NOAA Technical Memorandum NMFS-SEFSC-558

REPORT ON THE ALTERNATIVE PLATFORM OBSERVER PROGRAM IN NORTH CAROLINA: MARCH 2006 TO MARCH 2007

TRIP KOLKMEYER
BARRY GUTHRIE
BARBIE L. BYRD
ALETA A. HOHN

U. S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Fisheries Science Center
NOAA Beaufort Laboratory
101 Pivers Island Road
Beaufort, NC 28516

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Beaufort, NC 28516

U. S. DEPARTMENT OF COMMERCE
Carlos M. Gutierrez, Secretary
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
Conrad C. Lautenbacher, Jr., Administrator
NATIONAL MARINE FISHERIES SERVCICE
William T. Hogarth, Assistant Administrator for Fisheries

June 2007

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This report should be cited as follows:

Kolkmeyer, T., B. Guthrie, B. L. Byrd, and A. A. Hohn. 2007. Report on the Alternative Platform Observer Program in North Carolina: March 2006 to March 2007: NOAA Technical Memorandum NMFS-SEFSC-558. 20 p.

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101 Pivers Island Road
Beaufort, NC 28516-9722

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REPORT ON THE ALTERNATIVE PLATFORM OBSERVER PROGRAM IN NORTH CAROLNA: MARCH 2006 TO MARCH 2007

ABSTRACT

In February 2006, an Alternative Platform Observer Program (APP) was implemented in North Carolina (NC) to observe commercial gillnet trips by small vessels [<24 ft (7.2 m)] in nearshore waters out to three nm (5.6 km). Efforts began with outreach to the fishing industry while simultaneously gathering information to be incorporated in a Database of Fishermen. From 30 March 2006 through 31 March 2007, 36 trips were observed. Observed trips of the NC nearshore gillnet fishery targeted seven species: kingfish (*Menticirrhus spp*.), Spanish mackerel (*Scomberomorus maculatus*), spiny dogfish (*Squalus acanthias*), spot (*Leiostomus xanthurus*), spotted seatrout (*Cynoscion nebulosus*), striped bass (*Morone saxatilis*), and weakfish (*Cynoscion regalis*). Of the 36 trips, 20 (55.6%) were with vessels that were new to the Northeast Fisheries Observer Program (NEFOP), having never carried an observer. Based on the landings data for small vessels from North Carolina Division of Marine Fisheries (NCDMF), the APP has achieved 10.1% coverage by number of trips and 4.0% by pounds landed. No incidental takes of bottlenose dolphins were observed by the APP, although bottlenose dolphins were sighted during 19 (52.8%) observed trips. The APP has drastically increased the number of observed trips of small vessels in the nearshore waters of NC. When combined with trips observed by NEFOP (n=205), the APP resulted in a 15.6% increase in the number of observed gillnet trips.

INTRODUCTION

The western North Atlantic coastal bottlenose dolphin, *Tursiops truncatus*, is a strategic stock under the Marine Mammal Protection Act (MMPA) and interacts with nine Category I and II fisheries (NOAA 2007), thereby requiring a take reduction plan under section 118 of the MMPA (NOAA 2006). A Bottlenose Dolphin Take Reduction Plan (BDTRP) was developed by consensus from the Bottlenose Dolphin Take Reduction Team (BDTRT) and was finalized on 26 April 2006 (NOAA 2006). Among other mitigation provisions, the BDTRP requires monitoring of fisheries to determine the effectiveness of take reduction measures. Specific recommendations were made by the BDTRT to increase observer coverage of ocean gillnets, especially in North Carolina (NC), and to ensure that collected data are representative of actual fishing effort.

The Northeast Fisheries Observer Program (NEFOP) administered by the National Marine Fisheries Service (NMFS), Northeast Fisheries Science Center (NEFSC), has been

sampling commercial gillnet fisheries in the mid-Atlantic region since 1995 by placing observers aboard gillnet vessels. Between the years 1996 and 2000, 73% of the average bottlenose dolphin mortality occurred in waters adjacent to NC where annual observer coverage of gillnet fisheries has varied from 0.8% to 2.3% based on landings (Palka and Rossman 2001). However, the annual observer coverage has been skewed toward larger vessels [≥ 24 ft (7.2 m)] that typically fish offshore [federal waters: 3 – 200 nm (5.6 – 370.4 km) from shore] while the majority of gillnetting effort and observed takes have occurred nearshore [state waters: 0 – 3 nm (0 – 5.6 km) from shore]. An approximate 3-fold increase in observer coverage of nearshore gillnets is needed to significantly improve precision of mortality estimates of bottlenose dolphins (Marjorie Rossman, pers. comm., NMFS/NEFSC, Woods Hole, MA). Increases in coverage also need to be representative of the entire gillnet fleet, including small vessels not covered by NEFOP. For some fisheries, small vessels can make up the majority of active gillnet fishermen nearshore. In the fall spot (*Leiostomus xanthurus*) fishery in Brunswick County, NC, for example, approximately 99% of active gillnet fishermen use small vessels (< 24 ft) [North Carolina Division of Marine Fisheries (NCDMF), unpublished data, Morehead City, NC].

