

GULF OF MEXICO FISHERY MANAGEMENT COUNCIL

MIGRATORY SPECIES COMMITTEE

Astor Crowne Plaza New Orleans, Louisiana

January 30, 2017

VOTING MEMBERS

- 10 Pamela Dana.....Florida
- 11 LCDR Leo Danaher.....USCG
- 12 Kelly Lucas (designee for Jamie Miller).....Mississippi
- 13 Campo Matens.....Louisiana
- 14 Lance Robinson (designee for Robin Riechers).....Texas
- 15 Ed Swindell.....Louisiana
- 16 David Walker.....Alabama

NON-VOTING MEMBERS

- 19 Kevin Anson.....Alabama
- 20 Leann Bosarge.....Mississippi
- 21 Doug Boyd.....Texas
- 22 Roy Crabtree.....NMFS, SERO, St. Petersburg, Florida
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- 26 Tom Frazer.....Florida
- 27 John Greene.....Alabama
- 28 Martha Guyas (designee for Nick Wiley).....Florida
- 29 John Sanchez.....Florida
- 30 Greg Stunz.....Texas

STAFF

- 33 Steven Atran.....Senior Fishery Biologist
- 34 Douglas Gregory.....Executive Director
- 35 Morgan Kilgour.....Fishery Biologist
- 36 Mara Levy.....NMFS
- 37 Emily Muehlstein.....Public Information Officer
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- 39 Bernadine Roy.....Office Manager
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- 44 Randy Blankenship.....HMS
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2 Gary Bryant.....Gulf Shores, AL
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10 Bonnie Ponwith.....SEFSC

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12
13

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TABLE OF CONTENTS

1
2
3 Table of Contents.....3
4
5 Adoption of Agenda and Approval of Minutes.....4
6
7 Presentation - Overview of Management of HMS Species.....5
8
9 Report on ICCAT Portugal.....22
10
11 Adjournment.....24
12

13 - - -
14

1 The Migratory Species Committee of the Gulf of Mexico Fishery
2 Management Council convened at the Astor Crowne Plaza, New
3 Orleans, Louisiana, Monday afternoon, January 30, 2017, and was
4 called to order by Chairman Pamela Dana.

5
6 **ADOPTION OF AGENDA**
7 **APPROVAL OF MINUTES**
8

9 **CHAIRMAN PAMELA DANA:** I am going to call to order the Migratory
10 Species Committee, which, for the record, has not met since
11 August of 2009, and so the members on this committee are myself,
12 David Walker is the Vice Chair, Leo Danaher, Camp Matens, Kelly
13 Lucas, Robin Riechers, and Ed Swindell.

14
15 The reason we are holding this committee today is not because we
16 have action items, at least not to my knowledge at this point,
17 but we're holding this committee meeting today as an
18 informational committee meeting.

19
20 There is an increasingly -- There is a lot of issues in the Gulf
21 that impact the highly migratory species, the bluefin, the
22 tropical tunas, which are the yellowfin and albacore and
23 skipjack and bigeye, and we've got billfish and swordfish and
24 sailfish, and even king mackerel falls under the migratory
25 species.

26
27 I have asked two folks that represent us from NOAA to join us to
28 talk about some of the issues ongoing in the Gulf, and I
29 encourage you to ask them any questions, whether they address it
30 or not, but questions that are burning that you might have about
31 our species and quotas and rules and how we in the Gulf interact
32 with the world, essentially, on Atlantic highly migratory
33 species.

34
35 With that being said, I don't have -- I would like to ask that
36 we adopt the agenda as written, or if anyone has any additions
37 to this agenda. Do I have a motion to adopt the agenda? Camp
38 moves to adopt the agenda. Kelly seconds it. The agenda is
39 adopted.

40
41 We do not have minutes that are relevant. Only three members of
42 the current Gulf Council were on this Gulf Council during the
43 time of the last meeting, and so we're just going to move then
44 to a presentation by Randy Blankenship, who joins us from the
45 Southeast. He is the Southeast Branch Chief for Atlantic Highly
46 Migratory Species for NOAA Fisheries Service, and he is based
47 out of St. Petersburg. Thank you for joining us, Randy.

1 **PRESENTATION - OVERVIEW OF MANAGEMENT OF HMS SPECIES**

2
3 **MR. RANDY BLANKENSHIP:** Thank you, Pam. Thanks for the
4 invitation to come and speak to you all. As Pam mentioned, I am
5 Randy Blankenship. I am the Southeast Branch Chief for the
6 Atlantic Highly Migratory Species Management Division. That
7 division is a Headquarters Office within the Office of
8 Sustainable Fisheries at Headquarters.

9
10 There is an office located in Silver Spring and then branch
11 offices located in Gloucester, in GARFO, that deals primarily
12 with bluefin tuna management and some other issues, and then my
13 office in St. Pete that deals with a range of issues, going from
14 commercial to recreational swordfish to the billfish fisheries
15 to pelagic longline fisheries for yellowfin tuna and
16 interactions with protected species and HMS tournaments and
17 things like that.

18
19 This presentation is intended to be a general overview and for
20 information purposes and to help you understand a little bit of
21 the similarities between HMS management and council management
22 processes, but then also some of the differences that make HMS
23 management unique that hopefully will help you understand why
24 HMS management is what it is and why things are a little
25 different there.

26
27 Atlantic highly migratory species consists of billfishes, tunas,
28 swordfish, and sharks. The management of those species includes
29 the Atlantic Ocean, the Gulf of Mexico, and the U.S. Caribbean
30 from Maine to Texas and including the USVI and Puerto Rico.
31 Then, also, those fisheries, the United States, as they are
32 prosecuted on the high seas as well.

