

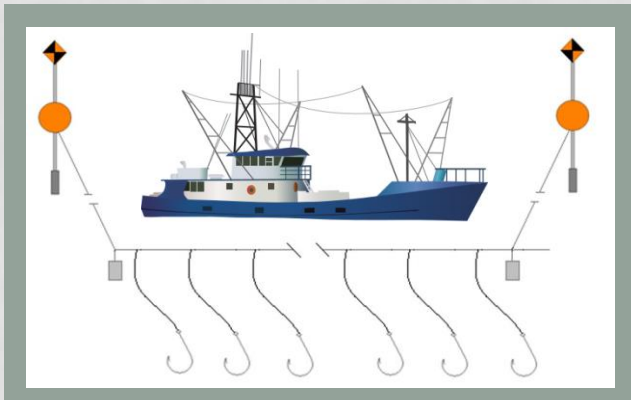


MITIGATION OF SEA TURTLE BYCATCH IN LONGLINE FISHERIES

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WCPFC/ABNJ & SPC

BACKGROUND

- WCPFC's CMM 2008-03: reporting, safe release & gear specifications
- Self-assessment (AR-2) to date
- Longline fisheries are of greatest concern:



- Sea turtles attracted to bait
- Potential for asphyxiation
- Safe release requires more than a dip net
- Post-release mortality from hooks/leaders

OBJECTIVES

- Combine data for joint analysis
- Adapt a SPC model of LL & shark interactions
- Evaluate mitigation options for longline fisheries



Photo credit: Yonat Swimmer

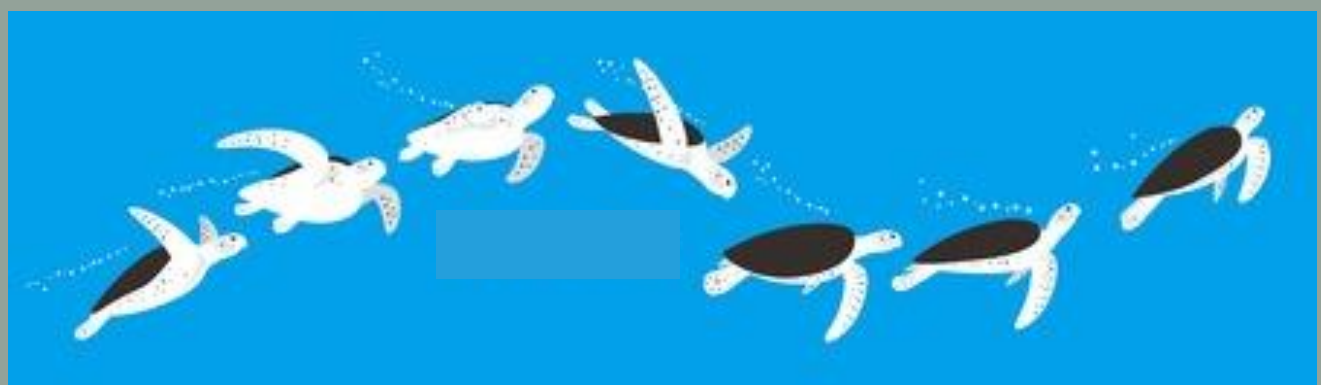
WORKSHOP #1

- Honolulu, 16-19 February 2016
- 31 participants from 14 countries, as well as IGOs and NGOs
- ABNJ Tuna Project funded with WPRFMC support
- WCPFC + SPC led



