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A COMPENDIUM OF FISHERIES INDICATORS FOR TUNA STOCKS NOT ASSESSED IN 2016 (BET AND YFT)

WCPFC-SC12-2016/SA-WP-O3

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Overview

- BET and YFT not formally assessed in 2016 (nor was SP ALB but summarized in separate paper)
- Several typical indicators are reviewed
- Discussion of BET 2016 CPUE patterns

Bigeye tuna

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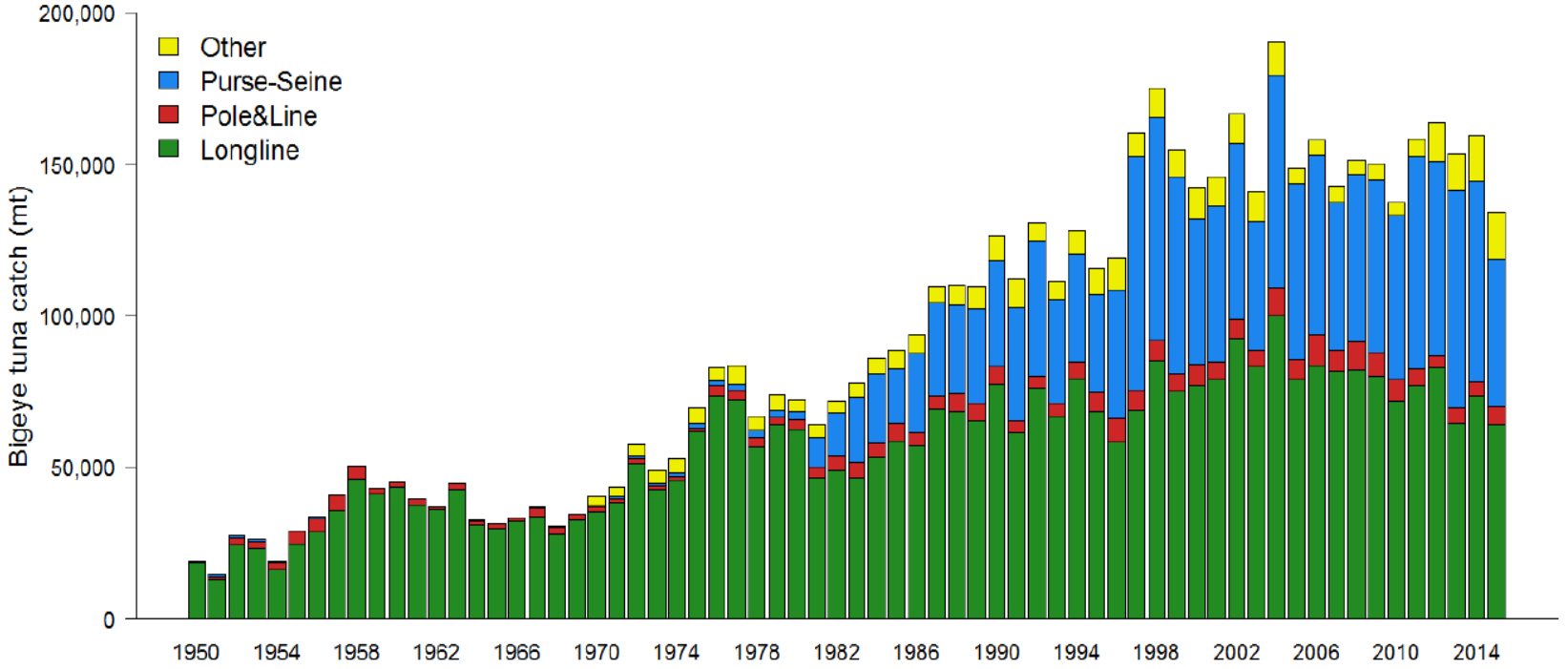
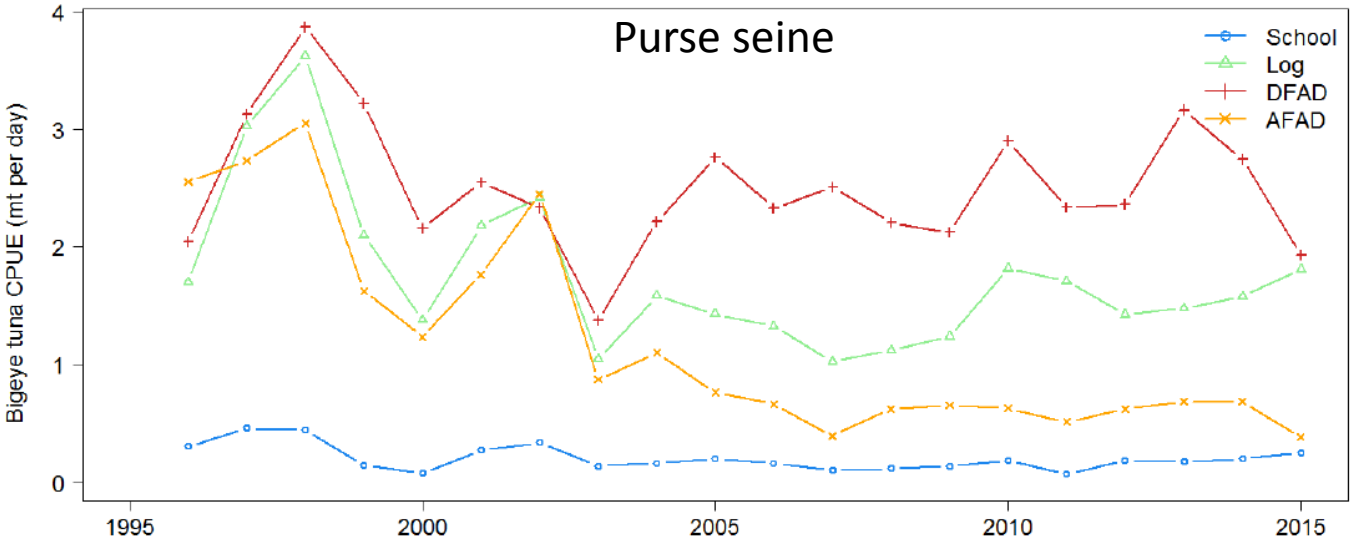
Bigeye catch by gear

