ACOUSTIC DISCRIMINATION IN TUNA FISHERIES

Through at-sea research, including with the Common Oceans ABNJ Tuna Project, ISSF and AZTI, scientists have been studying the acoustic responses and behavior of tuna and other species in purse-seine fisheries.

ISSF's findings may enable tuna fishers to use echosounders and other acoustic equipment to better identify the species, size, and number of tuna and non-tuna at fish aggregating devices (FADs) *before* they cast their nets — helping to avoid overfishing and reduce bycatch.

ISSF Research

Eastern Pacific Ocean research cruise on the vessel *Yolanda L*
Acoustic and optical surveys of aggregated tunas

Central Pacific Ocean research cruise on vessel *Albatun Tres*
Comparing echosounder measurements at different frequencies with catches at FADs

Atlantic Ocean cruise on vessel *Mar de Sergio*
Comparing four different brands of echosounder buoys, and sampling to compare acoustic data and species composition

Research with IATTC in Achotines laboratory, Panama
Acoustic studies of target strength and frequency response of isolated yellowfin tuna in an offshore cage

Research in Achotines laboratory
Development of acoustic-discrimination technology for selective fishing to reduce purse-seine catches of undersized yellowfin tuna

Workshops with buoy manufacturers and fishers
Disseminated results of acoustic discrimination of tropical tuna species project

Project planning with AZTI and Tuna RFMOs to reduce FAD impacts, including using sonars to count sharks before tuna sets and to improve echosounder buoy species-specific estimates as indices of tuna species abundance

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023

These organizations have collaborated on and/or funded ISSF's acoustic research:

AZTI MEMBER OF BASQUE RESEARCH & TECHNOLOGY ALLIANCE

CIAT IATTC

COMMON OCEANS

NOAA FISHERIES

Learn more about ISSF's acoustic discrimination research:
www.iss-foundation.org/fishery-goals-and-resources/our-priorities/tuna-conservation/acoustic-discrimination

ISSF INTERNATIONAL SEAFOOD SUSTAINABILITY FOUNDATION

iss-foundation.org

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