33
34 One of the things that I will do in this presentation is provide
35 a really brief history of management, to help kind of set the
36 context, talk a little bit about ICCAT management and the United
37 States' participation in ICCAT, and then some about HMS
38 management itself, the way that we're structured and set up with
39 our permits, and then a little bit about some big issues that
40 are happening in HMS management, at least just a few, and
41 hitting those at a very high level, and then I would entertain
42 questions after that.

43
44 On this slide, we begin a little bit of an overview of the
45 history of HMS management that goes back to, of course, 1976 and
46 the passage of the Magnuson Fishery Conservation and Management
47 Act. That was followed by an amendment in 1990 that gave the
48 authority for HMS management to the Secretary of Commerce,

1 specifically moving management of Atlantic tunas from the
2 Northeast Regional Office, now called GARFO, to NMFS authority
3 and not just within that region.

4
5 Then also moving shark management from the councils and then
6 also swordfish and billfishes, transferring those from the
7 councils as well and listing them a little differently within
8 the Act, some by species and some by group and some by family.
9 Then, also, the HMS Management Division was created in 1992.

10
11 Then, in 1996, when Magnuson was amended again, specifically
12 that amendment required the establishment of separate advisory
13 panels for highly migratory species fishery management plans.
14 At that time, there were two. One was for HMS and the other was
15 for billfish, and there were two advisory panels. In 2006, the
16 Consolidated HMS FMP brought those two FMPs together. Then,
17 similarly, it brought the two advisory panels together into one,
18 which is what we have right now.

19
20 There are some provisions of the Magnuson-Stevens Fishery
21 Conservation and Management Act that are shared with the council
22 process. Some of them involve the National Standards. Four of
23 them are mentioned here. For example, preventing overfishing,
24 minimizing bycatch, promoting safety at sea, and using best
25 available science.

26
27 There are also some similarities in fishery management plan
28 content requirements, such as that they contain measures
29 necessary to rebuild overfished stocks, to describe essential
30 fish habitat, and then also with some of the cumulative impacts
31 assessment, and those are just some examples, but there are some
32 provisions that are unique to HMS.

33
34 One is the advisory panel, which I have mentioned already, and
35 then certain international considerations and certain FMP
36 requirements that include things like the requirement for the
37 HMS Management Division to consult with councils and also the
38 ICCAT Advisory Committee that was established under the Atlantic
39 Tunas Convention Act.

40
41 It is through that that you will see HMS Management Division
42 staff sometimes come and present to you all about issues that
43 we're dealing with in management that affect a certain region,
44 and so we may talk to the Gulf Council or we may go and speak to
45 the South Atlantic Council or the Caribbean Council on those
46 kinds of issues and get your input. There are also provisions
47 in there that are intended to not disadvantage U.S. fishermen in
48 comparison with competition from foreign fleets and some other

1 provisions as well that are unique to HMS.

2
3 The United States is a participant at ICCAT, which is the
4 International Commission for the Conservation of Atlantic Tunas.
5 It is a regional fishery management organization that develops
6 management recommendations for tunas and tuna-like species.
7 Those are tunas, billfishes, swordfish, and, increasingly,
8 sharks. Now, under the current convention, sharks are not
9 included as tuna and tuna-like species, but yet ICCAT has made
10 some recommendations related to sharks, as they are considered
11 bycatch in the directed fisheries for tunas and tuna-like
12 species.

13
14 Recommendations that are made by ICCAT are binding on the United
15 States. They include things like quotas, minimum size limits,
16 trade restrictions, statistical documentation, vessel lists, and
17 similar-type things.

18
19 Also, the HMS Management Division implements those
20 recommendations from ICCAT under the authority of the Atlantic
21 Tunas Convention Act, or ATCA. ATCA was passed in 1975. It
22 provides the domestic authority for implementing those
23 recommendations, and it also specifies that management of those
24 fisheries, of those ICCAT-managed fisheries, include research.
25 ATCA also specifies that subsequent actions to the
26 recommendations cannot increase or decrease any U.S. allocation
27 of quota or fishing mortality that's agreed to at ICCAT.

28
29 The United States, in its participation at ICCAT, involves
30 participation and attendance at several workshops,
31 intercessional meetings throughout the year, as well as
32 participation in the annual meeting in the fall of each year.
33 This last year was in Portugal, and this next year will be in
34 Morocco.

35
36 Also, participation on the ICCAT Standing Committee on Research
37 and Statistics, or SCRS, and Craig Brown, who is with the
38 Southeast Fisheries Science Center, is going to give us a
39 presentation following mine, and he is one of several scientists
40 at the Southeast Center that actively participate in the SCRS
41 work.

42
43 Also established under ATCA, as I mentioned before, is the ICCAT
44 Advisory Committee. The ICCAT Advisory Committee provides input
45 for the U.S. delegation on position setting and negotiations
46 with ICCAT, and it provides some specific advice on proposals
47 that come from other countries as well.

1 The ICCAT Advisory Committee includes representation from
2 commercial fisheries, recreational fishing organizations,
3 environmental groups and academia, and it also has some
4 representation from councils, which Pam Dana has served as that
5 representative from your perspective. Members are nominated to
6 that ICCAT Advisory Committee every two years.

7
8 Getting back to the management overview for domestic management,
9 you all are very familiar with several other laws that you have
10 to abide by in the fishery management process in the federal
11 government, and HMS management is no different.

12
13 Some of them involve, of course, the Endangered Species Act, the
14 Marine Mammal Protection Act, and several other Administrative
15 Acts and Executive Orders listed here that I think you all are
16 familiar with.

17
18 This slide provides a table to try to kind of portray the
19 diversity and complexity of the HMS operational infrastructure,
20 but also the comprehensive nature of it. Within HMS management,
21 we have vessel permits for commercial and recreational
22 fisheries, and so recreational fishing vessels must be
23 permitted, or have an HMS angling permit, as well as the
24 commercial vessels.

