



Pacific  
Community  
Communauté  
du Pacifique

# Overview of tuna fisheries in the Western and Central Pacific Ocean, including economic conditions – 2015

(WCPFC-SC12-2016/GN WP-1)

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Co-presented by Dr Chris Reid

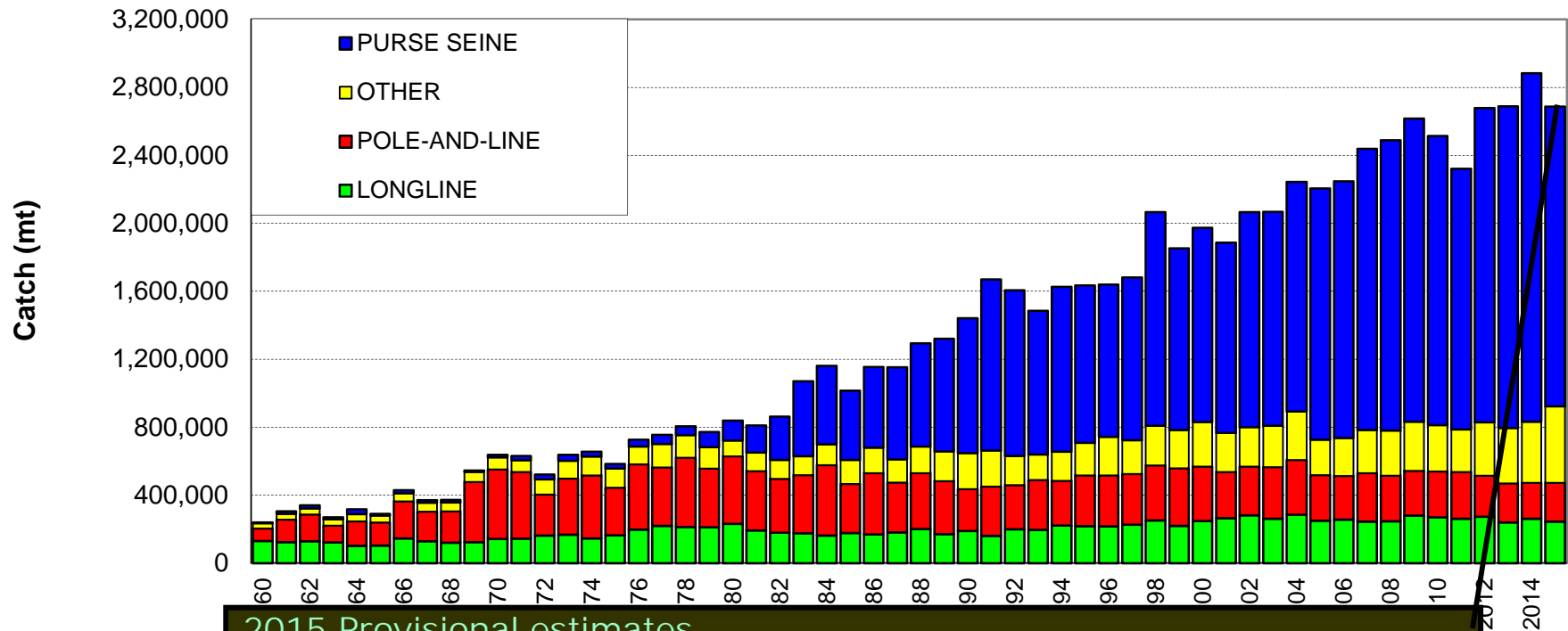
Twelfth Regular Session of the Scientific Committee (SC 12)  
3-11 August 2016  
Bali, Indonesia

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<sup>2</sup> Pacific Islands Forum Fisheries Agency (FFA), Honiara, Solomon Islands