Methods used by NEFOP to sample trips are often not amenable to obtaining representative observer coverage in NC because many vessels are too small to carry an observer and some fisheries are prosecuted from the beach. Additionally, fishermen using small vessels can be difficult to locate because they often launch from private or public ramps, in contrast to larger vessels that are docked at seafood dealers. Furthermore, current NC statutes prohibit NCDMF from providing contact information for state permitted participants in specific commercial fisheries to NMFS. This limits the observers' ability to contact specific fishermen to schedule trips. All of these factors contribute to the paucity of observer trips on small gillnet vessels in NC.

In NC and Virginia (VA), NEFOP has demonstrated success in observing small vessels using an alternative platform, and importantly, illustrated that the data could be combined with data from traditional observer coverage to estimate mortality of bottlenose dolphins. The term "Alternative Platform" refers to an independent vessel that carries observers and works alongside the commercial fishing vessel; it also can refer to observers working from the beach to observe beach-based fisheries. Although the feasibility of this approach has been demonstrated, the number of trips has been small, and funding levels have not supported simultaneous effort for

traditional and alternative platform observations. Funding levels also have not allowed for sufficient effort to better characterize the small-vessel fisheries, ensuring representative coverage of these small vessels.

To improve coverage of NC gillnet fisheries prosecuted from small vessels, the NMFS Southeast Regional Office (SERO) allocated funds from the Bottlenose Dolphin funding line to begin an alternative platform program in NC in 2006. In addition, the National Observer Program (NOP) provided funds to the Southeast Fisheries Science Center (SEFSC) to extend efforts to implement the alternative platform effort.

The purpose of this report is to summarize the objectives and first-year accomplishments of the SEFSC Alternative Platform Program (APP) based at the NOAA Laboratory in Beaufort, NC.

Objectives of the Alternative Platform Program in Beaufort, NC

1. Create a Database of Fishermen. The purposes of the Database of Fishermen (DOF) are to:
   a. Better characterize the fisheries in NC, with an emphasis on use of small vessels and beach based fisheries that require use of the alternative platform observation effort.
   b. Determine the spatial and temporal distributions of fishing effort by small-vessel gillnetters over the course of an entire year.
   c. Provide contact information of fishermen to allow observers to schedule trips and identify small vessels for which an alternative platform is necessary to obtain observer coverage.
2. Update the DOF continually as fishermen move, leave or enter fisheries, or alter fishing practices.
3. Assist SERO Fishery Liaison in providing information to fishermen and seafood dealers regarding the use of an alternative platform and why it is necessary to increase observer coverage using these methods.
4. Conduct alternative platform observations using the protocols and datasheets from NEFOP to ensure observer data are consistent with traditionally observed trips.
5. Allocate alternative platform trips using information in the DOF and landings data from DMF to ensure representative (*i.e.*, unbiased) coverage of small gillnet vessels.
6. Provide data to NEFSC for inclusion in the mortality bycatch analyses to more effectively monitor the success of the BDTRP.

METHODS

Two full-time field coordinators [FCs (TK and BG)] were hired in February 2006 to develop and implement the APP. They are based out of the NOAA Laboratory in Beaufort, NC, which is in a central location for covering most of the NC gillnet fishing effort (Fig. 1). From Beaufort, FCs traveled along the NC coast visiting docks, boat ramps, seafood dealers, state agencies, and fishing grounds to gather pertinent information on local fishermen and fishing trends. These findings were incorporated into the DOF with information already compiled by NMFS marine mammal-fishery interaction staff at the Beaufort Laboratory and the SERO Fishery Liaison. The FCs also attended NCDMF meetings to interact with fishermen and to learn about issues impacting the fishing community. In addition, the FCs worked with the SERO Fishery Liaison and NCDMF Marine Patrol to familiarize themselves with areas of fishing activity.

Observations began 30 March 2006 while concurrently continuing outreach activities with the commercial fishing industry. The guideline used to determine a vessel's eligibility (*i.e.*, small vessel) for alternative platform observations was a length of <24 ft. However, length alone did not determine whether a vessel was suitable for traditional or alternative platform observer coverage. The FCs took into account other factors that made some vessels ≥24 ft more suitable for alternative observer coverage. For example, the configuration of a vessel (*e.g.*, deck space, hull configuration, and amount of gear onboard) greatly contributes to its overall stability and safety, as does the weight of potential catch on deck. With some vessel configurations, a catch of more than 1000 lbs (454 kg) could make being on deck unsafe or affect the safety and stability of the fishing vessel at sea. As a result, FCs classified some vessels ≥24 ft as unsafe for on-board observers and performed alternative platform observations of them in addition to the small vessels.

