

December 21, 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 seventh time on December 21, 2023, via webinar to: (1) address any outstanding questions/issues associated with use of the DST; (2) review DST output metrics; and (3) review the DST user-decision flowchart.

Attending

Working Group Members

Julia Beaty
Scott Steinback
Kimberly Bastille
Andrew (Lou) Carr-Harris
Kiley Dancy
Steve Doctor
Hannah Hart
Corinne Truesdale
Sam Truesdell
Rachel Sysak
Chelsea Tuohy

Gregory Wojcik

Others

Adam Nowalsky
Greg DiDomenico
Sabrina Lovell
Unidentified 401 number
Mike Waine
James Fletcher

Discussion

Scott Steinback: Model is in the cloud! We have a website. Demo version with NJ sent out. Then all states added. We can talk about issues you've had, walk through the tool on this call. Will review a decision flow chart that Kim and Lou put together. Then review next steps.

Rachel Sysak: I've been able to do a bunch of runs. Example of summer flounder. Ran a bunch of iterations for bag size. We know not everyone is getting the full bag, so lowering the bag wouldn't be expected to have a big impact – but increasing the bag limit doesn't seem to be impacting harvest as much as it should. I can't even get a 1% difference raising the bag to 6 fish in NY and CT. Seems like it should be a bigger impact. Doing it at 19.5", which is a size limit NY and CT have been at in the past, so there should be data on that.

Lou Carr-Harris: To clarify, you increased from 5 to 6 fish, keeping the min size constant?

Rachel Sysak: I didn't run any keeping the min size constant for 6 fish, but I did for 5 fish. There was an increase, but it didn't seem like the scale of the increase matched being able to keep one more fish for the entire season.

Lou Carr-Harris: The probability of an angler keeping one legal-size fish on a trip is small. Probability of keeping 5-6 legal-sized fish is much lower than that so there wouldn't be a large impact from raising the bag limit.

Rachel Sysak: Maybe this is more in the mgmt. sphere. But I have concerns saying that raising the bag limit to 8 fish didn't impact things, so then why not raise the bag limit to 8 fish? We probably won't do that because if we need a reduction next year, we would need to take a big decrease from 8 fish to get an effect. But it feels like a disconnect that the model says we can have a huge increase in the bag limit as long as we have a 19.5" min size.

Lou Carr-Harris: Someone at the Council meeting mentioned that anglers might be encouraged to take more trips under higher bag limits even if the likelihood of them taking that full bag is tiny. Might be some demand effects from having just a higher bag limit. Model doesn't operate measuring the demand related to shifts in regulations, the model is driven by shifts in expected harvest. Using behavioral parameters on expected harvest, not changes in measures. If the model was set up differently, if we had data on how anglers preferred bag vs. size limits, we might be able to capture some of that. But right now, we're capturing impacts of changes in harvest. Based on the data I've seen, when anglers are unlikely to catch their limit, increases in the bag limit result in small impacts. I wouldn't recommend taking big increases in bag limits because we aren't modeling how demand would change under changes in bag limits. There might be a higher impact that we can't capture with the data we have.

Rachel Sysak: That's helpful. Folks above me are going to ask if we can do things like that. It's helpful to understand those things to think of how I would answer that question.

Corinne Truesdale: That was super helpful. Those types of issues might come up in RI too. Under the old method, going from 6 to 5 fish in the past only got us a 1% reduction. So the model results align with what we saw when using MRIP trip data.

Rachel Sysak: That's good to know.

Lou Carr-Harris: Jorge Holzer has been looking at this with a different analysis. Looked at bag limits across states from 2009-2020. For example, in NJ he estimated less than 4% landed the bag limit. It's not the bag limit that's constraining, it's the size limit.

Scott Steinback: Let's run through the model outputs. There are a few new output metrics that weren't available before this year. New column: **"% under harvest target (out of 100 simulations)."** Everyone should take a look at this. The goal should be to strive to find the highest % possible. The higher the percentage the higher the probability that the measures will actually result in a 28% reduction in summer flounder harvest and a 10% reduction in scup harvest. At a minimum, the measures should have at least a 50% probability of achieving the harvest reductions.

"Change angler satisfaction" tab. This shows the change in angler satisfaction associated with alternative management measures - relative to having status quo measures in place for 2024. As reductions in summer flounder and scup harvest will be required in 2024, these values will be

negative. The goal should be to try to minimize the loss in angler satisfaction when examining alternatives.

“**Estimated Trips**” tab. Total estimated number of angler trips that are predicted to occur in 2024 can also be compared across management scenarios.

Lou Carr-Harris: Should try to minimize loss in angler trips to sustain businesses that are reliant on fishing activity. This is slightly different from angler satisfaction. Angler satisfaction measures the monetary value that anglers themselves obtain from their fishing trips. Changes in angler trips can be thought of as the monetary value to the local economy.