# WCP-CA Tuna Catch by gear

Highlighting 2015 catches

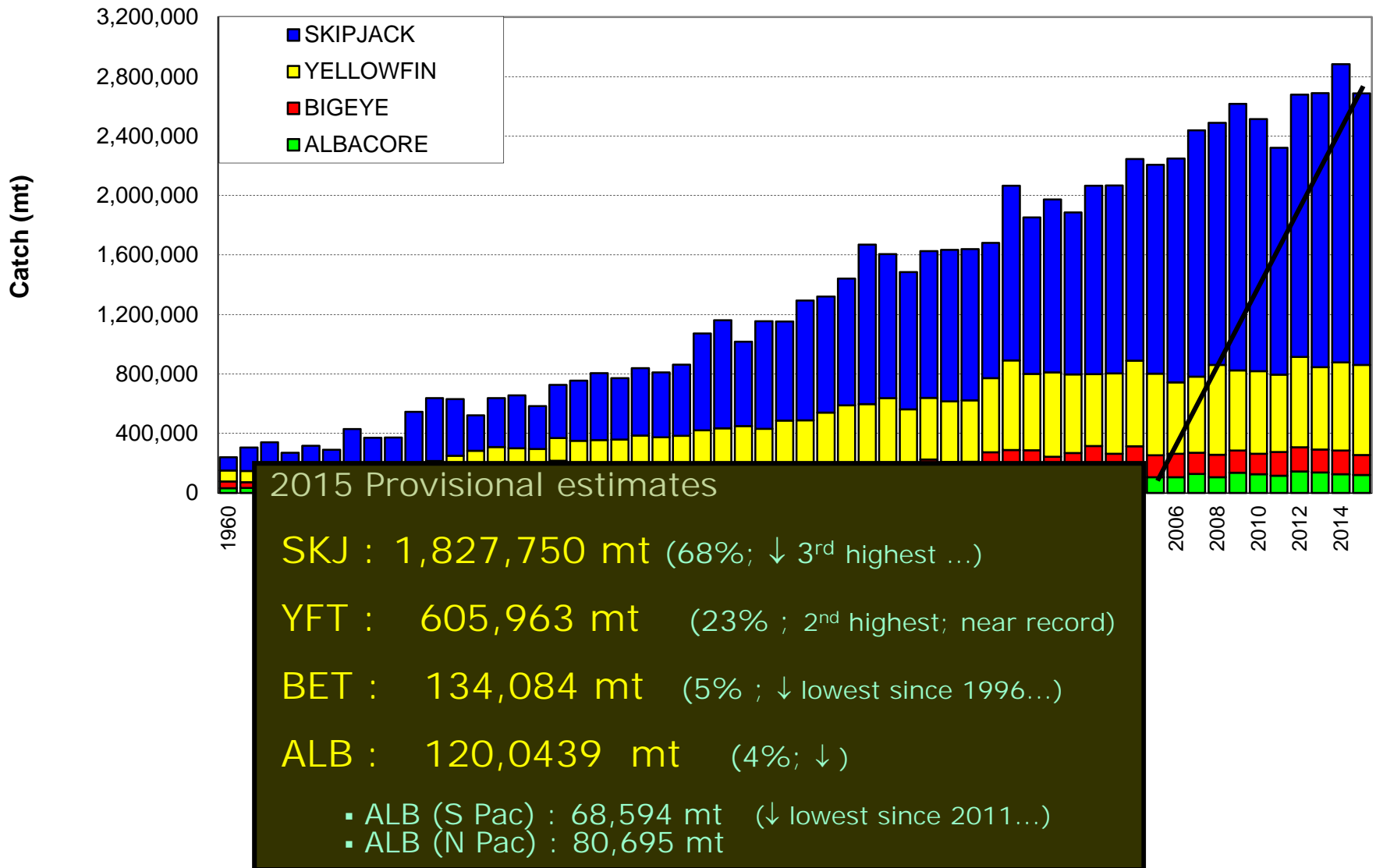


## 2015 Provisional estimates

- Total Catch – 2,687,840 mt (↓ 3<sup>rd</sup> highest on record...)
- Purse seine – 1,766,070 mt (↓ 66% ; 5<sup>th</sup> highest...)
- Longline – 243,547 mt (↓ 9% ; lower than recent average)
- Pole-and-line – 228,129 mt (8% ; stable c.f. 2014)
- Other (mainly ID/PH artisanal) – (17%)

