

Scoping Document for Amendment 31 to Address Bycatch of Sea Turtles in the Gulf of Mexico Reef Fish Bottom Longline Fishery

I. Purpose of and Need for Action

The Gulf of Mexico Fishery Management Council (Council) and the NOAA's National Marine Fisheries Service (NMFS) are considering measures to reduce bycatch of sea turtles in the bottom longline component of the eastern Gulf of Mexico reef fish fishery. The results of a recent Southeast Fisheries Science Center (SEFSC) observer analysis indicate the number of loggerhead sea turtle takes authorized in the 2005 biological opinion on the bottom longline reef fish fishery in the Gulf of Mexico have been exceeded. The west Florida shelf is an important sea turtle foraging habitat. Individuals incidentally caught by the fishery are sexually immature juveniles and mature adult loggerheads that have high reproductive potential. New observer bycatch data on loggerhead sea turtles and information on nest decline, suggest the population is decreasing. The biological opinion being developed by NMFS in light of this new information could result in a jeopardy opinion for loggerhead sea turtles unless action is taken to reduce the fisheries impact on this threatened species.

This action is needed to provide protection for threatened loggerhead sea turtles in compliance with the Endangered Species Act (ESA) and to reduce sea turtle bycatch and bycatch mortality in compliance with National Standard 9 of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). The ESA requires the federal government to protect and conserve species and populations that are endangered, or threatened with extinction, and to conserve the ecosystems on which these species depend. Section 7(a)(1) of the ESA requires all federal agencies to use their authorities to carry out their programs for the conservation of endangered and threatened species. Section 7(a)(2) of the Act requires all federal agencies to insure any action authorized, funded, or carried out is not likely to jeopardize the continued existence of any endangered or threatened species or to result in the destruction or adverse modification of habitat of such species. National Standard 9 under the MSFCMA, requires that conservation and management measures to the extent practicable, minimize bycatch and to the extent bycatch cannot be avoided, minimize the mortality of such bycatch. The MSFCMA expands on this requirement by stating that fishery management plans are required to "establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery, and include conservation and management measures that, to the extent practicable and in the following priority (A) minimize bycatch and (B) minimize the mortality of bycatch which cannot be avoided" (16 U.S.C. § 1853(11)).

II. What is scoping?

If an action is thought to be significant relative to the National Environmental Policy Act (NEPA), an environmental impact statement (EIS) is required to evaluate a reasonable range of alternatives that address the purpose and need for the action. A requirement of this process is to conduct scoping. Scoping is the formal coordination process required early in the preparation of an EIS for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action. It should be an early and open process. The objectives of scoping are to:

- Identify the affected public and agency concerns;
- Facilitate an efficient EIS preparation process;

- Define the issues and alternatives that will be examined in detail in the EIS while simultaneously devoting less attention and time to less important issues; and
- Save time in the overall process by helping to ensure that the draft EIS adequately addresses relevant issues and reduces the possibility that new comments will result in a rewritten or supplemented EIS.

The public can assist in the scoping process by providing concrete suggestions on the issues to be covered in the EIS to the Council and NMFS. Comments may be made at scoping meetings, or by sending them to NMFS. Details of when and where scoping meetings are to be held and how to submit written comments can be found in the Notice of Intent in Appendix A and *Federal Register* (73 FR 70982, 71605).

III. Background

The Council and NMFS operate under mandates to minimize bycatch to the extent practicable and protect endangered and threatened species. National Standard 9 under the MSFCMA, requires that conservation and management measures to the extent practicable, minimize bycatch and to the extent bycatch cannot be avoided, minimize the mortality of such bycatch. The bycatch reduction and monitoring requirements in the MSFCMA apply to a broad range of living marine species, including sea turtles¹.

The ESA requires the federal government to protect and conserve species and populations that are endangered, or threatened with extinction, and to conserve the ecosystems on which these species depend. Section 7 of the ESA requires all federal agencies to use their authorities to carry out their programs for the conservation of endangered and threatened species and to ensure any action is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of their critical habitat. NMFS develops opinions pursuant to a formal consultation under Section 7 of the ESA to assess the impact of proposed activities on most marine species. If the resulting opinion finds that the proposed activity is likely to result in jeopardy² to the species or destruction or adverse modification³ of its habitat, the opinion will outline reasonable and prudent alternatives (RPAs)

¹ The MSFCMA expands on this requirement by stating that fishery management plans are required to “establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery, and include conservation and management measures that, to the extent practicable and in the following priority (A) minimize bycatch and (B) minimize the mortality of bycatch which cannot be avoided” (16 U.S.C. § 1853(11)). Bycatch, as defined by the MSFCMA (16 U.S.C. § 1802 (2)), means fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards, but excludes fish released alive under a recreational catch and release fishery management program. The term “fish” is defined in the MSFCMA to mean “finfish, mollusks, crustaceans, and all other forms of marine animal and plant life other than marine mammals and seabirds.”

² The term “jeopardy” refers to a determination that a Federal action is reasonably expected, directly or indirectly, to diminish a species’ numbers, reproduction, or distribution so that the likelihood of survival and recovery in the wild is appreciably reduced.

³ The terms “destruction” or “adverse modification” refer to direct or indirect alterations that appreciably diminish the value of critical habitat for both the survival and recovery of a listed species.

to the action, if any, that would avoid such impacts. Commercial fisheries that result in bycatch of listed sea turtles, for example, would be required to implement the relevant RPAs as applicable to protect sea turtles from fishing gear.

If any incidental take (e.g. bycatch) is anticipated, the opinion includes an incidental take statement (ITS)⁴ specifying the amount or extent of incidental taking that may result from the proposed action, as well as nondiscretionary reasonable and prudent measures (RPMs), and terms and conditions to implement the measures, necessary to minimize the takes' impacts. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage a species in any such conduct. Conservation recommendations are also made.

On February 15, 2005, the Southeast Regional Office (SERO) completed the most recent opinion on the continued authorization of the Gulf of Mexico reef fish fishery managed under the Reef Fish Fishery Management Plan (FMP) as part of the ESA section 7 consultation process. The 2005 reef fish fishery opinion identified five species of whales (fin, humpback, sei, northern right, and sperm), six species of sea turtles (loggerhead, leatherback, olive ridley, Kemp's ridley, green, and hawksbill), and two species of fish (smalltooth sawfish and Gulf sturgeon) which occur in the Gulf of Mexico that are threatened or endangered. The opinion concluded authorization of the Gulf of Mexico reef fish fishery managed under this FMP is not likely to jeopardize the continued existence of sea turtles (loggerhead, Kemp's ridley, green, hawksbill, and leatherback) and smalltooth sawfish. An ITS was issued specifying the amount and extent of anticipated take on a three-year basis, along with reasonable and prudent measures and associated terms and conditions deemed necessary and appropriate to minimize the impact of these takes (Table 1). The other listed species and designated critical habitat in the Gulf of Mexico were determined not likely to be adversely affected, because they are not likely to occur where the fishery is conducted.

⁴ The term "incidental take statement" means the take of listed species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by a federal agency or applicant.

Table 1. Anticipated three-year incidental take in the Gulf of Mexico Reef Fish Fishery.

