# GULF OF MEXICO FISHERY MANAGEMENT COUNCIL 

## MIGRATORY SPECIES COMMITTEE

Omni Hotel
Corpus Christi, Texas
August 24, 2022
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The Migratory Species Committee of the Gulf of Mexico Fishery Management Council convened at The Omni Hotel in Corpus Christi, Texas on Wednesday morning, August 24, 2022, and was called to order by Chairman Tom Frazer.

## ADOPTION OF AGENDA <br> APPROVAL OF MINUTES <br> ACTION GUIDE AND NEXT STEPS

CHAIRMAN TOM FRAZER: I would like to call together the Migratory Species Committee. The first order of business on the agenda is the Adoption of the Agenda, Tab M, Number 1. Could I get a motion to approve the agenda?

Let me remind people who are on the committee. It's Dr. Greg Stunz, Susan Boggs, J.D. Dugas, Dakus Geeslin, Bob Shipp, and Troy Williamson, and so is there a motion to approve the adoption of the agenda?

MS. SUSAN BOGGS: So moved.
CHAIRMAN FRAZER: We have a motion to approve the agenda by Susan Boggs. Is there a second? Second by Dr. Stunz. Thank you. All right. The next item of business on the agenda is the Approval of the June 2021 Minutes. That's Tab M, Number 2 in your materials. Can I get a motion to approve the June 2021 minutes?

MS. BOGGS: Motion to approve.
CHAIRMAN FRAZER: Thank you, Susan. Can I get a second? Dakus or Greg, would you like to second to approve the minutes for this committee? It's seconded by Mr. Geeslin. Thank you. The third item on the agenda is the Action Guide and Next Steps. Dr. Hollensead will lead us through that. Lisa.

DR. LISA HOLLENSEAD: Thanks, Mr. Chair. We have one item for the committee today, but it will comprise two presentations. We have Dr. Enric Cortes, representing the Science Center, and Ms. Karyl Brewster-Geisz from the Atlantic Highly Migratory Species Division, as well as Randy Blankenship is in the back. They did a question-and-answer session last night, and so we certainly appreciate them taking the time to do that.

Dr. Cortes is going to speak specifically to give a presentation on the migratory shark species assessment process, and Ms. Brewster-Geisz is going to give a presentation on management strategies, and so the committee should review those meeting
materials, ask questions of presenters, and provide suggestions for shark management in the Gulf, and then, Mr. Chair, additionally, and it's not on the action guide, but, under Other Business. Dr. Stunz has agreed to give a verbal update on modifications to the quota adjustments for swordfish as well.

CHAIRMAN FRAZER: Thank you, Dr. Hollensead, and so we'll just get started with a couple of presentations, and so I would like to invite Dr. Cortes first to come up and tell us a little bit about stock status abundance trends and fishery mortality trajectories of U.S. Atlantic coastal shark stocks, and that will be Tab M, Number $4(a)$ in your briefing materials. Welcome, Dr. Cortes.

## PRESENTATION ON STOCK STATUS, ABUNDANCE TRENDS, AND FISHERY MORTALITY TRAJECTORIES OF U.S. ATLANTIC COASTAL SHARK STOCKS WITH A FOCUS ON THE GULF OF MEXICO

DR. ENRIC CORTES: Good morning, everybody. It's nice to be here for the first time in Corpus Christi, and so I would like to tell you a little bit about the status of shark stocks, abundance trends, and also fishery mortality trajectories for the Atlantic, but we will focus in the Gulf, since we are the Gulf of Mexico Fishery Management Council, but many sharks are assessed basin-wide, and so it includes both Gulf and Atlantic.

I am going to compare the status of the different species of sharks that we have assessed from the previous assessment to the most recent one, and we'll also look at trends in biomass, or abundance, relative trends in biomass, or abundance, and fishing mortality that we can extract from the latest assessments for each species, and then we'll open up for a little bit of discussion.

This is very busy, very small, and $I$ can hardly read it, and so, essentially, we started assessing sharks under the SEDAR process is about 2005, and so we follow the same process as for other fish, and, before, we had a slightly different process. What makes us different is that we don't have a council and an SSC, as my colleague, Karyl Brewster-Geisz, said yesterday, and so all of our assessments are CIE reviewed, Center for Independent Experts.

