is, which one is more appropriate? WTP is more appropriate when property rights are with the seller (of the license), not the angler. WTA would be better when there were no permits and the angler holds the right to fish.

Dan Lew – I can’t put the RP and SP data together for the 2007 data, due to the survey questions asked on that survey, but can for 2011 data and plan to.

Patrick P – In reference to the MA study and Dr. Whitehead’s comments – in MA the right to fish is with the angler as per the state legislation that created the license.

Ted McConnell – What Dan Lew is doing is a component of what Scott’s study is doing, in other words, the change in the total economic value to the angler of fishing opportunities.

Stephen – is the license to fish (say catch and release) versus retaining a fish upon landing? This is an important distinction when dealing with state versus federal permits and state vs federal waters.

Aaron – Can we use the values Dan has produced in a benefits transfer exercise (to OR?) Dan – not really a good comparison as AK is very different in terms of the non-residents and their values for fishing there (a once in a lifetime trip for many).

Scott – for the MA study, you could probably transfer the results to RI or NH but that might be it, due to species differences in other states

John W – You may be able to use the studies for Benefits transfer if you adjust some of the variables by the means appropriate to that new place

Rob – will NMFS run a similar study to the MA study somewhere else?

Scott – It would be nice to do so because that might allow for a calibration of RP to SP values.

Patrick – The study hurt compliance with license purchases in MA. It should have done more outreach ahead of time. Lots of government staff in MA put their reputation on the line for this study, and now MA is still 30% below compliance for licenses than what was projected.

**Presentations by NMFS Partners & Constituents**

**Rob Southwick and Mike Leonard, Matt Massey, Sherry Larkin**

Leif – These papers were good examples of where MRIP data and economic models can fill in some information gaps. One question is how do we come up with an informed metric of substitution for marginal changes?

Doug – Spatial data is needed in terms of where anglers are fishing. We are losing a lot of information on fishing when we don’t have GIS data on actual fishing sites.

Rob – Getting GIS data is expensive, not everyone wants to reveal their fishing spots. We should probably do some pilot studies on this, also we should decide how to use these new smartphone apps for voluntary reporting of catch and location.

Brad – We’re close on getting that type of information, e.g., I-Snapper applications. I-Snapper is being used in the Gulf of Mexico for stock assessments and for logbooks on for-hire boats.

Dave – There was a pilot study done this past summer in RI using tablets on a few charter boats, recording catch, size, actual GPS locations. Next year it will expand to a larger number of boats, including private boats.

Patrick – how can we make use of marketing and industry data?

Rob – industry is sensitive to revealing business data, or the industry doesn’t know where their product goes after a wholesaler buys it.

**Wrap Up Day 1**

Russ – A list of the issues I’ve heard today include the following: a lack of trust with the agency complicates some data collections, getting data into the hands of decision makers; getting data into the regulatory process earlier; doing a better job with normative data, being more careful when sending out data and results without a use manual to explain data limitations and caveats; and interest in regional analyses of the angler attitudes survey data.

Mike L – It’s not always the case that information isn’t given to managers, but that they don’t know how to use it.

Russ – Whose issue is that? The managers, NMFS, Councils?

Mike T – Both the managers and NMFS staff need to address it – i.e. the managers need more training on jargon, terms, etc.

**Day 2**

**Bioeconomic Modeling – Scott Steinback**

Doug – How well is the model performing relative to real data, and real outcomes? It’s very hard to get economic data into the policy setting process. The BLAST model is great because it really changes how economic data can get into the process which is a real advance. I have three points: 1) Now, the economic model is embedded in the process for council members so that they don’t have to figure out where in the process to put economic information. 2) It corrects the issue of not incorporating the biological data into the behavior model (like a RUM) and getting feedback from stock changes, for example, into the number of trips taken, or fish caught.

Scott – 2013 was the first year the model was used in the management process.

Patrick – In the NE, cod stocks in FY 12 was dire but the council and politicians were mostly dealing with commercial fisheries. The Rec sector was given the opportunity by the SSC to choose among options of bag limits, size limits, etc. At an SSC meeting, the BLAST model really provided the type of information that the SSC needed to decide which option was best. The main comment I have is that there is no variety between the types of vessels in the model, such as the for-hire boats that go to Stellwagen Bank, the for-hire boats that go to other areas, and the for-hire six pack boats. All three types operate differently and fish in different places, and can’t necessarily change to other species. Patrick and others in New England gave comments to help the BLAST model and make it better, he suggests building in how political management can give feedback to the process. Also, in my opinion the model failed in the sense that more haddock were caught than the model predicted. Council staff need to communicate the model’s ranges better so that probabilities are understood.