Species	Amount of Take	Bottom Longline	Commercial Vertical Line	Recreational Vertical Line	Total
Green	Total Take	26	9	16	51
	Lethal Take	13	3	5	21
Hawksbill	Total Take	0	13	31	44
	Lethal Take	0	4	9	13
Kemp's ridley	Total Take	2	0	1	3
	Lethal Take	1	0	0	1
Leatherback	Total Take	1	9	10	20
	Lethal Take	1	4	4	9
Loggerhead	Total Take	85	65	53	203
	Lethal Take	42	20	16	78
Smalltooth sawfish	Total Take	2	2	4	8
	Lethal Take	0	0	0	0

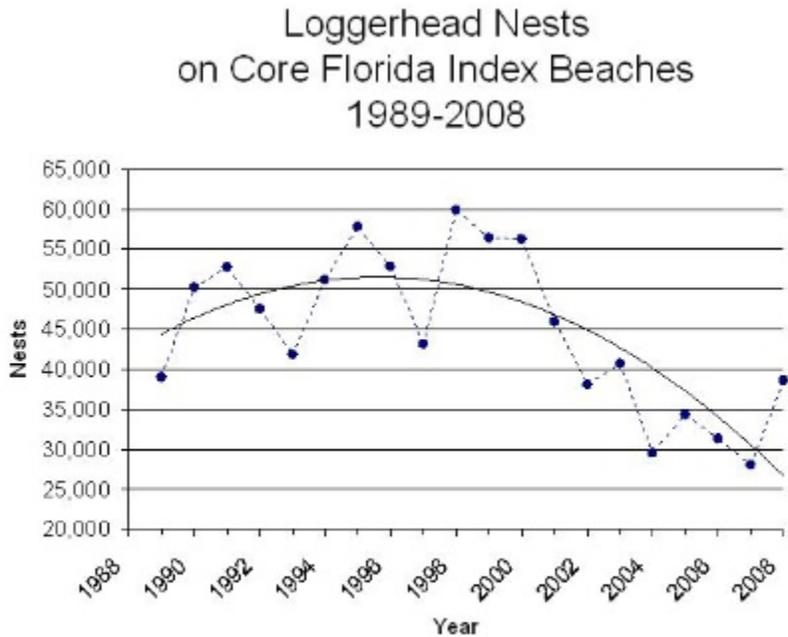
The Gulf of Mexico Fishery Management Council (Council) and NMFS took action in Amendment 18A to the Reef Fish FMP (implemented in May 6, 2007) to comply with the opinion's RPM that any sea turtle or smalltooth sawfish taken in the reef fish fishery is handled in such a way as to minimize stress to the animal and increase its survival rate. Regulations were implemented requiring sea turtle release gear be onboard reef fish-permitted vessels when fishing to facilitate the safe release of any sea turtles or smalltooth sawfish caught. In addition, vessels with commercial and for-hire reef fish vessel permits were required to possess specific documents providing instructions on the safe release of an incidentally caught sea turtle or smalltooth sawfish with hook-and-line gear. RPMs also required better data collection from the fishery on takes.

In September 2008, NMFS released a report that examined sea turtle takes by the bottom longline reef fish fishery from July 2006 through 2007 (NMFS 2008). Data was collected in the course of two observer programs sampling overlapping portions of the reef fish fishery. A total of 18 sea turtle captures were observed, 16 of which were loggerhead sea turtles. Sea turtle takes were only observed in the eastern Gulf of Mexico bottom longline fishery. Extrapolating these takes to the entire Gulf of Mexico using the Fishery Logbook System coastal logbook data, the annual number of takes by this segment of the fishery was estimated to be 974 sea turtles (95 percent confidence interval of 444-2,137 takes). Of these sea turtle takes, 433 were estimated to be released alive, 325 estimated as released dead, and 216 whose status is unknown.

The observer data indicates incidental loggerhead sea turtle take in the bottom longline component of the fishery has substantially exceeded the take specified in the fishery's ITS. Based on observer recorded size, takes included both sexually immature and mature sea turtles. Satellite telemetry studies of adult female loggerheads indicate the importance of the west Florida shelf as benthic foraging habitat. Strandings along the west Florida coast also indicate the importance of the shelf as foraging habitat for loggerheads, Kemp's ridley, and green turtles. A number of stock assessments (TEWG 1998, TEWG 2000, NMFS 2001, Heppell et al. 2003) have examined the stock status of loggerheads in the waters of the U.S., but have been unable to develop any reliable estimates of population size. For the past 20 years, the Index Nesting Beach Survey (INBS) has coordinated a detailed sea turtle nesting-trend monitoring program in conjunction with the Statewide Nesting Beach Survey (SNBS) program. Loggerhead nests counted annually at core index nesting beaches in Florida from 1989 through 2008 indicate a

declining trend in loggerhead nesting (Figure 1). For further information on the core index of beaches surveyed for nesting loggerhead sea turtles in the state of Florida go to: <http://research.myfwc.com> and search the sea turtle monitoring program. It is unclear at this time whether the nesting decline reflects a decline in population, or is indicative of a failure to nest by the reproductively mature females as a result of other factors (e.g., resource depletion, nesting beach problems, and oceanographic conditions).

Figure 1. Reprinted from FWRI (2008).



The “Draft Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle, Second Revision” identifies five recovery units for the Northwest Atlantic population of loggerhead sea turtles. Captured loggerheads are likely disproportionately from the Peninsular Florida and northern Gulf of Mexico draft recovery units. Both draft recovery units are declining. The Peninsular Florida recovery unit has exhibited a 28 percent decrease in nests (1989-2006) and a steeper decline of 43 percent since 1998. The northern Gulf of Mexico recovery unit has exhibited a significant declining trend in nests of approximately 6 percent annually (1989-2006) (FWRI 2008).

On September 3, 2008, SERO’s Sustainable Fisheries Division requested the SERO Protected Resources Division to reinitiate ESA section 7 consultation on the reef fish fishery. In addition, the Council has begun work developing measures to reduce the number of sea turtle takes by the reef fish bottom longline fishery, and has initiated the development of an amendment and associated environmental impact statement (EIS) to develop such measures.

IV. Commercial Reef Fish Longline Fishery Commercial Sector

This section provides an overview of the commercial sector of the grouper and tilefish fisheries in the Gulf of Mexico. Landings, ex-vessel values and effort by gear type are discussed. Several species and species groups are presented, specifically, reef fish, shallow-water grouper (SWG),

deepwater grouper (DWG), tilefish, red grouper, and gag. The SWG information includes red grouper and gag plus all other SWGs, while the reef fish information includes all grouper and tilefish, plus all other species in the reef fish management unit. Additional information on the grouper, tilefish, and reef fish fisheries is contained in Reef Fish Amendments 29 and 30B and is included herein by reference (GMFMC 2008a and GMFMC 2008b). It is specifically noted that the grouper, tilefish, and general reef fish fisheries are prosecuted Gulf-wide and Reef Fish Amendments 29 and 30B contain performance information by state. However, the grouper and tilefish fisheries as a whole are dominated by performance off Florida waters. Further, this action deals primarily with the Florida fishery. As a result, descriptions of the fishery by state are not presented here.

Annual Landings, Ex-vessel Values, and Effort

The commercial grouper and tilefish fishery is part of the commercial reef fish fishery in the Gulf of Mexico. The commercial reef fish fishing fleet in the Gulf of Mexico is composed of vessels using different gear types and catching a variety of species. A license limitation program is in effect in the commercial reef fish fishery and the harvest of commercial quantities of reef fish requires a valid reef fish permit on board the vessel. Commercial reef fish permits are renewable every year, with a grace period of one year to renew the permit. Non-renewal of a permit during this grace period results in permanent loss of the permit. On November 24, 2008, there were 884 active permits and 196 renewable permits, or a total of 1,080 permits.

Landings and ex-vessel values for the reef fish fishery are provided in Table 2. The table disaggregates landings for the various grouper aggregates as well as select individual grouper species. The table also provides estimates for all reef fish species combined. An average of 7.82 MP of SWG (includes gag and red grouper and all other SWG species combined), 1.17 MP of DWG grouper, and 0.52 MP of tilefish were harvested annually in the commercial reef fish fishery during 1993-2006. The respective ex-vessel values were \$18.91 million, \$3.06 million, and \$0.77 million in nominal (current year) prices, or \$21.51 million, \$3.49 million, and \$0.88 million in real (adjusted to 2006 dollars) prices. Within the SWG complex, red grouper and gag dominated the fishery, with red grouper accounting for 67 percent of landings and 62 percent of ex-vessel values, and gag accounting for 18 percent of landings and 21 percent of ex-vessel values.

Average annual landings for all species rose from 1993-1998 to 1999-2004, but fell in 2005-2006. Landings for all species were highest in 1999-2004. Nominal and real ex-vessel revenues rose and fell similar to landings, with the exception that, changes in the nominal ex-vessel prices for red grouper and tilefish showed slight increases instead of declines in 2005-2006. In general, 1999-2004 registered the highest ex-vessel values for all species. Nominal ex-vessel values rose in 1999-2004 relative to 1993-1998 by 34 percent, 143 percent, 47 percent, 45 percent, and 17 percent for red grouper, gag, SWG, DWG, and tilefish, respectively. A substantial portion of these increases were due to inflation as can be inferred from the corresponding lower increases in real ex-vessel revenues of 16 percent, 112 percent, 28 percent, 26 percent, and 1 percent for the respective species.

Table 2. Average Annual Landings and Revenues for Selected Species, 1993-2006.