Two vessels were used as alternative platforms for observing ocean gillnet vessels. The primary vessel was a 19.7 ft (6.0 m) rigid hull inflatable boat (RHIB). A 22 ft (6.7 m) RHIB also was used, primarily in the winter season or when rough sea conditions dictated a larger vessel would be safer. Both vessels were inspected annually per NOAA Administrative Order (NAO) 217-03, which specifies requirements for use of NOAA small boats. All APP trips included two participants as required by the NAO on small vessels.

The FCs used the following tactics to locate fishing effort: 1) landings data from NCDMF provided general information on when and where fishing activity was expected, 2) as the DOF expanded it provided finer-scale data on likely fishing activity and contact information for participating fishermen, and 3) outreach activities allowed the FCs to form reliable contacts with some of the well-respected fishermen in each of NC's geographical centers who could be contacted for information. These three sources of information allowed the FCs to make informed decisions as to where the APP effort would be directed most effectively.

Once an area was selected, the FCs requested coverage of a trip in several ways. In some cases, a trip was scheduled in advance by contacting a fisherman listed in the DOF. The FCs also went to popular boat ramps or docks at different times of the day to arrange a trip with fishing vessels departing or returning. If no one was contacted, FCs launched the APP vessel to search for fishing gear. When gillnets were located in the morning, the FCs waited by the gear or, if gear was located later in the day, the FCs would return the following morning to request a trip once the fisherman arrived to retrieve the gear. Another common practice of the FCs was to take the APP vessel to the inlet and await a fishing vessel; the FCs followed the fishing vessel to its gear, and then a trip was requested. This was a useful tactic because there was often more than one boat ramp/dock used to access an inlet.

Once a trip was established, observations were conducted according to protocols established by NEFOP. The APP used logs (*i.e.*, data sheets) provided by NEFOP to collect economic data, gear characteristics, haul and catch information, and detailed data regarding sightings and interactions with marine mammals, sea turtles, and sea birds (NMFS 2006).

Upon completion of a trip, all standard data submission procedures were in place to ensure seamless transfer of data to NEFOP. Brief trip summaries were reported to NEFOP within 24 hours of landing. Then data were edited and sent to NEFOP within seven days of landing for further editing and entry into the NEFOP database, at which time they were available for use in bycatch estimates.

Steps were taken to avoid excessive and repeated coverage of the same fishing vessel. In a specific area, each vessel identified as a candidate for the APP was covered before repeating observations of the same vessel. For instance, if boats A, B, C, and D are fishing off of Cape Hatteras, NC and boat A is observed on Monday, then boat A will not be observed again until boats B, C, and D are observed. This process ensured representative coverage of the effort

occurring at that time. Whenever possible, a boat was contacted on the water at the end of the day to schedule a trip for the next day.

Detailed biweekly reports also were prepared by the FCs. They included a summary of current gillnet fishing effort along the coast of NC and an update to interested colleagues as to the continued progress of the APP. The reports were shared with the SEFSC marine mammal-fishery interaction staff at the NOAA Beaufort Laboratory; SERO, Protected Species Division; NEFSC, NEFOP; and the SEFSC representative on the NOP Advisory Team. NEFOP also was informed of fishing effort involving larger vessels to aid traditional observers in locating vessels for trips.

For this report, monthly landings data from 2005 and 2006 were provided by NCDMF and monthly NEFOP data from March 2006 to January 2007 were obtained from the NEFOP website (NMFS 2006). NCDMF landings data included the number of gillnet trips by vessels <24 ft fishing in nearshore waters by county where fish were landed. The data were not necessarily indicative of where fish were caught because NCDMF does not collect data at that level of detail. NCDMF data were compared with data from APP trips to determine the percent of trips covered by the APP. To be consistent with NEFOP methods of calculating percent coverage, pounds landed were compared to pounds observed by the APP. NEFOP data were used to determine the increase in the number of overall observer trips by the APP.

RESULTS

From 30 March 2006 through 31 March 2007, 36 trips were observed by the APP (Table 1). Observed trips of the NC nearshore gillnet fishery targeted seven species: kingfish (*Menticirrhus spp.*), Spanish mackerel (*Scomberomorus maculatus*), spiny dogfish (*Squalus acanthias*), spot, spotted seatrout (*Cynoscion nebulosus*), striped bass (*Morone saxatilis*), and weakfish (*Cynoscion regalis*). Three different configurations of gillnet were observed: sink anchored, drift-floating, and drift-sink. One set was classified by NEFOP as a beach seine (Table 1). The beach seine was comprised entirely of monofilament webbing, and was fished as both a gillnet and a beach seine.

Of the 36 trips, 20 (55.6%) were with vessels that were new to NEFOP, having never carried an observer. Five vessels were observed on more than one occasion, totaling eight trips.

Ten of the 36 trips occurred on vessels ≥24 ft that were not conducive to on-board observer coverage [6 trips – 24 ft, 2 trips – 27 ft (8.2 m); 1 trip – 30 ft (9.1 m); 1 trip – 32 ft (9.8 m)].