25
26 Those permits are issued from different places. The open-access
27 commercial permits and the recreational permit are issued
28 through a website online, where fishermen can go in and purchase
29 the vessel permits there. The Southeast Regional Permits Office
30 is where the limited-access commercial permits are issued from,
31 as well as one open-access permit for the Caribbean.

32
33 Then there are also exempted fishing permits issued from our
34 Headquarters Office and HMS tournament registration occurs in my
35 office in St. Pete, and then there is one incidental HMS squid
36 trawl permit that is issued out of GARFO.

37
38 On the dealer side of things, we also have dealer permits for
39 swordfish, shark, and tunas. The swordfish and shark dealer
40 permits are issued out of the Southeast Regional Permit shop and
41 the tuna dealer permit is issued out of GARFO. There is also an
42 international fisheries trade permit that issued by the National
43 Permits System.

44
45 There are also a considerable amount of reporting requirements
46 for the various fisheries, both recreational and commercial. I
47 am not going to go into those in any specificity, because I
48 think it would take quite a while, but I am happy to explain and

1 talk about those as needed, and then, similarly, there is dealer
2 reporting that is required through E-Dealer, which provides near
3 real-time information on dealer activities and then also bluefin
4 tuna dealer reporting that goes into the Northeast HMS Office.

5
6 A little bit of a highlight here for some of the differences
7 between the HMS Advisory Panel and the council process. The HMS
8 Advisory Panel is advisory in nature only. We take their advice
9 very seriously, as opposed to the council process, as you know,
10 which voters approve or disapprove. You have votes to approve
11 or disapprove actions to submit to the National Marine Fisheries
12 Service.

13
14 For the HMS Advisory Panel, NMFS decides what actions to
15 consider and implement, as opposed to the council process, where
16 NMFS approves or disapproves the action that has been sent to
17 them. Under the HMS Advisory Panel process, HMS staff seek the
18 input of Science Center staff and other experts, while the SSC
19 process for the councils is very valuable there, to provide that
20 scientific input. The advisory panel for HMS meets about twice
21 a year. Meanwhile, the councils meet around five times a year.

22
23 Hitting on, at a very high level, some current issues for HMS
24 management, first of all, as related to bluefin tuna and the
25 continued implementation of our Amendment 7, about three years
26 ago or so, there was a presentation made to you all in San
27 Antonio, during the proposed rule stage of Amendment 7, and some
28 of you might remember that. That would be that opportunity to
29 consult with you all about that.

30
31 That implementation is ongoing. It's the program that
32 implemented the individual bluefin tuna quota system as well as
33 some new gear-restricted areas in the Gulf of Mexico and in the
34 Atlantic.

35
36 This map shows the Gulf of Mexico, and the blue boxes are the
37 two new gear-restricted areas that have been implemented in the
38 Gulf from April 1 to May 31 of each year, in order to provide
39 some additional protection for spawning bluefin tuna when they
40 are prevalent in the Gulf of Mexico, and this is a restriction
41 on pelagic longline fishing within those boxes.

42
43 That is in addition to the already existing pelagic longline
44 closed area year-round of the Desoto Canyon, which are the
45 cater-corner boxes in the Gulf of Mexico. This is just a couple
46 of issues that are happening with the implementation of
47 Amendment 7.

48

1 Then also another hot issue for us in HMS right now is related
2 to dusky shark management under Amendment 5b. The proposed rule
3 for that was out in 2016, and the comment period ended in
4 December. We have been considering those public comments and
5 developing the final rule and final EIS for that initiative, and
6 that should be out later this year.

7
8 Also, with swordfish, we are continuing the efforts to
9 revitalize the swordfish fishery, which, for several years in
10 the United States, has been underharvesting its quota that is
11 issued from ICCAT, and so, within the bounds of domestic laws
12 that we have to operate, we still work to, kind of on a
13 systematic basis, look for ways to provide additional
14 opportunities to harvest that swordfish quota, and that's an
15 ongoing process.

16
17 Also, bycatch remains a big issue for HMS that we are
18 continually thinking about. They involve things like protected
19 species, like sea turtles and marine mammals, and then also
20 billfish bycatch, just to name three groups. Under the
21 Endangered Species Act, we actually have reinitiated
22 consultation for the pelagic longline fishery and all other HMS
23 fisheries right now. Those consultations are underway.

24
25 Then, finally, I wanted to spend a little bit of time talking
26 about the last thing on this slide, which is the Deepwater
27 Horizon Oceanic Fish Restoration Program. This is a program
28 that is spearheaded by the Restoration Center, which is part of
29 NOAA, and has dealt with the restoration process for Deepwater
30 Horizon across the board.

31
32 The HMS Management Division is working actively to support the
33 Restoration Center in implementation of this particular program.
34 This program is working in partnership with the National Fish
35 and Wildlife Foundation, or NFWF, to work with voluntary pelagic
36 longline fishermen in order to help restore the injury that
37 occurred to pelagic species of fish in the Gulf of Mexico, and
38 this would occur through a voluntary program, where fishermen
39 that participate would agree to not fish with pelagic longline
40 during a portion of the year.

41
42 The program is temporary, it's voluntary, and it amounts to a
43 six-month pelagic longline fishing repose each year. Outside of
44 that six-month period, the fishermen would be able to fish with
45 pelagic longline, as they normally would. Once again,
46 participation through this program is voluntary, and the owners
47 of those vessels would be financially compensated for not
48 fishing with pelagic longline gear.

1
2 NOAA and NFWF are working with the industry to minimize the
3 economic impacts to local businesses that are associated with
4 this. One provision for that is that the pelagic longline
5 vessels, when they are not fishing with pelagic longline, would
6 fish with greenstick gear, which is a gear used for tunas, or
7 buoy gear, which is used for swordfish, in order to continue to
8 have some fishing activity, buying fuel, buying ice, buying
9 supplies, to make those trips and then also having some landings
10 from those, although the volume of landings does not replace
11 totally the pelagic longline landings that occur.

