

## Council Restricts Finning, Sets One-Shark Limit for Most Species

■ On March 2, the Western Pacific Regional Fishery Management Council (WESPAC) voted to amend the Pelagics Fisheries Management Plan (FMP) to include the following restrictions on the take of sharks by the Hawai'i longline fleet:

- a one shark per trip limit for all species except the blue shark;
- a finning ban (i.e., sharks must be landed whole or dressed) for all non-blue sharks; and
- a 50,000 quota for blue sharks, to be adjusted periodically based on population assessments and other indicators of the health of the stock.

In October 1999, the council also initially approved a ban on the use of demersal (i.e., bottom) longline gear to catch sharks, a measure that is expected to be included in the final FMP amendment.

The council's action recognizes the overfishing vulnerability of and lack of data for many sharks, the atypical characteristics of the blue shark and the socio-economic importance of blue shark catches in the Western Pacific region. The amendment also is in accordance with the United Nations Draft Code of Practice for the Full Utilization of Sharks (December 1991), which states the following:

### Section 4.6.1.3 Total Shark Utilization Should Be Encouraged

A sizeable portion of the shark catch is discarded at sea after removal of fins and livers because of the poor economics of transporting shark meat for sale as food, or, for that matter, for any other purpose. Profitability of shark fishing should be based on utilization of the total animal: meat, fins, hide, liver, teeth and offal. Ideally, this would entail skinning and curing the hides for shipment to a leather tannery; removing and drying the fins for sale to oriental food suppliers; freezing the choicest meat for the upscale market; salting and drying lower quality meat for traditional markets and using the remaining carcass meat for bait or for fish meal production. However, not all species can provide the fishery with commercial yields of all the shark products referred to above. The value placed on their physical components varies not only with size and species but also with the end-use to which such components are put to. While almost all species are edible, the premium as far as meat is concerned, is enjoyed by the smaller sharks, which cannot yield hides and fins. For hides and fins, the premium belongs to bigger sizes, but the meat is less rewarding in economic terms. Careful consideration of how to utilize catch, and strict adherence to quality considerations as outlined in this code may help overcome some of the difficulties.

In the section titled Processing Fins on Board, the UN code says, "Fins should be cut from the shark as soon as the fish is caught. . . . Where circumstances do not permit wet fins to be sold quickly or processed immediately or frozen, they can be dried on board, weather permitting."

According to the National Marine Fisheries Service (NMFS), 95 percent of the sharks taken by the Hawai'i longline fishery are blue sharks and the remaining 5 percent are oceanic whitetip, thresher, mako and various other mainly pelagic shark species. All of these species are listed as management unit species in the Pelagics FMP. Provisions in the FMP define the overfishing threshold for sharks at 35 percent spawning potential ratio (SPR), i.e., the ratio of mature fish in the fished population to the volume of mature fish in the unfished population. This conservative threshold accounts for the slower growth and reproduction rates for most sharks compared to bony or teleost fish, whose overfishing thresholds are set at 20 percent SPR.

The Pelagics FMP and its amendment acknowledge that there are distinct biological and economic differences between the blue shark and most other shark species. Many sharks are late in reaching sexual maturity (about 10 to 12 years) and reproduce only a few young each year. However, the blue shark matures in four to five years and produces up to 135 young annually. Many shark species have a meat that is marketable. However, there is no local market for blue shark meat. Limited markets for blue shark meat existing in Mexico, Spain and a few other locations are met by the local fisheries, as blue sharks are found in all oceans worldwide. Until local markets for the meat and other products of blue sharks can be developed, the fins are the only part of the shark that is of economic value. They fetch up to \$26 per lb in Hawai'i and can comprise about 10 percent of a crew member's pay, according to a 1999 NMFS study.

## WESPAC Report by Sylvia Spalding



Sharks and turtles are removed from the stomach of a larger shark, caught for research purposes off the Northwest Hawaiian Islands. Blue shark carcasses returned to the ocean are recycled similarly within the ecosystem, too.