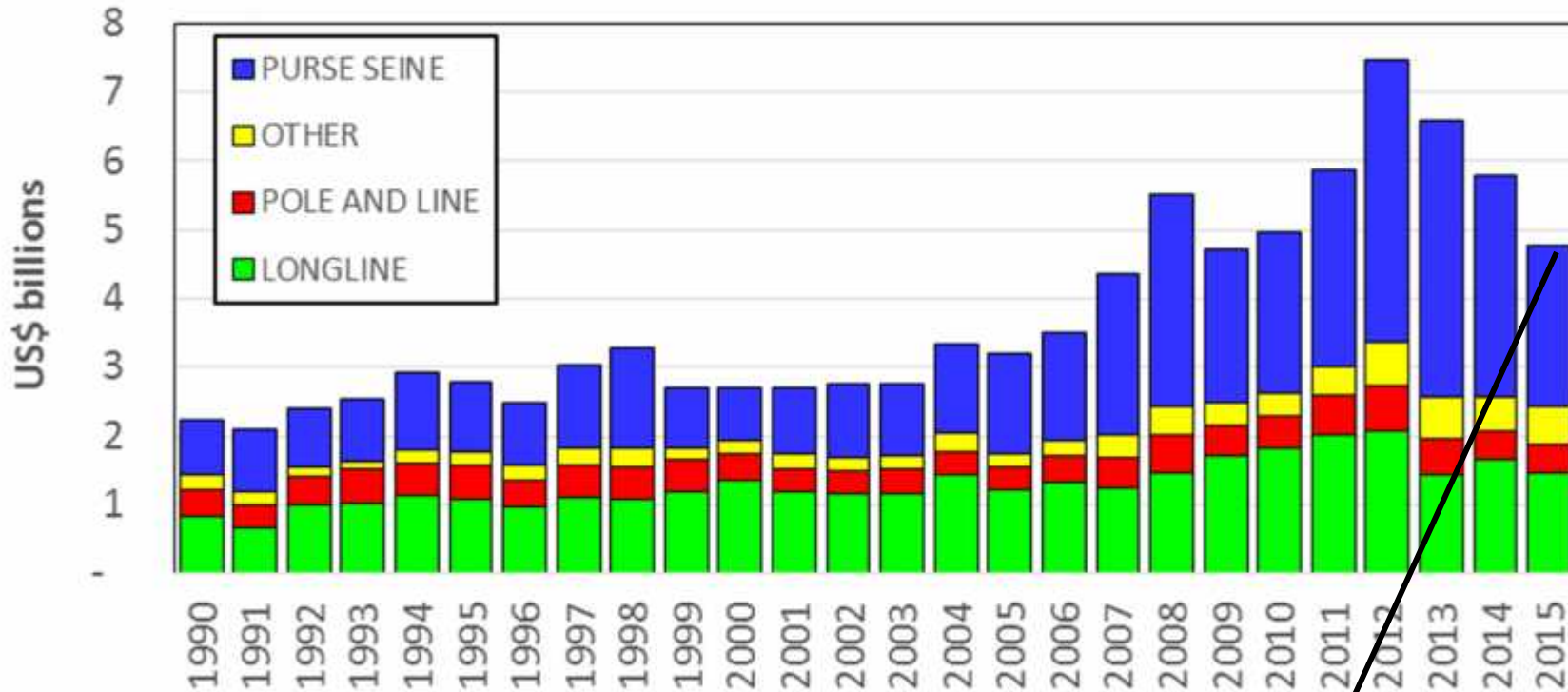
# WCP-CA Tuna Catch by species

Highlighting 2015 catches



# WCP-CA Tuna Catch Value by gear

Highlighting 2015 values

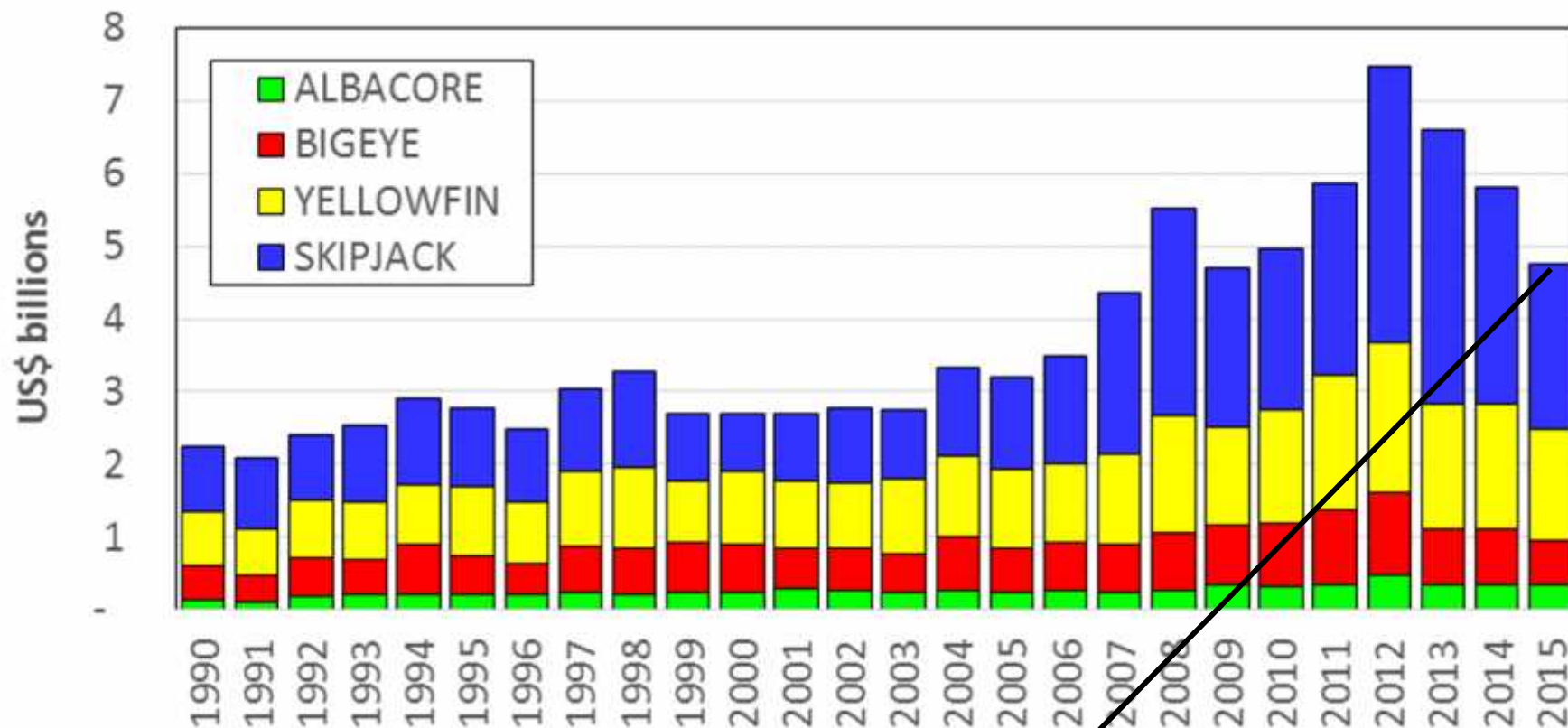


2015 estimates (billions)

- Total Value – \$4.76 (down 18%)
  - Purse seine – \$2.33 (down 28%)
