Species of Concern
NOAA National Marine Fisheries Service

Atlantic Bluefin Tuna
Thunnus thynnus

Photo credit: NOAA.

KEY INFORMATION

Area(s) of Concern
Atlantic Ocean and adjacent seas

Year Identified as "Species of Concern"
2011

Factors for Decline
- Overfishing

Conservation Designations
IUCN: Western stock - Critically Endangered; Eastern stock - Endangered (1996)
COSEWIC: Endangered

** While category names may be similar, it is important to note that scientific and conservation organizations use different criteria to classify species conservation status. We have not generally adopted any of the rankings used by these organizations, however we do review the information they present as part of our proactive approach to species conservation.*

Brief Species Description:
The body of bluefin tuna is spindle-shaped and robust with a pointed snout and a thin caudal peduncle. There are two dorsal fins. The body is counter-shaded with darker colors dorsally and lighter colors ventrally. Coloring on the dorsal surface ranges from black to dark blue with an iridescence of gray or green. The ventral and lateral surface and cheeks are silvery, and can have gray spots and bands as markings. The caudal fin is evenly lunate with sharply pointed lobes. Finlets are yellow and edged in black (Collette and Klein-MacPhee 2002, NMFS 2009).

Atlantic bluefin tuna are highly migratory pelagic fish that range across most of the North Atlantic and its adjacent seas, particularly the Mediterranean Sea and Gulf of Mexico (Figure 1). They are the only large pelagic fish living permanently in temperate Atlantic waters (Bard *et al.* 1998). While they do dive frequently to deeper depths, they generally spend most of their time in waters less than 1600 ft (500 m), and often much shallower.

Similar to other large predators, juvenile and adult Atlantic bluefin tuna are opportunistic feeders (Fromentin and Powers 2005). Their diet may consist of a variety of species including fishes, crabs, octopus, jellyfish, salps, and sponges (Collette and Klein-MacPhee 2002, Chase 2002, ICCAT 2008). Juveniles typically feed on crustaceans, fishes and cephalopods, while adults are generally piscivorous, primarily eating available baitfish such as herring, anchovy, sand lance, sardine, sprat, bluefish, and mackerel (Chase 2002, Collette and Klein-MacPhee 2002, ICCAT 2008). Zooplankton (primarily copepods) are thought to make up the diet of bluefin tuna larvae (Fromentin and Powers 2005).

While Atlantic bluefin tuna are epipelagic and typically oceanic, they do come close to shore seasonally (Collette and Nauen 1983). During the summer months when they feed actively on herring, mackerel, and squids in the North Atlantic, bluefin often occur over the continental shelf and in embayments.

Except for some sharks, Atlantic bluefin tuna are one of the largest fish in the Gulf of Maine, reaching lengths of nearly 10 feet (3 m) fork length and up to about 1,600 lbs (726 kg) (Collette and Klein-MacPhee 2002).