From March through December 2006, the APP observed 10.1% of nearshore gillnet trips reported by NCDMF for vessels <24 ft. Monthly coverage of small vessels ranged from a low of 0.0% of trips (July, August and December 2006) to a maximum of 12.2% of trips in September 2006 when fishing effort by small vessels increased during the early stages of the fall spot fishery (Table 2). Percent coverage based on pounds ranged from 0% to 4.8%, and averaged 4.0%. In addition, from March through June 2006, the APP observed more trips than were reported by NCDMF. Fishing effort peaked in October and November; however, the activity was aggregated (*i.e.*, many vessels fishing simultaneously). The FCs recorded between six and twelve vessels fishing simultaneously on the waters between Beaufort Inlet and Cape Lookout during this time period. In addition, on the first day of the two-day striped bass fishery in December 2006 (NCDMF 2006), there were at least 20 small boats fishing between Cape Lookout and Drum Inlet. By day two, however, there were 20 – 25 knot northeasterly winds, and no one in this area attempted to fish.

From March 2006 to January 2007, the APP completed 32 trips compared to 205 trips completed by NEFOP (Table 3). Overall, the APP resulted in a 15.6% increase in the number of observed trips. The greatest percent increase was in September 2006 when the APP completed more trips than NEFOP, resulting in a 116.7% increase in observed trips during that month.

Fishing effort by small gillnet vessels varied between 2005 and 2006 in terms of both overall effort and spatial distribution of that effort (Table 4). In 2005, the total number of trips (n = 430) was more than twice the total in 2006 (n = 198). The greatest difference between years was in January, likely due in large part to the nearshore gillnet fishery for striped bass that occurred in January 2005 (NCDMF 2004) and December 2006 (NCDMF 2006). In December 2006, however, the majority of the trips occurred in Carteret County, NC while during the January 2005 striped bass fishery, most of the trips occurred in Dare County, NC. Additionally, fewer trips occurred in February through May in 2006 compared to 2005.

No incidental takes of bottlenose dolphins were observed during APP observations. Bottlenose dolphins were sighted during 19 (52.8%) of the observed trips (Table 1). On three of the trips (8.3% of total trips), there was evidence of depredation on fish in nets targeting Spanish mackerel and spot off Carteret County. On two occasions, dolphins were observed to rapidly

approach the net and swim swiftly along it, splashing and creating a wake. These behaviors are consistent with depredation as described by Read et al. (2002). A fisherman, who reported the third instance during an observed trip, discovered a kingfish with a crushed head, which also is indicative of depredation (Read et al. 2004). Bottlenose dolphins were observed in the area on this trip, although none were seen at the net. However, this particular net had been soaking for approximately four hours while other nets were actively being fished and observed; therefore, the depredation could have occurred during observations of another haul. There was one Northern Gannet (*Sula bassanus*) that became entangled while attempting to depredate the net. It was briefly entangled, pulled from the surface of the water, fell from the net, and swam away.

As of 31 March 2007, the DOF has 126 entries of individual fishermen and more than half (n = 88) were entered by June 2006 (Fig. 2). The database includes contact information, vessel hull number, vessel size, seasons and locations fished, launch sites and species targeted. Small-boat gillnetters comprise 41% of the entries.

DISCUSSION

The APP has helped respond directly to a recommendation of the BDTRP to increase observer coverage, which improves the precision of mortality estimates from observer data (NOAA 2006). Overall observer coverage of ocean gillnet fisheries in NC increased by 15.6% with the addition of alternative platform coverage. In addition, the majority of vessels observed by the APP were new to the observer program. The inherent difficulties finding and observing small vessels has kept the traditional observer program from obtaining coverage of these vessels. With the addition of the APP, observer coverage is more representative of the entire NC gillnet fleet. As recently as March 2007, the FCs were observing vessels that were new to the observer program. In fact, seven out of ten trips in 2007 were with vessels that had not previously experienced observer coverage. This indicates that even after one year of effort, the FCs are continuing to find and observe new vessels, and to add new contacts to the DOF.

Observer coverage of small vessels by the APP averaged 10.1% of the number of trips reported by NCDMF for March through December 2006. For direct comparison to NEFOP coverage, percent coverage of APP trips based on weight of landings has been calculated as 4.0%, and is greater than historic annual observer coverage of all vessels regardless of size, which varied from 0.8% to 2.3% based on weight of landings (Palka and Rossman 2001). From

March to June 2006 more trips were observed than were reported by NCDMF. This may be due to poor catches that were not sold, or trips in which there was no catch and, therefore, not reported as a trip to NCDMF even though gear was fished. For example, on one observed trip the entire catch of 20 pounds (9.0 kg) was kept by the captain. Another trip landed only 26.5 pounds (11.9 kg) of fish. There were also four trips in which there were no fish caught.

