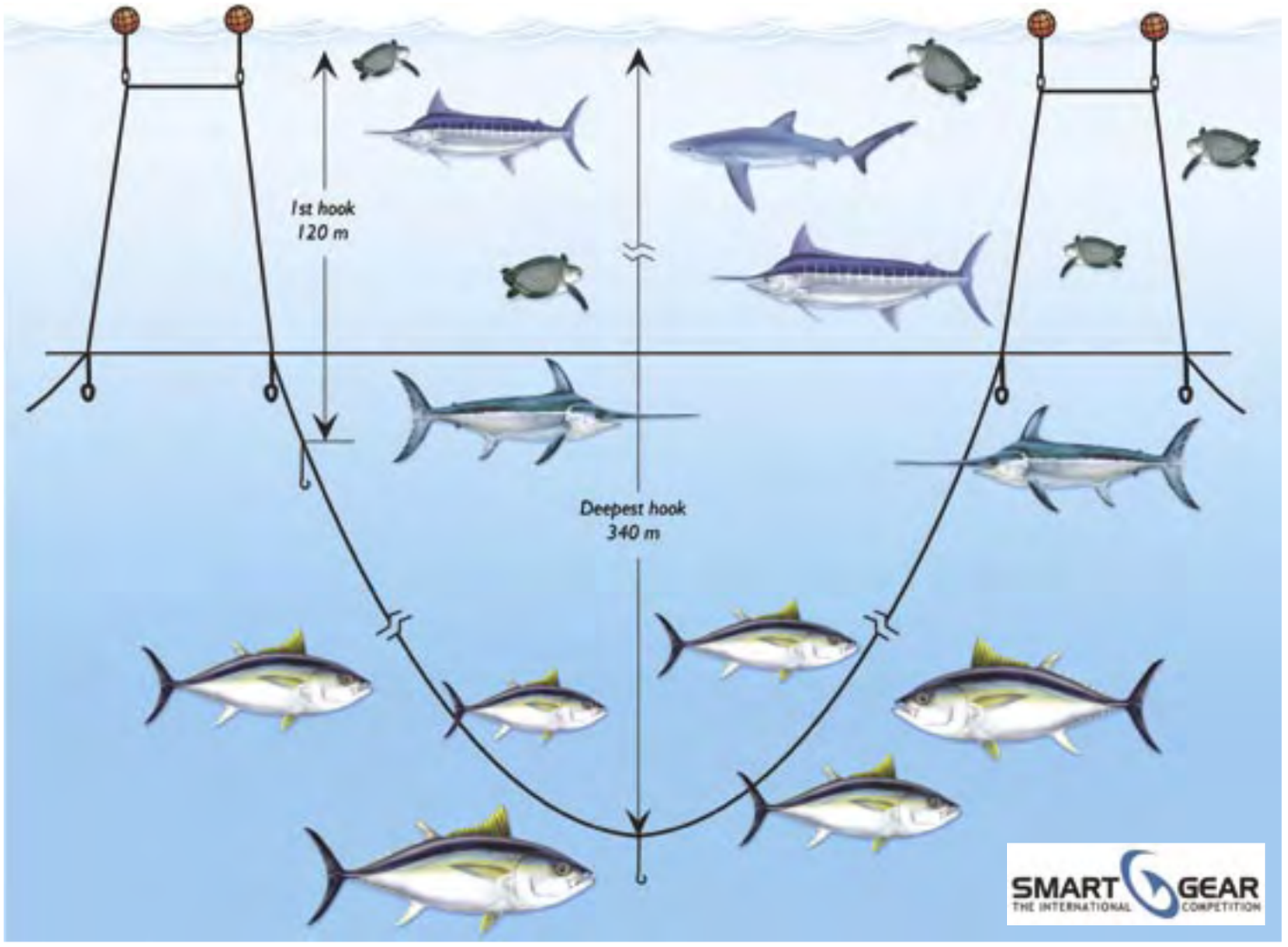
New Deep-Set Longline Is Smart Gear



Artist's rendition of one deep-set basket sh; target species below the line at 100 meters include bigeye tuna and day swimming broadbill swordfish. All baited hooks are below the 100-meter line. © YOUNGMI CHOI

In April 2005, World Wildlife Fund (WWF) awarded New Caledonia fisherman and scientist Steve Beverly the grand prize of US$25,000 in the first-of-its-kind International Smart Gear Competition. Participants from around the world submitted more than 50 entries for innovations to help reduce bycatch and make our oceans safer for sea turtles, whales, dolphins, birds, and other nontarget species caught accidentally in fishing gear. Look for details about the 2006 Smart Gear Competition at www.smartgear.org.

Beverly's idea helps longline fishermen target tuna and swordfish without catching sea turtles by setting longlines deep. While most boats fishing for tuna already set their lines deep, normal setting practices still leave a good portion of the baited hooks in shallow water where they are likely to snare a swimming sea turtle.

Normally, the main line is suspended between two floats and sags in a curve with the baited hooks floating at a variety of depths ranging from very near the surface and within sea turtle range down to 300 meters or more.

In Beverly's design the main line is weighted with lead weights and released or "set" in such a way that the section of main line, that holds 40 to 60 baited hooks goes down to and remains below 100 meters, which is safely out of sea turtle range yet within target species range. Successful testing of this idea has been carried out by three tuna vessels fishing Pacific waters, which caught 42 percent more tuna using Beverly's gear.

Sablefish longline operations set lines 3/4 mile long with hooks every 15 to 20 feet. © NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION / DEPARTMENT OF COMMERCE