Ted – The model is terrific, and I’m not saying that just because I had something to do with its creation. In the past, interaction between economics and biology has been spotty, but this makes great strides and sets a foundation for improvements so that in the future, these models will be used routinely. In 1976, recreation use was not even considered in council decisions in New England. The BLAST model is a really good economic study, and though the economic model is based on hypothetical responses, it works because they are reliable. There is a bit of uncertainty on compliance, bag limits, size limits in terms of the results. Sonia Jarvis’s dissertation looked at the difference in bag limits and expected catch. There is unobserved heterogeneity among anglers in terms of catch, so bag limit may not be binding for some, and anglers may or may not comply with rules (further investigation is needed on this).

Stephen – does the model include a time component?

Scott – The model now uses a 2 month wave period so it can handle any changes such as closures during that time period.

Ted – That’s a really good question, but I’m not sure how the model should handle that yet, i.e. to analyze a closure in one period, in terms of how that changes effort in other months.

Brian – Can other variables related to catch and release be accommodated into the model, and can it be applied in other areas?

Scott- We are working on a model of summer flounder now and striped bass. We could look at released fish for legal size fish.

Leif – Was the number of trips actually occurring close to the predicted number?

Scott – yes, and we used that difference to calibrate the model.

Leif – Does the model account for other anglers on the boat using a bag limit for another angler?

Stephen – is the model running dynamically, and for a two-species combination?

Rob – Overall, bioeconomic models as a concept are great, it gets at marginal changes. Could you get greater resolution for sub-fisheries if you had a bigger sample? Have there been other models like this? Can we apply this model to other locations?

Scott – Probably, but we haven’t had time to explore that (sub-fisheries) yet.

Brad – There was a MARFIN project used to look at quota trading for red-snapper but never used by the Council. Part of the problem is finding the anglers who actually catch the species in question, due to limitations of using MRIP intercepts to find respondents.

Russ – Can we get to the point where other analysts can use a decision tool without too much knowledge of the underlying models?

Brad – There are a limited number of fisheries where a bioeconomic model is needed. I think we can get to a point where we can speed up the process of developing these models. Let’s prioritize and then we can rapidly update behavioral models preferably using a panel study. Let’s investigate logbooks with anglers using mobile phones and such so that we can use revealed preference data as well.

Ted – I agree, a panel would provide a better response rate than MRIP respondents. Then we could get faster response rates and look at heterogeneity across anglers.

Patrick – Can a panel be made up with the recreational community members that are known to the leaders of the community?

Doug – Regarding Rob’s comment on applying this to other locations, NMFS wants to but it’s not a trivial process, so it will take time.

**Social Indicators of Community Resilience & Vulnerability – Lisa Colburn**

Brian – Asked about the meaning of place-based in this work. Will this work be extended to look at how communities are changing over time? In retrospect or with forecasting?

Lisa – In Census data, place based refers to a designation of zipcode, community level data. In regards to time trends, 2009 was the first year of Census data, with commercial data we can go back to 1997, with recreational data, to 2004.

Mike Travis- the mapping tool shows dependence which is a combination of reliance and engagement. Are they both equally weighted when combined into dependence? Why haven’t you attempted to aggregate the various factors used to indicate resilience and vulnerability into an aggregate index for each? Maybe you should consider aggregating to a more composite index to make it easier for decision makers, have experts make that weighting decision instead, rather than policy makers trying to do it in their heads at a meeting.

Lisa – yes, they are equally weighted. The reliance measure puts smaller communities on the map because of the fact that it divides (i.e. engagement) by population.

Ken – where are you going with this work, and how will you use this information?

Lisa – the new data on NAICS codes on shore side businesses will be incorporated next. Just to clarify, all the work is done using secondary data sources, not primary data collection but we did do a field verification test of some of the data early on.

Aaron- how do you deal with proximity issues between a town that has a small population but relies on a nearby larger population?

Danielle – when will you be able to do this same work for the West Coast?