Atlantic Bluefin Tuna SOC Range

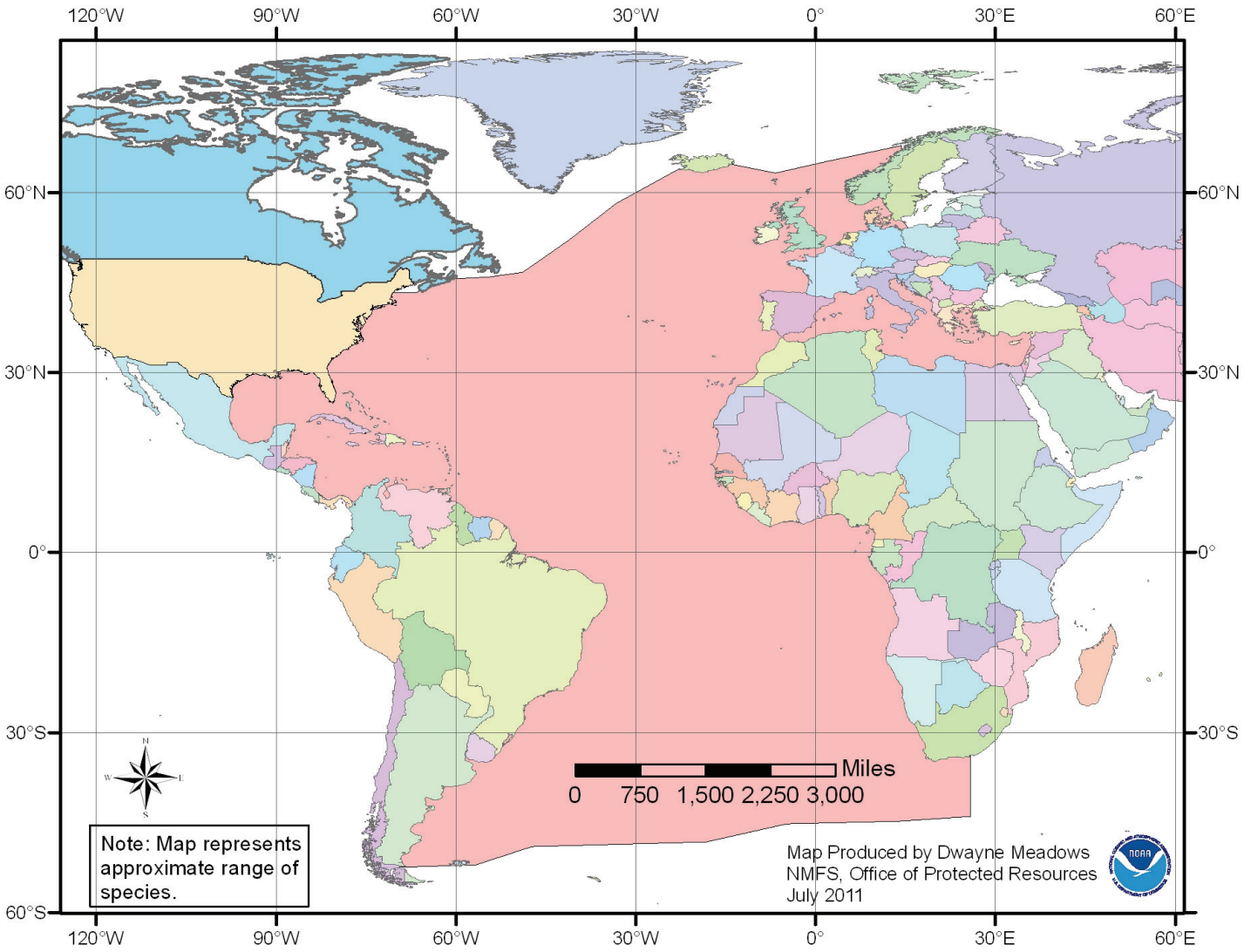

Figure 1. Range of the Atlantic bluefin tuna Species of Concern.

Being a relatively long-lived species, they can reach ages up to 30 years; however there is some debate over the age of maturity of bluefin tuna as very different maturity schedules have been assumed for the eastern/Mediterranean and western stocks (Colette and Klein-MacPhee 2002, ICCAT 2010). Histological studies conducted in the Mediterranean Sea suggest that some bluefin are capable of reaching maturity as early as age 3 and that 50% of the age 4 (25 kg) fish caught on the spawning grounds are mature; however, the relative fraction of age 3 and 4 fish that actually move to the spawning grounds has not been accounted for (Correio *et al*. 2005). In contrast, size frequency data from longline fisheries in the Gulf of Mexico suggests that fish younger than age 9 (140 kg) rarely visit the spawning grounds (Diaz and Turner 2007).

However, Mather *et al.* (1995) estimated that western Atlantic bluefin tuna most likely first spawn at age 5, but more research would be required to establish this.

Atlantic bluefin tuna are highly migratory and display strong homing behavior and spawning site fidelity in both the Mediterranean Sea and Gulf of Mexico. These two areas constitute the two primary spawning areas that have been identified to date. Atlantic bluefin tuna migrate long distances to reach the particular areas in which they spawn (Block *et al*. 2001), and homing fidelity to these sites is high. Muhling *et al*. (2010) concluded that adults are targeting specific areas and oceanographic features in order to maximize larval survival. The spawning areas in the Gulf of Mexico and Mediterranean are unique ecologically and possess the features (e.g., hydrography and appropriate water conditions such as temperatures, depths, salinities, and chlorophyll concentrations) that are necessary for maximizing Atlantic bluefin tuna spawning success for each population. However, larvae have been documented outside of the Gulf of Mexico, and the possibility of additional spawning areas cannot be discounted (McGowan and Richards 1989). The eastern Atlantic/Mediterranean and western Atlantic spawning populations were determined by NOAA Fisheries to be distinct population segments (DPSs) and are managed separately as stocks (see below). Atlantic bluefin tuna are oviparous (i.e., "lay" eggs) and iteroparous (i.e., spawn regularly), and are multiple batch spawners. The number of eggs produced is dependent on the size of the fish. Western Atlantic bluefin tuna are believed to spawn primarily from April to June in the Gulf of Mexico, and it has been suggested that some spawning may occur in the Bahamas and the Florida Straits (Baglin 1982, McGowan and Richards 1989, Block *et al*. 2005). Eastern Atlantic bluefin tuna spawning usually takes place from late May to July, with a peak from June to July. Although individuals may spawn more than once a year, it had been assumed that there is a single annual spawning period. However, some authors have suggested that bluefin tuna do not spawn on an annual cycle (Lutcavage *et al*. 1999, Block *et al*. 2005, Fromentin and Powers 2005, Goldstein *et al*. 2007), or a component of the western stock is spawning somewhere other than the Gulf of Mexico (*e.g.*, in the central North Atlantic or Gulf Stream edge) (Mather *et al*. 1995, Lutcavage *et al*. 1999, Goldstein *et al*. 2007).

