July 20, 2023 Recreational Demand Model (RDM) Decision Support Tool (DST) Working Group (WG) Meeting Summary

The RDM DST Working Group for Summer Flounder, Black Sea Bass, and Scup met for the second time on July 20, 2023, via webinar to discuss enhancements made to the draft DST design template based on feedback from the first DST WG meeting on June 15, 2023.

Attending

Working Group Members

Tracey Bauer
Julia Beaty
Scott Steinback
Kimberly Bastille
Andrew (Lou) Carr-Harris
Kiley Dancy
Lorena de la Garza Hernandez
Emily Keiley
Alexa Galván
Mark Terceiro
Corinne Truesdale
Samuel Truesdell
Rachel Sysak

Chelsea Tuohy
Gregory Wojcik
Richard Wong
Tony Wood

Others

Laura Deighan
Jesse Hornstein
Jeff Kaelin
Adam Nowalsky
David Records

Discussion

Scott Steinback: Introduction about the purpose of the DST WG.

Kim Bastille: Incorporated changes based on DST WG feedback from the first meeting. States now listed in alphabetical order. Each column in the DST begins with last year's management measures with options to break out management seasons by mode. Also provides and option to add a season.

Back-end changes: Last meeting just provided examples, but now the DST can output numbers of kept and released fish by species. By the next meeting, kept and released fish by weight will be available as well. Angler welfare values have also been added to the model run outputs. The final table shows a summary of the status quo alternative based on updated data from last year.

Tony Wood: In this table, what is the status quo value? Numbers of fish?

Kim Bastille: Yes, numbers.

Tony Wood: The releases for summer flounder don't seem plausible.

Kim Bastille: We're still playing with the model so things may not seem correct. As I make tweaks, the numbers will change.

Tony Wood: Looks like BSB is the same, both an order of magnitude off?

Scott Steinback: Yes, I noticed that too. We'll double check all of these numbers for the next meeting.

Rachel Sysak: What is the angler welfare number? What is that value?

Scott Steinback: This is something that hasn't been available but is a nice feature of the model. It's the primary driver of the economic model. Angler welfare is also called angler satisfaction or consumer surplus. It's the value that anglers receive in dollars above what they're actually spending. Another way to think about it is, it's equivalent to the additional amount of money that anglers would have been willing to spend to go on the fishing trip, but didn't have to actually spend.

The model sums these angler welfare values across every angler fishing for these species. Managers will now be able to compare angler welfare across management scenarios providing an additional metric for assessing the performance of the management scenarios. For example, if restrictions are needed, maybe two sets of different management measures result in the same estimated harvest reduction, but one has higher estimated angler satisfaction. Under this scenario, anglers would receive greater benefits by choosing the alternative with the highest estimated angler satisfaction.

Rachel Sysak: Relative to the status quo measures, this would be the dollar value above or below of what they would have spent at status quo?

Scott Steinback: A positive change relative to status quo means anglers would be gaining value, negative, they would be losing value.

Corinne Truesdale: Is there a way to include the total number of kept and released fish for the state overall?

Kim Bastille: Yes, there's a total keep and total release for each species by state.

Lorena de la Garza Hernandez: NC was still not on the list, will it get added?

Kim Bastille: Still in discussions of how to add NC data because catch is so small.

Scott Steinback: We'll follow up with you later about that, Lorena. Data are very sparce in NC so not sure where to go yet.

Kim Bastille: Right now the front end of the DST is only built out for NJ. Once NJ is working properly then I will incorporate the other states.

Alexa Galvan: Suggestion to include the units on the results page. Like angler welfare, dollar sign. Otherwise, this looks really good.

Scott Steinback: I noticed something about a low bag limit and a high bag limit? What did this mean?

Kim Bastille: For summer flounder, there's the split bag limit where you can keep two in the single slot and then one above the slot. I incorporated that so that users can adjust lengths and bag limits.

Scott Steinback: Would that feature be an option for all of the states?

Kim Bastille: Incorporated for summer flounder in NJ because those are the current regulations. It could be an option if states are interested in breaking out bag limits by length.

Scott Steinback: I believe NJ is the only state that managers summer flounder in that way, but not 100% sure.

Kim Bastille: For BSB there are only min and max length regulations – no slots. Maybe can incorporate slots in the future if requested.

