



Ref. No. FR 23
File No. FSC 02/03

FINAL RECOMMENDATION

KEY THREATENING PROCESS

HOOK AND LINE FISHING IN AREAS IMPORTANT FOR THE SURVIVAL OF THREATENED FISH SPECIES

The Fisheries Scientific Committee, established under Part 7A of the *Fisheries Management Act 1994* (the Act), have made a recommendation to list Hook and Line Fishing in Areas Important for the Survival of Threatened Fish Species, as a **KEY THREATENING PROCESS** in Schedule 6 of the Act.

Listing of Key Threatening Processes is provided for by Part 7A, Division 2 of the Act.

The Committee understands that commercial and recreational fishers often make use of various combinations of hooks and lines, and that the general banning of hook and line fishing is not warranted nor proposed in this recommendation.

The Fisheries Scientific Committee has found that:

1. Threatened fish species in selected areas within NSW marine and fresh waters are particularly vulnerable to the activity of hook and line fishing (for definition see Point 2, below). For example, many threatened fish species form schools or aggregations at particular locations, perhaps as juveniles, or sometimes for the purposes of spawning or feeding. These threatened species are highly vulnerable to impacts from hook and line fishing at these locations. Some of these important environmentally-sensitive areas are identified as Critical Habitat under Part 7A of the Act.
2. Hook and line fishing refers to any activity that uses a combination of lines and hooks with the aim of catching fish. This includes, but is not restricted to, the use of lines composed of monofilament, wire and cord, with attached lures, hooks and jigs. Hand-lines, set lines, rod and reel fishing, trolling, lure fishing and fly fishing are all included in the activities that may be identified as a Key Threatening Process. This definition of hook and line fishing specifically embraces the fishing activity, including catch and release, and not just the “taking” of fish.
3. Ample and sound evidence (see the Committee’s information sheet) shows that a wide range of fishes, including sharks, are detrimentally impacted by hook and line fishing. This evidence comes from a range of scientific research into the impacts of hook and line fishing. Fishing hooks can cause immediate damage to the mouth of fishes, which may impact on feeding behaviour and feeding success. The effects of fish hooks can be more serious over a longer

time if retained in the mouth, throat and stomach of fishes and sharks, and ultimately can lead to death.

4. Even though taking a threatened species is illegal, these species are still being harmed by hook and line fishing, as evidenced by grey nurse sharks and black cod being seen with hooks in their mouths. Several scientific studies and anecdotal reports implicate hook and line fishing as a threat to several listed threatened and protected species within NSW marine waters. For example:
 - the NSW Fisheries Draft Recovery Plan for Grey Nurse Sharks has identified hook and line fishing, particularly with stainless steel hooks and wire traces, as a significant threat to the survival of the grey nurse shark, *Carcharias taurus*, in NSW waters. Several cases based on autopsies document injuries, including septicaemia and bacterial infection, that have resulted in the death of grey nurse sharks by hook and line fishing.
 - the final recommendation to list black cod, *Epinephelus daemeli*, as a Vulnerable Species in NSW waters noted that:
 - historical evidence (pre 1908) indicated that a decline in abundance and possibly size occurred around the turn of the century due to fishing pressure, especially near large towns or cities; and
 - anecdotal evidence from the 1960's and 1970's, documented in various fishing magazines, indicated overfishing by recreational line fishers and spearfishers, because large specimens were considered a prized catch.
5. In addition, the Final Determination for the listing of the *Aquatic Ecological Community in the Natural Drainage System of the Lower Murray River Catchment*, notes that: "For species listed as endangered or vulnerable, such as trout cod, Macquarie perch, and silver perch, targeted or incidental recreational catch must be considered as a threatening process". Also the Proposed Recommendation for the listing of the *Aquatic Ecological Community in the Natural Drainage System of the Lowland Catchment of The Darling River* notes that: "Overfishing has reduced populations of species such as Murray cod and golden perch. For species listed as endangered or vulnerable, such as olive perchlet, purple-spotted gudgeon, silver perch, Macquarie perch and trout cod, targeted or incidental collection and recreational catch must be considered as a threatening process."

In light of the above, the Fisheries Scientific Committee is of the opinion that Hook and Line Fishing in Areas Important for the Survival of Threatened Fish Species adversely affects two or more threatened species, populations or ecological communities and could cause species, populations or ecological communities that are not threatened to become threatened. Therefore, the process qualifies for inclusion in Schedule 6 of the Fisheries Management Act 1994 as a **KEY THREATENING PROCESS**.

Dr Pat Dixon
Chairperson, Fisheries Scientific Committee