In 2010 we received a petition to list the species under the Endangered Species Act. After analysis by a Status Review Team (SRT) and agency staff, it was determined in May 2011 that the species did not warrant listing under the ESA. However, because of the remaining uncertainties regarding the effects of the Deepwater Horizon oil spill, it was determined that Atlantic bluefin tuna would be added to the Species of Concern list. Further information on the ESA process is described below.

Rationale for "Species of Concern" Listing:

Factors for Decline:

Fishing

The main concerns about the status of both DPSs of Atlantic bluefin tuna stem from overfishing.

Atlantic bluefin tuna are currently managed domestically by NMFS' Highly Migratory Species (HMS) Management Division and internationally by the International Commission for the Conservation of Atlantic Tunas (ICCAT). ICCAT is an intergovernmental fishery management organization that is responsible for the conservation of Atlantic tunas and tuna-like species. The Commission is made up of 48 contracting parties, including countries within the range of Atlantic bluefin tuna, as well as those

who fish or have interests in Atlantic tunas (e.g., Japan, Philippines, etc). ICCAT manages the Atlantic bluefin tuna population as two separate stocks (eastern and western), separated by the 45°W longitude meridian. ICCAT sets Total Allowable Catch (TAC) limits yearly after taking into consideration the recommendations based on scientific advice put forth in the stock assessments conducted by their Standing Committee on Research and Statistics (SCRS). These recommendations are based upon TAC levels that are estimated to allow for maximum sustainable yield, and also allow for stock growth in keeping with the rebuilding plan. In recent years, stock assessments for bluefin tuna have been conducted approximately every two years by the SCRS.

According to the SCRS stock assessment in 2010, which summarizes data from the 1950s to the present, the total catch for the western Atlantic peaked at 18,671 tons (t) (16,938 mt) in 1964, with catches dropping sharply to less than 4,000 t (3,628 mt) thereafter with the collapse of the Atlantic bluefin tuna longline fishery off Brazil in 1967 as well as the decline in purse seine catches. Catch increased again to average over 5,000 t (4,535 mt) in the 1970s due to the expansion of the Japanese longline fleet into the northwest Atlantic and Gulf of Mexico, and an increase in purse seine effort targeting larger fish for the sashimi market. Since 1982, the total catch for the western Atlantic, including discards, has generally been relatively stable due to the imposition of quotas by ICCAT. However, following a total catch level of 3,319 t (3,010 mt) in 2002 (the highest since 1981), total catch in the western Atlantic declined steadily to a level of 1,638 t (1,485 mt) in 2007 (the lowest level since 1982), before rising to 1,935 t (1,755 mt) in 2009, which was near the total allowable catch (TAC). The decline prior to 2007 was primarily due to considerable reductions in catch levels for U.S. fisheries. The major harvesters of western Atlantic bluefin tuna are Canada, Japan, and the United States.