- Total BET catch decreased by 16% from 2014
  - PS down 26%, LL down 13%
  - PL up 20%, Other gear up 3%

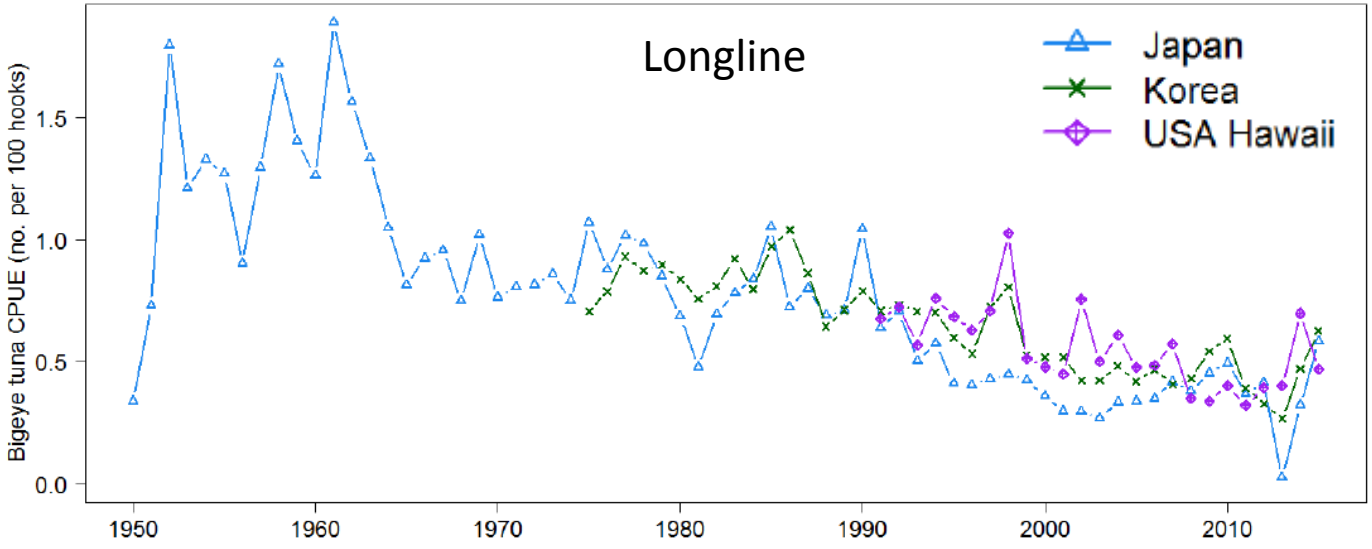


Trends in Bigeye CPUE



Re 2010-14
Free: +50%
DFAD:-28%
AFAD:-39%

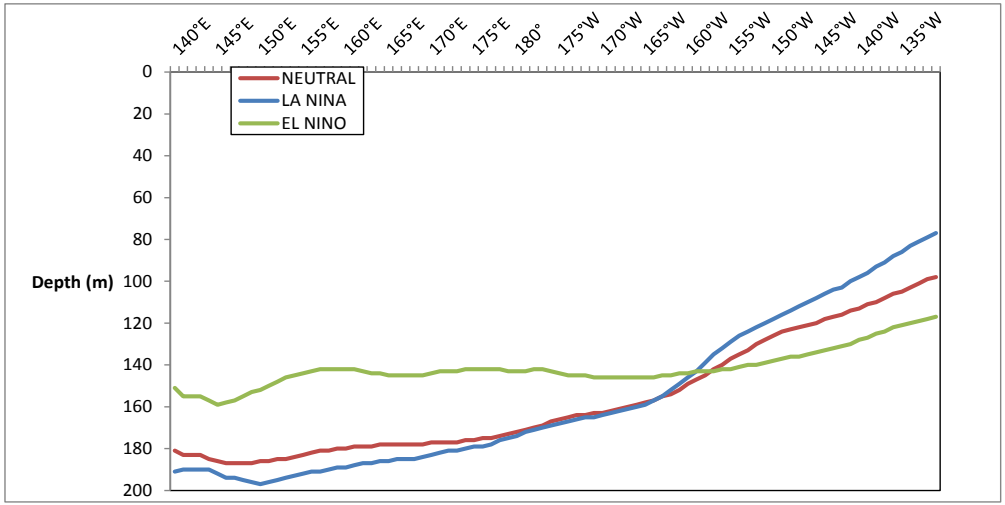
20N – 10S



Re 2010-14
JP: +79%
KR:+52%
US HW:+7%

Why lower PS BET CPUE?

- Fishery centred further east due to El Niño – expected to see higher CPUE
- PS effort declined overall, esp for “key” fleets
- Changes in oceanography a possible explanation
  - Changes in 20°C thermocline likely affect catchability
  - EL Niño leads to deeper thermocline in east
  - Complex relationship requiring further study