12
13 The project is planned to continue for five to ten years,
14 depending on the annual participation that occurs, and this
15 year, in 2017, we are in the first year of implementation, which
16 is considered to be a pilot year, when we have a lower amount of
17 participation than we anticipate having in the years to come,
18 and so that is an ongoing thing right now.

19
20 For more information, you can go to this website that I have put
21 on this slide, which is the National Fish and Wildlife
22 Foundation website, as they are a cooperating partner in
23 implementing this program. With that, I will conclude my
24 presentation and leave it to Pam about whether we have questions
25 now or go to Craig.

26
27 **CHAIRMAN DANA:** Thank you, Randy, very much. I think probably
28 we'll let Craig do his presentation, and that might spur a
29 little bit more questions, and, Randy, just we will turn it to
30 you to answer questions after Craig finishes up. Craig, are you
31 on the line?

32
33 **DR. CRAIG BROWN:** Yes, I am.

34
35 **CHAIRMAN DANA:** Awesome. Craig Brown is joining us from Miami.
36 He missed his plane this morning, because the traffic was bad
37 over there, but he comes out of the Southeast Science Center,
38 where is a stock assessment scientist there. Dr. Brown, take it
39 over.

40
41 **DR. BROWN:** Thanks, Pam. You would think that, after all the
42 time that I've been in Miami, I would have realized how crazy
43 traffic can get, but it's one of those days, and so I'm sorry I
44 couldn't be there in person, but, as Pam mentioned, I am the
45 Branch Chief for Highly Migratory Species of the Sustainable
46 Fisheries Division, and that can be confusing a bit, because
47 Randy just introduced himself very similarly. The difference is
48 that our division is associated with the Southeast Fisheries

1 Science Center, and we deal with the research and assessment of
2 the highly migratory species.

3

4 I am going to give you an overview of the stock assessment
5 process, including the research that supports it, and giving you
6 some examples as well as to what the Southeast Fisheries Science
7 Center is doing in the Gulf.

8

9 Randy touched on the role of ICCAT. The species that are
10 actively managed in one way or another within ICCAT are listed
11 here, and it includes bluefin, bigeye, skipjack, yellowfin
12 tunas, albacore, swordfish and various billfish, and some
13 sharks. Nearly all of them, with the exception of porbeagle and
14 rarely blue shark, are in the Gulf of Mexico.

15

16 There is also responsibility in ICCAT for collecting data on
17 other species. That would include Spanish mackerel and king
18 mackerel, although they haven't yet been assessed within ICCAT,
19 but my group, the Highly Migratory Species Branch out of Miami,
20 is also responsible for domestic assessments within the SEDAR
21 process.

22

23 Just to kind of touch on some of the differences in the process,
24 and I think Randy touched, again, on some of this, but just to
25 emphasize some of the differences. The ICCAT Advisory Council
26 is like a blend of council advisory panels and the SSC, but,
27 unlike an SSC, there is no authority to set an ABC. The
28 management measures are negotiated by the country delegations at
29 the commission meetings, and, within the U.S., our domestic
30 regulations can't conflict with those measures, but there is
31 latitude to use those domestic regulations to do various things,
32 to ensure compliance and allocation, et cetera.

33

34 The scientific body of ICCAT is the SCRS, and so it defines the
35 procedures for collecting, compiling, and transmitting the data
36 for access to the SCRS and coordinating research across the
37 member countries and carrying out the stock assessments. Every
38 member of the commission could be represented on the SCRS. I am
39 the lead scientist for the U.S. scientific delegation to SCRS.

40

41 The SCRS acts like an SSC and SEDAR combined, in that it
42 conducts research and analysis and reviews the results and,
43 ultimately, delivers the management advice, the scientific
44 advice for management, to the commission, but, of course, the
45 commission is free to ignore the advice, and that happens every
46 now and then.

47

48 The next thing is I just want to give you an example, if you

1 happen to go to iccat.int and want to look up some of the stock
2 assessment results. You will see this type of graph as one of
3 the standard graphs to communicate the management advice. This
4 is to describe the current stock status.

5
6 One of the things to pay attention to within ICCAT is the
7 convention objective, which currently is to maintain populations
8 at levels which will permit the maximum sustainable catch,
9 although, currently, it's being negotiated, and that might be
10 changed to maintain populations at least at levels which will
11 permit the maximum sustainable catch, but this is what we have
12 right now.

13
14 The way that is generally interpreted is that the target is
15 basically the F level, the fishing mortality level, at MSY and
16 the biomass level that supports MSY. That could be either total
17 biomass or spawning stock biomass. On this particular graph,
18 where you have, on the X-axis, your biomass relative to the
19 biomass MSY, and, on the Y-axis, you have the relative F , your
20 target then would be right here, at the intersection of one and
21 one.

22
23 What that means is that, if you fall below the biomass at MSY,
24 which is to the left of that vertical line, it's overfished. If
25 the F is above the fishing mortality at MSY, then it's
26 overfishing, and so you have that depicted in the red zone here.
27 In the green, it's where neither of those is occurring. The
28 yellow, of course, is where one or the other is taking place,
29 either overfishing or an overfished state.

30
31 In this example, you can see there is a lot of dots in blue and
32 black, and so the blue is depicting the results from one model
33 that the scientists feel is appropriate, and the black is from
34 another model that they also feel is appropriate, and they
35 couldn't determine whether one was better for advice or not, and
36 so they are depicting both.

37
38 You have the median of the blue points shown here. Now, the
39 blue points, the scatter, is depicting the uncertainty around
40 the estimate of stock status, and then, under the black, you
41 have also the uncertainty around that median, and so, since we
42 can't, in this example, put one model forward over the other,
43 the advice, finally, is built on a median of the two.