  - Longline – \$1.47 (down 11%)
  - Pole-and-line – \$0.42 (down 6%)
  - Other \$0.55– (up 11%)

# WCP-CA Tuna Catch Value by species

Highlighting 2015 values



2015 estimates (billions)

SKJ : \$2.27 (↓ 24%)

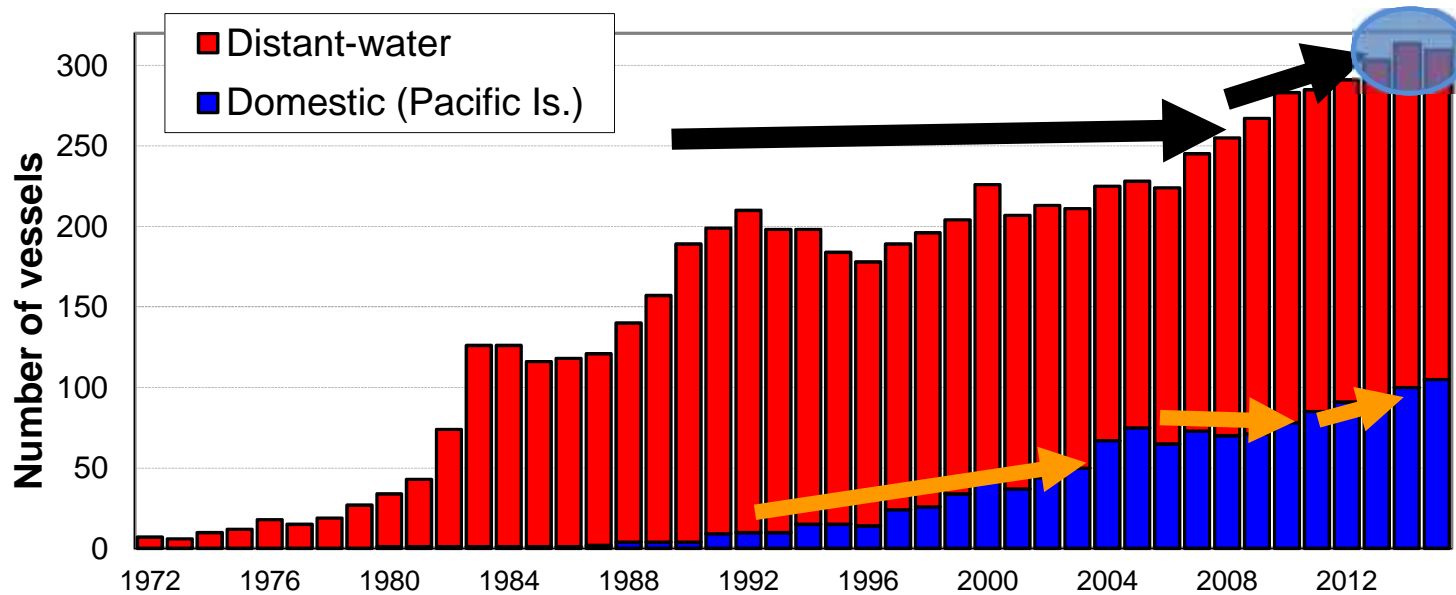
YFT : \$1.53 (↓ 11% ...)