What I have here is a number of species that we have assessed, sandbar, dusky, blacktip, scalloped hammerhead, and then other species that we have not yet assessed, and so what $I$ wanted to show is that -- While sandbar is still in a rebuilding plan, the relative status, and so the degree of being overfished, and
being overfishing, which is no longer the case, the overfishing, and it has improved since the last assessment, and, in fact, that led us to propose, based on projections, only about a 10 percent increase in TAC.

Dusky shark is another species that is under rebuilding, and it still shows a little bit of undergoing overfishing, but the situation is also improved, and so it's a slow improvement, but the trends are going up, in terms of, you know, recovery of the stock in general, and so that was reflected by us saying that the reduction in $F$ necessary to reach -- To rebuild with a 70 percent probability of rebuilding here was not as high as we had estimated before.

We have a Gulf-specific stock of blacktip shark, and that has never been overfished or undergoing overfishing, and the most recent assessment we did, also compared to the previous one, the trends were better, and so there are increases in relative biomass and decreases in relative fishing mortality.

Scalloped hammerheads, we are currently assessing, together with other species of hammerheads, under SEDAR 77. The previous assessment, done a long time ago, in 2009, was an external assessment, and it found that the species, and this is for the whole Gulf and Atlantic combined, was overfished and undergoing overfishing. In 2024, we are expecting to assess the status of the other main coastal sharks that have not yet been assessed, and that is the skinner, tiger, and bull shark.

Just looking at each of these stocks, and I will go over these slides pretty quickly, but, essentially, these are the results of the latest assessment that was done in 2017, and it shows that there has been a 10 percent increase in SSF since 2008, and SSF is spawning stock fecundity, and these charts -- We can count the plots for the actual years that measure. In many cases, depending on the type of assessment, we are able to do this with the data available, and so, for sandbar shark as well, there has been a decrease, a substantial decrease, in $F$ since about the mid-2000s.

Another thing here to look at is that, as I said, for certain species, we look at the spawning stock fecundity, but, if we actually look at the biomass, this graph shows like the relative abundance, with $S S F$ or in numbers, with respect to virgin levels, and you see that there -- The abundance, in numbers, is recovering a little faster than the other measure, SSF, or spawning stock biomass, or other fishes, and so this is also due to the fact that many of these sharks have a late age at
maturity, and it takes time for the new pups to reach maturity and produce pups, in turn.

For the dusky shark situation, we still found that it was still undergoing overfishing, and the trend in SSF, the relative SSF, was slowly down, and so this assessment was done in 2016, if I remember correctly, but the rate of decline in biomass, or in SSF, in this case, had slowed down, particularly since 2011, and the $F$ had declined a lot since that peak in 2000, and it had further decreased, by 9 or 10 percent, since 2010.

Again, with dusky shark here, you can see it a little better, that the abundance in numbers is recovering faster than what the SSF is telling us, and so that's something to keep in mind, but the stock is still overfished, and it's recovering at a slower rate, because, again, these are species that have a very late age-at-maturity and live many years, a long life span.

For the blacktip shark, there was never an issue, and these are the results from the states of nature from that last assessment, and it has never been overfished or overfishing occurring.

Again, as $I$ said, the scalloped hammerhead was a long time ago, and we are reassessing it, as we speak, and, even though it was overfished, it has already showed an increasing trend since the late 1990s, and the trends in relative fishing mortality were volatile in the past few years, in the most recent years.

This is just a composite view of these four stocks, and again, the three, the sandbar, dusky, and scalloped hammerhead, that are still overfished, but on a positive trend, and then the blacktip, which is not overfished, and so this is just the relative fishing mortality for these four species, and only, as I said, the dusky shark, in red, still showed a little bit of overfishing, and, of course, the scalloped hammerhead trends showed overfishing.

This is the analogous thing for small coastal sharks, where we have finetooth, blacknose, Atlantic sharpnose, bonnethead, and we also threw in there the smoothhound complex, which was done specifically for the Gulf of Mexico. For finetooth, we are reassessing it as well, together with the other species that I mentioned, in 2024, and the previous assessment was done a long time ago, and it was not overfished or undergoing overfishing.

The blacknose, we have two stocks, and the stock in the Gulf -Actually, that specific assessment was not approved by the CIE reviewers, and so we don't have a status, and then, for the

Atlantic sharpnose, we consider a combined stock, and they are not overfished, with overfishing not occurring, and the same thing for bonnethead, and $I$ would mention that the status also had improved, with respect to the previous assessments that were done years before, and, again, the smoothhound complex, we only have one assessment that showed that there was no problem with that.