44
45 To further communicate the uncertainty, we put these marginal
46 distribution plots on the axes, and so this would be
47 representing the distribution of uncertainty for fishing
48 mortality, because it's running along the same direction as the

1 Y, and that is -- If you just drop down all those points in blue
2 against that axis, it would build up into a distribution, like
3 this, and the same with the black ones, to form this
4 distribution.

5
6 Finally, you have the overall distribution shown here on the
7 mirror image, and it's the same thing up above it, is the
8 biomass uncertainty, and so these are all things that the
9 commissioners have asked for to help communicate the
10 uncertainty. I am not sure they are happy that they asked for
11 that detail, but there you have it. Hopefully it isn't too
12 confusing.

13
14 Another product that we normally include in the advice to the
15 commission is something called a strategy matrix. In this case,
16 we are projecting forward with different assumptions about
17 management measures, either constant catch for total allowable
18 catch or some fraction of the F at MSY. For example, if you had
19 a result, a stock status, in 2016, and you wanted to know where
20 you would be ten years later, if you put in 22,000 tons, then,
21 in 2026, you would have an 80 percent chance of being within the
22 green zone of not overfished with no overfishing.

23
24 In this case, we have a reflection of the frequency of the
25 assessments by stock. In the left column, the stock, you can
26 see that some of the species are split into multiple stocks. We
27 have a Western and an Eastern Atlantic Stock for bluefin, but
28 just one stock, currently, regarded for bigeye and yellowfin,
29 and you can see, from this plot, the blue represents every year
30 that we had a stock assessment.

31
32 One thing about the ICCAT stock assessments is that they're
33 generally regarded as the equivalent of full stock assessments.
34 In the case of bluefin, we had something unusual, in that it was
35 considered an update, but, in that case, the update was, in many
36 cases, a full stock assessment, except there was limits to the
37 new types of analyses that could be conducted, but the process
38 within the SCRS typically, particularly for stocks other than
39 bluefin stocks, is to be very open with the types of methodology
40 that are employed, with a preference for using the previous
41 models that provided management advice, until they were shown to
42 be better by some new method.

43
44 The SCRS has officers that chair various working groups, and you
45 can see, on this slide, that the U.S. has a lot of
46 representation. The current Chair of the SCRS, and that is the
47 one who presents the management advice to the commission, is
48 David Die, who is with the University of Miami, the Cooperative

1 Institute with NOAA.

2
3 The names that are underlined on this slide are all members,
4 regular members, of the U.S. scientific delegation. It consists
5 of -- The core of the delegation are scientists from the
6 Southeast Fisheries Science Center, although, depending upon the
7 species being assessed or the study that's being undertaken, it
8 could include scientists from other labs or from academia or
9 private scientists.

10
11 Here we have the upcoming meeting schedule for 2017, and so you
12 can see that we'll be pretty busy. In fact, there are both data
13 preparatory meetings and assessment meetings for shortfin mako,
14 swordfish, and bluefin tuna, and so you can imagine that
15 swordfish and bluefin tuna are particularly high-priority stocks
16 for the United States.

17
18 Finally, in yellow, at the bottom, this is the main meeting, the
19 plenary session, at the end of the year, where the scientists
20 all review the work of the year and compile it into a single
21 volume of executive summaries by species and all the other
22 recommendations coming from the SCRS, and that gets presented to
23 the commission meeting, which takes place generally in November.

24
25 I wanted to kind of touch on some of the research that's going
26 on, but, unfortunately, I am not keeping track of time. Is
27 there someone who could let me know how much time we've got
28 available here? How much time is left, more or less?

29
30 **CHAIRMAN DANA:** You're doing okay.

31
32 **DR. BROWN:** Give me a shout when there's a few minutes left, so
33 we've got time for questions.

34
35 **CHAIRMAN DANA:** Okay.

36
37 **DR. BROWN:** Ultimately, this is kind of gee-whiz stuff that I
38 think that you will be interested in seeing, but I don't want to
39 delay the meeting at all, and so I can stop at any point, but at
40 least I find it interesting. I hope that I can communicate some
41 of that enthusiasm.

42
43 The Southeast Fisheries Science Center has hosted the
44 Cooperative Tagging Center, which began in 1954. There is about
45 270,000 fish of eighty different species that have been tagged
46 during the course of the program. On this particular slide, we
47 are looking at nearly 200,000 deployments of tags on these seven
48 highly migratory species.

1
2 There are some additional deployments that you can't see. This
3 is just looking in the Northwest Atlantic, but there were some
4 deployed by fishermen throughout the Atlantic, although the bulk
5 of them do occur closer to us. You can see there is a lot of
6 them in the Gulf of Mexico.

7
8 Here are the recapture locations for those same species. Many
9 of these are transatlantic crossings, but, then again, many of
10 these are also ones that were tagged overseas originally.

11
12 We also conduct the Recreational Billfish Survey. The
13 tournaments must register and report the catch and effort data
14 to the Southeast Fisheries Science Center, and there is also
15 some onsite biological sampling. For example, we have a sampler
16 who goes to the tournaments and also to the docks, when there
17 are tournaments, in the area of Venice, Louisiana, and collects
18 biological samples from the HMS species.

19
20 I am going to touch on larval surveys as well, which can be
21 important. I should point out that this presentation of
22 research is by no means comprehensive, and, in fact, it's a
23 little biased towards what we're doing within the Highly
24 Migratory Species Branch, what we're associated with, and so
25 there is -- I have left things out for time constraints and not
26 for any intentional neglect for the work that's being done, for
27 example, by the folks in Panama City on aging or Pascagoula on
28 evaluating bycatch mitigation.

29
30 We have here data from the larval survey that takes place every
31 spring from April to June, and that's been really important in
32 our bluefin assessments that collects bluefin larvae, and those
33 are used to develop relative abundance indices of the spawning
34 stock.