Spatial pattern of CPUE: LL

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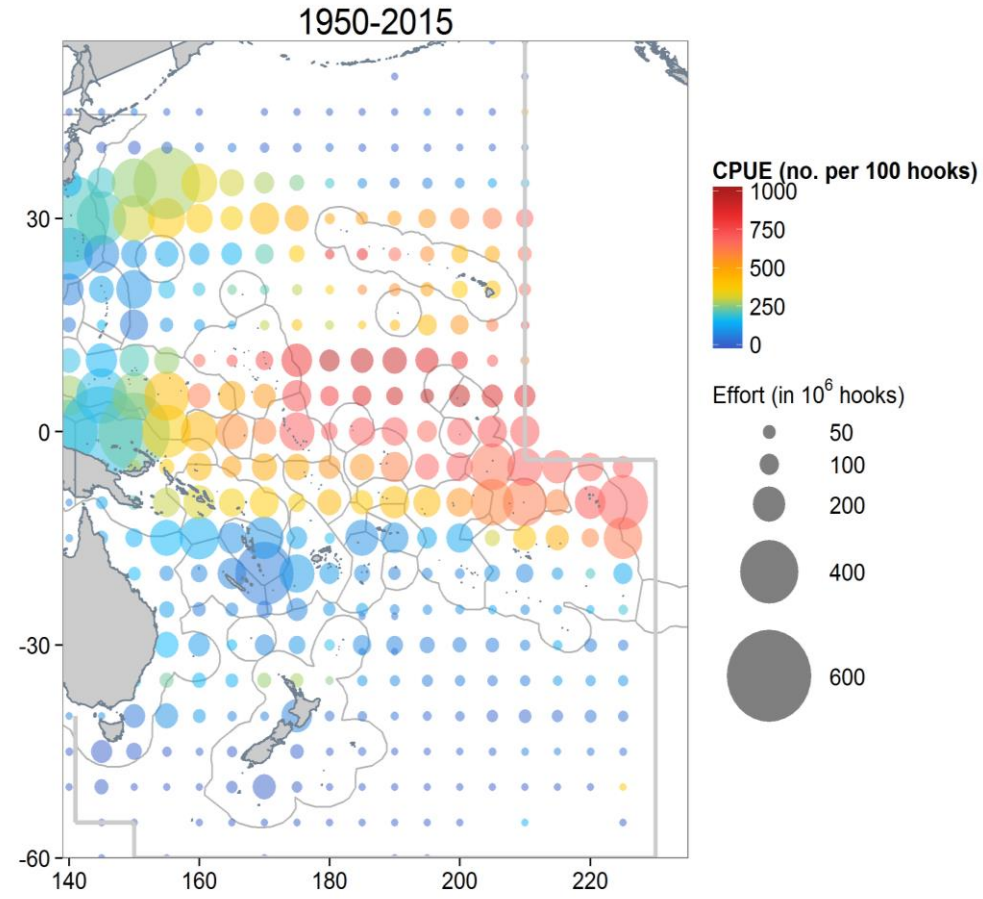