According to ICCAT (2010), spawning stock biomass (SSB), the weight of Atlantic bluefin tuna that are of spawning age, declined dramatically between the early 1970s and early 1990s. Since then, SSB was estimated to have fluctuated between 21 and 29 percent of the 1970 level, but with a gradual increase in recent years from the low of 21 percent in 2003 to 29 percent in 2009. Thus, the stocks have undergone substantial declines since historic highs were reported in the 1970s (Figure 2). The size of fish being targeted by various fleets has led to different levels of fishing mortality in the stocks. After 2003, fishing mortality on spawning fish (ages 9 and older) declined due to increasing

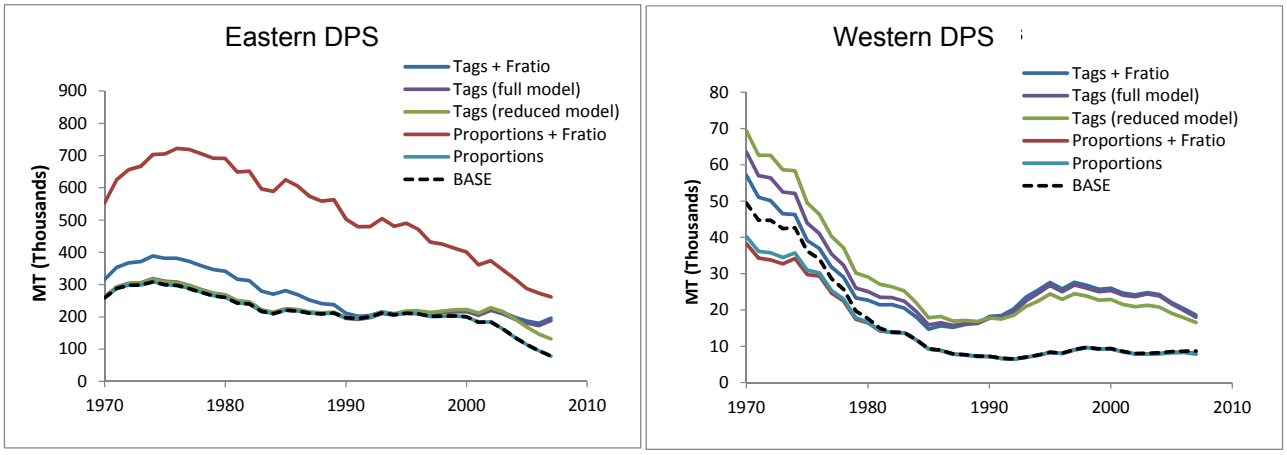

Figure 2. Spawning biomass estimates (tons) for the eastern (left) and western (right) populations of bluefin tuna for the five scenarios compared to the corresponding base cases without mixing (dashed line)(from ICCAT 2010).

regulatory mechanisms intended to reduce dead discards and incidental catch of Atlantic bluefin tuna. ICCAT (2010) reports that recruitment estimates for the early 1970s were very high, but have been lower for the following years, with the exception of a strong year-class documented in 2003. However, anecdotal information from U.S. recreational and commercial fishermen pointed to a perceived high abundance of small bluefin tuna in U.S. waters in 2010, which seems to contradict the SCRS estimation that recruitment has been low except for the 2003 year class.

Fishing for bluefin tuna has occurred in the Mediterranean since the 7th millennium BC (Desse and Desse-Berset 1994 *in* Fromentin and Power 2005). These ancient fisheries primarily used handlines, beach seines, and other types of seine nets (Fromentin and Powers 2005). According to Fromentin and Powers (2005), commercial fisheries in this area initially used traps and beach seines. Ravier and Fromentin (2002) estimated annual yields to be between 7,000 and 30,000 mt between 1910 and 1930. Eastern Atlantic/Mediterranean reported catches peaked at over 50,000 t (45,359 mt) in 1996 and then decreased substantially, stabilizing around 19,500 mt, the TAC levels established by ICCAT in 2009. The reported increase and the following decrease in reported catch occurred mainly for the Mediterranean (ICCAT 2010). Catches of Atlantic bluefin tuna in the eastern Atlantic/Mediterranean fisheries were under-reported from 1998 to 2007 (ICCAT 2010). Since 1997, "farming activities" in the Mediterranean have significantly changed the fishing strategy of purse seiners and resulted in a deterioration of the quality of Atlantic bluefin tuna catch at size (CAS) data reported to ICCAT. These farming activities consist of catching Atlantic bluefin tuna, transporting them alive to net pen farms where the fish are fed and fattened, and upon reaching the desired weight, are then reported as harvest and sold in the market. Some facilities "farm" smaller specimens for longer periods of time (greater than 20 months), while other facilities "fatten" larger fish for a shorter period of 1-7 months, to more closely time production with market demand. This affects the CAS data reported to ICCAT because the size samples were obtained only at the time of harvest from the farms and not at the time of capture. The 2008 and 2009 reported catches were reviewed by the SCRS during the Atlantic bluefin tuna data preparatory meeting in 2010, and the SCRS indicated that the reporting of catches had significantly improved in those 2 years. However, the SCRS also indicated that some misreporting could still have been taking place.