The number of APP trips that can be conducted per year is still being determined. Originally, it was anticipated that approximately two trips a week for 52 weeks (~100 trips) could be completed. However, this estimate did not take into account several limiting factors. During the first year of the APP, weather was a major limiting factor for small vessels fishing in the ocean. Historically, most gillnet effort occurred in the fall and winter (Steve et al. 2001); winter in particular can be a time of inclement weather along the coast of NC. Most gillnet effort in 2006 occurred during the fall and winter for small vessels, but even slight variations in weather kept small vessels inactive while large vessels were still able to fish. As a result, fishing activity by small vessels was often short-lived and intense during periods of favorable weather. This was exemplified during the 2-day striped bass fishery in December 2006. Another limitation of the APP is that it had operated as a single unit, capable of observing one trip at a time, while fishing effort among vessels is concurrent and short-lived for each fishery (*i.e.*, many vessels fishing an area at a time). To offset this limitation, the FCs have made up to three trips in a 24-hour period. This is possible when fishermen use different practices during one day such as continuously hauling and resetting their nets throughout the night, soaking their nets overnight and hauling in the morning, or setting and hauling their nets based on the tidal cycle and not time of day.

Sightings of bottlenose dolphins were common, having occurred during more than half of observed trips. No incidental takes of bottlenose dolphins were observed by the APP; however, NEFOP documented a take in the Spanish mackerel fishery in September 2006 and another take in the king mackerel fishery in October 2006, both off Dare County (Rossman 2007). Additionally, stranding evidence has indicated that incidental mortality occurs even when bycatch is not documented by observers (Friedlaender et al. 2001). Observing an incidental take is considered relatively rare (Palka and Rossman 2001), making increased observer coverage that is representative of the entire fishing fleet critical to ensuring the accuracy and precision of mortality estimates. In addition to funding the APP, SERO provided funds to increase NEFOP

observer coverage in nearshore waters (Stacey Carlson, pers. comm., NMFS/SERO, St. Petersburg, FL). The implementation of these two efforts will improve future estimates of mortality.

The fishermen of NC have been extremely cooperative with the APP. Prior to finalization of the BDTRP, some outreach had been conducted by the SERO's Fishery Liaison on expected increases in overall observer effort. Fishermen on the BDTRT also have been advocates for increased observer coverage and have conveyed that information to the fishing community, whom they represent on the team. In addition, when the FCs were first hired they spent much time and energy talking with fishermen to explain the program and its short-term (no observers in the way on the boat) and long-term (more accurate estimates of bycatch) benefits. All of these efforts have contributed to the fact that no fishermen have refused to allow the FCs to observe their trip. Feedback suggests that many fishermen using small vessels favor the APP due to the minimally invasive nature of the techniques employed by the FCs while making observations.

Efforts to collect data for the DOF were concurrent with efforts to help direct coverage of small vessels by the APP. However, the DOF contains gillnetters who fish from small (41%) and large vessels (59%) because the information can help the traditional observer program also. According to data from NCDMF, 437 vessels reported ocean landings in 2006 and 262 of them were less than 24 ft (NCDMF, unpub. data, Morehead City, NC). This may represent less than 437 participants because NCDMF data is by vessel and participants may have more than one vessel; thus, the DOF contains approximately 29% of the total number of participants. During the second year of the APP, FCs will incorporate data from NMFS on NC gillnetters who have federal permits to help fill in the DOF with the remaining fishermen. They will also continue efforts to increase the total number of entries in the DOF and modify the data as needed for fishermen already included.

Efforts from the first year of the APP will help direct activities in the second year. In addition to expanding the DOF as mentioned above, the FCs will examine the DOF and landings data from NCDMF to determine the spatial and temporal distribution of fishing effort by nearshore gillnet fishermen. This will help develop an allocation schedule for trips by month and county. Landings data from 2005 and 2006 show that fishing effort can be highly variable among years, so there will need to be flexibility in the schedule to account for those variations.

The APP observed more trips than reported to NCDMF in some counties; therefore, landings data can serve as a guide only. It is possible that some trips were not recorded in the NCDMF Trip Ticket Program. Because the trip tickets are filled out where the fishermen land (*i.e.*, sell or pack out their catch), it also could be that fishermen setting gillnets off a particular county packed out their catch elsewhere. For example, in September of 2006 there were more trips landed in Pamlico County, NC than any other county. Pamlico County is not adjacent to the ocean, however, the closest inlet into the ocean is in Carteret County. The fishermen may have fished there, explaining why the APP observed more trips in Carteret County than were reported as landed there.

Examining the landings data from NCDMF is still useful to help direct future allocation of trips. From 2006 data, it is clear that increased APP coverage should be directed to Brunswick County in August and September, and Carteret and Dare Counties in December. During some months, in particular summer, ocean gillnet fishing is almost nonexistent. The APP plans to begin limited coverage of the NC Inshore Gillnet Fishery [Category II (NOAA 2007)] during periods when ocean gillnetting is not occurring due to seasonality of fisheries and weather. Coverage is also needed in southern VA where less is known about the prevalence of small vessels. The FCs will begin to collect information from Virginia Marine Resources Commission to determine temporal and spatial trends amenable to the APP.