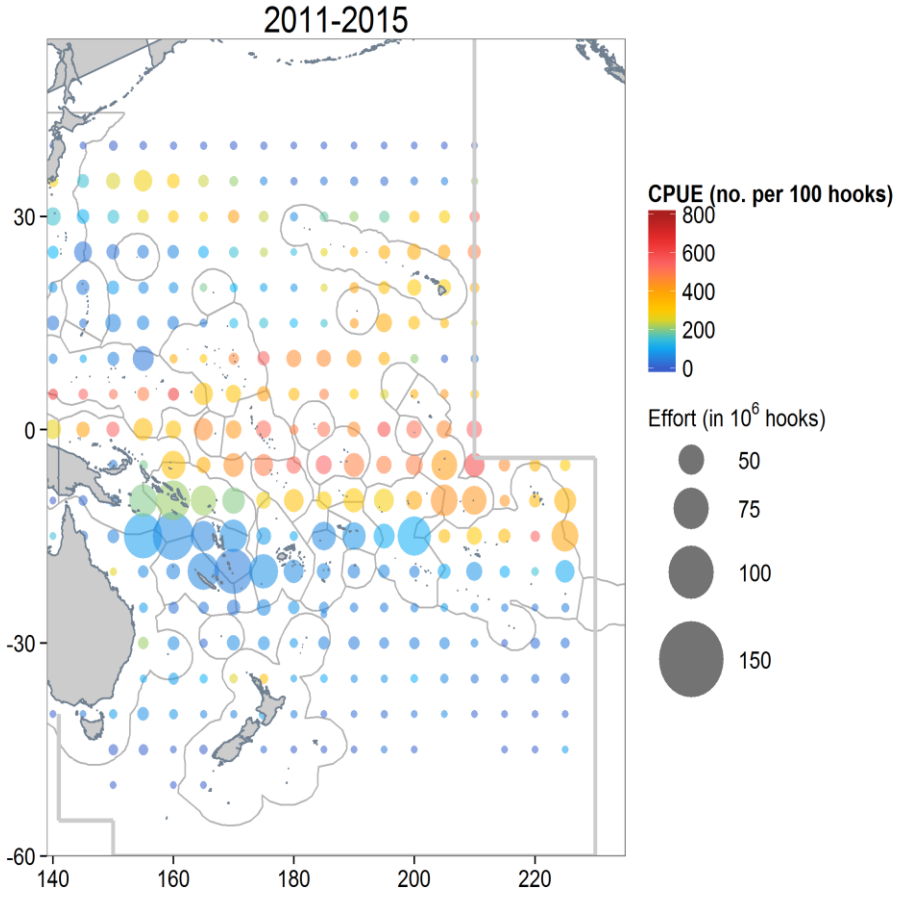
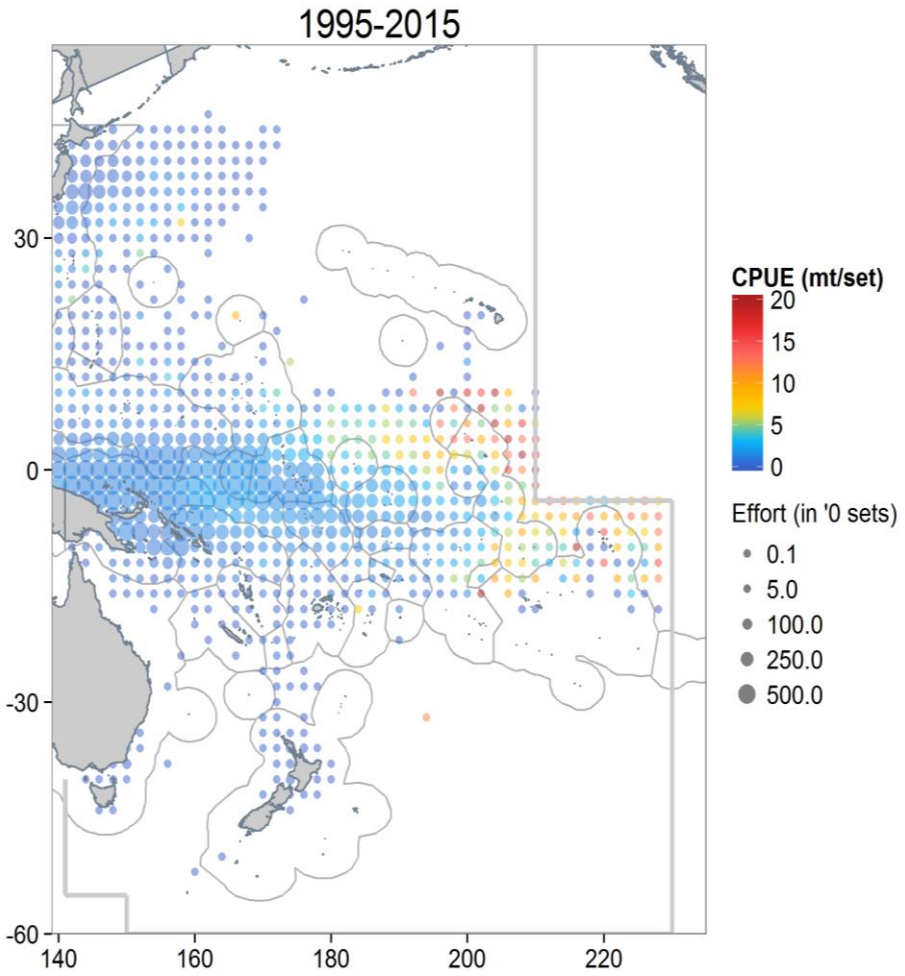
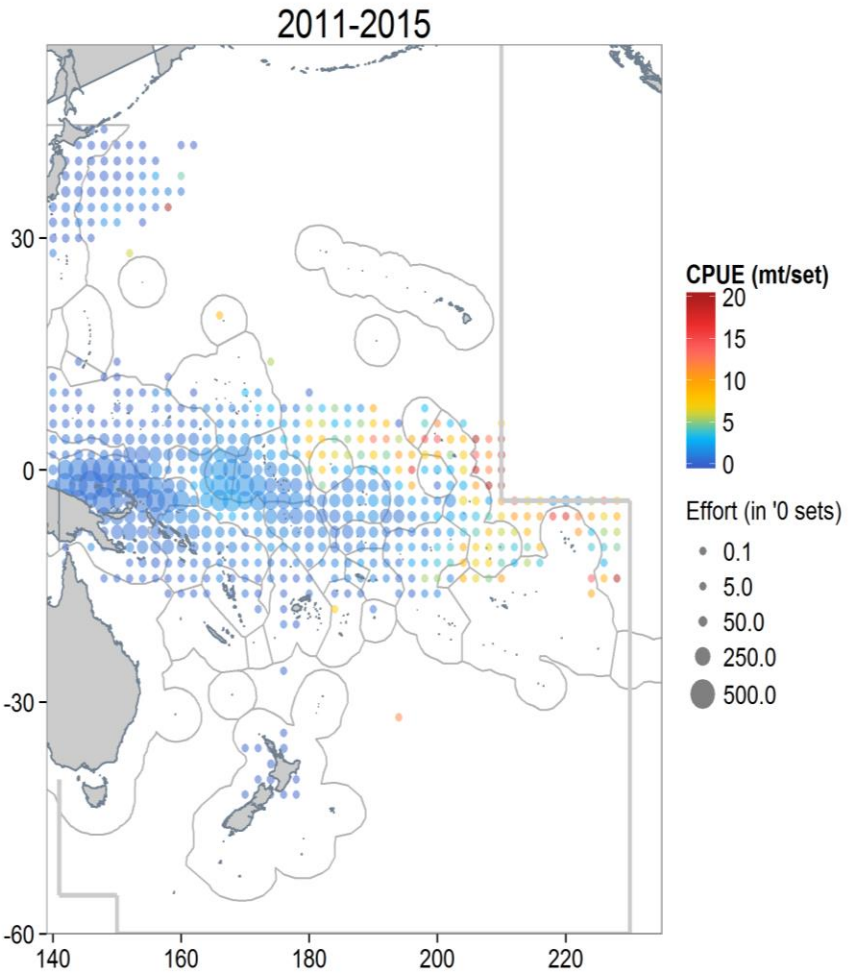