This is for the finetooth shark, and, again, no problem here, with not overfished and not overfishing. For the Atlantic sharpnose, the blue line, dotted line, indicates the relative biomass, and so, if you go to the right axis, it's not overfished, and the red line shows that it's well under the dotted-horizontal line, and so no overfishing. There has been an increasing case in SSF, in this case, in the 2000s, and accompanied by a decreasing trend in $F$.

This is a very similar situation for the bonnethead shark, with not being overfished or in an overfishing condition, and this is for the smoothhound complex, and that shows an increasing trend from the beginning of the time series in relative biomass, or SSF, in this case, and a decreasing trend in fishing mortality.

Again, this is all the small coastal sharks together, and, as you can see here, they're all above the dotted line, and so it's not in an overfished condition, and, analogously, they are all under the fishing mortality threshold, and so no overfishing is occurring.

This is just putting everything together for large and small coastal sharks for the relative biomass, or abundance, and this is for the fishing mortality, and so the same trends are just repeated, just summarized, here.

The conclusion here is that all large coastal shark stocks that have been reassessed, and so assessed more than once, have improved in status since the previous assessments, the sandbar, the dusky, and the Gulf of Mexico blacktip shark, in this case. Increasing trends in abundance were detected in three or four cases. With the dusky, it's still questionable, and it's still evening out, but, as $I$ showed, if you consider abundance in numbers, the picture is better than when you consider the SSF, and they have all showed either decreasing or stable, in the case of the dusky shark, trends in fishing mortality.

For the small coastal sharks that have been reassessed, they have all improved in status since the previous assessment, and, as I said, increasing trends in abundance and decreasing trends
in fishing mortality were detected in all cases.
This leads to me this, my last slide, and so the big question, right, and is there a discrepancy between the results of stock assessments and these on-the-water observations that show a lot of increased stock abundance, and so what $I$ would say is that, from the data we have in the assessments we have done, almost all the trends obtained from stock assessments lend support, as I showed, for increasing trends in abundance and decreasing trends in fishing mortality, and especially in the cases where we simply look at the numbers, and we see that improvement.

One thing to consider, as you know, is that stock assessments use multiple sources of information, and we are not only looking at the indices of abundance, right, and so there is catches, biology, length compositions, depending on the type of assessment you do, and the indices of abundance are supposed to reflect changes in --

Or be proportional to the abundance of the population, right, which is one of the main assumptions of these models, and so what $I$ am saying is that the on-the-water observation, to me, could be looked at as an index, in a way, but it's in areas where effort is concentrated in areas of high abundance of other fishes, and sharks, of course, will take the opportunity to go and depredate on them, right, and I'm not saying that this is the only explanation, but I'm saying it's one potential explanation, and so, that way, you see what we call hyperstability, where the abundance is higher in these areas than it would be in other areas, but, for stock assessments, we are interested in the total abundance of the population, right, and, in theory, that's what we are doing when we conducting the assessments.

We have representative samples, and so that would, in part, explain why we see recovery for many of the stocks, but at a different rate, a slower pace, because we are considering the entire population, and that's just a hypothesis of that's why we see the differences, but, in general, what we see supports the increasing shark abundance that is observed by many of you. This is it, and I don't know if I should take questions now or wait until the end.

CHAIRMAN FRAZER: I think we can start, if there are any questions for Dr. Cortes at this point. If not, we'll slide into the next presentation, and then we can combine the $Q \& A$ time, and so is there any questions now for Dr. Cortes, or should we hold off for a minute? All right. It looks like
we're not seeing a lot of questions, and so we'll go ahead and slide into the second presentation by Ms. Brewster-Geisz.

## ATLANTIC SHARK FISHERY MANAGEMENT UPDATE

MS. KARYL BREWSTER-GEISZ: All right. Thank you, everybody. It is great to be back in front of you in-person. The last time I was here in front of all of you, it was in January of 2020, and it was before everything shut down. At that time, I focused on shark depredation issues and noted the need for data collection, and, now that $I$ am back, $I$ would like to tell you what has happened since that time and what we're considering to be our next steps.

I do want to remind all of you, and I don't know how many of you were here last night when we presented the $Q \& A$, but there is no council for sharks, and we manage them directly in the Highly Migratory Species Management Division, but we are still bound by the Magnuson-Stevens Act requirements. The other thing to note is that ICCAT, the International Commission for the Conservation of Atlantic Tunas, is increasingly involved in managing shark species as well.