Period	Red Grouper	Gag	SWG	DWG	Tilefish	Reef
Landings (1,000 lbs)						
1993-98	4,790	850	6,840	1,047	507	17,584
1999-04	5,831	1,885	8,946	1,331	534	19,756
2005-06	5,074	1,525	7,389	1,053	510	16,598
1993-06	5,276	1,390	7,821	1,170	519	18,374
Nominal Value (\$1,000)						
1993-98	9,854	2,243	15,057	2,488	697	34,097
1999-04	13,223	5,453	22,136	3,604	814	44,895
2005-06	13,360	4,915	20,779	3,150	841	44,252
1993-06	11,799	4,000	18,908	3,061	768	40,176
Real Value (\$1,000)						
1993-98	12,494	2,814	19,045	3,145	880	43,173
1999-04	14,541	5,959	24,301	3,956	893	49,265
2005-06	13,155	4,868	20,499	3,123	830	43,595
1993-06	13,466	4,455	21,505	3,489	879	45,844

Distribution by Gear Type in the Grouper and Tilefish Fisheries

Various gear types are used in the harvest of reef fish. In the particular case of the grouper and tilefish fisheries, handlines (vertical lines) and longlines⁵ are the two dominant gear types, with traps comprising a distant third gear type. There are, however, variations in gear dominance depending on the species caught. It should be noted that traps have been prohibited for use in the reef fish fishery since February 2007. It is not yet known how historic trap landings will be distributed among the remaining gear types. Table 3 presents several fishery performance measures by gear type. In terms of landings, longlines have dominated the grouper and tilefish fisheries. Handlines have been the dominant gear in the gag fishery. Except for fish traps, all the other gear types have historically accounted for relatively small amounts of grouper and tilefish landings. In addition, trap catches were only substantial for the SWG fishery. The distribution of ex-vessel revenues mimics that of landings. Specifically, longlines generated the most ex-vessel revenues for all fisheries, except gag for which handlines accounted for the largest portion of revenues. In terms of the number of boats, number of trips, and days away from port, the handline fleet dominated the grouper and tilefish fisheries. With more handline boats in each of the fisheries examined, it is only logical to expect that handlines would account for more trips and days away from port than any of the other gear types for each of the subject fisheries.

⁵ Although the data do not make a distinction between surface and bottom longlines, it is assumed that all longline harvests are from bottom longlines.

Table 3. Selected fishery performance measures by gear type, 1993-2006.

	Diving	Handlines	Longlines	Other Gear	Traps	Trolling
	Landings (thousand pounds)					
Red Grouper	10	1,299	3,203	8	754	2
Gag	30	893	448	5	12	3
SWG	52	2,907	4,040	18	796	8
DWG	0	198	966	1	4	1
Tilefish	0	20	497	0	1	0
	Revenues (thousand dollars)					
Red Grouper	26	3,296	8,250	22	1,866	6
Gag	95	2,870	1,427	16	37	11
SWG	159	8,399	10,875	52	1,996	24
DWG	1	462	2,585	2	8	2
Tilefish	0	29	847	1	1	1
	Boats					
Red Grouper	42	586	146	10	65	12
Gag	31	465	112	5	28	14
SWG	50	791	165	14	67	27
DWG	4	262	127	2	8	5
Tilefish	1	121	98	1	4	1
	Trips					
Red Grouper	210	4,509	1,298	28	562	21
Gag	172	3,654	788	17	158	35
SWG	324	7,344	1,475	43	612	63
DWG	324	7,344	1,475	43	612	63
Tilefish	1	364	457	1	8	2
	Days Away					
Red Grouper	350	17,229	11,749	122	3,035	46
Gag	276	12,451	7,411	47	890	58
SWG	489	25,217	13,203	153	3,151	121
DWG	10	5,951	6,546	16	90	22
Tilefish	3	2,086	4,187	7	44	6

V. Possible Alternatives

Alternative I. Modify baits

Description of the industry and loggerhead turtle biology

Loggerhead sea turtles (*Caretta caretta*) are carnivorous with strong beaks for consuming pelagic invertebrates (e.g., jellyfish and crab larvae) as juveniles and benthic invertebrates (e.g., crabs, clams, and soft corals) as adults (Spotila 2004). Diet studies were completed on dead loggerhead sea turtles stranded on the beach from the northwestern Gulf of Mexico. Mollusks (e.g., clams and whelks) were the third highest-ranked prey item and had a higher occurrence in more loggerhead turtles' digestive tracts than other prey items throughout the season (Plotkin et al. 1993). Fish and shrimp were found in lower abundance, suggesting these prey items may be more difficult for loggerhead turtles to come into contact with and capture. Because loggerhead sea turtles are classified as generalist feeders, but have a greater preference for mollusks such as squid, there is a potential that changing bait from squid to a finfish species may reduce loggerhead sea turtle and bottom longline interactions.

Squid has typically been used as preferred bait in bottom longline reef fish industry due to its tenacity for staying on a circle hook, especially at deeper depths (Pinguo 1996). Squid wings from the Humboldt squid are ideal because they are available in bulk orders, 100 percent usable (i.e., no pen or ink to remove), and easily cut to the preferred size (Brooks and Spaeth personal communication 2008). The finfish that are used as bait in the industry when available and economically priced are mackerel, threadfin herring, and mullet (Brooks and Spaeth personal communication 2008). When observers documented sea turtle takes and recorded bait type, 63.6 percent of the bait was identified as squid and 72 percent of the sea turtles were hooked in the mouth (i.e., beak, roof, or jaw; NMFS 2008). This information indicates that hard shell sea turtles were biting the baited hook rather than becoming entangled within the gangions alone. One study focused on reducing sea turtle mortality associated with the pelagic longline fishery found the combination of circle hooks and mackerel for bait reduced sea turtle takes and had no negative effect on swordfish catches (Watson et al. 2005). Therefore, bait modification may be successful in reducing sea turtle takes.

Issues to Consider

- Costs to the industry for bait modification
- Reduction in targeted species catch(i.e., grouper, snapper, or tilefish species)
- Enforcement
- Loggerhead sea turtle takes may **not be sufficiently reduced** due to their generalist feeding habits

Alternative II. Modify effort by changing fishing behavior and gear practices

Limit mainline length, soak time, and number of hooks

Currently, the reef fish bottom longline industry uses mainline material composed of cable (galvanized or stainless steel) or monofilament, both approximately ranging in diameter from 3.2 to 4.0 mm (NMFS 2005). The industry uses a range of mainline lengths, which typically depends on vessel size. For example, on some observer trips the mainline length ranged from 4 to 9 nm (7.4 to 16.8 km), with an average of 7 nm (12.9 km; Hale et al. 2007). Others in the industry were observed setting an average mainline length of 2.4 nm (4.4 km; NMFS 2005). Average soak time of the gear is 3 hours, which is defined as the time the last hook enters the water to the time the first hook is hauled back (NMFS 2005; Hale et al. 2007). Bottom longline fishers that use longer gangions typically have longer soak times, greater than 3.5 hours (Brooks personal communication 2008).

Based on observer studies, the number of hooks fished for reef fish bottom longlines ranged from 36 to 2,100 hooks, the average was 1,121 hooks documented by Hale et al. (2007) and the average number was 732 hooks fished documented by NMFS (2005). The usual rule of thumb for longlines is 100 to 200 hooks per mile of mainline (Spaeth personal communication 2008). Hale et al. (2007) reported only circle hooks were used, with 14/0 size being the most common. Similarly, the longline reef fish fishery was documented using 14/0 and 13/0 circle hooks (NMFS 2005; NMFS 2008).

Sea turtle size and activity level, as well as the surrounding water temperature, all have a direct impact on diving depth and time spent underwater (Lutcavage and Lutz 1997). Satellite telemetry studies on loggerhead sea turtles have recorded turtles submerged underwater for as long as 171.7 minutes to as little as 4.2 minutes (Renaud and Carpenter 1994). Sea turtles can rest or sleep underwater for several hours at a time, but submergence time is much shorter during activity. In warm conditions, sea turtles normally spend 15 to 30 minutes underwater searching for food. However, they can remain active underwater for 45 minutes or longer without breathing. The normal voluntary dive duration of a loggerhead sea turtle foraging is 15-30 minutes; the maximum dive duration is 60 minutes (Spotila 2004). Based on information about loggerhead turtle biology and the bottom longline reef fish industry the following three alternatives should be considered: reduce the mainline length, reduce soak time, and/or reduce hooks fished. By reducing mainline length, soak time, and/or fished hooks, the industry could reduce the time gear is submerged, potentially reducing sea turtles takes and bycatch mortality from drowning.