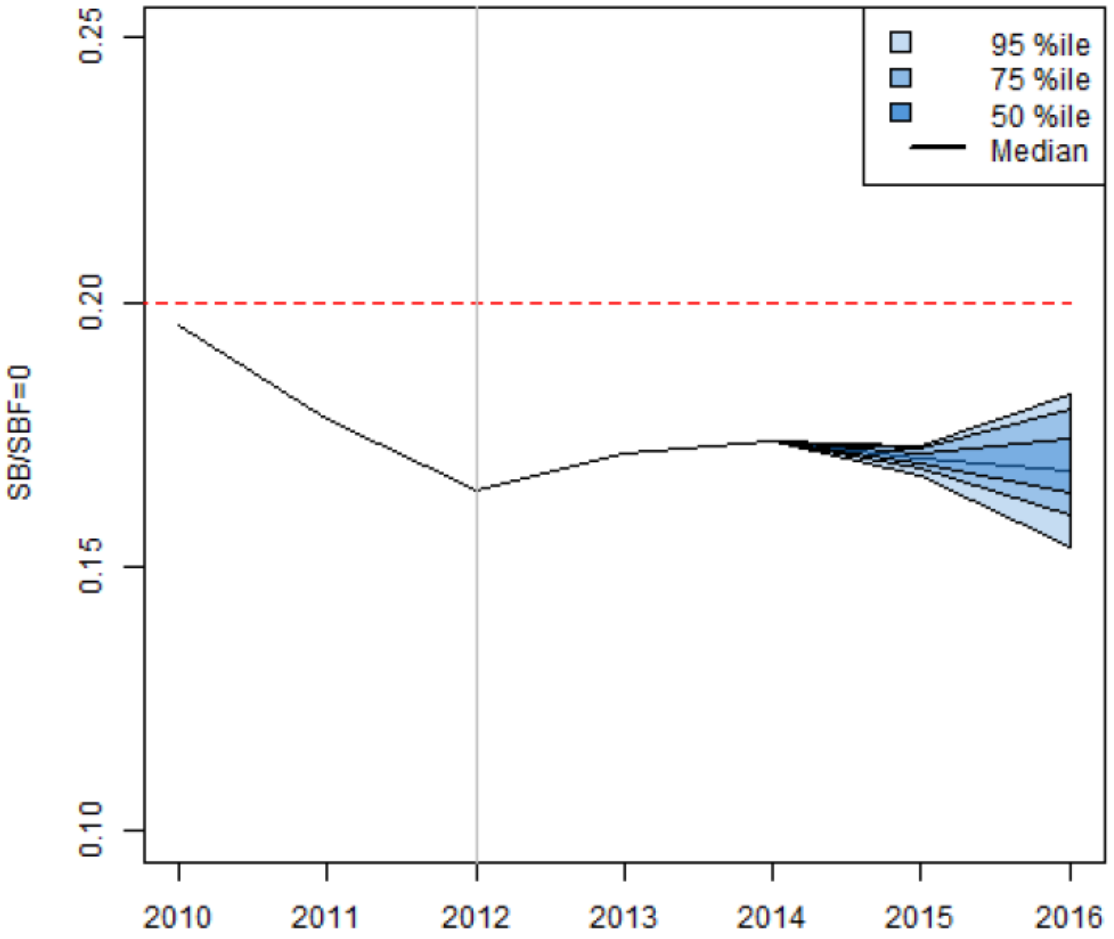


Spatial pattern of CPUE: PS





Bigeye stock projections



- No further decline in the bigeye stock was projected under recent conditions, *assuming recent estimated recruitments continue*
- $F_{2016}/F_{MSY} = 1.11$
- $SB_{2016}/SB_{F=0} = 0.17$

Yellowfin

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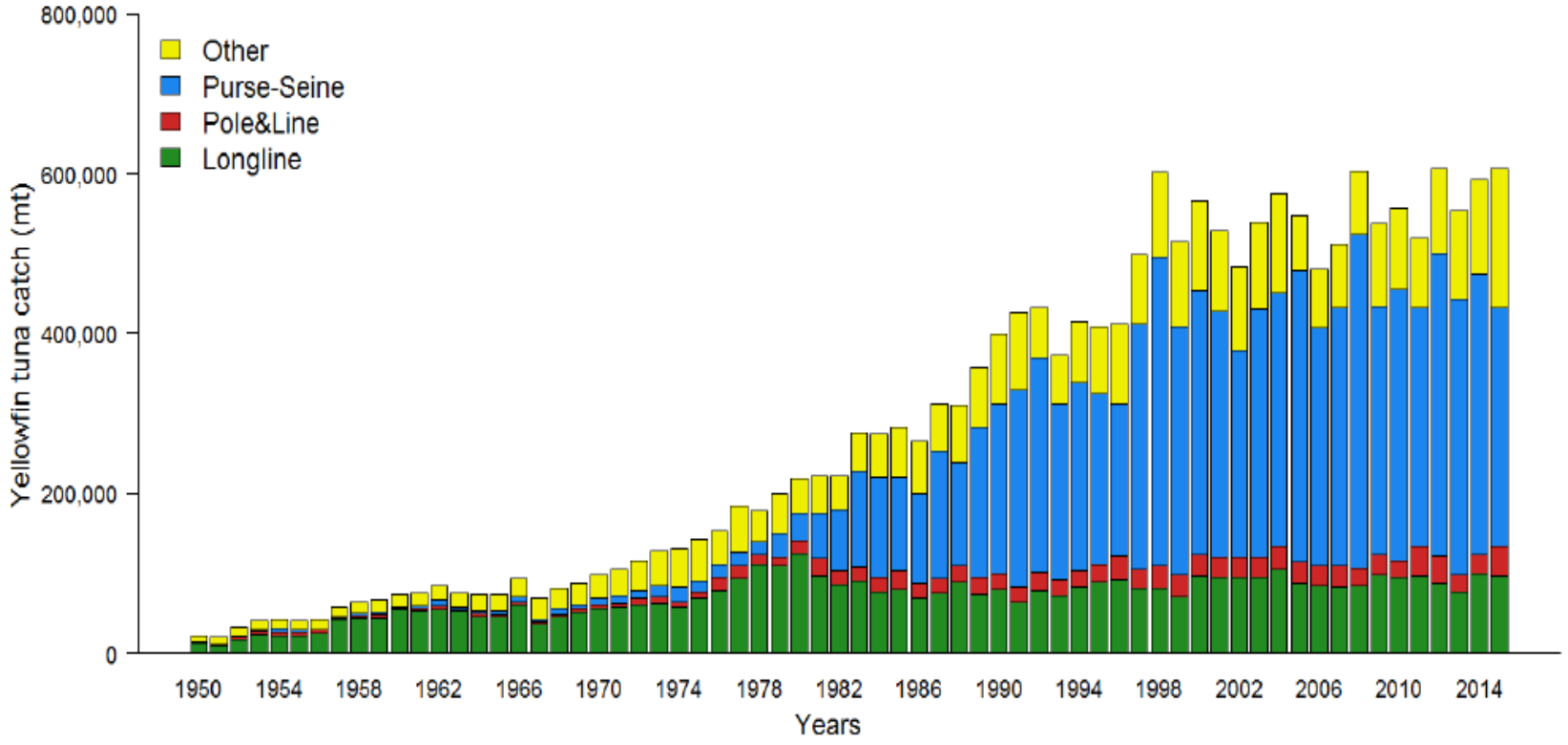
Yellowfin tuna catch by gear