Scott Steinback: Last tab is “**Discard Mortality**.” This tab shows dead releases in pounds and numbers. This metric wasn’t available in previous years. Users should try to find measures that minimize discard mortality.

Mike Waine: Is it still the agency’s determination that this is the best scientific information available?

Scott Steinback: I would presume yes. That’s why we’re using it.

Mike Waine: I found the bag limit discussion interesting. We’re not measuring the change in demand with size limit changes either, right?

Lou Carr-Harris: Indirectly. We’re modeling how changes in min size restrictions will affect anglers’ expected harvest. Not directly measuring how anglers respond to an actual size limit change.

Mike Waine: It seems like the justification you said, don’t change the bag because we don’t know what that change in expected behavior would be, applies to the size limits. This sounds very iterative. Is there a way to flip it around and say I want to maximize angler satisfaction while minimizing releases, while also having a 50% probability of runs achieving the reduction?

Scott Steinback: It’s not an optimization model. We’ve been thinking about how we could turn it into that. It will take some effort. Maybe we could do it in the future. At this point, it’s an iterative process to find the preferred measures. Would take a lot more processing capacity and a shift in how the model is constructed to do that. Right now, it’s not possible, is the bottom line.

Rachel Sysak: Considering where we’re at now and our initial discussion about the social behaviors that people engage in that are not captured by the model, I don’t know that optimization would work. As a technical person and a manager, I try to keep in mind all the other social factors that play into what people want to see from regulations. This is mostly capturing one aspect of what’s important to people: money. It’s important, but not the only aspect of angler satisfaction. I think the model is awesome. I think iterative is the better way. We have a suite of options we can consider. I know we’re not going to go up to 8 fish for summer flounder because it would anger people, it wouldn’t make sense. Even if the model might say we would be achieving our goal. I don’t know that optimizing with the model would get us to an actual optimal value.

Mike Waine: I don't know what data Rachel would be using to make those calls. Expert opinion. If there are data sets that we can use to help optimize this, that would make sense. I'm not sure if there are data sets to help inform the other social metrics.

Rachel Sysak: We send out a survey to as many stakeholders as possible to get preferences from those communities. Not a data set that's been vetted. Just an in house data collection effort. We do rank choice.

Scott Steinback: Do all the states do something similar? Is that common?

Corinne Truesdale : We have our public process for coming up with regulations that will be proposed to the state government. We go through a workshop process for stakeholders. Give them info about what changes need to be made. They come up with proposals themselves. Generally have a party/charter representative and a shore/private/rental mode representative. They will go back and forth to come up with their formal proposals. Then goes to public hearings and then the council for RI.

Kim Bastille: We built a flowchart to help identify what questions to ask yourself and where to find those answers in the tool. Kim walked everyone through the flowchart (included at the bottom of these notes)

Julia Beaty: Can the TC collectively agree on guidelines for this year? For example, proposed measures need to have at least 50% of runs achieving target. The TC could pick something different, for example based on the ABC risk policy so a higher percent of successful runs is required for lower biomass levels.

Chelsea Tuohy: Wasn't necessarily planning for another TC meeting, but did send out a memo with proposed methods. Are you thinking the percentage of runs rule would be coastwide or state by state?

Julia Beaty: Could be a TC decision. Sometimes it's cleaner if all states do it the same way. But there have been instances in the past of states coming to agreement where they do it differently as long as the total percentage change meets the needed amount.

Scott Steinback: Let's keep our next planned meeting for January 18. Most states might have their preferred measures by then. Chelsea asked states for it by January 19. We can talk about any remaining questions/concerns. After that, we can take a break for maybe 4 months. Will be running the model again next year. Will at least need to do it for black sea bass. Will make some changes next year. Want everyone to be involved in that.

Mike Waine: Really interesting data outputs. First time I've seen some of that angler satisfaction stuff. Iterative approach, percent of runs that meet the reduction. What about comparing between runs and showing if there is a statistical difference between runs?

Lou Carr-Harris: We could, but we don't save those outputs. We could manually do some of those tests to look for significant differences. But as of now, it's not incorporated into the model because the raw output files that would be needed are not saved.

Mike Waine: Sounds like it would be possible, but you are questioning how valuable it would be because a lot of these runs are not likely to be statistically different from one another. I think that would be valuable for stakeholders to know.

Lou Carr-Harris: Can think about some of this for next year.