Issues to Consider

- Costs to the industry for gear modification
- Reduction in catch
- Law enforcement issues
- Loggerhead sea turtle takes might **not be reduced significantly** due to effort and gear modifications

Alternative III. Modify gear

Use of weaker (lower pound test) gangions

The industry typically uses gangion material made of monofilament ranging in strength from 200 to 400 pound test and lengths ranging from 0.46 to 1.92 m (1.5 to 6 ft), with an average length of 0.79 m (2.5 ft) (NMFS 2005). Some fishermen use longer gangions, 1.8 to 2.7 m (6 to 9 ft), and fish the gangions for longer soak times (Brooks personal communication 2008). Another alternative for reduced turtle takes is lowering the gangion strength so that turtles could potentially break the gangion off from the mainline and swim free versus being submerged for an extended period of time, resulting in drowning. Ideally, the gangion should break near the hook rather than the mainline to minimize the amount of line trailing after the sea turtle.

Use of hook guards to reduce entanglement

Data from reef fish observer cruises suggests that sea turtles are becoming entangled in bottom longline gear in the reef fish fishery during gear deployment. For example, when observers reported takes of sea turtles they were hooked in unknown locations 16.7 percent and hooked in the flipper 11.1 percent of the time (NMFS 2008). If turtles are becoming entangled during deployment of gear, a potential alternative for reducing turtle takes would be using hook guards (e.g., funnels) to shield hooks and baits during deployment.

Gear conversion

Some bottom longline fishermen also use vertical lines on their vessels to harvest reef fish. The reef fish observer program also sent observers on vertical line fishing trips. Observers were present on 93 trips and did not record any takes of protected species (NMFS 2008). If possible the industry could convert to vertical line fishery to reduce the turtle and longline interactions. This conversion would depend on the bottom longline industry's ability to change gears and the incentives needed for a timely conversion. This conversion could be voluntary or a facilitated conversion of gears from bottom longline to vertical line.

Issues to Consider

- Reduction in catch due to weaker gangion strength
- Law enforcement issues
- Loggerhead sea turtle takes might **not be reduced significantly** due to reduced gangion strength (e.g., the sea turtle swallowed the hook and will eventually die)
- Loggerhead sea turtles takes might **not be reduced significantly** regardless of hook guards (e.g., the sea turtle is badly entangled, and/or hooked and will eventually die)
- Costs of gear conversions
- Ability of captain and crew to convert to new fishing methods and gears
- Changes from increased fishing pressure on specific bottom types and areas, because of gear modifications
- Changes from bottom longline to vertical gear might **not significantly** reduce sea turtle takes

Alternative IV. Area or time closures

The take of sea turtles by the reef fish bottom longline fishery may be reduced by closing particular areas to fishing or closing the fishery during specific times. The SEFSC study (NMFS, 2008) shows most of the sea turtle takes occurred on fishing trips west of the Tampa Bay area (Figure 2). An area closure ranging from approximately 26 degrees latitude to 28 degrees latitude would encompass the area where 72 percent of sea turtles were taken in the observer study, and an area ranging from approximately 27 degrees latitude to 28 degrees latitude would encompass the area where 56 percent of sea turtles were taken.

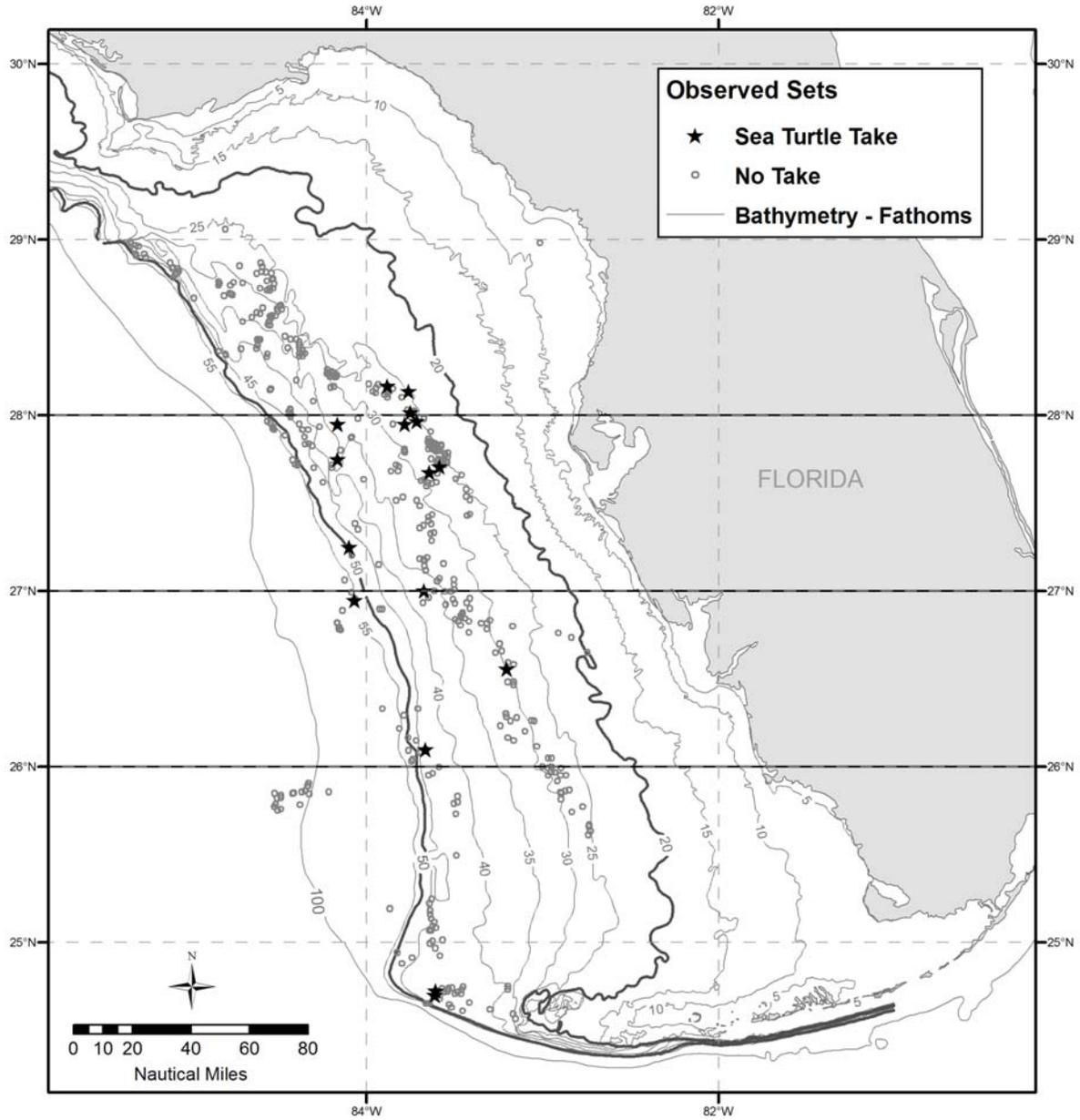
An area closure could also be based on depth. Loggerhead turtles spend most of their time in the top 5 meters of water, but may dive to 200 meters (100 fathoms; Spotila 2004). Currently, longlines can only be used at depths greater than 20 fathoms (36.6 m) east of 85°30' longitude. In the past, the Council has considered moving longlines to depths greater than 50 fathoms (91.4 m). All but one turtle taken during the SEFSC study were on sets at 50 fathoms or less, and 72 percent of turtles taken were on sets at 40 fathoms or less. Both types of area closures (by location or depth) could be combined. For example, an area closure from the 50 fathom line shoreward between 26 degrees and 28 degrees latitude would cover the area where 67 percent of turtles were taken in the study.

Seasonal closures could occur during the time when sea turtles are most likely to be captured. The entire eastern Gulf of Mexico could be closed during a seasonal closure or just a portion of the fishing area, such as described above for area and depth closures. In the SEFSC study, 89 percent of sea turtle takes occurred from June through August and 94 percent occurred from April through August (NMFS 2008). In other studies, sighting rates of hard-shelled sea turtles increased during spring and summer (Braun-McNeill and Epperly 2002, and references therein). In addition, 53 percent of turtle strandings in the eastern Gulf during 1998-2004 occurred during April-August (Sea Turtle Stranding and Salvage Network 2008). Seasonal closures could be combined with area and depth closures as well.