The APP is an effective method for observing small boat nearshore gillnet fisheries in NC. It has been able to observe many vessels that were previously unobservable or undetected by the NEFOP; thus increasing NMFS's ability to obtain more representative observer coverage of all gillnet fishing effort. The APP also has increased overall observer coverage in NC, thereby increasing the accuracy and precision of bycatch and mortality estimates of coastal bottlenose dolphins.

ACKNOWLEDGMENTS

This project was funded by the NMFS Southeast Regional Office and National Observer Program. We thank Stacey Carlson, Vicki Cornish, Debi Palka, and Marjorie Rossman for assistance and support. Mike Tork provided data and protocol for the APP. We also thank SERO Fishery Liaisons Parks Lewis and David Hilton for guidance and information. Stacey Carlson, Red Munden, Marjorie Rossman, and Bridget Watts provided helpful reviews of the manuscript. We thank Patti Haase and Eric Griffith for crewing on trips when an FC was unavailable. We also graciously acknowledge the fishermen of North Carolina, for without their cooperation this project could not be successful.

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Table 1. Observed trips (n = 36) and hauls (n = 174) in North Carolina from 30 March 2006 through 31 March 2007 via the Alternative Platform Program. All mammal sightings were bottlenose dolphins. Twenty trips were with fishermen that have never been observed by the Northeast Fisheries Observer Program.

Trip ID	Date	County Sailed	Target Species	Gear Code*	Total # of hauls	Mammal Sighting	Vessel New to Program
1[a]	3/31/2006	Onslow	kingfish	100	5	yes	no
2[b]	4/18/2006	Carteret	kingfish	100	2	no	yes
3	4/20/2006	Carteret	kingfish, weakfish	100	2	no	yes
4[c]	4/21/2006	Carteret	weakfish, kingfish	100	4	no	no
5[c]	5/3/2006	Carteret	kingfish	100	3	no	no
6	5/17/2006	Dare	kingfish	100	8	yes	yes
7[d]	5/18/2006	Dare	kingfish	100	8	no	yes
8	5/19/2006	Dare	kingfish	100	8	yes	no
9[e]	5/31/2006	Carteret	Spanish mackerel	100	2	yes	yes
10[b]	6/6/2006	Carteret	Spanish mackerel	100	1	yes**	no
11[b]	6/7/2006	Carteret	Spanish mackerel	100	1	no	no
12[d]	9/19/2006	Dare	Spanish mackerel	100	5	yes	no
13[e]	9/25/2006	Carteret	spot	100	1	yes	no
14[e]	9/26/2007	Carteret	spot	100	3	no	no
15	9/26/2006	Carteret	spot	100	5	no	yes
16	9/26/2006	Carteret	spot	100	8	no	no
17	9/27/2006	Carteret	spot	100	7	yes**	yes
18	9/28/2006	Carteret	spot	100	2	no	no
19	10/2/2006	Carteret	spot	100	5	no	yes
20	10/2/2006	Carteret	spot, Spanish mackerel	100/116	6	yes**	yes
21	10/11/2006	Carteret	spot	100	6	no	yes
22	10/11/2006	Carteret	spot	100	8	no	yes
23	11/14/2006	Onslow	kingfish	100	8	yes	no
24[a]	11/15/2006	Onslow	kingfish	100	5	yes	yes
25[c]	11/28/2006	Carteret	spotted seatrout	070	1	no	no
26	12/19/2006	Pamlico	striped bass	117	3	yes	yes
Trip numbers start over at the beginning of the new year.							
1	1/3/2007	Carteret	striped bass	117	2	yes	yes
2	1/4/2007	Carteret	striped bass	117	3	no	no
3	1/4/2007	Carteret	striped bass	117	2	yes	yes
4	1/23/2007	Carteret	striped bass	117	7	yes	no
5	1/24/2007	Hyde	striped bass	117	2	no	yes
6	1/30/2007	Carteret	kingfish	100	2	no	yes
7	2/12/2007	Dare	kingfish	100	7	yes	no
8	2/16/2007	Dare	spiny dogfish	117	14	yes	yes
9	2/27/2007	Carteret	kingfish	117	3	yes	yes
10	3/13/2007	Dare	kingfish	100	15	yes	yes

*Gear Code 100 = gillnet, ancored, sink, 116 = gillnet, drift-floating, 117 = gillnet, drift-sink, 070 = beach seine;

**Indicates depredation; Superscripts a - e indicate individual vessels that were observed more than once.

Table 2. Percent coverage by month of gillnet trips and pounds by the Alternative Platform Program (APP) from March through December 2006. Data for the number of gillnet trips and pounds landed were provided by the NC Division of Marine Fisheries (NCDMF) and include data only from vessels <24 feet (7.2 m) fishing in the nearshore [0-3 nm (5.6 km)] waters. Landings data from NCDMF by month were confidential (*conf*.) (*i.e*., they represented less than three fishermen), but could be included in the TOTAL. The symbol § represents months for which the APP observed more trips or landings than reported by NCDMF.

