5.0 THE FISHERY MANAGEMENT UNIT

5.1 Description of the Species

The swordfish, Xiphias gladius (Linnaeus, 1758), has a stout body with the greatest depth just behind the head, large mouth with the upper jaw greatly prolonged into a sword which is wider than deep, large eyes and only possesses teeth in the jaws when young (Leim and Scott, 1966). The color is a dark metallic-purplish above, dusky below, and the sword is virtually black above and lighter below; swordfish can be recognized easily by the greatly prolonged upper jaw, large pectoral fins, lack of scales in the adult, and lack of pelvic fins (Leim and Scott, 1966).

5.2 Range of the Fishery

The swordfish (Robins et al., 1980) is considered to be a single species, Xiphias gladius, over its worldwide distribution in temperate and tropical zones. In the western Atlantic Ocean, swordfish occur from Newfoundland to Argentina, including the Gulf of Mexico and Caribbean Sea (Goode, 1882, 1883; Bigelow and Schroeder, 1953). Commercial catches of swordfish have been taken primarily in temperate zones in the summer and secondarily in subtropical and tropical zones in winter (Cavaliere, 1963; Ueyanagi et al., 1970; Guitart-Manday, 1975).

There are four primary fishing areas in U.S. waters. The first is the California harpoon, rod and reel, and more recently drift gill net fisheries. The second is the south Florida area where a longline and rod and reel fishery recently developed. The third fishing area is the traditional New England fishery where four types of gear are used: rod and reel, longline, harpoon, and, more recently, drift gill nets. The final fishing area is the Gulf of Mexico where longline gear predominates. In addition, a fishery is being developed within the waters of Puerto Rico and the U.S. Virgin Islands. This management plan addresses the fishing areas in the New England, Mid-Atlantic, South Atlantic, Gulf of Mexico and Caribbean waters.

5.3 Management Unit

The fishery management unit for the swordfish, Xiphias gladius, consists of that portion of the resource that lies within the FCZ in the jurisdiction of the New England, Mid-Atlantic, South Atlantic, Gulf of Mexico and Caribbean Fishery Management Councils.

5.4 Rationale for Choosing This Unit

This unit was chosen because the swordfish is considered to be a single species with a world-wide distribution in temperate and tropical zones and similar harvesting and marketing methods throughout the range of the fishery. For more detailed discussions, refer to Sections 8.1.4 and 8.4.4.3.

The large degree of similarity among the different geographical fishing areas facilitates management of the swordfish fishery under the jurisdiction of a joint plan. This reduces the cost of plan preparation; reduces the likelihood of redundant and/or conflicting research, regulations or management solutions; eases the burden of compliance by fishermen through one comprehensive plan; and allows enforcement agencies to cooperate under one set of regulations, thereby maximizing enforcement efficiency while minimizing cost.