Issues to Consider

- Closures may be in prime fishing areas
- Smaller vessels may not be able to reach open fishing grounds
- Increased fuel costs for Florida west coast vessels to reach open fishing grounds
- Increased law enforcement necessary

Figure 2. Map of the eastern Gulf of Mexico showing locations of longline sets with observers onboard.



Alternative V. Effort Reduction by Gear

A reduction in effort by the bottom longline portion of the reef fish fishery would reduce the opportunity for take of sea turtles. One way to reduce effort is to reduce the number of vessels fishing with longline gear. Draft Amendment 29 to the Reef Fish FMP (GMFMC, 2008a) proposes actions to reduce effort in the Gulf of Mexico grouper and tilefish fisheries. Although the Council chose an IFQ program as their preferred alternative, an alternative was to issue endorsements based on historical landings. Options presented included endorsements specifically for longline gear. Using the Council's preferred qualifying period of 1999-2004, the number of vessels that would be excluded from the fishery was calculated using three different thresholds for grouper and tilefish landings. Under a threshold of only one pound minimum annual average landings, approximately 10 percent of the vessels with longline landings would not be able to qualify for an endorsement because they had no grouper or tilefish landings during the time period. Under a threshold of 10,000 pounds minimum annual average landings, it is estimated that over half of the vessels with grouper and tilefish longline landings would not be able to receive an endorsement. The number of vessels not able to receive an endorsement increases to over 80 percent if the minimum average landings for the time period is set at 50,000 pounds. It is important to note that these calculations were based on grouper and tilefish landings in the entire Gulf, whereas current effort reduction would be for all reef fish but only in the eastern Gulf.

Issues to Consider

- Elimination of vessels from the longline fishery could create economic hardship
- A low landings threshold (e.g., one pound) **would not substantially** reduce effort
- Increased administrative impacts

Alternative VI. Observers

The authority to place observers on commercial fishing and processing vessels operating in particular fisheries is provided either by the MSFCMA or the Marine Mammal Protection Act (MMPA). These two acts require the government to collect data on activities which affect marine resources. Many of the observer programs also satisfy requirements of the ESA. The data collected by the observer programs are often the best means to get current data on the status of many fisheries. Without observers and observer programs, there would not be sufficient data in many fisheries for effective management.

NMFS has been sending fishery observers to collect catch and bycatch data from U.S. commercial fishing and processing vessels since 1972. Annually, 42 different fisheries are monitored by observer programs logging over 60,000 observer days at sea. In the Gulf of Mexico, fishery observer programs have been in existence since about 1987. The first programs were originally developed to provide an economic evaluation of turtle reduction devices in shrimp trawls. Currently, two observer programs monitor reef fish trips. One program is the Reef Fish Bycatch Research Program administered through the SEFSC's Galveston Laboratory. This program has sampled the commercial reef fish fishery from the second half of 2006 through 2007, and is still ongoing. The other program is the Shark Bottom Longline Observer Program (SBLOP) which has been in existence since 1994 and is now administered by the SEFSC's Panama City Laboratory. This program was created to obtain better data on catch, bycatch, and

discards in the shark bottom longline fishery; however, depending on the time of year and length of the large coastal shark season, this fishery will also target reef fish. Each program was independently designed and implemented sampling regimes for different, but overlapping portions of the Gulf commercial reef fish fishery.

At-sea observer programs can be a reliable and accurate source of many of the data needed for fisheries management, including verification of fishing effort and catch per unit effort data, and collection of data on discards and on interactions with non-target species. Sufficient observer coverage is a particular challenge for the accurate monitoring of the highly variable bycatch events that are typical of vulnerable non-target species, including sea turtles.

Observers are used at least two ways relative to sea turtle incidental takes. The first is to monitor fishery take levels. In fisheries where there is 100 percent observer coverage (e.g. Hawaii-based shallow-set longline fishery), the data is used to determine when the allowable take is met or projected to be met and the fishery closed. When there is less than 100 percent observer coverage, observer data are used to provide sea turtle catch rates in observed effort (sets, hooks and then extrapolated fishery wide using logbook effort information.

The other way observers could be used would be for general information gathering for the fishery. In this case, observers could provide data so NMFS could learn more about sea turtle interactions with fishing operations, better estimate the annual number of turtle takes, and better evaluate existing or subsequent measures to reduce sea turtle takes. This information could be used to determine whether additional measures to address prohibited sea turtle takes would be necessary. Under this scenario, observers would be needed on a sufficient percentage of fishing trips to be able to characterize the fishery.

Two important factors to be considered with any observer program is the cost of observers and who pays for the observers. There are about 300 vessels within the longline fishery. Longline vessels landing at least one pound of SWG spent on average 13,200 days at sea between 1993 and 2006 (GMFMC 2008). Approximately 80 percent of the SWG landings occurred in Florida. Therefore, days at sea by this segment of the fishery could be about 10,500 days if landings reflect fishing effort. Over the same time period, longline vessels that had at least one pound of DWG averaged about 6,500 days at sea, and vessels landing at least one pound of tilefish spent an average of 4,187 days at sea. Approximately 40 percent of DWG and tilefish are landed in Florida. Given that many of the fishing trips probably land fish from more than one group, a reasonable estimate of the average number of days at sea for the longline fleet would be 12,000 days. Current observer costs run about \$1,500 per day⁶ (collection, data entry, and analysis), thus complete observer coverage for this segment of the commercial reef fish fishery would cost millions of dollars. The current NMFS budget for putting observers on commercial reef fish vessels is approximately \$250,000⁶.

Most observer programs are paid for by NMFS. Other programs have mostly been paid for by industry, such as the North Pacific Groundfish Observer Program (NPGOP). Should NMFS be responsible for covering the costs of additional observers, funding would have to be found from the NMFS' budget to cover these activities. If funding could not be found, then observer

⁶ Personal communication. Dr. James Nance, Southeast Fishery Science Center, Galveston Laboratory, Galveston, Texas

coverage could not be increased. As with the NPGOP, a requirement for operators of reef fish longline vessels to pay for observers could increase the number of observers; however, this could substantially reduce the profitability of a fishing operation. Costs could be shared between NMFS and operators to increase the number of observers. For example, NMFS could pay for the observer while the operator paid for accommodations and food.

Issues to Consider

- Observers monitoring take versus observers collecting information on fishery-sea turtle interactions
- Increase the level of observer coverage.
- Who should pay for the cost of observers to be aboard commercial longline vessels?

VI. Other issues

To examine the magnitude and significance of the effects of an action, it is important to seek input on the geographic scope of the action, the time frame for the analyses, what may be the significant effects of an action, and what other actions affecting the resource, ecosystems, and human communities.

a. Geographic scope

The immediate areas affected by this action are the federal waters of the Gulf of Mexico. These are the waters extending from the seaward side of the state waters of Texas, Louisiana, Mississippi, Alabama, and the west coast of Florida state waters to 200 miles. Gag and red grouper in the SWG complex, and yellowedge grouper in the DWG complex are the three primary targets of the grouper fishery. Tilefish are found in deeper waters and are an important component of the deep-water reef fish fishery. The distributions of these species range in waters from off the Mid-Atlantic and New England states to off Brazil, and include waters of the Gulf of Mexico.

The loggerhead sea turtle is highly migratory and is found in waters around the globe. This species is the most abundant species of sea turtle occurring in U.S. waters. The near shore waters of the Gulf are believed to provide important developmental habitat for juvenile loggerheads. In the western Atlantic, most loggerhead sea turtles nest from North Carolina to Florida and along the Gulf coast of Florida.

b. Time frame

The Gulf of Mexico reef fish fishery in federal waters has been managed since the Reef Fish FMP was implemented in November 1984. Since that time, numerous amendments (either plan or regulatory) have been approved providing further regulation of this fishery. Grouper stocks, the primary target of the commercial reef fish longline fishery in the Gulf of Mexico, have been periodically assessed since 1991. Some assessments have used commercial data as early as the 1900s for some fish species. Recreational data comes from the Marine Recreational Fishery Statistical Survey with reliable estimates of harvest beginning in 1981.

The following is a list of reasonably foreseeable future management actions.