BET : \$0.61 (↓ 20% ...)

ALB : \$0.36 (stable ...)

# WCP-CA Purse seine fishery

Number of vessels (according to WCPFC CCM submissions)

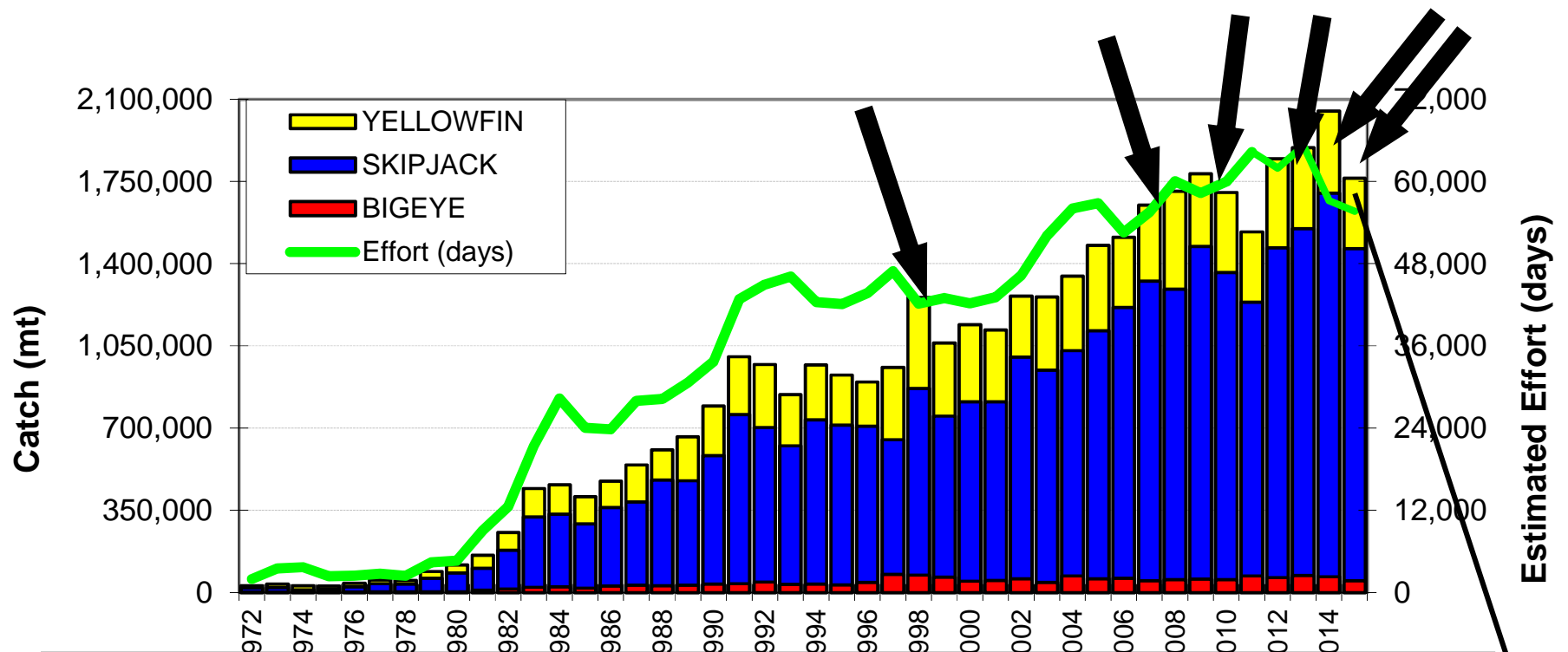


Also please refer to APPENDIX :

- Table A14 for active vessel numbers according to logbooks
- Figure A15 in response to SC11 recommendation on improving presentation of vessel capacity.