Month	Total Gillnet Trips	Observed Gillnet Trips	Percent Coverage	Total Pounds from Gillnets	Observed Pounds from Gillnets	Percent Coverage
Mar. '06	0	1	§	0	238	§
Apr. '06	1	3	§	*conf.*	367	§
May '06	1	3 *	§	*conf.*	1,152	§
Jun. "06	1	2	§	*conf.*	3	*conf.*
Jul. '06	3	0	0.0	618	0	0
Aug. '06	14	0	0.0	2,982	0	0
Sep. '06	41	5 *	12.2	24,966	1,199	4.8
Oct. '06	53	4	7.5	46,749	1,972	4.2
Nov. '06	52	2 **	3.8	64,340	842	1.3
Dec. '06	32	0 **	0.0	5,122	0	0.0
TOTAL	**198**	**20**	**10.1**	**144,960**	**5,773**	**4.0**

* Two additional trips were completed on vessels ≥24 ft

** One additional trip completed on vessel = 24 ft.

Table 3. Monthly number of trips observed by the traditional Northeast Fisheries Observer Program (NEFOP) and the Alternative Platform Program (APP), showing the percent increase attributed to the APP.

Month-Year	NEFOP Trips	APP Trips	Total Trips	% Increase in Trips
Mar. '06	7	1	8	14.3
Apr. '06	37	3	40	8.1
May '06	7	5	12	71.4
Jun. '06	3	2	5	66.7
Jul. '06	2	0	2	0.0
Aug '06	3	0	3	0.0
Sep. '06	6	7	13	116.7
Oct. '06	34	4	38	11.8
Nov. '06	21	3	24	14.3
Dec. '06	23	1	24	4.3
Jan. '07	62	6	68	9.7
TOTAL	**205**	**32**	**237**	**15.6**

Table 4. For commercial vessels <24 ft (7.2 m), monthly number of nearshore gillnet trips by county where fishermen landed their catch in 2005 and 2006. In 2006, the monthly number of observed trips by the Alternative Platform Program in the county where the fishing occurred are in parentheses.

2005 County of Landing	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	**Total**
Brunswick	8	14	9	15	13	1		11	6	27	35		**139**
Carteret	21	11			4	1			3	20	13	1	**74**
Chowan	10												**10**
Columbus													
Currituck	3							2		4			**9**
Dare	74									2			**76**
Hyde	15												**15**
New Hanover		12	2	14	1					1			**30**
Onslow	1				1				4	2			**8**
Pamlico	1									1	15	1	**18**
Pasquotank	22												**22**
Pender		1		8	2					1	2	1	**15**
Perquimans	12												**12**
Tyrrell	2												**2**
Total	**169**	**38**	**11**	**37**	**21**	**2**		**13**	**13**	**58**	**65**	**3**	**430**

2006 County of Landing	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	**Total**
Brunswick								8	12	2	9		**31**
Carteret				1 (3)	1 (2)	1 (2)		3	4 (6)	27 (4)	20 (1)	18	**75 (18)**
Chowan												2	**2**
Columbus									2				**2**
Currituck							3	3	3	3	3		**15**
Dare					(3)				(1)		1	6	**7 (4)**
Hyde													
New Hanover									1		9		**10**
Onslow			(1)						5	8	6 (2)		**19 (3)**
Pamlico									14	9	1	3 (1)	**27 (1)**
Pasquotank													
Pender										4	3		**7**
Perquimans												3	**3**
Tyrrell													
Total			**(1)**	**1 (3)**	**1 (5)**	**1 (2)**	**3**	**14**	**41 (7)**	**53 (4)**	**52 (3)**	**32 (1)**	**198 (26)**