35
36 There is a new technique that we're exploring now that is kind
37 of exciting that may enable us to estimate the number of the
38 spawners directly, and that's a genetic mark-recapture technique
39 that, now that genetics has advanced to the point that we can
40 identify individuals, both the adults and their progeny, there
41 is a technique called close-kin analysis that has been
42 successfully applied to minke whales and southern bluefin tuna
43 that we're looking into.

44
45 Essentially, you can identify parent-offspring pairs and
46 estimate the number of parents, like in a mark-recapture
47 experiment. I am going to cover briefly how it works, but don't
48 worry. There is absolutely no testing that is going to go on

1 with any of this.

2
3 Essentially, you have a population in which you can conceive of
4 each juvenile as having tagged his parents, by virtue of the DNA
5 marker that it carries. You have a sample of those, and so you
6 have -- The fish highlighted are the adults and juveniles that
7 you sample, and you get the genotypes from them. From that, you
8 can identify matches of parent-offspring pairs. Then you can
9 use that in a formula to basically expand the number to an
10 estimate of the total spawners.

11
12 Now, the larger your population, the larger your sample size
13 needs to be, but western bluefin is of a size that we think we
14 can get this information from sampling about a thousand or more
15 larvae each year. The idea is to use larvae so we don't have to
16 worry about mixing between eastern and western stocks. Then
17 about 30 percent of the adult catch, and that can be reduced if
18 you sampled over multiple years.

19
20 The only problem is, so far, we've been having difficulties in
21 confirming that the genetics of historical larval samples can be
22 used, but we're continuing that work, and, if we're successful
23 with that, it's a game-changer, really, because it can help us
24 to groundtruth our assessments.

25
26 Some other important work that is going on is we have a problem
27 with not only bluefin, but with a lot of our stock assessments,
28 and that is that indices tend to be produced by each country's
29 scientists, and they don't always show the same trends, and
30 they're not always the same level of confidence in the results,
31 and the data programs are not always the same.

32
33 You also have cases where the fisheries take place either
34 overlapping or immediately adjacent, and so we're looking at
35 ways to combine the analysis and get a single index across the
36 different datasets, and so this work was started last year.
37 Just last week, scientists from all four countries that fish for
38 western bluefin, the U.S., Mexico, Canada, and Japan, met in
39 Mexico to advance this work further, in hopes of helping with
40 this year's assessment.

41
42 We also have some young-of-the-year work underway for bluefin,
43 trying to develop an index, and, on the left, you see what a
44 bluefin looks like at that size, but we haven't been able to
45 catch any from the volunteers that have been participating in
46 our program. It's always someone else who has seen them.

47
48 Then a major component of our research program here in Miami

1 deals with pop-up satellite archival tags, where the data is
2 collected on depth, temperature, and light level, so we can
3 estimate location. Then, after a time, the tag pops up and
4 transmits the data to satellites.

5
6 Here are some tracks for our work in the Gulf of Mexico on
7 bluefin tuna. All of these bluefin were tagged from longline
8 vessels within the Gulf of Mexico during spawning season. The
9 primary objective of the study was to evaluate post-release
10 mortality, but its design enables us to do a lot of other
11 analysis as well, and it can be interesting to look at this.

12
13 For example, if you look at that information in conjunction with
14 sea surface temperatures and kind of loop it over time, you can
15 see, starting in March and as we move into April, we tagged --
16 This was in 2012, and we tagged a number of tuna, and you're
17 watching them all simultaneously. As the temperature warms up
18 in the Gulf, you also see them kind of leave, en masse. We
19 recovered a number of these tags, including some that went all
20 the way up to Prince Edward Island.

21
22 We also have done a lot of work in the Gulf with yellowfin tuna,
23 both tagging from longline vessels and from rod-and-reel
24 vessels. Here are our tracks for yellowfin tagged in the Gulf
25 of Mexico. Most of our releases have been in the Northeast
26 quadrant, and so I wouldn't say this is a comprehensive analysis
27 of where they are in the Gulf, but it's interesting that very
28 few of them left the Gulf in the time the tags were retained on
29 them.

30
31 Granted, some of that is the fact that the tags didn't stay as
32 long as we would have liked, but our longest example was 172
33 days, the orange track that is just swimming back and forth
34 along the edge of the shelf off of Louisiana and Alabama.

35
36 We started working with Mexico, and we've been tagging in
37 Mexican waters. Here is an example of a fairly large yellowfin
38 that was released. It was at large for forty-seven days before
39 the tag popped up, and we recovered it, and so we have data
40 recorded every ten seconds. On this particular day, highlighted
41 in blue, you can see that this is just one day, looking at the
42 diving behavior, and the color is the temperature, and so we
43 have this one case where it dove to over 500 meters, and very
44 rapidly. At one point, it was diving at about twenty miles an
45 hour.

46
47 Later on in the same track, the fish stayed at the surface,
48 except for one dive that lasted a couple of hours and went down

1 to below 1,200 meters, to water temperatures of around six
2 degrees Celsius, which is kind of impressive for a so-called
3 tropical tuna.

4
5 This may seem confusing, but, basically, this is a graph from
6 the data that we get every ten seconds. We just summarize it by
7 night and day, and here is a nighttime. You can see the
8 brighter colors are the highest level.

9
10 Each color is 10 percent of the total observations, but, because
11 they're so dense, you can see that there is a cluster of
12 activity near the surface, at around thirty degrees, and then a
13 smaller activity that's a little deeper during the night.
14 Mainly, they are clustered at the surface, whereas, if you look
15 during the daytime, they're going much deeper, and the black
16 dots that are stringing out here are individual dives. We've
17 also done some work on blue marlin in Mexico, and this will
18 complement some work that's being done in the northern Gulf of
19 Mexico. That is basically all I had.

20
21 **CHAIRMAN DANA:** Thank you, Craig. That was very informative.
22 You guys are doing great work over there at the research center,
23 and we appreciate your time. Maybe I will open it up to
24 questions from the entire council on just anything HMS or
25 international, ICCAT. Kevin Anson.