# WCP-CA Purse seine fishery

Annual catch (mt) by species and effort - Highlighting 2015 catches



2015 Provisional estimates

**TOTAL : 1,766,070 mt** (↓ 5<sup>th</sup> highest on record; mainly due to a drop in effort)

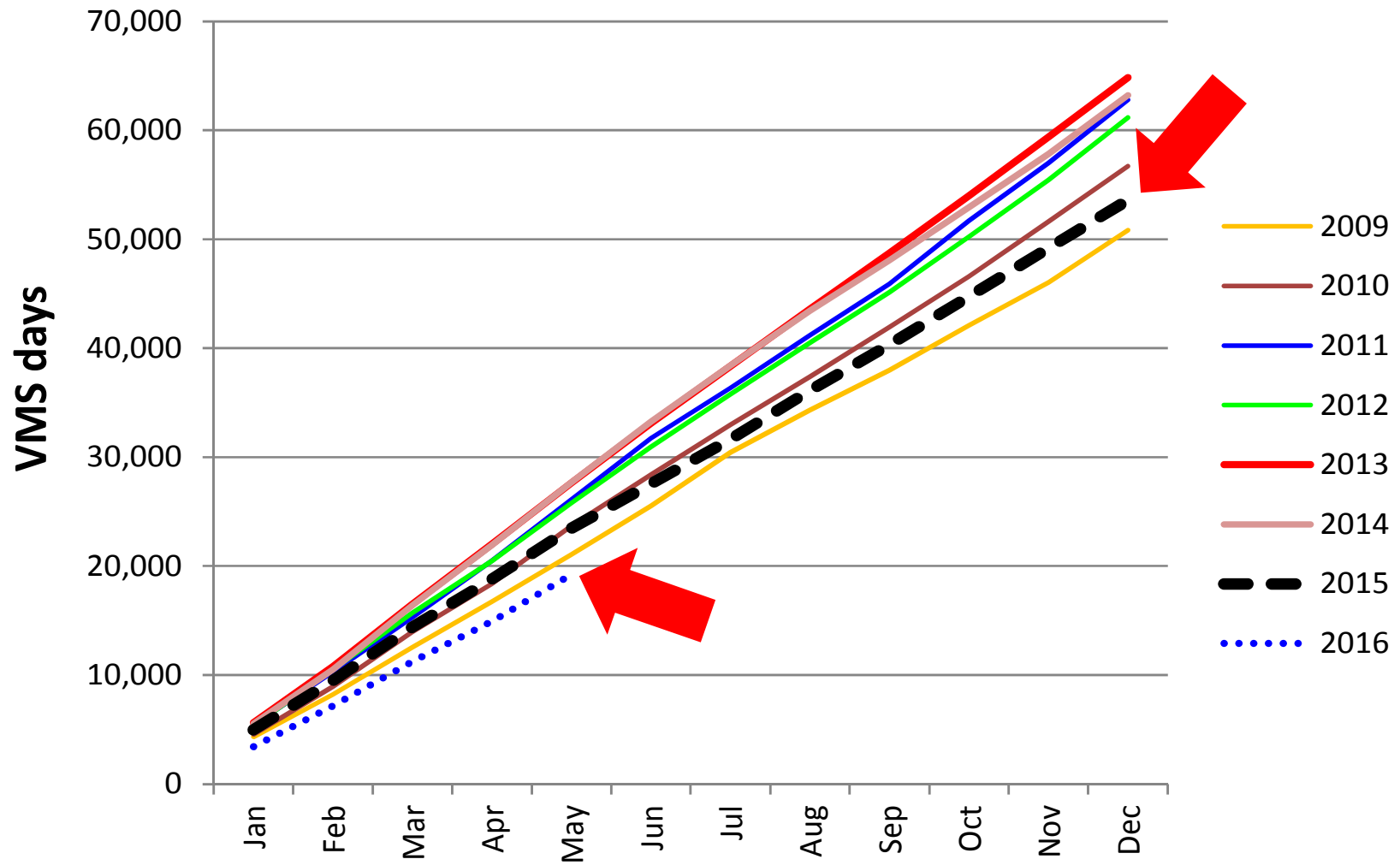
**SKJ : 1,416,435 mt** (80%; ↓ 210,000mt lower than 2014 record)