- Total YFT catch increased by 2% from 2014
  - PS down 15%, LL down 2%
  - PL up 51%, Other gear up 47



Trends in Yellowfin CPUE

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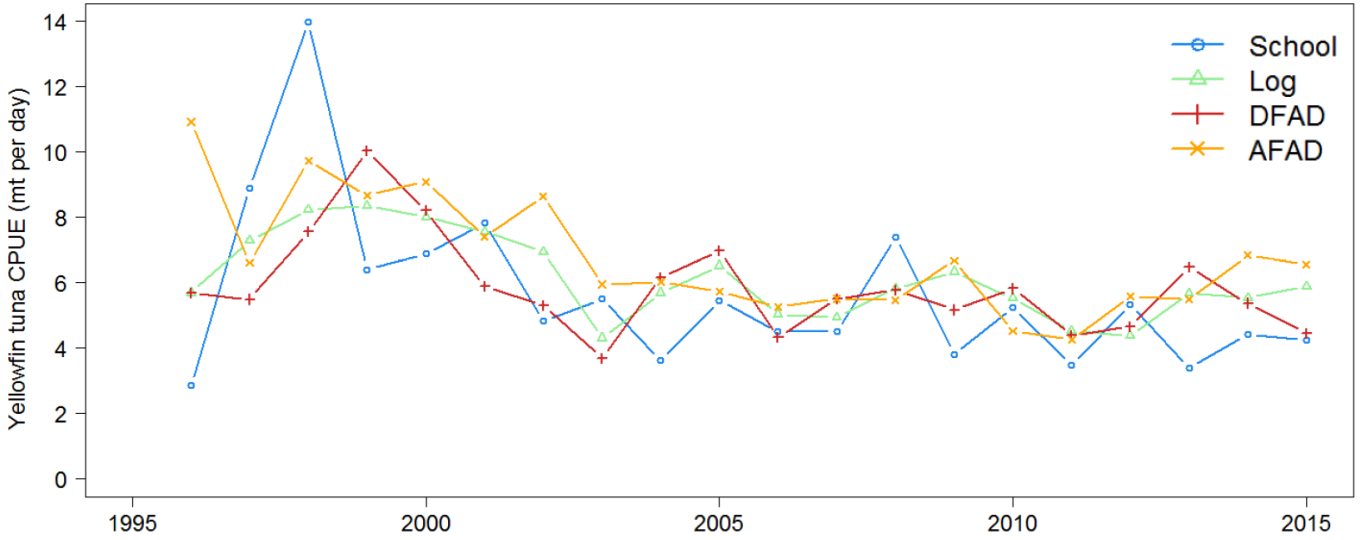
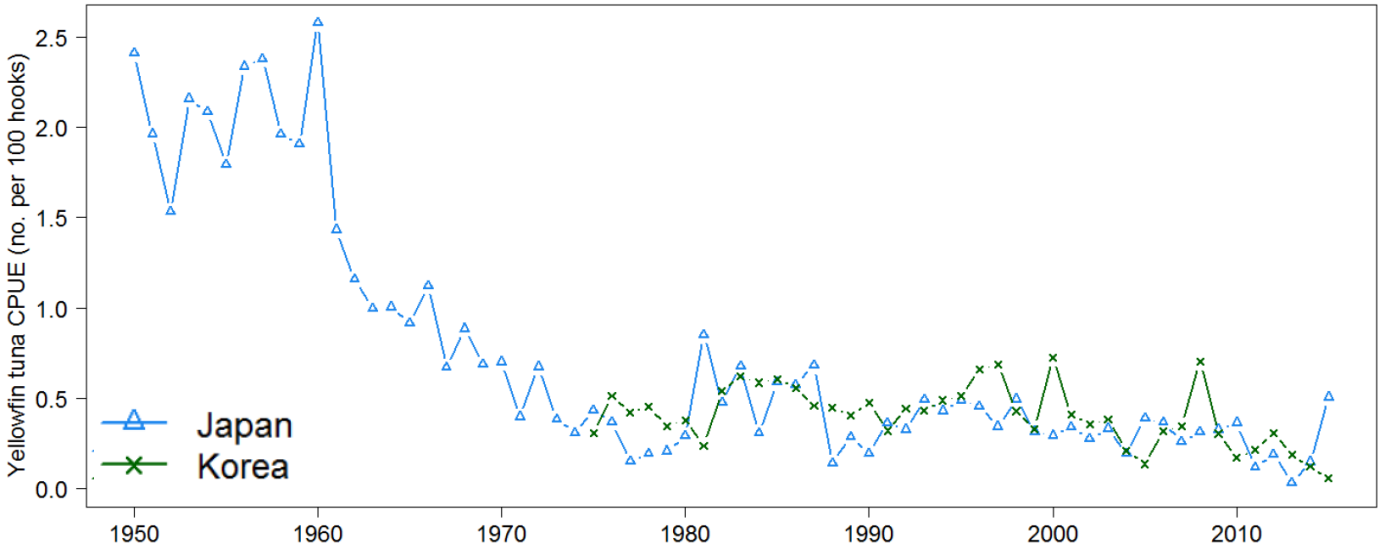
Purse seine