Since I was last here, we have released Draft Amendment 14, and, in fact, we released that back in September of 2020. During that comment period, we received a lot of support for what we had proposed in Amendment 14, but a lot of people also noted the need for us to provide more detail on what we were doing for our tiered $A B C$, or acceptable biological catch, control rule, and so we worked with Dr. Cortes, and others in the Science Center, to supplement Draft Amendment 14 , which we released that supplement earlier this year, and, again, we received a lot of support for everything that we proposed in Amendment 14.

Specifically, we are preferring a tiered $A B C$ control rule. This control rule is very similar to the one for the Caribbean, and it has aspects that all of you have implemented in your own control rules.

We would be actively managing the commercial and the recreational annual catch limits. Those of you who are familiar with shark management know that, right now, we have quota linkages, and so, for example, the hammerhead management group, and the aggregated large coastal management group, if one of those quotas is met, we close both of them together. We have proposed removing those quota linkages entirely, and we're also proposing to allow carryover of underharvest for all stocks. Right now, we only allow underharvest if the stock is a healthy
status.
Then allowing for stock status changes between assessments, specifically regarding overfishing, which you have seen our stock assessments, and sometimes there's a decade or more in between them, and so, if we believe we are under the overfishing level, we would be assessing that every three years, and possibly changing that without a stock assessment, and so we are working very hard to finalize Amendment 14, and Amendment 14 doesn't have any regulatory text with it. It is just setting up the framework for what we would be doing later on, and that we would be implementing through a future rule, which we've already labeled as Amendment 16, and so you'll hear me talking about that in the future, I'm sure.

We've also released a draft document that we call SHARE, and SHARE stands for Shark Fishery Review, and is reviewing the entire fishery and not just the stock status, but the fishery as a whole. We released this back in October of last year, and we had a lot of really good comments and suggestions on ways to improve it, and so the next few slides are focused on some of the information that we shared in SHARE.

This slide shows the number of limited access permits by region from 2014 to 2019, and the number of permits go up on the $Y$ axis. On the left-hand side is the directed shark permit holders, and those are the ones who can target sharks, versus the shark incidental permit holders, who can only land a very limited number of sharks when they are targeting other species. The top of each bar, the red, is the Atlantic, and the green underneath is the Gulf of Mexico, and these are the active permits, and so these are people who are actually landing sharks, and, as you can see, over the last five years, the number of active permit holders are decreasing.

This graph shows the number of trips those active permit holders are taking. The red line shows the state permit holders, and so how many vessels that only hold state permits, and what are they doing, and, as you can see, their number of trips zig-zags up and down over time, and our purely directed shark permit holders, which is that dark purple-blue line, is decreasing. That's how many trips they are taking, and it's decreasing over time.

The orange line is our tripack directed permit holders, and, by tripack, they hold a directed shark permit, but they also hold a swordfish permit and a tuna permit, and their number of trips are increasing, but, on the whole, we are seeing a decreasing
number of trips, in addition to a decreasing number of commercial permit holders.

This is one of our many recreational slides showing just the sheer number of sharks that can be harvested and released in every year. On the left-hand side, you see the Atlantic, and, on the right, you see the Gulf of Mexico. This is for blacktip sharks, which, as Dr. Cortes just said, was -- They are not overfished in either the Atlantic or the Gulf of Mexico.

You can see that, overall, a large number of sharks are harvested recreationally, but they are not retained. In the Gulf of Mexico, that lower blue bar, that's how many are retained, and so the Gulf of Mexico is retaining more than the Atlantic, but, overall, most sharks are released.

Of course, we also looked at our favorite topic, which is shark depredation, and this is the proportion of fishing sets that had interactions that we depredated. These were looking at observer data, and, as you can see from the green line, which is the pelagic longline sets, the proportion of depredation was pretty stable, but, if you switch to bottom longline, which is the red, or vertical line, which is the blue, those proportions of depredated sets are increasing over time.

Besides those documents, we have also been dealing with a number of other individual species actions. One of those has to do with dusky sharks. This shark has been prohibited from retention since the year 2000 . The updated stock assessment showed that, despite that, it is still overfished, and overfishing is still occurring. Thus, back in 2017, we issued a final rule for Amendment 5B that had a number of actions in it, but all of those actions were focused on maximizing the survival of dusky sharks, when they were released, and also minimizing the number of interactions. Obviously, it's a prohibited species, and so you can't retain it anyway.