26
27 **MR. KEVIN ANSON:** Thank you, Madam Chair. I don't know if this
28 is for Randy or Dr. Brown, but what source or sources do you use
29 primarily to account for recreational landings, the ones that
30 you use, I guess, to monitor the actual country quota?

31
32 **MR. BLANKENSHIP:** For recreational landings, and so you're
33 talking about several different species here, but --

34
35 **MR. ANSON:** Let me clarify that. It would be the yellowfin
36 tuna.

37
38 **MR. BLANKENSHIP:** For yellowfin tuna, and, Craig, you can help
39 me out on this too, but yellowfin tuna are -- The recreational
40 landings there would be coming from some of the survey
41 information that would come from the Large Pelagic Survey, which
42 is from Maine to Virginia, and then MRIP surveys outside of that
43 area. That would be some of the primary information that would
44 be used to estimate recreational landings.

45
46 For yellowfin tuna, there is not the requirement for angler-
47 reported landings like there is for swordfish and billfish and
48 bluefin tuna, because yellowfin don't have that same requirement

1 domestically. Craig, do you have anything to add to that?

2
3 **DR. BROWN:** Yes, I can expand on that. Basically, like for the
4 other HMS species recreationally that we're reporting, we try to
5 incorporate all of the potential information we can. We include
6 the MRIP estimates. The Large Pelagic Survey takes precedence,
7 where the Large Pelagic Survey exists. We include the headboat
8 survey, although it's pretty rare that we see fish from there,
9 and we include the Texas Parks and Wildlife Department Survey,
10 although that, I think, has maybe more of a bias towards the
11 bait fishery, but you occasionally get some HMS.

12
13 The tournament sampling reports some yellowfin that weren't
14 otherwise being captured, at least before tournaments were
15 included in the sample, and so we try to cast a broad net to
16 bring in all the catches we have, but I think we could certainly
17 recognize that we may be -- It's difficult to capture
18 recreational landings of highly-migratory species. I know that
19 NOAA is taking some steps to try to improve that in recent
20 years.

21
22 **CHAIRMAN DANA:** Thank you, Craig. We've got a follow-up by
23 Kevin.

24
25 **MR. ANSON:** Just to keep on that same subject, you said you want
26 to try to cast a broad net for available data sources, and so
27 I'm curious. I didn't hear LA Creel, Louisiana's LA Creel
28 survey, and so they have the mandatory reporting requirement for
29 tuna there, and my understanding, working in Alabama, is that
30 yellowfin tunas are considered more of a rare event type of
31 species and those are hit-or-miss in the landings, oftentimes,
32 and so you might get zeroes for a year or two and then you might
33 get some relatively large landings.

34
35 LA Creel, I think, hit upon that a little bit better and was
36 able to provide more consistent and reliable results, as far as
37 landings, and do you use theirs? Have you looked at their
38 survey?

39
40 **DR. BROWN:** I am aware that they have started this effort, and
41 you're talking about their recent expansion, right?

42
43 **MR. ANSON:** Yes, and they've included reporting of yellowfin in
44 the last three or four years, I guess.

45
46 **DR. BROWN:** Yes, and I'm not directly involved with that effort,
47 but I am aware of it, and I am aware that NOAA is looking at
48 what's being done in Louisiana and considering how that might --

1 How to handle that, moving forward, for our estimates, but I am
2 certainly open to incorporating those estimates in future
3 updates to the historical data.

4
5 We have been looking at things in parallel, and we have to be
6 careful that we're not -- Since you have estimates coming out of
7 the MRIP, we have to be careful not to double count,
8 essentially, but I am aware of that effort going on, and we have
9 plans to look into how we might modify our methods to try to
10 incorporate that, but we haven't done it yet.

11
12 **MR. BLANKENSHIP:** I wanted to just add to that, to say that one
13 of the really good things about our HMS Advisory Panel is we
14 have representation from the different states, and I know that
15 the representation from Louisiana, with Jason Adriance, is very
16 good, and he is on top of a lot of the numbers that he gets a
17 chance to review, and we really depend upon his eyes as well,
18 and so I am confident that we will be able to continue that kind
19 of communication, to make sure that that kind of information is
20 incorporated appropriately.

21
22 **MR. ANSON:** Thank you.

23
24 **CHAIRMAN DANA:** Are there other questions? Lieutenant Danaher.

25
26 **LCDR LEO DANAHER:** Thank you, Madam Chair. The question is
27 really more for Mr. Blankenship, and it goes back to his
28 presentation on I think it was Slide 11, with the map of the
29 boundaries, in particular the new rectangle boundary that is
30 basically like due south of the Texas/Louisiana area. My
31 question is how did the group or panel come to the conclusion on
32 the boundaries for those particular areas?

33
34 **MR. BLANKENSHIP:** Those particular areas were based upon an
35 assessment of pelagic longline observer data, over a several-
36 year period, and the timing of bluefin tuna interactions in that
37 data and looking at various combinations of the timing of such a
38 restriction, and we came to that conclusion. It's fully
39 described in the draft environmental impact statement for that
40 measure, for Amendment 7.

41
42 **LCDR DANAHER:** Thank you, sir. I've got a follow-on question,
43 and it's with regards to outreach for those HMS fleets that
44 operate in the Gulf of Mexico, and I am curious as to what
45 measures are being taken, because that is a new area for this
46 year, and, from an enforceability standpoint, that's pretty far
47 offshore, and so it's -- I am anxious or interested to know the
48 outreach process.

1
2 **MR. BLANKENSHIP:** Actually, it's been implemented for a couple
3 of years now, and the outreach process was one of sending
4 letters to individual permit holders in that fishery, as well as
5 outreach through HMS News, through leaders within that fishery
6 and that community, including key points of contact in Louisiana
7 and some of the concentrations of pelagic longline vessels there
8 in Louisiana as well.