Re 2010-14
Free: -3%
DFAD:-17%
AFAD:+23%

Longline



Re 2010-14
JP: +197%
KR:-72%

Spatial pattern of CPUE: LL

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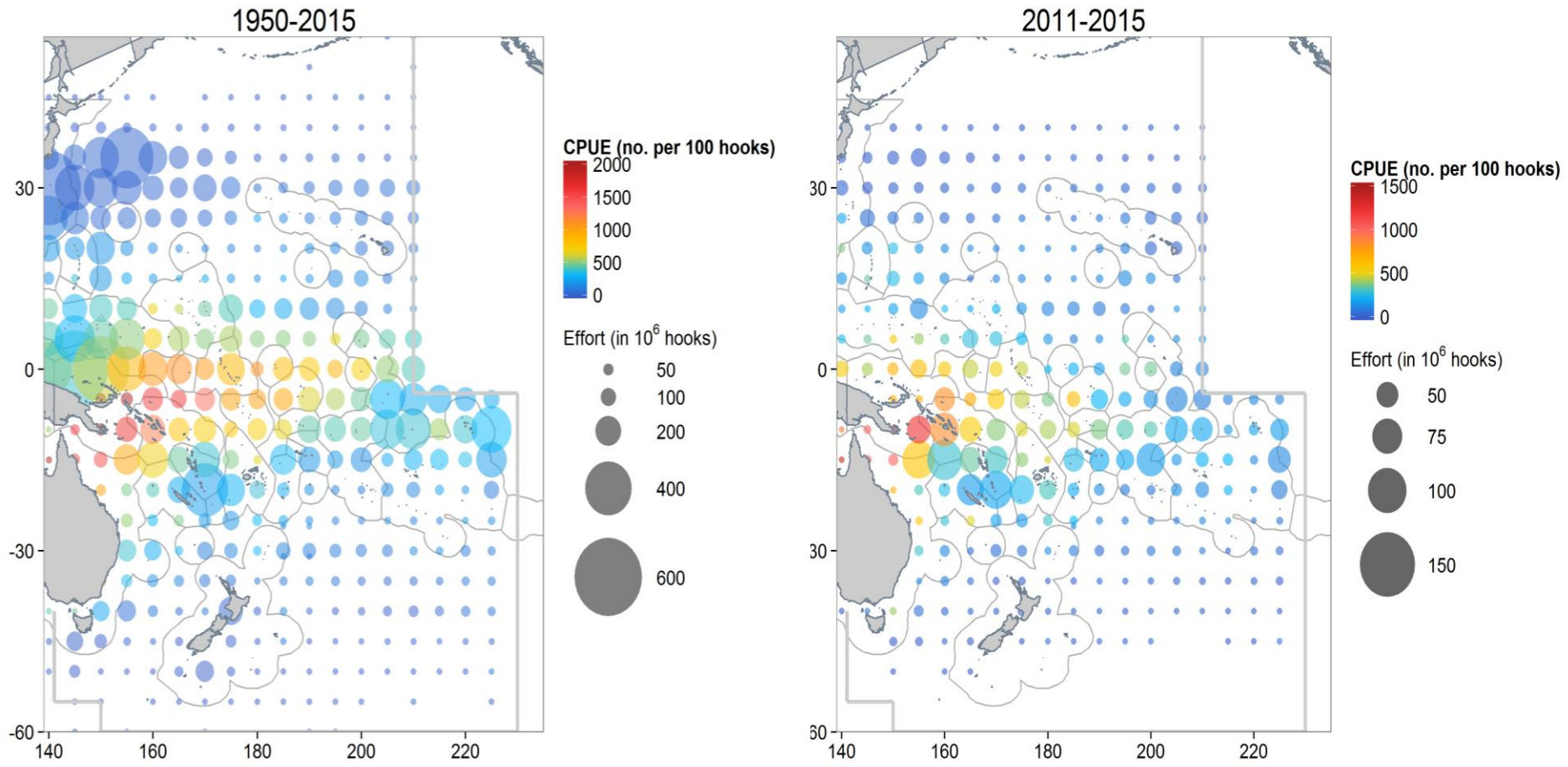
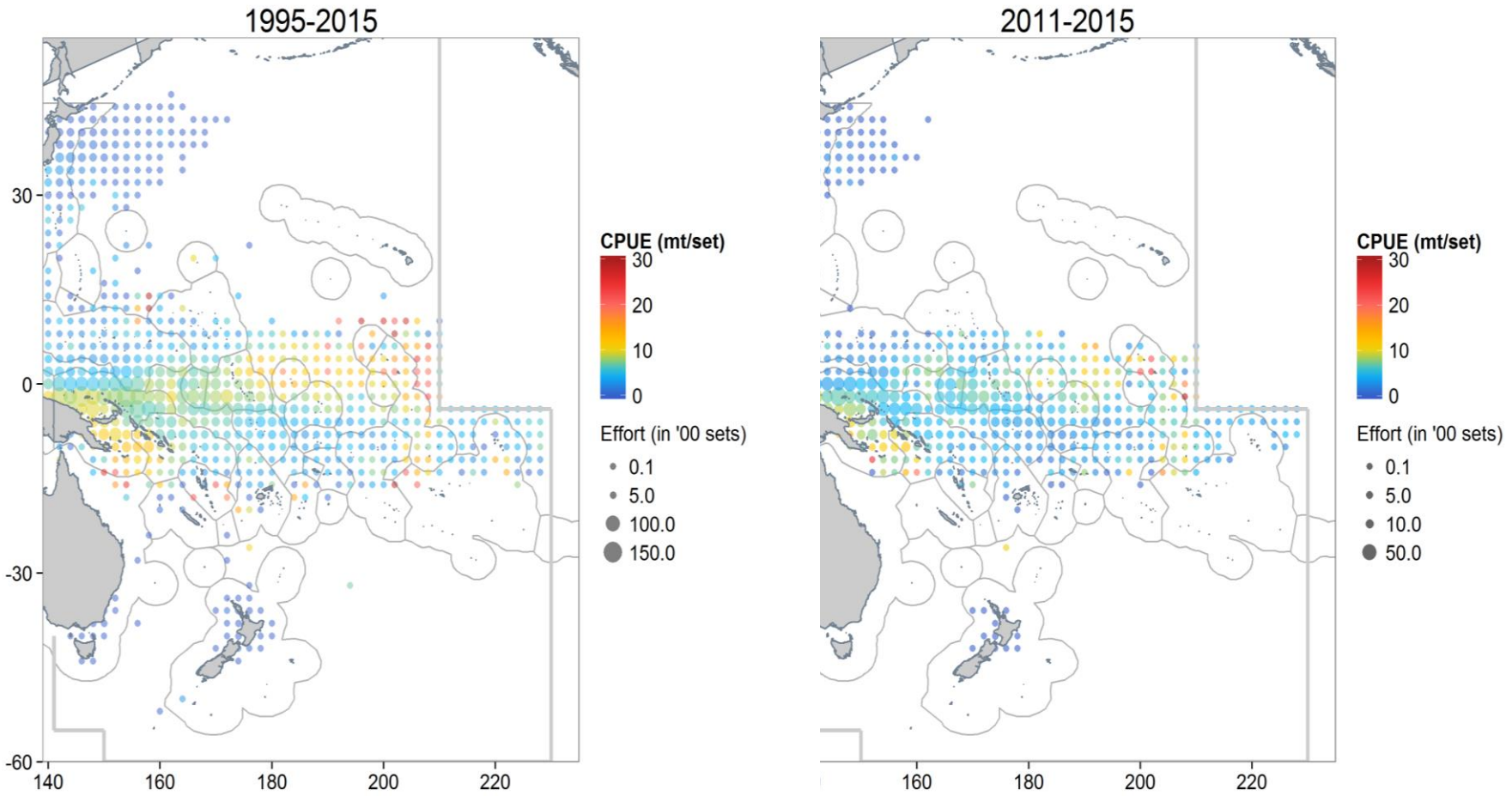