As a result of Amendment 5B, Oceana sued the agency, claiming that we were not doing enough to protect them. There were a lot of back-and-forth in that lawsuit, including a remand document, where we were required to go back and look at the data and determine whether or not we could come up with an estimated for the number of dusky sharks. Ultimately, the District Court upheld Amendment 5B. Oceana then appealed that ruling, and, just in June, the District Court again upheld what we had done in Amendment 5B, and, of course, this is just an example of not everyone agrees that sharks are -- Or at least not all species of sharks are increasing at the same rate.

Shortfin makos, shortfin mako sharks are assessed by ICCAT. The last stock assessment, in 2017, showed overfished and overfishing. This triggered a number of actions on our part, but also ICCAT adopted a recommendation to maximize live release and improve data collection for the species. This triggered us to do an emergency rule, followed by, in March of 2019, finalizing Amendment 11 to our fishery management plan.

In this amendment, we required that all live sharks be released that were caught commercially, and, recreationally, we set up our first split between male and female minimum sizes.

Overall, for the United States, those measures reduced our shortfin mako mortality by 90 percent, and so it was highly successful, from our standpoint, but, across all of the nations that catch shortfin mako sharks, it was not quite as successful. As a result, in November of last year, ICCAT adopted a new recommendation that prohibited retention of shortfin mako for the next two years, and it will only allow retention of shortfin mako again, in future years, if fishing mortality across all nations is reduced below 250 metric tons.

We, just recently, implemented a final rule that sets the default retention limit for shortfin mako sharks at zero. We can increase that, if ICCAT gives us an allowance, but, until that point, no one is allowed to retain any shortfin mako sharks.

I know I've given you several presentations virtually about this report to Congress, and it was just handed over to Congress on Monday, and so I believe some of you have it, and we will definitely be releasing it, and $I$ haven't been checking emails much since coming down here, but $I$ know that it is available if you want it.

Where does this leave us? We need to finalize Amendment 14. That sets up a framework that will allow us to make a lot of changes in the future for sharks, and so we're also starting Amendment 16, and that's using that framework in Amendment 14, and we will be revising all of our shark quotas based on that framework, and, in addition to that, we're going to need to look at retention limits, because all the retention limits we have right now are set based on those quotas and what we're expecting, and so you can expect big changes in the coming years, in terms of how many sharks are allowed.

We're also working to finalize SHARE, to see where it is we can
improve and change to maximize the utilization of sharks, while also maintaining the rebuilding progress that we need to, and then, finally, depredation, and we had a lot of great comments and questions last night, and we still need to continue collecting information, in order to characterize and determine what the scope is, and define best practices to help improve the situation, as much as we can, and, as you heard Randy Blankenship say last night, sharks are not going to go down. They are going to keep increasing in numbers as we rebuild them. That is part of the process, and they are also predators, and so we can't expect the depredation issue to go away. That's all I have, and I don't know if you have questions specifically for me, or if you want to bring Dr. Cortes back.

CHAIRMAN FRAZER: Well, thank you, Ms. Brewster-Geisz. I really appreciate the presentation and the review that both you and Dr. Cortes provided, and so, at this time, I guess we will open it up to the floor, and if there's a question specifically for Dr. Cortes, we'll invite him back, and so are there any questions at this point from the council? Ms. Boggs.

MS. BOGGS: Thank you. The report that you mentioned that was submitted this week, how do we get a copy of that, or is that something you can send to the council staff, and they can forward it to the council members?

MS. BREWSTER-GEISZ: I believe we sent already, earlier this week.

CHAIRMAN FRAZER: Chairman Diaz.
MR. DALE DIAZ: Thank you, Dr. Frazer. I have a couple of questions. First, $I$ see the number of permits in the Gulf has gone down substantially over time, and are those permits transferable, and if you could give us the primary reason why they're not being renewed, or allowing them to lapse, and I would be curious to know those things.

MS. BREWSTER-GEISZ: Yes, the limited access permits can be transferred to other vessels. That is part of the question, as to why are both the number of permits, and the number of active permits, and so why are they going down? Some of the answers we have are just it doesn't make economic sense for the vessels to go out fishing for sharks, especially a number of states have implemented state fin bans, and that means that the vessels, when they land their sharks, need to destroy the fins, and that's half their profits, or maybe a little less than half the profit, and that is not true for blacktip sharks.