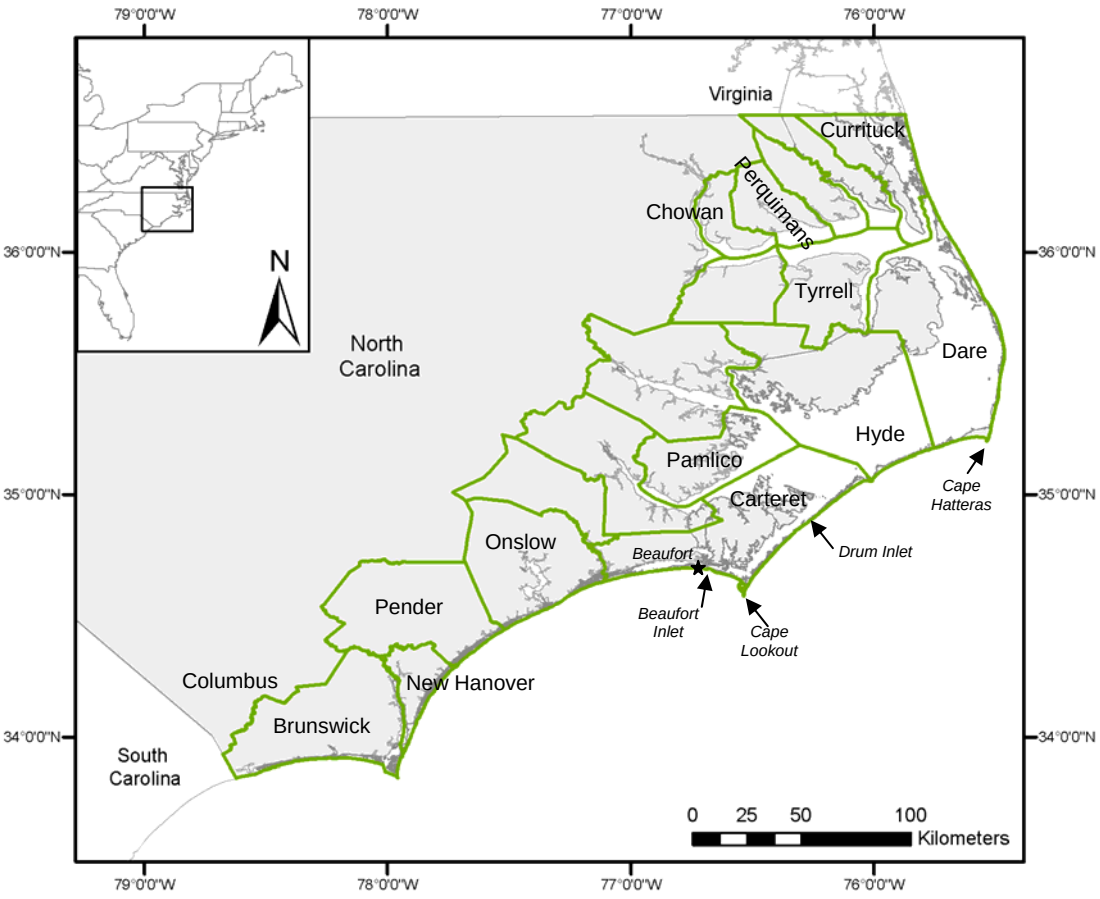

Figure 1. Counties and areas (*italics*) of coastal North Carolina.

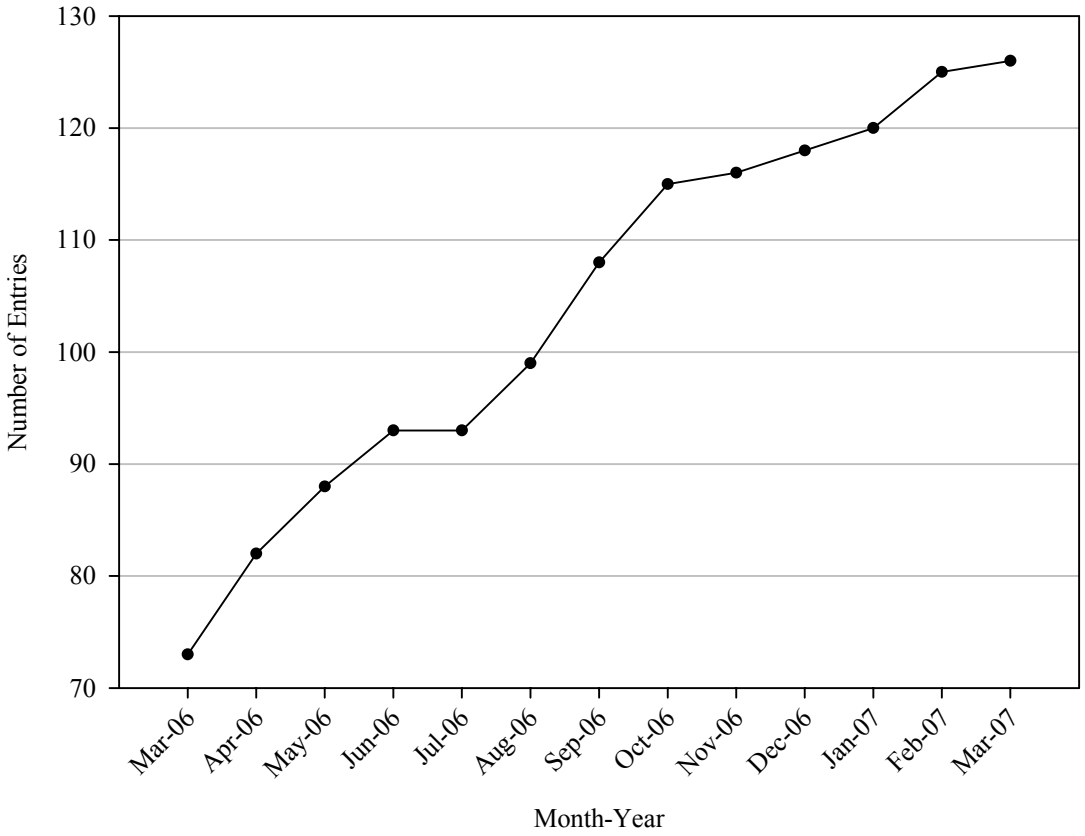

Figure 2. Number of entries in Database of Fishermen by month.