Lisa – we are able to use MRIP data for Atlantic and Gulf which isn’t available for the West Coast so we will have to use state data there.

Scott: In the next round of analysis, you should break out the MRIP trip data by resident and non-resident trip totals.

**Bait and Tackle Business Survey – Cliff Hutt and Sabrina Lovell**

Rob Southwick: Suggested categories of revenue, not ask for absolute or rounded values as the stores are not going to want to reveal their revenue exactly. Also, set up appointments at ICAST show in July to keep the survey in forefront of the shop owner’s minds, and remind them to do it. Is the survey getting too long? Also he suggested a phone call reminder be built into the contract so that if the survey is not returned right away, the contractor makes a phone call to remind them.

Mike Travis: thinks that the ranges of revenues will affect the accuracy and precision of revenue estimates and disagrees with adding ranges in place of asking for revenues directly.

Forbes: asked if ASA should endorse the survey with a letter in advance, but Mike Leonard disagreed and suggested the endorsement come from Big Rock Sports.

Patrick Paquette – thinks that reaching the smaller independent stores in MA will be hard, because he doesn’t think they sell licenses and may not buy from Big Rock. Wants to know how we are identifying these smaller stores. Suggested that could look at the list of the MA certified weigh stations for fish, and also thinks that we need to allocate enough money to reach these smaller stores, perhaps by site visits, etc and that the interviewers should be local people.

Jerry Leonard: The gross margin question is very important on the commercial side, but here we don’t have an equivalent piece of information like commercial harvest values or pounds, because we don’t know how much the stores are buying of lures, tackle, etc, and therefore the gross margins are not that important to know by category as we have it now. He thinks we can drop this question. Also, we need to know how much the costs are by category, so keep that question.

Leif – asks how we will deal with partially completed surveys and whether or not we will use such incompletes for a non-response followup test.

Jeff Gabriel– suggests adding boat related electronic accessories (like fish finders), and also ropes, etc used for fishing

Aaron – suggests splitting the species types by OR, WA and CA

Stephen Holiman – asks if this model will be a stand alone analysis or if it will be integrated into the angler expenditure impact models. (Cliff/Sabrina – stand alone analysis is planned)

**Panel Discussion on Management Needs, Future Directions**

**Discussants: John Whitehead, Ken Haddad, Stephen Holiman**

John W –Speaking as someone who has been on an SSC for 10 years, and as a researcher who used the MRFSS data, I’ve seen how it was used in the snapper-grouper analysis over time, and my concern is that new analyses are still being done using the results from older models based on outdated MRFSS data (ie 2000) instead of updating the underlying MRIP data to more current years. Can we do a Gulf of Mexico model, or a South Atlantic model and update it every year using a standard RUM model? NMFS has relied on conjoint studies for a long time now, but has leapt over other more simplified techniques because it gives us nice estimates of value of fish caught, but these models haven’t faced the same level of scrutiny as other SP studies, like contingent valuation methods, but have been shown to have the same type of problems such as scope tests. Simple add-on surveys to the MRIP intercept survey could be used to easily collect economic data. You can estimate a nice RUM model but you can’t look at the changes in overall total effort but you could use a linked model like the one Matt Massey talked about yesterday, if we could just add 1-2 questions on the add-on about opting out of fishing as an alternative. For example, we could add a question on trip cost increments, ie would the angler still take the trip they are currently on if the cost increased by a certain amount, yes or no. We can also ask site-specific questions, or questions such as how many more trips or less trips would they take if there were a change in expected catch, bag limits, etc. It’s never clear if the travel cost estimated values from stated preference will be the same as you get from revealed preference, so we should match the values in the same study to see if they agree or not.