According to Fromentin and Ravier (2005) and Porch (2005), the development of the sushi-sashimi market during the 1980s made bluefin tuna significantly more profitable than historically, and this resulted in a significant increase in the efficiency and capacity of fisheries during this time. The increased profitability associated with these new technologies and high-value markets resulted in the rapid development of even more new and powerful fleets in the Mediterranean countries, and the expansion of effort which exploited fish in the Mediterranean and North Atlantic. Japanese longline fisheries also expanded in the Central North Atlantic, adding pressure on bluefin tuna stocks (Fromentin and Powers 2005). The development and expansion of all Atlantic bluefin tuna fisheries resulted in rapid increases in yields since the 1980s, especially in the Mediterranean Sea. Eastern Atlantic and Mediterranean catches reached an historical peak of over 50,000 mt during the mid-1990s. However, catches in the western Atlantic, including discards, have been relatively stable since the imposition of quotas in 1982, but the total western Atlantic catch declined steadily from the high of 2002 until 2007, primarily due to considerable reductions in catches by U.S. fisheries. The decrease indicated by the United States catch rate of large fishes was matched by the increase in catch indices for large fishes of other countries, particularly Canada (ICCAT 2011). In 2009, the United States harvested its national base quota of bluefin tuna.

Atlantic bluefin tuna fisheries are closely managed by various regulatory mechanisms from ICCAT and national fishery regulators, and the western Atlantic bluefin tuna are highly regulated with TAC limits generally set within the range recommended by SCRS. Current TAC levels are projected to result in increased population levels of both DPSs as long as there is a high degree of compliance (ICCAT 2010). Even greater reductions in TAC for the eastern stock were discussed at the Atlantic bluefin tuna data preparatory meeting in 2010 to account more fully for the assessment uncertainties and increase the probability and rate of stock growth and recovery. However, these reductions were not implemented at that time. Given the strong control measures for the stocks in effect on the water, in port, and at the marketplace (through the implementation of the catch documentation scheme), it is likely that compliance will increase (ABFTSRT, 2011). ICCAT and its members are expected to continue their efforts to ensure the effective conservation and management of this important resource.

Oil and Gas Development and the Deepwater Horizon Oil Spill

One of the major activities with the potential to impact Atlantic bluefin tuna and their habitat is oil and gas development on the outer continental shelf. For oil platforms, there are direct and indirect impacts to the environment such as disturbance created by drilling, associated pollution from drilling activities, discharge of wastes associated with offshore exploration and development, operational wastes from drilling muds and cuttings, potential for catastrophic spills caused by accidents, such as the Deepwater Horizon (DWH) oil spill in 2010, hurricanes, or alteration of food webs created by the submerged portions of the oil platform, which attract various invertebrates and fishes.

The effect of the DWH spill on bluefin tuna is an area of focus of the U.S. government's Natural Resources Damage Assessment (NRDA) team. That team is conducting targeted analyses on the effects of the spill on bluefin tuna, but most of those analyses are not yet available. To date, the NRDA scientists have analyzed the paths of 12 satellite-tagged bluefin tuna that entered the Gulf of Mexico between 2008 and 2010. However, there is no evidence to suggest that any portion of adults were immediately affected by the oil spill, although studies are ongoing that may give more information on possible long-term impacts. The results from several electronic tagging studies confirm that some Atlantic bluefin tuna have historically spent at least a portion of their time in the waters in the vicinity of the spill area, but the exact fraction is difficult to quantify because of the uncertainties associated with inferring tracks and the rather low number of samples. All of the electronically-tagged bluefin tuna that were known to have spent time in the Gulf of Mexico during the actual spill event (8 fish) survived long after leaving the Gulf of Mexico, but long-term impacts are possible.

Satellite imagery indicated that the oil spill could have affected over 20 percent of the Gulf of Mexico spawning grounds for Atlantic bluefin tuna. Two independent projections by the SCRS (i.e., the high and low recruitment potential hypotheses) along with new model assumptions for effects of the oil spill on the spawning grounds were run by the Atlantic bluefin tuna Status Review Team (SRT) to estimate the future effects of the DWH oil spill on SSB. These model indicated a reduction in SSB of less than 4 percent (Figure 3). Additional runs were made with the 'MAST' model (Taylor, McAllister and Block, pers. comm.), which uses electronic tagging data in an effort to account for intermixing between the eastern and western DPSs. These runs assumed future catches slightly greater than allowed by the current management plans, and the results were very similar to those above, resulting in a 3 percent reduction in SSB due to potential effects from the oil spill. In summary, independent projections with two different types of models were run to show that a 20 percent reduction in the 2010 year-class due