- Next assessments for gag and red grouper through SEDAR are scheduled to occur in mid-2011. SEDAR assessments for yellowedge grouper and tilefish are scheduled for 2010.
- Amendment 28 to the Reef Fish FMP is scheduled to begin development in 2008. This amendment would examine fair and equitable ways to allocate all FMP resources between recreational and commercial fisheries.
- Amendment 29 to the Reef Fish FMP is scheduled to be completed in 2008. This amendment would establish a grouper IFQ program for the commercial reef fish fishery.
- Reef Fish Amendment 30B was submitted to the Secretary of Commerce for approval in the fall of 2008. This amendment addresses gag thresholds and benchmarks; establishing gag and red grouper total allowable catch (TAC), interim allocations and accountability measures (AMs); ending overfishing of gag; managing gag and red grouper commercial and recreational harvests consistent with TAC; reducing grouper discard mortality; establishing time/area closures or expanding existing restricted fishing areas; and requiring compliance with Federal fishery management regulations by federally permitted reef fish vessels when fishing in state waters.
- An interim rule to implement gag regulations by January 1, 2009, was requested by the Council. These regulations would end gag overfishing while Amendment 30B is under Secretarial review.
- The Council will be developing either a Reef Fish amendment or a generic amendment to address annual catch limits (ACLs) and the corresponding AMs. The reauthorized MSFCMA was enacted on January 12, 2007, and requires ACLs to be developed in 2010 for stocks subject to overfishing and 2011 for all other stocks.

The Council is scheduled to complete an Aquaculture FMP in 2009. This FMP would provide a programmatic approach to evaluating the impacts of aquaculture proposals in the Gulf of Mexico and a comprehensive framework for regulating such activities.

With respect to the ESA, an informal section 7 consultation was conducted on the Reef Fish FMP prior to its implementation in 1984. NMFS concluded the management measures proposed in the subject FMP were not likely to adversely affect any listed species under the ESA. However, the consultation did not analyze the effects of the fishery itself. The effects of the Gulf reef fish fishery on endangered and threatened species were considered as part of an April 28, 1989, opinion, which analyzed the effects of all commercial fishing activities in the Southeast Region. The opinion concluded that commercial fishing activities in the Southeast Region were not likely to jeopardize the continued existence of any threatened or endangered species. Subsequent amendments through Amendment 23 were all either consulted on informally and found not likely to adversely affect any threatened or endangered species, or were determined by to have no effect and not warrant consultation. All of these actions were found to not change the prosecution of reef fish fishery in any manner that would significantly alter the potential impacts to endangered and threatened species or their designated critical habitats previously considered in the July 5, 1989, opinion. In 2005, an opinion was developed in response to actions for Reef Fish Amendment 23. Although the opinion concluded the anticipated incidental take of these species by the reef fish fishery was unlikely to jeopardize their continued existence, it did require RPMs be taken to minimize stress and increase survival rates of any sea turtles and smalltooth sawfish taken in the reef fish fishery.

c. Possible effects of this action and other non-fishery actions on the resource, ecosystems, and human communities.

One way to review various effects of actions is to identify important valued environmental components (VECs). VECs are “any part of the environment that is considered important by the proponent, public, scientists and government involved in the assessment process. Importance may be determined on the basis of cultural values or scientific concern” (EIP 1998). For purposes of this scoping document, an initial 25 VECs were identified. In past reef fish actions, some of these VECs were combined into a revised VEC because many of the past, current, and reasonably foreseeable future actions were similar and resulted in seven VECs being determined as the most important for further consideration.

The following discussion refers to the effects of past, present, and reasonably foreseeable future actions on the various VECs.

Habitat

Essential fish habitat (EFH), as defined in the GMFMC (2004a), for the Reef Fish FMP consists of all Gulf of Mexico estuaries; Gulf of Mexico waters and substrates extending from the US/Mexico border to the boundary between the areas covered by the Gulf of Mexico and the South Atlantic fishery management councils from estuarine waters out to depths of 100 fathoms. In general, reef fish are widely distributed in the Gulf of Mexico, occupying both pelagic and benthic habitats during their life cycle. A planktonic larval stage lives in the water column and feeds on zooplankton and phytoplankton (GMFMC 2004a). Juvenile and adult reef fish are typically demersal and usually associated with bottom topographies on the continental shelf (<100 m) which have high relief, i.e., coral reefs, artificial reefs, rocky hard-bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings. For some species, juveniles have been documented in inshore seagrass beds, mangrove estuaries, lagoons, and larger bay systems.

From fishing, the most sensitive gear/habitat combinations include EFH for reef fish species. Allowable gear for directed reef fish fishing activities includes longlines, vertical lines, and spearfishing gear. These have low levels of impacts compared to other gears. Damage caused from reef fish fishing, while minor is associated with the level of fishing effort. Therefore, actions reducing levels of effort are likely to result in greater benefits to the physical environment because fishing related interactions with habitat would be reduced.

Reef fish EFH, particularly coral reefs and SAVs, are particularly susceptible to non-fishing activities (GMFMC 2004). The dredge and fill activities (i.e., ship channels, waterways, canals, and coastal development) are considered one of the greatest threats. Oil and gas activities as well as changes in freshwater inflows can also adversely affect these habitats. The effects of these activities depend on decisions made by agencies other than NMFS, as NMFS and the Gulf Council have only a consultative role in non-fishing activities. Decisions made by other agencies that permit destruction of EFH could potentially cause irreversible damage. However, damage to EFH and HAPC could occur less frequently as a result of protected designations. Accidental or inadvertent activities such as ship groundings on coral reefs or propeller scars on seagrass could also cause irreversible loss. Additionally, sea level rise from global warming could have negative effects on habitat, particularly coastal areas.

Managed Resources

There are 42 species of reef fish managed in the Gulf of Mexico EEZ, and of the species where the stock status is known, four of seven are undergoing overfishing (red snapper, gag, gray triggerfish and greater amberjack) and two of four species are considered overfished (greater amberjack and red snapper). A recent assessment for greater amberjack has found stock recovery is occurring slower than anticipated. In the past, the lack of management of reef fish has allowed many stocks to undergo both growth and recruitment overfishing. This has allowed some stocks to decline as indicated in numerous stock assessments. Present management measures are designed to improve stock status. These measures primarily restrict fishing effort to either allow stock status to improve, or maintain a stock at a level that can be harvested in a sustainable fashion. Some measures have had the unavoidable adverse effect of increasing bycatch of some species.

Non-fishing activities are likely to adversely affect reef fish stocks. Liquefied natural gas (LNG) facilities could have negative effects on reef fish species. Global warming is another factor which could have a detrimental effect on reef fish species. However, these effects cannot be quantified at this time.

Protected Resources

There are 28 different species of marine mammals that occur in the Gulf. All 28 species are protected under the MMPA and six are also listed as endangered under the ESA (sperm, sei, fin, blue, humpback, and North Atlantic right whales). Other species protected under the ESA occurring in the Gulf include five sea turtle species (Kemp's Ridley, loggerhead, green, leatherback, and hawksbill); two fish species (Gulf sturgeon and smalltooth sawfish), and two Acropora coral species (elkhorn and staghorn). The Gulf reef fish fishery is classified in the 2008 MMPA List of Fisheries as Category III fishery. This classification indicates the annual mortality and serious injury of a marine mammal stock resulting from any fishery is less than or equal to 1 percent of the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. Dolphins are the only species documented as interacting with the reef fish fishery. Bottlenose dolphins may predate and depredate on the bait, catch, and/or released discards of the reef fish fishery.

All five species of sea turtles are adversely affected by the Gulf reef fish fishery. Incidental captures are relatively infrequent, but occur in all commercial and recreational hook-and-line components of the reef fish fishery. Captured sea turtles can be released alive or can be found dead upon retrieval of the gear as a result of forced submergence. Sea turtles released alive may later succumb to injuries sustained at the time of capture or from exacerbated trauma from fishing hooks or lines that were ingested, entangling, or otherwise still attached when they were released. Sea turtle release gear and handling protocols are required for reef fish permitted fishing vessels to minimize post-release mortality. As indicated in the introduction of this scoping paper, allowable sea turtle takes by the commercial longline fishery have been exceeded.