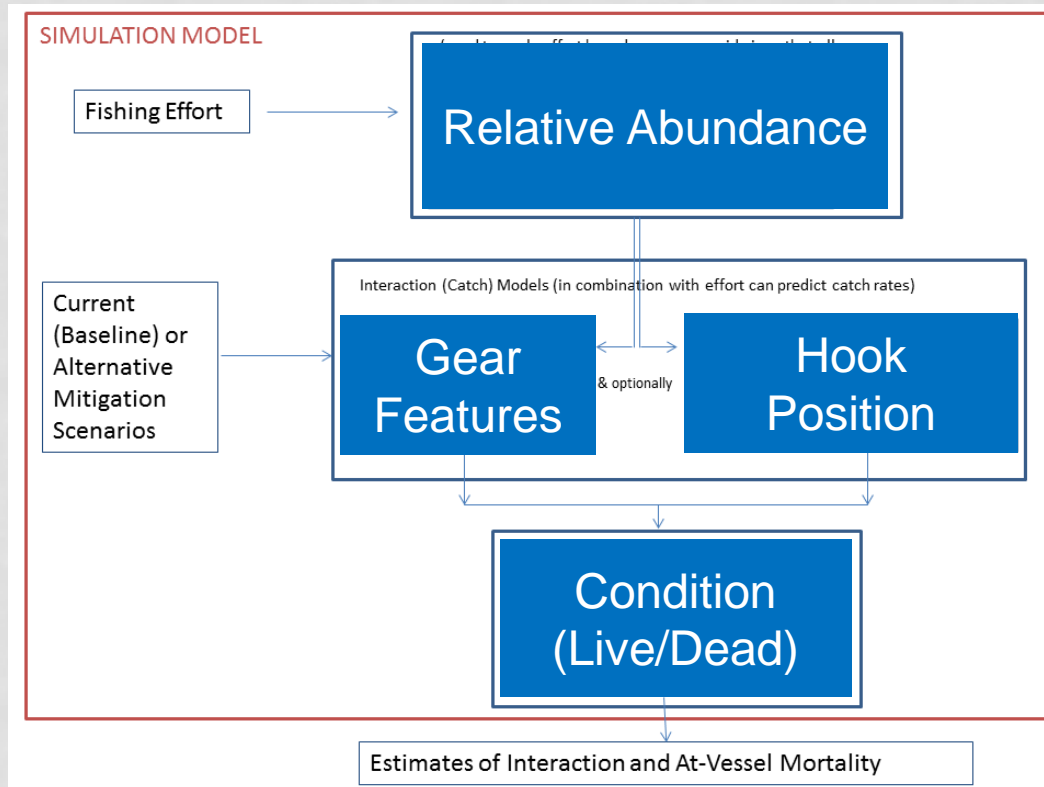
DATA

- Observer data 1989-2015 (ROP, SPC members, US, JP and CT)
- 31 fleets with >2,300 turtles
- Mainly leatherback, green, loggerhead and olive ridley



APPROACH

- Four factors in estimating sea turtle interaction rates:



GEAR FEATURES

- Do hook shape/size*, bait*, hooks per float*, time of day, species*, SST* & soak time* matter?