Scott Steinback: We'll see kept and released in numbers and weight, eventually, and then a total as well? Could also provide an estimate of total mortality – implying discard rates to releases. We could add this in here as another metric.

Kim Bastille: Could also break it out by species sections: separate tabs for BSB, summer flounder, and scup.

Scott Steinback: Maybe a sub tab under the results, one for each species?

Sam Truesdell: My recollection of the model is that the computational expensive part – time step is 2 weeks. Takes a long time. One or two days opening or closing calculation didn't require a full model run.

Kim Bastille: The model is now calculating seasons a little differently. Now the model does not toggle by two weeks, but by days. There's a correction factor for weekends and holidays. Came up with a way to get a value for a single day.

Sam Truesdell: That sounds good.

Scott Steinback: Lou will attend next meeting. Will be contacting some of you to provide release length data. In these meetings, we're trying to concentrate on the construction of the DST though. I think we're finally getting to the outputs we're looking for, that everyone wants to see, now we can start focusing on formatting the output. At our next meeting, we'll see better how that looks. We can keep expanding on the DST as we move forward. This is a living tool. If anyone sees something amiss, or would like to add something new to the DST, please let us know. Our goal is to make this tool as easy to use as possible. Kim, how many model runs are you up to now?

Kim Bastille: Yesterday when I was working on incorporating fish lengths, I was able to run the model fifty times. This is a computationally heavy model - one of our goals is to get this into a cloud space where you can do parallel processing for each iteration. Keeps the time between

making selections and getting results as low as possible. Where then would the front end live? We're still working that out. We are trying to get to a place where it won't bog down when we're all using it together. Goal is to have it up and going for all users to use the tool at the same time, but haven't gotten there yet.

Scott Steinback: Unfortunately, there doesn't seem to be a lot of cloud processing support at NOAA Fisheries – or anywhere within NOAA. Have reached out to folks outside of NOAA and have meetings scheduled with them. I think that we're on track to finding the cloud processing capability that we're looking for.

Kim Bastille: In perspective, we only started working on this front end a few months ago, still a brand new tool we're working on. Once we figure out how to run it in the cloud, it'll be good to go.

Scott Steinback: We are hoping to be able to simulate each management scenario within the model 100 times. If we're able to do that, then another output metric from the model will be the percent of runs that resulted in the target reduction or liberalization.

Kim Batille: Right now just medians, but in the future you'll see % of the time that the target was reached.

Scott Steinback: Accessibility: At a minimum we still hope to provide all working group members with access to the tool for the 2024 regulation setting process.

Sam Truesdell: Question about the 100 runs. While we're in exploration mode, would there be any value in lowering that to speed things up until we narrow things down?

Scott Steinback: It's an option. The constraining issue is processing speed. If we're not able to run this in the cloud, we have other options, but it'll take longer to get output. If that's the case, we could reduce the number runs, which would speed up the processing.

Kim Bastille: Another option. There's some places in Lou's model where we're drawing multiple times to derive parameter estimates. We can cut that down to speed up the model. In the long term though, we don't want to move to much from the current modeling approach.

Scott Steinback: Reducing the number of model runs or calculating parameter estimates by drawing fewer times raises the uncertainty of the model outputs. We did do some sensitivity testing with Gulf of Maine cod/haddock model. We ran it up to 1,000 times but when we did comparison to 100 times, they were within 1% of each other. Also, running 100 simulations made it easier for people to understand the output better. We could show the number of times, out of the 100 simulations, that the mortality estimates met the target (i.e., the percent of the time the management alternative kept mortality below the annual catch limit). We're better off running more versus fewer simulations. If we get into the cloud we aren't limited by that.

Kim Bastille: The final tab in the DST shows documentation. Here we could include FAQs or a YouTube tutorial.

Scott Steinback: This is where we will also add links to Lou's model. We'll try and provide as much info on that tab as possible.

Public Comment:

Jeff Kaelin: Lunds Fisheries. Just became governor's appointee to Commission. Going to listen to issues that I don't normally track. Adam, Joe, and I will be NJ's delegation. Just wanted to say thanks for letting us listen in.

Scott Steinback: Next meeting is August 17th. I will send draft meeting notes around early next week and post the final notes on the website. I'll send out an announcement for the next meeting shortly.