Anthropogenic factors that impact hatchlings and adult female turtles on land, or the success of nesting and hatching include: beach erosion, beach armoring and nourishment, artificial lighting, beach cleaning, increased human presence, recreational beach equipment, beach driving, coastal construction and fishing piers, exotic dune and beach vegetation, and poaching (NMFS 2005). An increase in human presence at some nesting beaches or close to nesting beaches has led to

secondary threats such as the introduction of exotic fire ants, feral hogs, dogs and an increased presence of native species (e.g., raccoons, armadillos, and opossums) which raid and feed on turtle eggs. Although sea turtle nesting beaches are protected along large expanses of the northwest Atlantic coast, other areas along these coasts have limited or no protection.

Loggerhead sea turtles are affected by activities occurring in the marine environment. These include oil and gas exploration, coastal development, and transportation, marine pollution, underwater explosions, hopper dredging, offshore artificial lighting, power plant entrainment and/or impingement, entanglement in debris, ingestion of marine debris, marina and dock construction and operation, boat collisions, poaching, and fishery interactions. Besides the commercial reef fish longline fishery, loggerheads in the pelagic environment are exposed to a series of longline fisheries, which include the Atlantic pelagic longline fisheries, an Azorean longline fleet, a Spanish longline fleet, and various longline fleets in the Mediterranean Sea (Aguilar et al. 1995, Bolten et al. 1994, Crouse 1999). Loggerheads in the benthic environment in waters off the coastal U.S. are exposed to a suite of fisheries in federal and state waters including trawl, purse seine, hook and line, gillnet, pound net, longline, and trap fisheries.

Global climate change could have a negative effect on sea turtles, particularly because they are highly migratory, wide-ranging organisms that are biologically tied to temperature regimes. Major ways climate change could affect sea turtles are: 1) Changes in hatchling sex ratios as a species that exhibits temperature-dependent sex determination (Hawkes et al. 2007); 2) loss of nesting beach habitat due to sea level rise (Fish et al. 2005); 3) changes in nesting behavior that correlate with fluctuations in sea surface temperature (Hawkes et al. 2007); and 4) alterations to foraging habitats and prey abundance resulting from global climate change (Chaloupka et al. 2008).

Fishermen (Commercial and Recreational)

Adverse or beneficial effects of actions to vessel owners, captains, and crew are tied to the profitability of the vessel. In commercial fisheries, these benefits are usually derived in terms of shares awarded after fishing expenses are accounted for. The greater the difference between expenses and payment for caught fish, the more profit is generated by the fishing vessel. In the for-hire sector, revenues are generated by the number of trips sold for charter businesses, and by the number of paying passengers for headboat businesses.

Many actions have had short-term negative impacts on both the for-hire and commercial fisheries. Harvest of many reef fish species has needed to be constrained to end overfishing, prevent overfishing, or allow overfished stocks to recover. In many cases, this has increased competition within the fishery to harvest other stocks. In addition, with increasing costs, the profit margin is further being constrained. However, for some stocks that have recovered such as red grouper and vermilion snapper, some short-term beneficial actions have occurred due to the relaxation of management measures. Because many management measures are designed to manage stocks at OY, these actions should have long-term benefits for the for-hire and commercial fisheries.

The effects of various management measures on anglers are measured through levels of participation in the fishery. Measures that reduce participation are negative and measures that increase participation are positive. However, it is difficult to assess what affects past and present management measures have had on anglers because the amount of effort by the private sector has

continually increased where data was available. This increase has been from just over 6 million trips in 1981 to over 14 million trips in 2004 (SEDAR 12 2007). Therefore, it is difficult to link changes in participation to specific management action. Likely the effects of how various management measures have affected participation by anglers is similar to the effects on the for-hire industry discussed above.

Fishing Communities

Approximately 182 dealers possess permits to buy and sell reef fish species⁷. More than half of all reef fish dealers are involved in buying and selling grouper. These dealers may hold multiple types of permits. Average employment information per reef fish dealer is not known. Although dealers and processors are not synonymous entities, Keithly and Martin (1997) reported total employment for reef fish processors in the Southeast at approximately 700 individuals, both part and full time. It is assumed that all processors must be dealers, yet a dealer need not be a processor. Further, processing is a much more labor-intensive exercise than dealing. The profit profile for dealers or processors is not known.

Dealers benefit from actions that allow the commercial fishery to expand. However, the effect of measures constraining commercial landings may not have negative effects on dealers because dealers also have the ability to substitute other domestic seafood products for grouper in order to satisfy public demand for seafood. Therefore, the negative effects from management actions for the fishery may not necessarily translate into negative effects for dealers. As domestic fish stocks are rebuilt and management programs such as IFQs are instituted, a more stable supply of domestic reef fish will be available to dealers. This should improve their ability to market these products and improve profits they receive from handling these fish.

Infrastructure refers to fishing-related businesses and includes marinas, rentals, snorkel and dive shops, boat dockage and repair facilities, tackle and bait shops, fish houses, and lodgings related to recreational fisheries industry. This infrastructure is tied to the commercial and recreational fisheries and can be affected by adverse and beneficial economic conditions in those fisheries. Therefore, management measures should reflect responses by the fisheries to these actions. Past actions allowing the recreational and commercial fisheries to expand have had a beneficial effect providing business opportunities to service the need of these industries. Present actions which have constrained the commercial fisheries likely have had a negative effect since lower revenues generated from the fishery would be available to support the infrastructure. However, should conditions improve in the reef fish fishery benefits should be accrued by the businesses comprising the infrastructure. For the recreational fishery, as stated above, it is difficult to assess the impact of management measures since angler participation has been increasing. Actions enhancing this participation should also be beneficial to the infrastructure. However, it should be noted the Council has been receiving public testimony that participation declined when fuel prices increased. Participation may not have recovered despite recent declines in fuel prices.

⁷ Carolyn Sramik, Permits, Southeast Regional Office, National Marine Fisheries Service, St Petersburg, FL

Administration

Administration of fisheries is conducted through federal (including the Council) and state agencies which develop and enforce regulations, collect data on various fishing entities, and assess the health of various stocks. As more regulations are required to constrain stock exploitation to sustainable levels, greater administration of the resource is needed. NMFS law enforcement, in cooperation with state agencies, would continue to monitor regulatory compliance with existing regulations and NMFS would continue to monitor both recreational and commercial landings to determine if landings are meeting or exceeding specified quota levels. Further, stock status needs to be periodically assessed to ensure stocks are being maintained at proper levels. Some recent actions have assisted the administration of fisheries in the Gulf. In 2007, an IFQ program was implemented for the commercial red snapper fishery, requiring NMFS to monitor the sale of red snapper IFQ shares. Recordkeeping requirements for IFQ shares would also improve commercial quota monitoring and prevent or limit overages from occurring. This should improve red snapper quota monitoring. VMS has also been required for all commercial reef fish vessels since 2007 and is helping enforcement identify vessels violating fishing closures. Management measures are designed to improve stock status and this will require increases in the administrative burden to ensure harvest is constrained at a level maintaining stock sustainability.

Scoping Meetings - Locations and Times

Tuesday, December 9, 2008 - Panama City, Florida
Hilton Garden Inn, 1101 US Highway 231,
Panama City, FL 32405
Telephone: (850)-392-1093

Wednesday, December 10, 2008 - Madeira Beach, Florida
300 Municipal Drive,
Madeira Beach, FL 33708
Telephone: (727) 391-9951

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efforts by NOAA. The SSWG was requested to develop findings and recommendations to enhance NOAA's social science research capabilities. The complete terms of reference for the working group can be found at http://www.sab.noaa.gov/Working_Groups/current/socialscience/SAB%20SSWG07_ToR_FINAL.pdf. The SAB is chartered under the Federal Advisory Committee Act and is the only Federal Advisory Committee with the responsibility to advise the Under Secretary of Commerce for Oceans and Atmosphere on long- and short-term strategies for research, education, and application of science to resource management and environmental assessment and prediction.

NOAA welcomes all comments on the content of this draft report. We also request comments on any inconsistencies perceived within the report, and possible omissions of important topics or issues. This draft report is issued for comment only and is not intended for external purposes. For any inadequacies noted within the draft report, please propose specific remedies. Suggested changes will be incorporated where appropriate, and a final report will be posted on the SAB Web site.

Please follow these instructions for preparing and submitting comments. Using the format guidance described below will facilitate the comments process and assure that all comments are appropriately considered. Overview comments should be provided first and should be numbered. Comments that are specific to particular pages, paragraphs or lines of the section should follow any overview comments and should identify the page and line numbers to which they apply. Please number each page of your comments.

Dated: November 20, 2008.