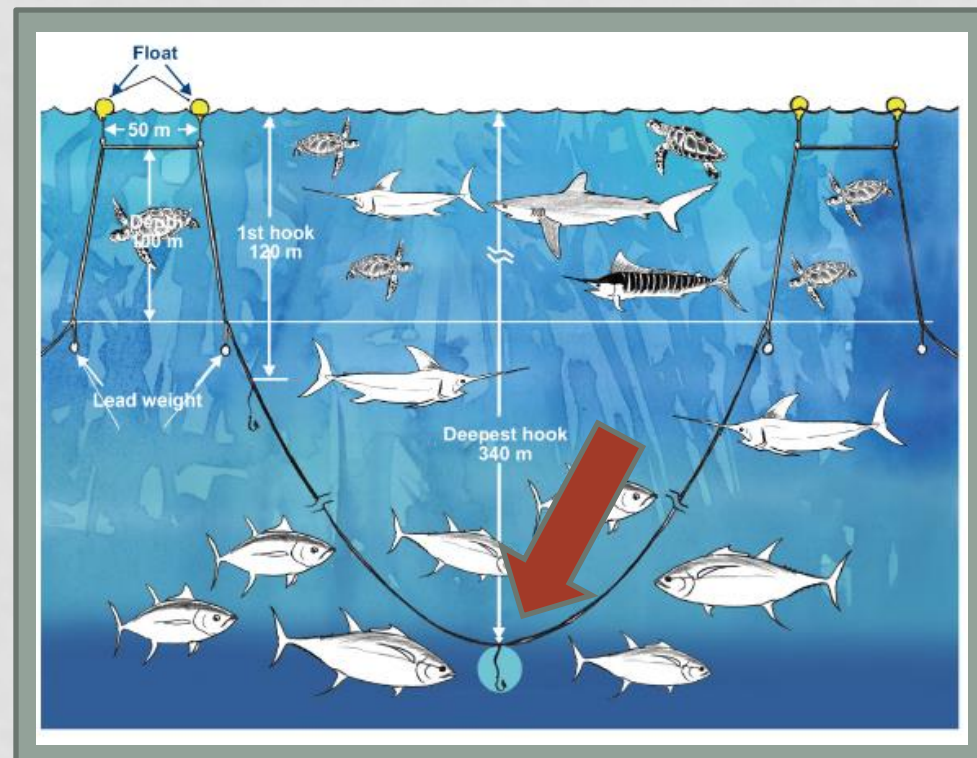
Finfish Bait



Large Circle Hooks

HOOK POSITION

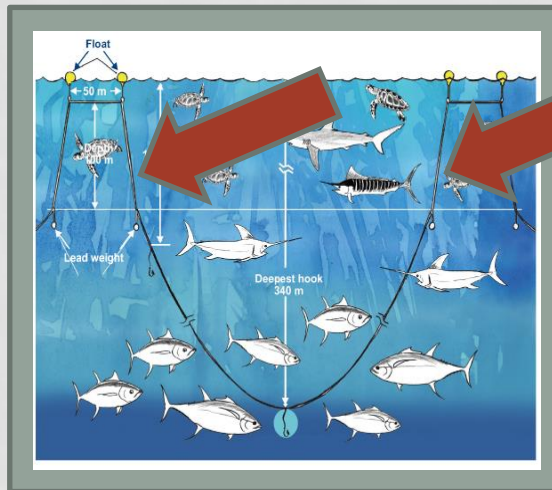
- How do interactions vary by hook position between floats?



Deeper
hooks

CONDITION

- What determines if a sea turtle is alive or dead at haulback?