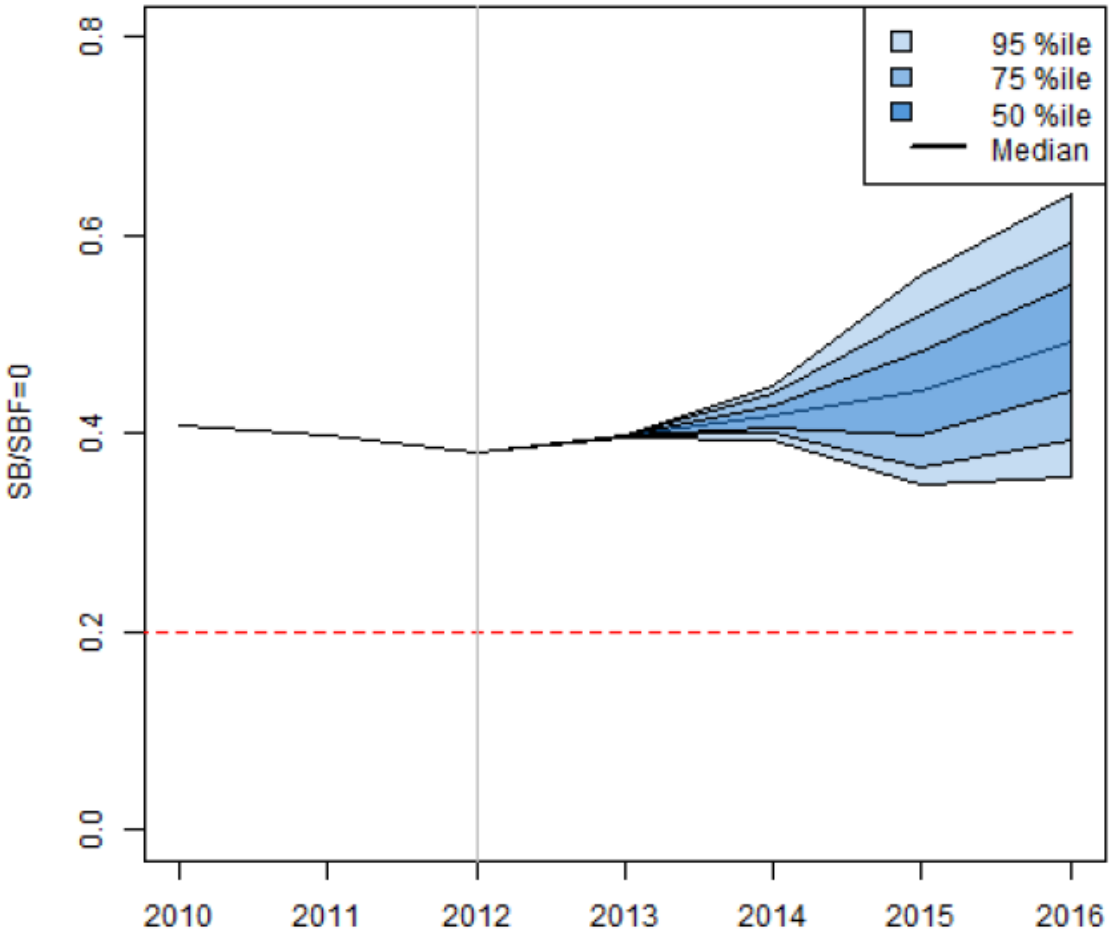


Spatial pattern of CPUE: PS



Yellowfin stock projections



- The yellowfin stock was projected to increase under recent conditions, *assuming recent estimated recruitments continue*
- $F_{2016}/F_{MSY} = 0.80$
- $SB_{2016}/SB_{F=0} = 0.49$