Mark E. Brown,

Chief Financial Officer, Office of Oceanic and Atmosphere Research, National Oceanic and Atmospheric Administration.

[FR Doc. E8-28008 Filed 11-24-08; 8:45 am]

BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XL66

Fisheries of the Caribbean, Gulf of Mexico, and South Atlantic; Regulatory Amendment to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of intent (NOI) to prepare a draft environmental impact statement (DEIS); notice of scoping meetings; request for comments.

SUMMARY: NMFS, Southeast Region, in collaboration with the Gulf of Mexico Fishery Management Council (Council), intends to prepare a DEIS to describe and analyze management alternatives to be included in a regulatory action taken under the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico (Reef Fish FMP). These alternatives will consider measures to reduce the incidental take of sea turtles by the bottom longline component of the reef fish fishery. The purpose of this NOI is to solicit public comments on the scope of issues to be addressed in the DEIS.

DATES: Written comments on the scope of issues to be addressed in the DEIS must be received by NMFS by December 26, 2008. Scoping meetings will be held in December 2008. See **SUPPLEMENTARY INFORMATION** for specific dates and times.

ADDRESSES: Written comments on the scope of the DEIS, suggested alternatives and potential impacts, and requests for additional information on the action should be sent to Peter Hood, NMFS, Southeast Regional Office, 263 13th Avenue South, St. Petersburg, FL 33701-5511; telephone (727) 824-5305; fax (727) 824-5308. Comments may also be sent by e-mail to 0648-XL66@noaa.gov. Requests for information packets and for sign language interpretation or other auxiliary aids should be directed to the Gulf of Mexico Fishery Management Council, 2203 North Lois Avenue, Suite 1100, Tampa, FL 33607; telephone: (813) 348-1630; fax: (813) 348-1711; Web site: www.gulfcouncil.org. Requests may also be sent by e-mail to Carrie.Simmons@gulfcouncil.org.

FOR FURTHER INFORMATION CONTACT: Peter Hood, phone: (727) 824-5305; fax:

(727) 824-5308; e-mail: Peter.Hood@noaa.gov.

SUPPLEMENTARY INFORMATION: A 2005 Biological Opinion on the Gulf of Mexico (Gulf) reef fish fishery concluded the fishery's continued authorization is not likely to jeopardize the continued existence of any species listed under the Endangered Species Act (ESA). The Incidental Take Statement (ITS) anticipated takes of 85 loggerhead sea turtles over a three-year period for the bottom longline portion of the reef fish fishery and 203 loggerhead sea turtles for the entire fishery. Take was also anticipated for other sea turtle species and smalltooth sawfish.

Beginning in 2006, NMFS has required vessels participating in the Gulf reef fish fishery to carry observers if selected to participate in the observer program. Observer data is collected from reef fish vessels as well as shark bottom longline vessels that also participate in the reef fish fishery. Currently, the program covers one percent of the fishery. From July 2006 through December 2007, observers documented 16 loggerhead sea turtles and 2 unidentified hardshell sea turtles captured by longlines targeting reef fish in the eastern Gulf. Only 44 percent of captured sea turtles were released alive. Based on these data and levels of effort from logbooks, NMFS estimated 902 hardshell sea turtle takes occurred during the 18-month study period in the eastern Gulf by reef fish bottom longline vessels.

According to the ESA, reinitiation of a consultation on the effect a federal action has on listed species is necessary when "the amount or extent of taking specified in the ITS is exceeded." The 18-month estimates from the NMFS study for bottom longlines in the eastern Gulf exceed the anticipated takes for all gear in the entire Gulf for three years. Accordingly, the Southeast Regional Office, Sustainable Fisheries Division, requested reinitiation of consultation for the Gulf reef fish fishery on September 3, 2008.

At its October 2008 meeting, the Council decided to initiate regulatory action including measures to reduce the incidental take of sea turtles by the bottom longline component of the reef fish fishery. NMFS, in collaboration with the Council, will develop a DEIS to evaluate alternatives to accomplish this reduction. Those alternatives include, but are not limited to: a "no action" alternative; alternatives to develop time/area closures; alternatives for gear or bait modification; alternatives to expand the observer

program; and alternatives for effort limitation.

In accordance with NOAA's Administrative Order 216-6, Section 5.02(c), the Council has identified this preliminary range of alternatives as a means to initiate discussion for scoping purposes only. These preliminary issues may not represent the full range of issues that eventually will be evaluated in the Environmental Impact Statement.

The Council has scheduled the following scoping meetings to provide the opportunity for additional public input:

1. Tuesday, December 9, 2008 Hilton Garden Inn, 1101 US Highway 231, Panama City, FL 32405, phone: 850-392-1093;

2. Wednesday, December 10, 2008 City of Madeira Beach, 300 Municipal Drive, Madeira Beach, FL 33708, phone: 727-391-9951.

Copies of the scoping document are available from the Council or can be downloaded from the Council Web site (see **ADDRESSES**).

All scoping meetings will begin at 7 p.m. The meetings will be physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to the Council (see **ADDRESSES**).

Once the DEIS associated with the regulatory action is completed, it will be filed with the Environmental Protection Agency (EPA). The EPA will publish a notice of availability of the DEIS for public comment in the **Federal Register**. The DEIS will have a 45-day comment period. This procedure is pursuant to regulations issued by the Council on Environmental Quality (CEQ) for implementing the procedural provisions of the National Environmental Policy Act (NEPA; 40 CFR parts 1500-1508) and to NOAA's Administrative Order 216-6 regarding NOAA's compliance with NEPA and the CEQ regulations.

NMFS will consider public comments received on the DEIS in developing the final environmental impact statement (FEIS) and before adopting final management measures for the action. NMFS will submit both the final measures and the supporting FEIS to the Secretary of Commerce (Secretary) for review as per the Magnuson-Stevens Fishery Conservation and Management Act.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: November 20, 2008.

Emily H. Menashes,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.
[FR Doc. E8-28017 Filed 11-24-08; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XK83

Incidental Takes of Marine Mammals During Specified Activities; Marine Seismic Surveys in the Southwest Pacific Ocean, January-February, 2009

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; proposed incidental take authorization; request for comments.

SUMMARY: NMFS has received an application from the Lamont-Doherty Earth Observatory (L-DEO) for an Incidental Harassment Authorization (IHA) to take small numbers of marine mammals, by harassment, incidental to conducting a seismic survey in the southwest Pacific Ocean. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS requests comments on its proposal to authorize L-DEO to take, by Level B harassment only, small numbers of marine mammals incidental to conducting a marine seismic survey during January through February, 2009.

DATES: Comments and information must be received no later than December 26, 2008.

ADDRESSES: Comments on the application should be addressed to Michael Payne, Chief, Permits, Conservation and Education Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910-3225. The mailbox address for providing email comments is *PR1.0648-XK83@noaa.gov*. Comments sent via e-mail, including all attachments, must not exceed a 10-megabyte file size.

A copy of the application containing a list of the references used in this document may be obtained by writing to the address specified above, telephoning the contact listed below (see **FOR FURTHER INFORMATION CONTACT**), or visiting the internet at: *http://www.nmfs.noaa.gov/pr/permits/incidental.htm*.

Documents cited in this notice may be viewed, by appointment, during regular business hours, at the aforementioned address.

FOR FURTHER INFORMATION CONTACT: Jeannine Cody or Ken Hollingshead, Office of Protected Resources, NMFS, (301) 713-2289.

SUPPLEMENTARY INFORMATION:

Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of marine mammals by United States citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

Authorization for incidental taking shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses, and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth. NMFS has defined "negligible impact" in 50 CFR 216.103 as "...an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival."

Section 101(a)(5)(D) of the MMPA established an expedited process by which citizens of the United States can apply for an authorization to incidentally take small numbers of marine mammals by harassment. Except with respect to certain activities not pertinent here, the MMPA defines "harassment" as:

any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild ["Level A harassment"]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering ["Level B harassment"].

Section 101(a)(5)(D) establishes a 45-day time limit for NMFS' review of an application followed by a 30-day public notice and comment period on any proposed authorizations for the incidental harassment of small numbers of marine mammals. Within 45 days of the close of the comment period, NMFS must either issue or deny issuance of the authorization.

Summary of Request

On August 18, 2008, NMFS received an application from L-DEO for the taking by Level B harassment only, of small numbers of 29 species of marine mammals incidental to conducting, with