

Appendix D. Bycatch Practicability Analysis (BPA)

Bycatch is defined as fish harvested in a fishery, but not sold or retained for personal use. This definition includes both economic and regulatory discards and excludes fish released alive under a recreational catch-and-release fishery management program. Economic discards are generally undesirable from a market perspective because of their species, size, sex, and/or other characteristics. Regulatory discards are fish required by regulation to be discarded, but also include fish that may be retained but not sold.

Agency guidance provided at 50 CFR 600.350(d)(3) identifies ten factors to consider in determining whether a management measure minimizes bycatch or bycatch mortality to the extent practicable. These are:

1. Population effects for the bycatch species;
2. Ecological effects due to changes in the bycatch of that species (effects on other species in the ecosystem);
3. Changes in the bycatch of other species of fish and the resulting population and ecosystem effects;
4. Effects on marine mammals and birds;
5. Changes in fishing, processing, disposal, and marketing costs;
6. Changes in fishing practices and behavior of fishermen;
7. Changes in research, administration, and enforcement costs and management effectiveness;
8. Changes in the economic, social, or cultural value of fishing activities and non-consumptive uses of fishery resources;
9. Changes in the distribution of benefits and costs; and
10. Social effects.

The Councils are encouraged to adhere to the precautionary approach outlined in Article 6.5 of the Food and Agriculture Organization of the United Nations Code of Conduct for Responsible Fisheries when uncertain about these factors.

If implemented, Amendment 7 to the Fishery Management Plan (FMP) for the Dolphin and Wahoo Fishery of the Atlantic (Dolphin Wahoo Amendment 7) would allow fishermen to bring dolphin and wahoo fillets from the Commonwealth of The Bahamas (Bahamas) into the U.S. exclusive economic zone (EEZ). While in Bahamian waters, fishermen would be required to obtain the necessary Bahamian cruising and fishing permits and obey all Bahamian regulations. If dolphin or wahoo are retained from Bahamian waters and the vessel transits back into U.S. waters with any filleted fish, Bahamian cruising and fishing permits must remain on the vessel. If there are no filleted fish onboard once the vessel returns to the Atlantic EEZ, all U.S. possession and size limits must be adhered to regardless of where the fish were caught. If there are filleted fish onboard while the vessel is in the U.S. EEZ, the vessel and fishermen would be required to abide by all U.S. federal regulations including possession limits. Furthermore, the vessel possessing fillets may not engage in any fishing, and must remain in a continuous transit until reaching a U.S. port.

Since the action in this amendment does not directly affect dolphin and wahoo managed by the South Atlantic Fishery Management Council (South Atlantic Council), the reader is referred to **Appendix E**, the BPA for Amendment 5 to the Dolphin Wahoo FMP (SAFMC 2013) for details on the bycatch and bycatch mortality issues related to the dolphin and wahoo fishery in the U.S. EEZ. A brief summary regarding the ten factors considered in this BPA is presented below.

Most dolphin and wahoo in the U.S. EEZ are taken with hook-and-line gear, with some harvest using pelagic longlines (SAFMC 2003). Landings for dolphin outnumber wahoo. Release mortality rates are unknown for most managed species, including dolphin and wahoo. It is likely that most mortality is a function of hooking and handling of the fish when the hook is being removed. However, sustainable seafood guides recommend dolphin harvested by hook-and-line gear in the U.S. as a “best choice” or “good alternative” since this gear has minimal bycatch issues (Blue Ocean 2010; Seafood Watch 2010). A small portion of dolphin is harvested using pelagic longlines, with sea turtles, sharks, and rays commonly caught as bycatch, but survival rates of hooked sea turtles was over 94% (Whoriskey et al. 2011). The dolphin and wahoo harvested in Bahamian waters would most likely be caught using hook-and-line gear. Fisheries resources (jurisdiction and conservation) regulations in The Bahamas are covered under Chapter 244-Section 19 of the Subsidiary Legislation of the Bahamas. The Bahamas allow for a total of 18 fish in any aggregation of king mackerel, tunas, dolphin, or wahoo. Filleting of dolphin and wahoo is not prohibited under Bahamian law. There are no size limits for dolphin or wahoo in the Bahamas. Foreign (e.g., U.S.) vessels are required to have a cruising and fishing permit onboard, otherwise the vessel has a possession limit of six fish. Additional information can be obtained from:

http://laws.bahamas.gov.bs/cms/images/LEGISLATION/SUBORDINATE/1986/1986-0010/FisheriesResourcesJurisdictionandConservationRegulations_1.pdf

Prager (2000) conducted an assessment of dolphin and indicated the species can withstand a high level of exploitation. Prager (2000) stated the biomass of the U.S. stock of dolphin appeared to be higher than needed to produce the maximum sustainable yield, but the results were not conclusive. The 2012 Report to Congress (NMFS 2012) indicates dolphin are neither overfished nor undergoing overfishing. The overfished/overfishing status of wahoo is unknown; however, like dolphin they are not considered to be vulnerable to overfishing due to life history characteristics including rapid growth rates, early maturity, and batch spawning over an extended season (Oxenford 1999, Prager 2000, McBride et al. 2008, and Schwenke and Buckel 2008). Furthermore, dolphin and wahoo are listed as species of “least concern” under the International Union for Conservation of Nature Red List, i.e. species that have a low risk of extinction (IUCN 2013). A Southeast Data, Assessment, and Review stock assessment for dolphin and wahoo is scheduled within the next 5 years.

Dolphin and wahoo are pelagic and migratory, interacting with various combinations of species groups at different levels on a seasonal basis. Blue Ocean (2010) reported that the fishing method used to harvest dolphin in the Atlantic does little damage to physical or biogenic habitats, and that the habitat for this species remains robust and viable. Therefore, ecological effects due to changes in bycatch in this fishery are likely to remain very low if Dolphin Wahoo Amendment 7 is implemented.

The National Marine Fisheries Service (NMFS) evaluated the dolphin wahoo fishery of the Atlantic as part of the Southeastern U.S. Atlantic, Gulf of Mexico, and Caribbean pelagic hook-and-line/harpoon fishery and designated it as Category III (78 FR 53336, August 29, 2013). Category III fisheries have a remote likelihood of/no known incidental mortality or serious injury of marine mammals. Further, NMFS completed a biological opinion on August 27, 2003, evaluating the impacts of the Atlantic dolphin wahoo fishery on Endangered Species Act (ESA)-listed species. The opinion concluded the fishery would not affect ESA-listed marine mammals. The roseate tern occurs within the action area. Roseate terns occur widely along the Atlantic coast during the summer but in the southeast region, they are found mainly off the Florida Keys (unpublished USFWS data). Interaction with fisheries has not been reported as a concern for either of these species.

Therefore, regarding factors 1-4, as noted above, and in **Chapter 3** of Dolphin Wahoo Amendment 7, the effects on bycatch and bycatch mortality on dolphin and wahoo from this amendment are likely to be minimal.

The action in Dolphin Wahoo Amendment 7 is administrative in nature and its implementation is not expected to significantly implicate factors 5-10 (see **Chapters 3** and **4** for details). Allowing fillets of dolphin and wahoo into the Atlantic EEZ from the Bahamas is not expected to have significant economic effects for the U.S. Atlantic dolphin wahoo fishery. Social effects are expected to be positive since this management measure could be beneficial to South Atlantic fishermen lawfully harvesting dolphin and wahoo in Bahamian waters, particularly for fishermen traveling between South Florida (and the Florida Keys) and The Bahamas.

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