to the spill will likely result in less than a 4 percent reduction in future spawning biomass. However, if a significant fraction of adult Atlantic bluefin tuna were killed or rendered impotent by the spill, then subsequent year-classes might also be reduced, leading to greater reductions in SSB than estimated above. For example, if 20 percent of the adults were also killed in 2010, then the SSB would be immediately reduced by 20 percent, which might lead to additional reductions in the 2011 and subsequent year-classes (relative to what they would have been in the absence of the spill). The reduction in the 2010, 2011, and subsequent year classes would, in turn, lead to reductions in future SSB levels (9 years later as they begin to mature).

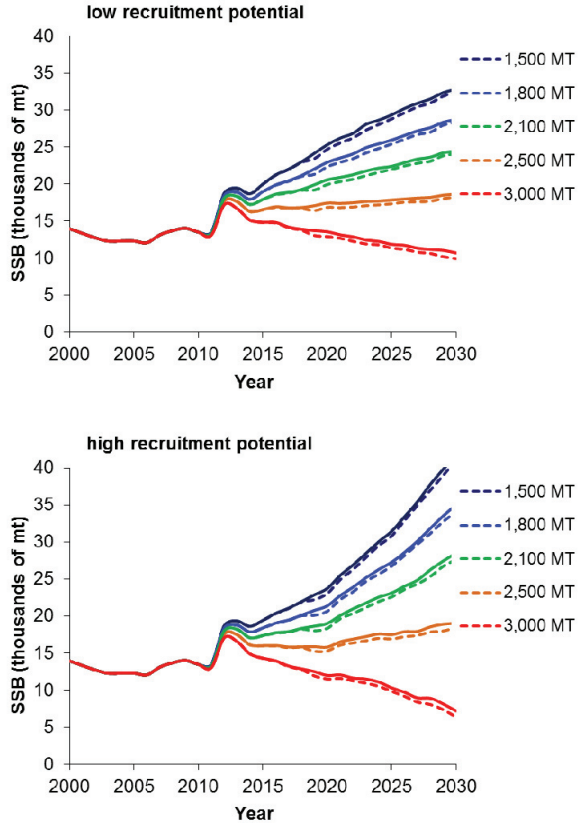

Figure 3. Projections of spawning biomass (age 9 and older) relative to the target level (MSY) assuming the 'low' and 'high' recruitment potential models postulated by the ICCAT SCRS. The solid lines represent the trends of the projections under various quotas without regard to the Deepwater Horizon event (as conducted by the SCRS 2010 assessment). The adjacent dashed lines show the corresponding projections when it is assumed that the number of age 1 recruits in 2011 will be reduced by 20 percent (relative to what they would have been had the spill not occurred). The diverging trends in spawning biomass are not marked until 2019 because the age at first maturity is assumed to be nine years old (from ICCAT 2010).

Given that it is not possible to determine the level of impact on adults from the DWH oil spill at this time, scientists at the Southeast Fisheries Science Center (SEFSC) re-ran the extinction risk models assuming spill-induced mortality rates of 20 percent for larvae and from 5 to 50 percent for adults. The short-term (10 year) risk of extinction was negligible for all levels of mortality examined. The long-term risk (e.g., projected to 2100) did not exceed 5 percent except under the high recruitment potential scenario when adult mortality rates exceeded 15 percent. Using the latest information, including the 2010 larval survey, SEFSC scientists developed a worst-case scenario for larval mortality of 15 percent (their best estimate was about 7 percent). Accordingly, an adult mortality rate of 15 percent also represents a worst-case scenario because it implies the same proportion of adults encountered oil as the larvae and that all of those "oiled" adults subsequently died. Thus, it appeared

that adult mortality rates would have to be extremely high in order to incur a substantial risk of extinction to the species. Because the information on larval and adult mortality from the DWH oil spill is not certain, NMFS used the best available science to model "worst case scenarios." From these model projections, NMFS was able to determine that although it is not possible to accurately determine the level of effect of the DWH spill at this time, even if the oil spill had the highest level of effect currently viewed as scientifically plausible, the species would not warrant listing at this time.