Ken H – I learned quite a bit from this workshop, not being an economist. From a management perspective, regarding the difficulty of using socio-economic data for higher level council members, not the SSC members, it is because they haven’t learned to integrate economics well, as they are unfamiliar with it and can only get 1-2 minutes of discussion and feedback on it usually, when it typically is presented at a large meeting. In my opinion and experience, economic data and results are rarely discussed in final meetings regarding management changes. How can we integrate economic data at this higher level? Don’t look at that as a failure of the council members, look at it as a failure of the process. The economics doesn’t seem to anticipate the future, it’s more reactive. I challenge all of us to do that, and maybe we need help from the P.R. and communication folks, rather than the economists. What are the big issues coming up? They are 1) allocation, it is a priority for the recreational community, it needs science behind it. Red snapper is the canary in the coal mine, in terms of all the issues surrounding it. David Carter and Juan Agar’s paper made it to the council but with all the doubts and caveats are what were emphasized not the actual results. 2) Sector separation, splitting recreational sector into private versus for-hire. There is absolutely no understanding of what it means to the industry to do that, but the time has come. The rec sector is available to overcapitalize in days, in an explosive fishery. 3) Private fisherman comes to a council meeting and has no information on the value of recreational fishing. There is very little (models, analysis?) nationally that can be an umbrella across regions. Partnerships between economists and industry are critical to building trust. I’ve never seen a positive level of trust between the federal government and fisherman, and it will take a lot to rebuild that trust. It’s very easy to look at the commercial industry in terms of economics but not so with recreational.

Stephen H– I’m an end user of the products from the Science Centers, and I work closely with the council members. Over the years there has been a whole lot more economics that goes into the council process now compared to earlier. Data from the for-hire sector is being used and has been since the 1980s. I use economic impact models from S&T regularly. There are far fewer amendments now where it is just a qualitative discussion, than earlier. The whole IFQ issue is on the horizon for the for-hire sector in the Gulf. Things have gotten better than before. When does the information get to the Council? It’s rare that any of the economists get to talk to the Council directly (either the NMFS economists or the Council economists). The Gulf Council lacks a process to get the economic data to the Council, usually only the regulatory flexibility economic data makes it to the Council itself. I typically use a worst-case scenario to analyze proposed regulations, e.g. 100% of directed trips are cancelled due to a regulation. I like Scott’s bioeconomic model because it can improve on that and we can use a behavioral model to actually show exit from a fishery versus a change in species targeted.

Comments:

Ken – The trade industry did not pay attention to fisheries management until a few years ago, when ACLs came on the scene. I think there is not enough information on the effects on industry from changes in the behavioral models, for example the links between a change in trips to a change in bait and tackle sales.

Brad – Do we keep throwing economic data at council members until they ask for it, or the other way around? NMFS has focused too much on pure science versus applied science, why are we not pushing on that? NMFS does a good of reacting to council decisions or alternatives but we’re not proactive by helping to formulate alternatives.

Mike T- demand drives production, we need councils to know what to ask about. Get councils aware of what’s going on at NMFS in their region as well as in other regions. Scott’s presentation looked at what management objectives can achieve conservation goals. Let’s broaden that to include all goals, specifically economic and social goals. How can we bring in more quantitative social information into the bioeconomic models a la Lisa’s model (i.e., a sociobioeconomic model such as the one developed by Griffin et al (1987) for the Texas inshore shrimp fishery)?

Mike L – I found the workshop very useful but still finds things are being done piecemeal versus overarching goals across NMFS and Councils. Do we have a national set of economic priorities? Then how will all that information get into the management process?

Brian – Part of the problem is timing, there are very short time frames to do the analysis on management options. I need a standing data set to use for quick turnaround analysis, such as a standard MRIP econ add-on or a recreational log-book. Until I have that, I can’t do analysis for these quick turnaround time frames. Most of the time, I have to use data from one area and adapt it to another area or make assumptions.

Rob – Set a NMFS-wide prioritized list of projects and let outside constituents be involved in setting those lists.

Forbes – We need to be mindful of the psychology of the results, and how they are interpreted.

Patrick – A lot of the issue is that too many factors complicate the studies, e.g. climate change, acidification, etc. Also, some of these issues need to be addressed in MSA re-authorization. NMFS management should set economic priorities. The Council staff are overworked, how can we prioritize stock assessment improvements versus economic studies. How can we do a cost-benefit analysis on which studies to choose overall within a limited NMFS budget?

Rob – The Rec community is not just the council members, there are others out there too that use the data and could help set priorities and bring support.

**Wrap Up Session:**

Doug – Is there any important topic we haven’t touched on yet? How do we inform the April Rec Fishing Summit?

Communication is a big area and we need to do this across the board, at all stages. Training, new approaches, decision support tools are needed to help council staff and council members.

Rita – I agree on prioritizing on the science side; there is a programmatic approach as outlined in the model and data factsheets. Engaging the councils is a NMFS wide concern and is the hardest thing to do.

Comments around the room – (very few, most just thanked everyone for a great workshop).