9
10 Then also outreach through communications through vessel
11 monitoring system opportunities, and that is how that is
12 monitored, through VMS, and so there is a regular ability to
13 communicate effectively when vessels are moving into that area.

14
15 **LCDR DANAHER:** Thank you, sir. I just wanted to make sure that
16 I understood you correctly. When is that particular area
17 looking to be implemented for enforcement?

18
19 **MR. BLANKENSHIP:** It has been implemented, and it is in place
20 from April 1 to the end of May.

21
22 **LCDR DANAHER:** And that's for this year?

23
24 **MR. BLANKENSHIP:** Yes.

25
26 **LCDR DANAHER:** Thank you.

27
28 **CHAIRMAN DANA:** Any other questions? Okay. Again, thank you
29 very much, Randy and Dr. Brown, for your time. I appreciate
30 just the work you're doing, and I hope that you will leave the
31 door open for us to ask questions and engage with you, as
32 appropriate, in the future.

33
34 **DR. BROWN:** Absolutely. My pleasure.

35
36 **REPORT ON ICCAT PORTUGAL**

37
38 **CHAIRMAN DANA:** Okay. I know we're over time, but barely, and
39 I've talked to Martha, who is the Chairman of the Spiny Lobster,
40 and she said that she can do her committee if I take maybe five
41 minutes right now to just review the ICCAT.

42
43 You've got a little background on the ICCAT, but, in November, I
44 joined the U.S. delegation, where I represented all the five
45 councils that have membership on the Atlantic HMS Migratory
46 Species AP at the International Commission for the Conservation
47 of Atlantic Tunas, which, again, is ICCAT.

1 This annual international meeting brought together partnering
2 nations and others from about fifty-four nations from both sides
3 of the Atlantic, from Mexico to Venezuela to Africa and Iceland.
4 China and Japan have membership as well.

5
6 It was pretty fascinating to see how the ICCAT process works, in
7 that the multinational, multilateral decisions are made by
8 consensus and not by vote, and so, in essence, if one nation
9 does not agree with an amendment or a proposal, then that
10 proposal simply does not move forward, and so you need 100
11 percent consensus for anything to pass through.

12
13 For example, there was a move to prohibit the removal of shark
14 fins at sea and require all sharks to be landed with their fins
15 naturally attached, fully or partially, and, while the vast
16 majority of nations supported the shark fins being attached,
17 three nations, Japan, China, and Morocco, and were opposed to
18 it, and so consensus was not met and the proposal failed.

19
20 Things that did move forward, of interest to the Gulf, included
21 the adoption of the first ever conservation and management
22 measures for sailfish, requiring participating nations in ICCAT
23 to maintain measures to limit sailfish mortality, including live
24 release and using circle hooks and following minimum size and
25 other efforts. That comes second-nature to us in the United
26 States, but we can't assume that it does to the other nations
27 that participate in ICCAT, and so that was a good thing.

28
29 We also had the extension of management, essentially quota
30 measures, for the North and South Atlantic swordfish, the
31 Western Atlantic bluefin tuna and tropical tunas, with include
32 the yellowfin, bigeye, skipjack, and albacore.

33
34 On yellowfin, it was determined that the Atlantic stock is
35 overfished, but not incurring overfishing. However, the United
36 States voiced concern regarding the impact the high catch of
37 juvenile bigeye and yellowfin tuna was having on the overall
38 status of the stock.

39
40 In the Gulf of Guinea, off of Africa, there is a large number of
41 vessels, mostly from -- They are large vessels, mostly from the
42 EU, that are able to deploy up to 500 floating FADs per vessel,
43 which, to us, that's kind of -- In the United States, we don't
44 have -- Or we're not supposed to be having FADs, but, in other
45 parts of the Atlantic, it's happening and allowed.

46
47 The FADs are highly effective in attracting bigeye tuna, and
48 yellowfin hang around with bigeye tuna. The problem is that

1 many of the fish that are attracted to these FADs are juveniles,
2 and so the high level of mortality is being considered a threat
3 to our overall yellowfin tuna stock here in the Gulf, because of
4 the fishing habits over on the other side of the Atlantic.

5
6 There was pushback by the EU, the European Union, and other
7 large vessel, purse seining and longlining, countries to reduce
8 the number of FADs per vessel, and so the compromise was to
9 establish a FAD working group to look at the issue of reducing
10 juvenile mortality, et cetera, in the future.

11
12 All-in-all, this was a tremendous amount of hard work being done
13 by the U.S. delegation over the course of just eleven days. The
14 day started at ICCAT at seven in the morning, with a daily
15 delegation pre-briefing, followed by non-stop ICCAT proceedings,
16 going from nine to six o'clock. Then, after the ICCAT session
17 would end, then the U.S. delegation would hold post-briefings,
18 sometimes until ten o'clock, and that didn't mean that the
19 delegates didn't return to their rooms and keep working on some
20 of these proposals.

21
22 It was literally anywhere from seven in the morning until ten at
23 night days, and that's a long workday, and I was just very
24 impressed with the commitment and the smarts of the U.S. team,
25 comprised of NOAA, HMS, the State Department, U.S. Coast Guard,
26 and some private sector reps. That is essentially it, and I
27 think, unless we have any other comments, any other business, we
28 can probably adjourn.

29
30 One last thing is I did have some attachments that Steve Atran
31 put into our briefing books, and one of them was the eleven-
32 pager of all the activities that happened under ICCAT, if anyone
33 is interested in that, and, again, we've got the contact
34 information for Randy Blankenship and Dr. Craig Brown, if you
35 have questions that you want to ask offline. If there is no
36 other business, we will adjourn.

37
38 (Whereupon, the meeting adjourned on January 30, 2017.)

39
40

- - -