James Fletcher: Is there any chance that we could require vessels in the EEZ to report by cell phones? Keeps getting split between recs in state waters and the EEZ. The Council and NOAA should only be regulating the EEZ. For years I have been recommending a total length for all species. If someone wants a larger fish, they would use larger hooks. In the EEZ that would not be a problem. This needs to be split state and federal and start in federal waters. What happened on the commercial side, we had state licenses and no federal licenses when Magnuson was passed in 1976. Now we have federal vessel permits. Can we do something like that for recreational so we have a better understanding of the numbers? We don't know the number of people we are dealing with. Until we know that, how are we going to come up with anything? How do I get you all to discuss total length? How do I get someone to give me a number for recreational fishermen in the EEZ? I tried to run it back on state licenses in NC and VA. NC has 25 different recreational fishing licenses. VA has 19. You can't tell the individual people. Can NOAA start it rather than the states?

Scott Steinback: The objective of this working group is to develop the front end tool for the RDM. That's our focus. Just on development of the front end to that model. Decisions about changes to management is beyond the scope of this working group. Currently there are no total length limits in place, so that's not an option to analyze through the model. If we ever moved to a total length limit, we would have to figure out how to analyze something like that.

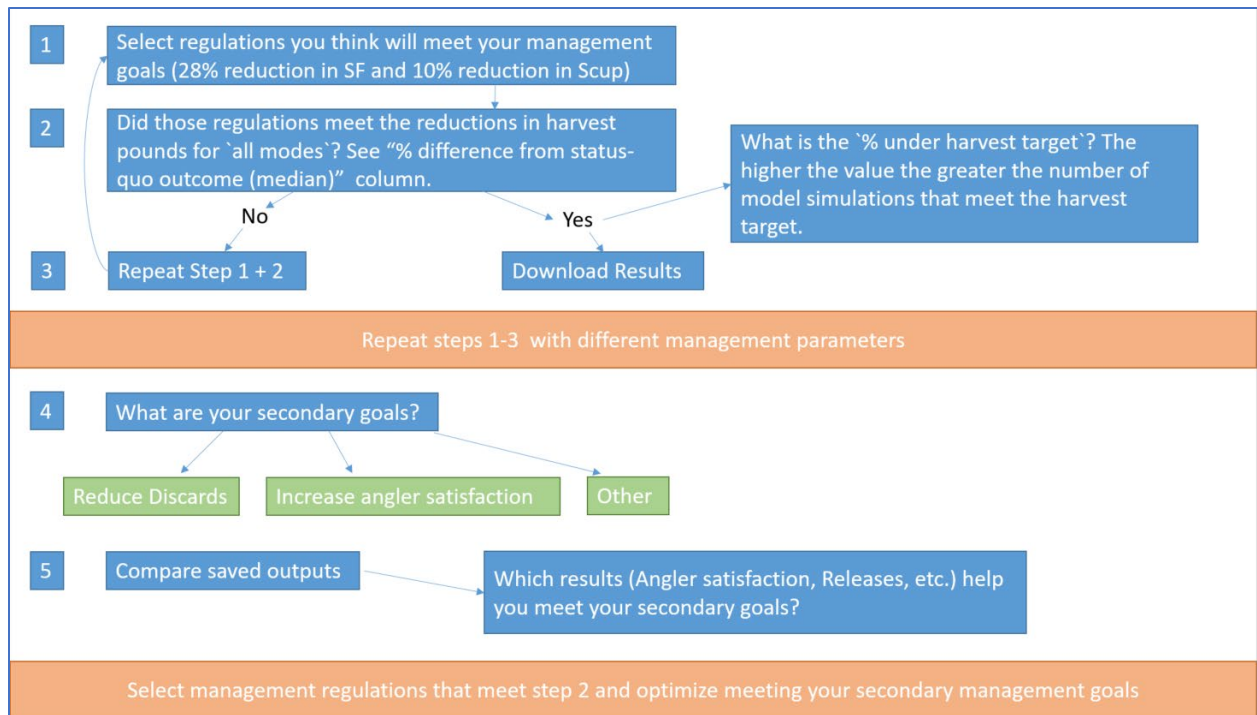
Chelsea Tuohy: Wanted to gauge TC interest in developing recommendations for that percentage of runs column. If measures need to be submitted by Jan 19, need to come up with something soon so states have enough time to work with it.

Steve: That column is cool information, but I don't think it has a bearing on making regulations. We'll focus on the percent reduction column. I don't think there's any reason to change it at this point.

Rachel Sysak: My thought is we should do 50. I was thinking by state. I think coastwide makes more sense. But the model takes most of the work day to run when you include the coast. I wouldn't be able to look at all my measures like that in a realistic time frame. I don't think we have time for coastwide. I think 50 or better by state would work better for this scenario.

James Fletcher: Could these models be compared through AI to determine if these models are correct?

Scott Steinback: Maybe someday in the future.



DST Decision Flowchart