Shallower
hooks



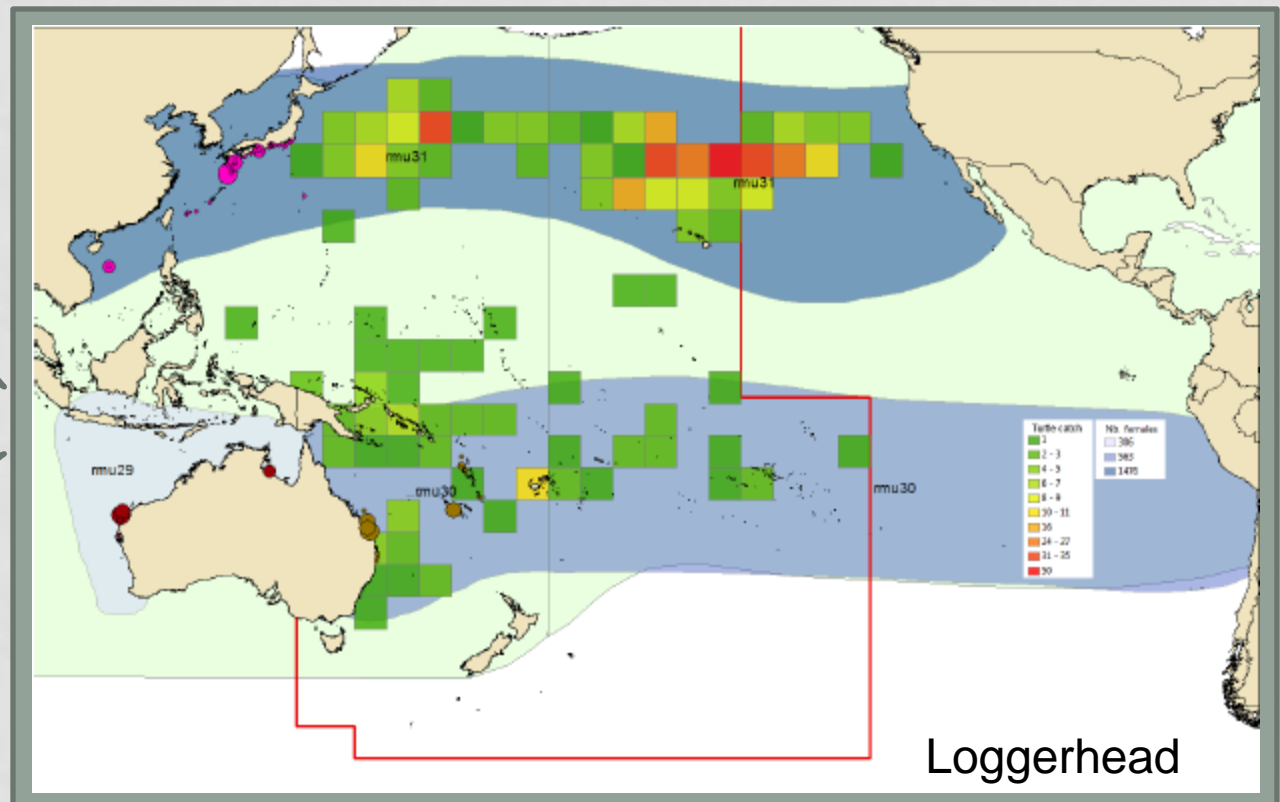
Species effects

RELATIVE ABUNDANCE

- How does the probability of catching a turtle vary by area?

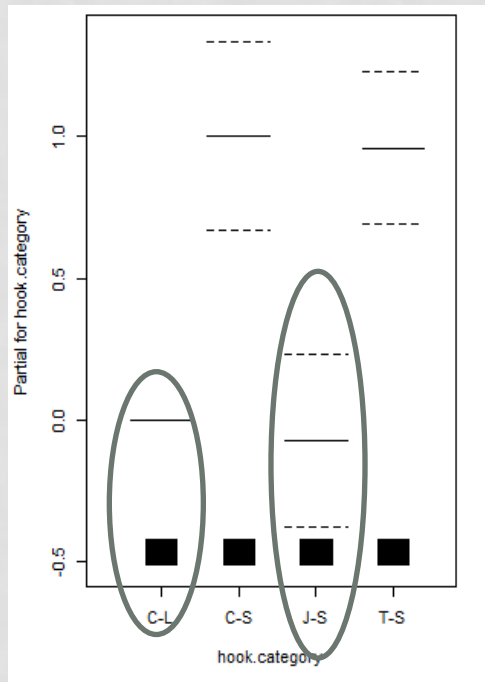
Peer
Review

Envr'l
Models

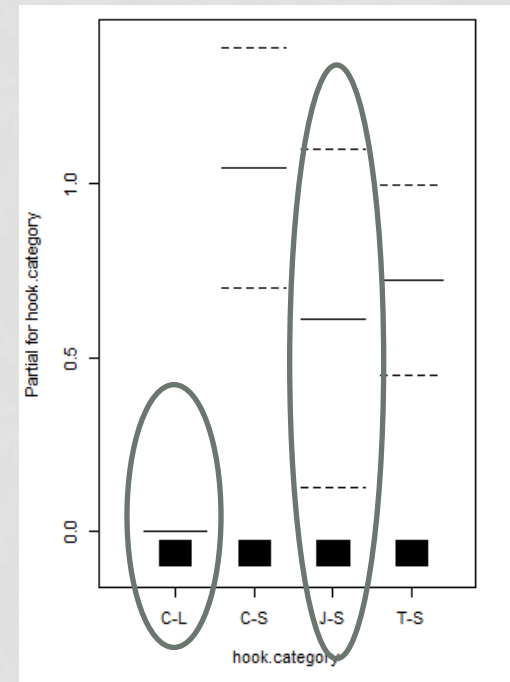


A HICCUP

- Corrected analyses for hook shape/size completed



Before



After

NEXT: SIMULATIONS

- In preparation for Workshop #2, SPC is running 51 scenarios
- Combinations of shallow SWO/ non-SWO, and deep sets with:
 - Large circle hooks
 - and/or
 - Finfish bait
 - and/or
 - Removal of 1-2 shallow hooks



WORKSHOP #2

- 3-8 November 2016 Honolulu



- Examine model results:
 - Baseline interaction & mortality rates
 - Testing mitigation scenarios



ACKNOWLEDGEMENTS

ABNJ TUNA PROJECT
SPC
WPRFMC
ALL PARTICIPANTS!