Status Reviews/Research Underway:
As mentioned above, on May 24, 2010, NMFS received a petition requesting that we list the entire species of Atlantic bluefin tuna (*Thunnus thynnus*) or, in the alternative, Atlantic bluefin tuna DPSs consisting of one or more subpopulations, as endangered or threatened under the ESA. Following a positive 90-day finding on the petition (75 FR 57431: http://www.nmfs.noaa.gov/pr/pdfs/fr/fr75-57431.pdf), NMFS convened an Atlantic bluefin tuna SRT to review the status of the species.

During the status review process, NMFS determined the eastern Atlantic/Mediterranean and western Atlantic spawning populations are DPSs. There is some evidence to suggest that there may be two discrete populations of Atlantic bluefin tuna within the Mediterranean. While the two Mediterranean populations may be discrete, we did not have enough information to conclude that they are significant, by themselves, to Atlantic bluefin tuna, and so this area currently constitutes a single eastern Atlantic/Mediterranean DPS.

After reviewing the information presented in the status review report, NMFS determined that listing the eastern Atlantic/Mediterranean and western Atlantic bluefin tuna DPSs as either endangered or threatened was not warranted at this time; however, because of the remaining uncertainties regarding the effects of the Deepwater Horizon oil spill, it was determined that Atlantic bluefin tuna would be added to the Species of Concern list. The most recent status review report for Atlantic bluefin tuna was completed in May 2011, and can be obtained at http://www.nmfs.noaa.gov/stories/2011/05/docs/bft_srr_final.pdf.

NMFS intends to revisit the status of the species in early 2013 once the NRDA analyses have concluded to determine whether the DWH oil spill altered the condition of the species. Additionally, new stock assessments will be conducted by ICCAT for Atlantic bluefin tuna in 2012, and new ICCAT compliance reports will be available. This information will be considered as well.

There are numerous scientific studies on Atlantic bluefin tuna, the largest of which is being coordinated by ICCAT's SCRS—the Atlantic-wide Bluefin Tuna Year Program. The program started in 2010 and is funded by ICCAT members and cooperating parties. It has multiple objectives, including improving the understanding of key biological and ecological processes, basic data collection (including information from farms, observers, and Vessel Monitoring Systems), provision of scientific advice on stock status through improved modeling of key biological processes (including growth and stock-recruitment and mixing between various areas), and developing and using biologically realistic operating models for more rigorous management option testing. Research undertaken to date through the ICCAT program, or in coordination with it by scientists from ICCAT's membership, has been either non-lethal (aerial surveys) or has been intended to be non-lethal (tagging programs), although mortalities do sometimes occur after a tagging event. In addition, other types of research by other researchers (microconstituent analysis, organochlorine tracer analysis, genetic analysis) are conducted, which primarily rely on samples taken from fish harvested in

commercial fishing operations or from historical collections. In addition, larval surveys and activities to monitor young-of-the-year Atlantic bluefin tuna are also conducted.

Data Deficiencies:
Currently, NMFS is developing an integrated research plan for Atlantic Highly Migratory Species (including Atlantic bluefin tuna). Among some of the research needs identified in the draft plan is the development of a systematic sampling program for the collection of biological samples across all U.S. fisheries and areas. To reduce uncertainty in the results of stock assessments and, therefore, to improve management for this species, there is also need to further improve our knowledge on areas such as stock structure, age and growth, maturity, habitat utilization, and feeding ecology. A detailed explanation of the different research needs for Atlantic bluefin tuna can be obtained from the plan when it is published.

Existing Protections and Conservation Actions:

ICCAT

As previously noted, ICCAT manages the Atlantic bluefin tuna population as two separate stocks (eastern and western), and takes into consideration the scientific advice from SCRS when making recommendations for the TAC levels for the stocks. Some of the management measures ICCAT has implemented are really focused on conservation of the species and are discussed here rather than in the fisheries management section above. A new measure includes provisions for payback of overharvests (i.e., deducting from current and future quotas for prior quota overharvests), and also allows carry forward of voluntary quota reductions from 2009 into 2011. All totaled, the adjusted TAC for 2011 will be less than 11,500 mt, the lowest TAC in recent years, and it is designed to allow for rebuilding within the rebuilding period (or very close to it). Setting the TAC at levels that allow for rebuilding is one of the primary reasons the species was not listed under the ESA. Western Atlantic harvesters are expected to fully implement a recommendation to reduce quotas for the United States, Canada, and Japan for 2011 and 2012 by mid-June 2011. NMFS is currently preparing a final rule to implement the ICCAT-recommended U.S. base quota as well as the adjusted 2011 quota and subquotas.

