

INTERNATIONAL DOLPHIN CONSERVATION PROGRAM

SCIENTIFIC ADVISORY BOARD

1ST MEETING

LIMA (PERU)
12 JUNE 2004

DOCUMENT SAB-01-04

POTENTIAL RESEARCH ON IMPROVING PURSE-SEINE TECHNOLOGY AND TECHNIQUES AND ON ALTERNATIVE MEANS FOR CATCHING LARGE YELLOWFIN TUNA

1. DEVELOPMENTS IN GEAR TECHNOLOGY AND FISHING TECHNIQUES TO IMPROVE DOLPHIN RELEASE

Using the backdown maneuver results in zero dolphin mortality in more than 93% of sets, and remains the best single technique for reducing mortality. However, other possibilities could be pursued, such as the recent experiments by the Mexican national program in which small panels were attached to the sides of the net; these act like the doors of a trawl net, increase resistance to the water flow, and help keep the net open.

Another idea that could be tested is Captain Dick Stephenson's *boleadoras*. These consist of three ropes tied together, two with weights attached and the third with a handle. The two weighted lines are dropped from a speedboat, one on each side of the corkline, causing it to sink; the third line is used to control the depth of the corkline.

Comments by fishermen indicate that the use of jet skis has enhanced the fishermen's ability to herd and rescue dolphins in the net. The SAB should consider this and other refinements and propose a research protocol for trials or other methods of evaluation to determine whether they can contribute to reducing dolphin mortality.

2. CAPTURE OF MATURE TUNAS NOT IN ASSOCIATION WITH DOLPHINS

During a study conducted in 1992-1993 (IATTC, 1994), spotted dolphins and yellowfin tuna were simultaneously tracked to gather information about the tuna-dolphin bond. It was discovered that large yellowfin tuna are not always associated with the dolphins, and that they swim at about the depth of the thermocline. This study could be continued to determine under what circumstances the tuna-dolphin bond is formed and broken, and help predict where large yellowfin may be found when not in association with dolphins.

Acoustic studies with instruments capable of long-range detection of tuna schools could be used to find the unassociated aggregations. The possible use of active and passive devices has been mentioned over the years. A laser detection system (LIDAR) has been proposed for finding subsurface tunas, and has undergone limited testing.

The SAB should consider these and other options and, if they seem feasible, design trials to evaluate the most promising options.

Literature cited

IATTC. 1994. 1993 Annual Report. 316 pp.