Blacktip sharks are mostly a meat market, but those fins still need to be destroyed, and the fins are still part of the profit, even if they aren't the main part of it, and retention limits is another aspect. The retention limits are low for sharks, and so it's hard to land enough to make it financially feasible to land sharks.

CHAIRMAN FRAZER: Go ahead, Chris. Mr. Schieble.
MR. CHRIS SCHIEBLE: Thank you, Mr. Chair. I'm not on the committee, but this is just a quick question. Back in, I guess, February or March, the possession limit on the commercial harvest of the large coastal sharks was increased, I think from forty-five to fifty-five per day, and, you know, the terminal year of the assessments for those species in that complex don't all line up together, and so I'm trying to figure out -- If you could elaborate on how that was determined to increase from forty-five to fifty-five, and what was the impetus for the tenshark increase? What determined that, and do you expect any potential increase in that going into the future?

MS. BREWSTER-GEISZ: Thanks for that. When we established the aggregated large coastal complex quota, we looked at what -- At how many sandbar sharks and dusky sharks could possibly be interacted with as people were catching that quota, and so we set up a retention limit with a default of forty-five, but a range going from zero up to fifty-five, in order to ensure that sandbar and dusky sharks could still rebuild while they were fishing for large coastal, but we also wanted to make sure, to the extent we could, that the quota would be caught throughout the year.

The past few years, the quota has not been caught, and so we have capped that retention limit at fifty-five sharks, in order to try to maximize the quota as much as we can throughout the year. This is not -- In the Gulf of Mexico, we have the region split between east and west, and that is because, in Florida, in that area, they want the quota to last the whole year, whereas, in the Louisiana area, they actually prefer having most of the quota caught in the beginning of the year, before Lent, and so that's why there is that sub-regional split, and so I do want to just clarify that, while we are aiming to have it open the full year in the east part of the Gulf of Mexico, in the west, we do recognize that they are looking to catch it mostly in the beginning of the year.

CHAIRMAN FRAZER: Mr. Anson.

MR. KEVIN ANSON: Thank you, Mr. Chair. I'm not on your committee, and I appreciate you allowing me to ask the question, and $I$ was wondering if you could just quickly review the slide you had, Number 4, and the Amendment 14 ABC control rule, and you have on there the bullet to allow stock status changes between assessments, and could you briefly describe how you will do that, or what the mechanism is that's proposed?

MS. BREWSTER-GEISZ: That is a mechanism that a number of the councils use, where we are basically just doing it for overfishing, and not for the overfished, status, and we're looking to see are we below where the assessment said we needed to be to get to that not experiencing overfishing stage, and so, if we are consistently under a particular ACL, on average over three years, we would remove the overfishing determination.

MR. ANSON: Thank you.
CHAIRMAN FRAZER: Okay. I've got a couple of questions on the other side of the table. Dr. Porch and then Mr. Dugas.

DR. CLAY PORCH: Thank you very much for the presentation. It's really interesting to see the trends from all the different stocks. One thing $I$ noticed is that most of the stocks are increasing, but just a little bit, except for maybe smoothhound, and that has like tripled or something, over the timeframe that we've been looking at, whereas what $I^{\prime \prime m}$ hearing from the fishermen is that they've increased quite a lot, more than just a few percent, but the other thing $I$ noticed is that, in most cases, the data, the last year of data, is probably seven years ago, for a lot of the assessments, and some are even older than that.

They were overfished at the time of the last assessment, but overfishing had stopped, and so that implies, to me, that there could still have been quite a bit of increase since the last assessment was done, and this is something we see quite often. You get the regulations on the books after the assessment, and several years go by, and what the fishermen see on the water is a little different than the last assessment, because things have changed.

My question to you is, given the regulations that are on the books, that have stopped overfishing, how much might we expect that the stocks have increased since even these graphs have been shown, and just a rough guess, and it might be something that I could direct towards Dr. Cortes, but, given that some of them
that I see overfishing has been reduced to the point where it's something like, you know, almost half of the overfishing level, and so, potentially, they could have increased quite a lot, even in the last several years.

DR. CORTES: Yes, and I would expect the trend to keep trending up, increasing, and I wouldn't dare provide an amount, but what we do know, with these species, is that recovery will be slow. I mean, we have rebuilding years of many decades into the future, and that may be -- That won't change when we do a completely new assessment, but, yes, you're right that we don't have real-time information, and we have a delay of several years, and what we know, from the assessment trends, is that they're increasing.