### The Hawai'i Longline Fishery

- Active vessels: 115.
- Average trip length: about three to four weeks.
- Operates largely on the high seas beyond the U.S. 200-mile exclusive economic zone and well beyond state waters (0 to 3 miles from shore)\*.
- Targets sashimi-quality tuna and swordfish.
- Catches blue sharks incidentally.
- Stores fish on ice.
- The Pelagics FMP bans longline fishing within 50 to 75 miles of the main Hawaiian islands and within 50 miles of the Northwest Hawaiian Islands.

Because of its atypical characteristics, the blue shark in the North Pacific has withstood sustained fishing effort. A 1991 study estimated the minimum stock size of blue sharks in the North Pacific at 52 million to 67 million individuals and argued that "even the minimum stock size can sustain the present catch level." In 1992, the high seas driftnet fishery ended, reducing the total fishing mortality on blue sharks by 2 million to 3 million annually. U.S. and Japanese scientists recently reported that there is no evidence of a decline in longline fisheries catch rates for blue sharks over the past three decades or of overfishing of the North Pacific blue shark stock. The NMFS and Japan's National Research Institute of Far Seas Fisheries are conducting a stock assessment of the North Pacific blue shark that should provide further information on the population's health. The study is to be completed by late spring 2000.

## U.S. Shark Conservation and Management

REGION (EEZ SIZE)	FEDERAL/STATE MANAGEMENT	COMMERCIAL LANDINGS	RECREATIONAL CATCHES
N. England, Mid-Atlantic, S. Atlantic, Gulf of Mexico, Caribbean (516,600 sq. nmi)	National Marine Fisheries Service manages sharks 3-200 miles offshore Ala., Conn., Del., Fla. (E. Coast), Ga., La., Maine, Md., Mass., Miss., NH, N.J., NY, NC, RI, SC, Va., and 9-200 miles offshore Fla. (W. Coast), Texas and Puerto Rico. One FMP covers 72 shark species; another proposed FMP would cover dogfish. Conn., Maine, Mass., NH, RI do not have shark-specific regulations for state waters.	70,896,149 lbs (does not include Puerto Rico)	>273,000
W. Pacific (1,570,600 sq. nmi)	W. Pacific Fishery Management Council manages sharks 3-200 miles offshore Hawai'i, American Samoa and Guam and 0-200 miles offshore Northern Mariana Islands, Kingman Reef, Midway and Palmyra Atolls, and Johnston, Wake, Jarvis, Howland, and Baker Islands. All oceanic sharks are covered in the Pelagics FMP. No shark-specific regulations exist for Hawai'i state waters.	7,269,460 lbs	about 50 (Hawai'i charter only)
Pacific (240,200 sq. nmi)	Pacific Fishery Management Council manages sharks 3-200 miles offshore Ore. and Wash. Three sharks are included in the Groundfish FMP; a plan for pelagic fish, including oceanic sharks, is being developed. The PFMC gave Calif. state the authority to manage sharks 0-200 miles since there was no federal plan. The Pacific States Marine Fisheries Commission sets coastwide landing guidelines for common thresher shark.	2,504,658 lbs	252,700
N. Pacific (867,400 sq. nmi)	N. Pacific Fishery Management Council manages sharks 3-200 miles offshore Alaska. The two Groundfish FMPs manage seven shark species each. State recreational shark fishing regulations extend to federal waters.	1,700,000 lbs	not available

Sources: Harrington, Charles. National Ocean Survey, 1982. Approximate Areas of Fishery Management and Continental Shelf Areas of the US and its Territories and Possessions; Camhi, Mary. National Audubon Society, 1998/1999. Sharks on the Line VI; Haight, Wayne and Paul Datzell. Western Pacific Fishery Management Council, 2000. Catch and Management of Sharks in Pelagic Fisheries in Hawai'i and the Western Pacific Region.; pers. comms. with state fishery management agencies.