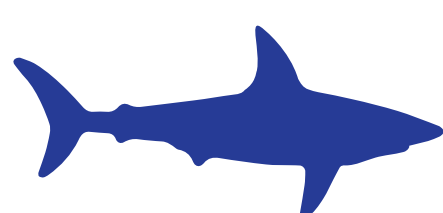


# Protecting Sharks



## Reducing shark bycatch in purse seine tuna fisheries

The shark **bycatch-to-tuna catch ratio** in purse seine fisheries is quite small — less than 0.5% in weight.

But given the size of the global tuna purse seine catch, reducing its impact on shark species is essential.

One study estimates  
**480,000-960,000**  
**silky sharks** could  
have been entangled in FADs  
every year in the Western  
Indian Ocean during  
2010-2012\*

## ISSF research

has identified 4 approaches:

### Before catch

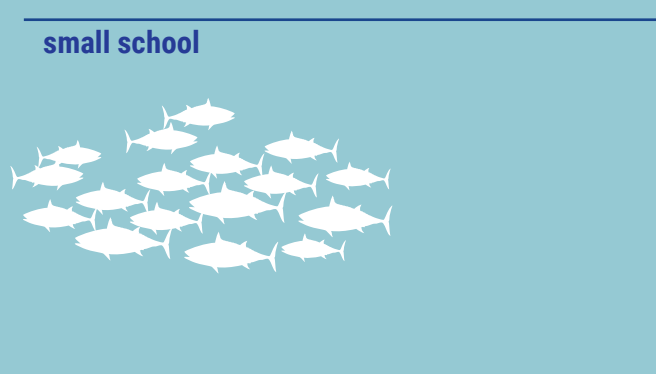
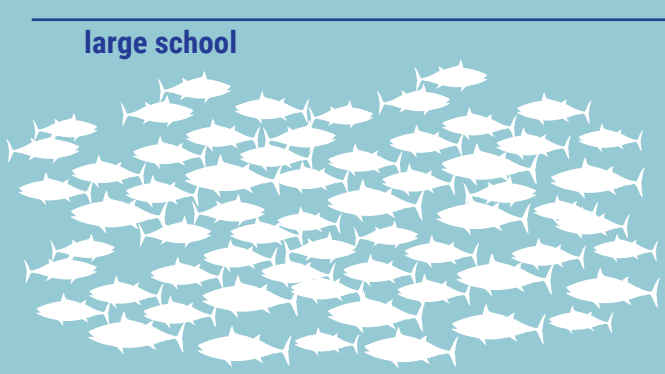
#### 1. Reduce the number of sets on FADs

a.) Shift some effort  
to free school sets

Sharks are more commonly found in natural log and FAD sets than they are on free swimming schools. For a given amount of fishing effort, shift to more free swimming school sets to reduce overall catch of sharks.

b.) Avoid setting on  
small schools of fish

Avoiding sets on schools of tuna less than 10 tons would reduce the amount of bycatch of silky sharks by 21-41% depending on the region.



Can reduce the  
catch of silky sharks,  
for example, by  
**21-41%**

#### 2. Implement non- entangling FADs

Traditional FADs with open netting and large mesh hanging structures entangle sharks. To avoid capturing sharks in the first place, use non-entangling FADs, as guided by ISSF recommendations and required by three tuna RFMOs

Completely  
**eliminate**  
entanglement

### After catch

#### 3. Release from net

Fishing sharks out of purse  
seine net with hand line

Releasing sharks from purse seine nets while still free swimming rather than on deck can improve their survival. Fishing sharks from the net with handlines and baited hooks is a promising technique.

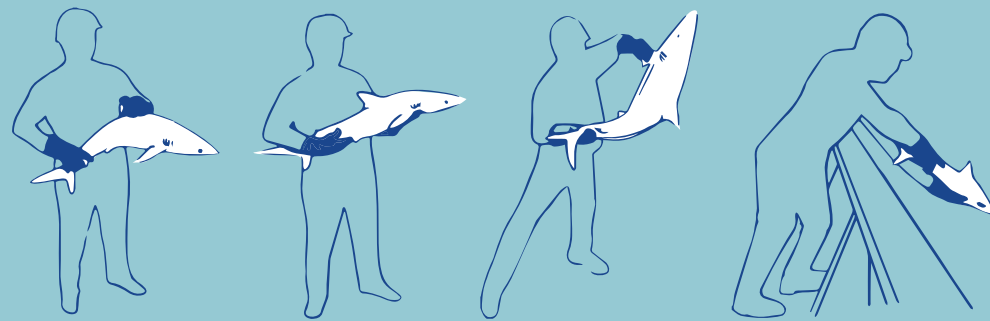
can save  
**20%**  
of sharks  
encircled

#### 4. Release from deck after incidental catch

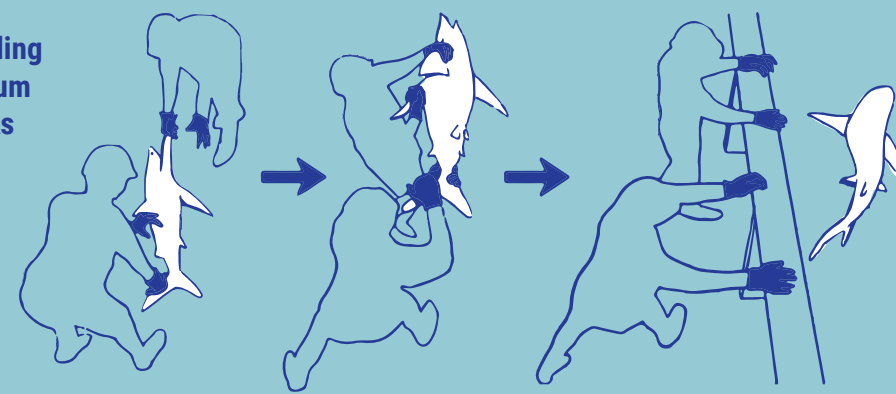
Implement best practices to  
maximize shark survival after release

Can save  
**15-20%**  
of sharks  
caught

Handling  
small sharks



Handling  
medium  
sharks



Illustrations based on Poisson et al, 2012

**To learn more** about bycatch in tuna fisheries, visit [www.issf-foundation.org](http://www.issf-foundation.org)



#### And view the Bycatch Research Cruise Compendium

<http://issf-foundation.org/knowledge-tools/reports/technical-reports/download-info/issf-technical-report-2016-13-compendium-of-issf-at-sea-bycatch-mitigation-research-activities-as-of-july-2016/>