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**ISSF SUBMITTED PAPER – TOWARDS ACOUSTIC DISCRIMINATION OF TUNA
SPECIES AT FADs**

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fishing at FADs followed by intensive spill sampling to compare acoustic data and species composition caught (Fig 2).

Acoustic sampling

Catch

Spill sampling

Fig 2. Protocol at sea: Acoustic sampling before the catch and species and sizes sampling after the catch.

The study obtained first Skipjack tuna and consistent Bigeye tuna TS-length relationships for the three different frequencies used. Also, given the clearly distinct frequency responses found between Skipjack and Bigeye tuna species (Fig 3), the potential of multi-frequency acoustics for tropical tuna discrimination is confirmed. This positive result encourages further research to obtain the acoustic mask needed for tropical tuna discrimination, which would allow, in the near future, informing fishers on the proportion of tuna species at FADs before setting.

and bigeye (swimbladdered fish, right) tunas during the survey.

Next steps towards acoustic discrimination:

- Measure TS values for Yellowfin tuna
- Build the discrimination mask using multiple frequencies
- Share this knowledge with fishers, scientists and buoy manufacturers
- Work with managers to develop management measures using these outcomes.

References

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