Another thing is, as you know very well, looking at indices of abundance as an indicator, and the information for that is a little bit more contradictory, in some cases, and we don't necessarily have a unified solution, but, yes, it's true that there is this delay, and you're seeing things as they happen now, and we are a few years into the past. In some cases, quite a few.

CHAIRMAN FRAZER: Mr. Dugas.
MR. J.D. DUGAS: Thank you, Mr. Chair. I think I heard you say, and I just want to clarify, that you all manage east and west, and you all divide the Gulf, and this is a migratory species that you all are managing in two different areas?

MS. BREWSTER-GEISZ: Yes. We manage some of our stocks in two different areas within the Gulf, east and west.

CHAIRMAN FRAZER: I guess, as a follow-up to that question by Mr. Dugas, $I$ realize that there are a number of different kind of areas of consideration when you're managing the different shark species, but so, in the Gulf of Mexico specifically, are there assessments that are restricted to the Gulf only, and are there regional assessments as well, and where would I go to find those assessments?

DR. CORTES: As I showed in my presentation, there are a number of Gulf-specific assessments, and I think I forgot to show the very last slide, and that has essentially the SEDAR website, and I can tell you, from memory, the SEDAR assessment numbers for each of the shark, and it's 11, 13, 29, 34, 54, 65, and 77.

CHAIRMAN FRAZER: That's all right. I got it. Thank you.

MS. BREWSTER-GEISZ: I am just going to add to that that we have some stocks, like blacknose, which are, for biological reasons, Atlantic and Gulf of Mexico, but then, within the Gulf of Mexico, we split it between east and west for management purposes, and it's not for biological reasons, and so we don't have an east Gulf of Mexico stock assessment.

CHAIRMAN FRAZER: That was the nature of my question, right, and so you've adopted some local, or regional, management, although the assessment isn't really carried out on the same scale, and so $I$ was trying to better understand what prompted you to do that.

MS. BREWSTER-GEISZ: Yes, and that is, as I said, the fishermen in the east Gulf of Mexico often want to fish in very different ways, at different times, than people in the west Gulf of Mexico, and so that was our attempt to try to make sure that Louisiana, who wants to fish really hard at the beginning of the year, do not close Florida fishermen out before Florida fishermen even want to go out and go fishing.

We do -- Because it's for management purposes, we watch the quotas on either side, and, just recently, we did end up switching quotas all around, in order to maximize the opportunities for all fishermen.

CHAIRMAN FRAZER: I guess, to that point, and so, essentially, you're making an allocation decision internally, right, and you're trying to figure out, well, how much quota are you going to allow in the eastern region, as opposed to the western, and so I'm starting to probe a little harder right now, but what's the process involved in that decision-making?

MS. BREWSTER-GEISZ: We did that all in Amendment 6, and we did a lot of scoping, and then public hearings, to figure out what should be. In the end, we essentially looked at the percentages over a series of years, to make that split, but where the line actually was -- We required a lot of public input on that.

CHAIRMAN FRAZER: I really appreciate you answering those questions, and so are there any additional questions? Mr. Dugas.

MR. DUGAS: Thank you, Mr. Chair. One more. I hear a lot of challenges with the anglers in the room, and my question is do you all have any advice that you can give the anglers that are challenged with sharks?

MS. BREWSTER-GEISZ: I don't have any good advice for them. I would say the best thing to do is to participate in those studies, such as the one that $I$ had on the previous slide, that are trying to characterize and collect information about it. The more information we have, in terms of what fishing techniques they are using, which ones work, or time of year, the better we are equipped, in order to come up with, as I said, those best practices, while trying to rebuild all the shark stocks, and we also want to make sure that everybody has a chance to enjoy their time out on the water and go fishing.

CHAIRMAN FRAZER: All right. I would like to thank both of you, and other members of the HMS team, that were here for the workshop as well last night, and thank you very much for your presentations. They were quite informative.

All right, and so we are moving on to our Other Business item, and that would be Dr. Stunz is going to provide us an update on the adjustment of the 2022 North and South Atlantic swordfish quotas. Dr. Stunz.

## OTHER BUSINESS <br> UPDATE ON ADJUSTMENT OF THE 2022 NORTH AND SOUTH ATLANTIC SWORDFISH QUOTAS

DR. GREG STUNZ: Thank you, Mr. Chairman. This is just a really brief update on swordfish and some new regulations coming out that are generally of interest to the Gulf, I think, and I would also -- Clay, I just want to give you a heads-up, and $I$ know your team is heavily involved in this process, as well as HMS folks, and so, if I'm not covering something, feel free to jump in, because it's a pretty complicated process.