In addition, the ICCAT 2010 eastern Atlantic/Mediterranean recommendation also strengthened the monitoring and control scheme, including enhanced monitoring of farming operations to document fish upon entering the farming operations and throughout the process to market, further restrictions on joint fishing operations (e.g., generally prohibiting joint operations between contracting parties and clarifying that each party is responsible and accountable for catches made under such operations), and requiring fishing capacity issues to be fully addressed by 2013.

NMFS

Effective May 5, 2011, NMFS requires the use of “weak hooks” by pelagic longline vessels fishing in the Gulf of Mexico. A weak hook is a circle hook that meets NMFS’ current size and offset restrictions but is constructed of round wire stock that is thinner-gauge (i.e., no larger than 3.65 mm in diameter) than the 16/0 circle hooks currently used in the Gulf of Mexico pelagic longline fishery. The requirement that the pelagic longline fleet use weak hooks is intended to allow for bluefin tuna to escape capture and reduce incidental catch of Atlantic bluefin tuna during pelagic longline fishing for

swordfish and yellowfin tuna in the Gulf of Mexico, which is the primary known spawning area for the western Atlantic DPS of bluefin tuna, and to increase bluefin tuna spawning potential and subsequent recruitment into the fishery.

CITES

In March 2010, the United States supported Monaco's proposal to list North Atlantic bluefin tuna on Appendix I of the Convention on the International Trade of Endangered Species (CITES). Based on the 2008 stock assessments for western and eastern Atlantic bluefin tuna, the United States concluded that both stocks met the biological criteria for an Appendix I listing. At the time, ICCAT's scientific committee was warning of possible collapse in the eastern Atlantic bluefin fishery. Since then, we have the benefit of additional information in the form of new stock assessments from ICCAT's scientific committee for western and eastern stocks (conducted in October 2010, with data through 2009), which no longer warns of such a collapse. Ultimately, Monaco's proposal was defeated on a vote of 72 to 43. The U.S. is currently inviting proposals for consideration at the next CITES meeting in 2013 and has not yet taken a position on adding bluefin tuna to a CITES appendix.

COSEWIC

Although the details of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) status report have not yet been made public, they have posted their determination that the species is endangered on their website. There are significant differences in the process and the criteria for listing a species under Canada's Species at Risk Act (SARA) and the U.S. Endangered Species Act. COSEWIC uses criteria similar to IUCN for determining whether a species is threatened or endangered. Under these criteria, bluefin tuna were determined to be endangered because there has been more than a 50% reduction in abundance in 10 years or 3 generations (whichever is longer). The actual reduction reported by COSEWIC on their website is 69%. Under SARA, however, economic impacts of a listing are also considered before an endangered species is protected. Under the ESA, economic impacts cannot be considered. NMFS will consider all of this information when it is publically available.

IUCN

The International Union for the Conservation of Nature (IUCN) assessed the status of the western Atlantic and eastern Atlantic stocks of bluefin tuna in 1996. At that time, it was determined that the western Atlantic stock was Critically Endangered and the eastern Atlantic stock was Endangered under the IUCN criteria. Both assessments include an annotation indicating a need for updating this information.

Links:
NMFS Permit Shop - https://hmspermits.noaa.gov/
NMFS Northeast Region Proactive Conservation Program - http://www.nero.noaa.gov/prot_res/CandidateSpeciesProgram/
NOAA Fisheries Office of Protected Resources - http://www.nmfs.noaa.gov/pr/species/fish/bluefintuna.htm
Press Release regarding decision not to list Atlantic bluefin tuna under ESA - http://www.nmfs.noaa.gov/stories/2011/05/bluefin_tuna.html
ICCAT - http://www.iccat.es/en/
Tag-a-Giant Foundation - http://tagagiant.org/
Large Pelagics Research Lab's Tag-a-Tiny Program - http://www.tunalab.unh.edu/Tagatiny.htm

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Point(s) of contact for questions or further information:

For further information on this Species of Concern, or on the Species of Concern Program in general, please contact NMFS, Office of Protected Resources, 1315 East West Highway, Silver Spring, MD 20910, (301) 427-8403, soc.list@noaa.gov; Sarah Laporte, NMFS Northeast Region, 55 Great Republic Drive, Gloucester, MA 01930, (978) 282-8477, sarah.laporte@noaa.gov; or Calusa Horn, NMFS Southeast Region, 263 13th Avenue, St. Petersburg, FL 33714, (727) 824-5312 x 5782, calusa.horn@noaa.gov.