In the North Atlantic and South Atlantic, as far as swordfish is managed through the ICCAT process, and then there's the Atlantic Tunas Conservation Act, which governs things, as well as the Magnuson Act, and it gets really confusing, of course, as we talk, and, by the way, I guess I should say that I'm the representative for a lot of our HMS work at ICCAT meetings and things like that.

What happens in the swordfish fishery, depending if you're in the North Atlantic or South Atlantic, you get to carry over unharvested quota, a smaller percentage in the North Atlantic and 100 percent in the South Atlantic. Because of very limited, or no, catches in commercial swordfish, there is some quota to be carried over, and, by the way, I'm talking about the
commercial side here.

Recreational swordfish, as it's related to the Gulf and South Atlantic, are still managed at the HMS office, through bag limits per person and vessel limits, and, of course, size restrictions as well, and so this has to do with some uncaught carryover in the South Atlantic on the commercial fishery, which is essentially about seventy-five metric tons.

There are some other issues going on, and a lot of those swordfish, through different agreements, are transferred to countries like Namibia and Belize, and part of that quota is given to them through ICCAT agreements and other things.

What it all boils down to is that there's about seventy-five metric tons left over, and, just a few days ago, it was published in the Federal Register, and it goes through the end of the year, that those seventy-five metric tons will be available for harvest, and this is kind of a one-time deal. At the beginning of year, it reverts back to the normal -- What the normal quota will be, and this was just to allow for that overage, and so, Mr. Chairman, I don't know how much more detail, or, Lisa, you were wanting for this group, as it relates to that, but that's a brief general update.

CHAIRMAN FRAZER: I think, Greg, I really appreciate that update as well. I mean, we don't talk about swordfish very much in this group, but $I$ think there's an increasing amount of interest in that fishery in the Gulf of Mexico, and so I think it's timely, and it's time to probably put it on people's radars a little bit. I don't have any additional questions, and $I$ am looking around, to make sure that the council doesn't. Dr. Simmons.

EXECUTIVE DIRECTOR CARRIE SIMMONS: Thank you, Mr. Chair, and so not questions, per se, but staff has been discussing ways that we could try to engage with Highly Migratory Species, and, you know, the council is on the periphery of that, but we think that one way we could do this is try to ask one of the staff at HMS to participate in our Ecosystem Technical Committee, because one of the things that the council is starting to work on is fishery ecosystem issues and modules, and this is certainly a fishery ecosystem issue, in my opinion, and so $I$ think, if you have the resources, if we could ask a staff member to participate in that, it would be very beneficial to that group.

Even though, you know, tackling some of these difficult issues may not lead the council to make any different management
changes, it could inform at least the public why we're seeing those interactions.

For example, if you wanted to try to understand the effects of why there's more depredation, like say in the private recreational fishery, at certain times of the year, as we know more about these sharks and where their movement is, with the tagging studies, we know they're in certain areas in the norther Gulf in the summertime, and so that's maybe why we're seeing those interactions.

Now, that may not change the council's decision regarding when those seasons are open, but that could help explain some of those interactions, moving forward in management, and so $I$ would like to do that.

CHAIRMAN FRAZER: All right. Thank you, Dr. Simmons. All right. Are there any other questions and/or comments or other business to come before this committee? I am not seeing any. Mr. Chairman, back to you.

MR. DIAZ: Thank you, Dr. Frazer, and we're going to move right into the Sustainable Fisheries Committee.

MS. BOGGS: Mr. Chair.
MR. DIAZ: Go ahead, Ms. Boggs.
MS. BOGGS: So, Carrie, you didn't need a motion for that, did you?

EXECUTIVE DIRECTOR SIMMONS: No, and I think we just need to look down to the agency, down the table, and see if they would be willing to provide a staff that would help us with that, and we would just add them to the technical committee.

MR. DIAZ: Okay. Thank you, Ms. Boggs.
CHAIRMAN FRAZER: Real quick, I think Dr. Porch wants to weighin.

DR. PORCH: I think, at least from our end, we would be happy to do that.

MR. DIAZ: Okay, and so we're going to move right into the Sustainable Fisheries Committee.
(Whereupon, the meeting adjourned on August 24, 2022.)