**YFT : 298,847 mt** (17% ↓ amongst lowest over last decade)

**BET : 48,772 mt** (5%; ↓ lowest since 2007; low effort and CPUE)

# WCP-CA Purse seine fishery

Cumulative monthly effort (according to VMS data)

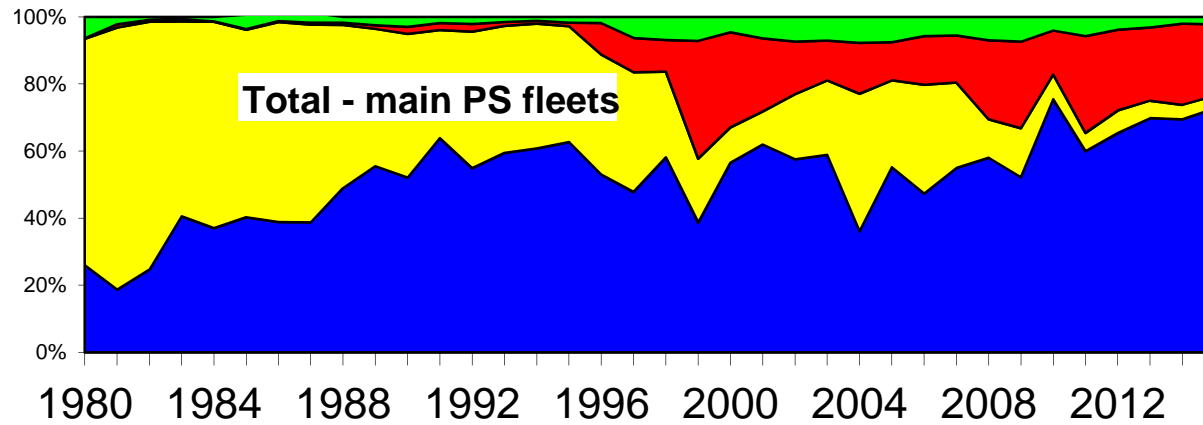




# WCP-CA Purse seine fishery

Trends in the proportion of EFFORT and CATCH by set type (major fleets)

## EFFORT

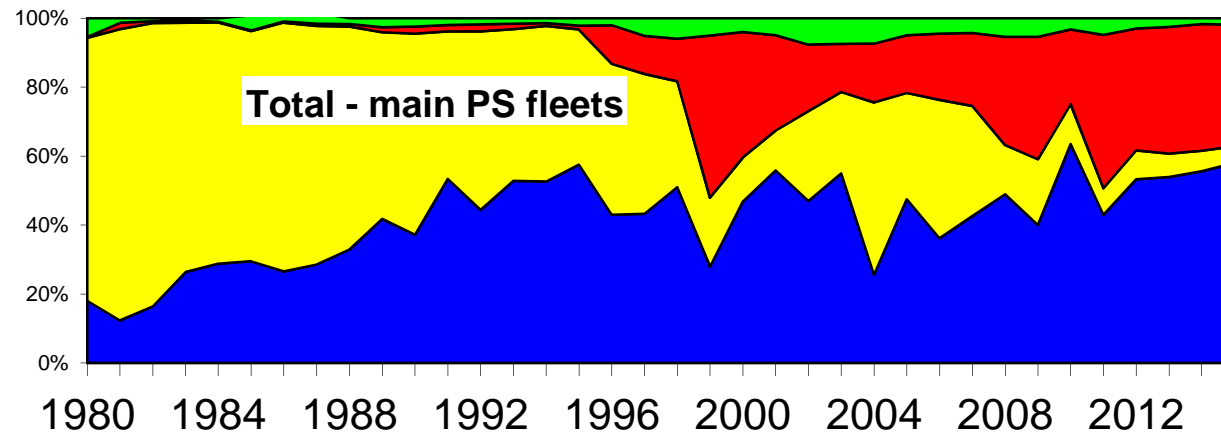


Unassociated

2015 Effort = 72%

2015 Catch = 59%

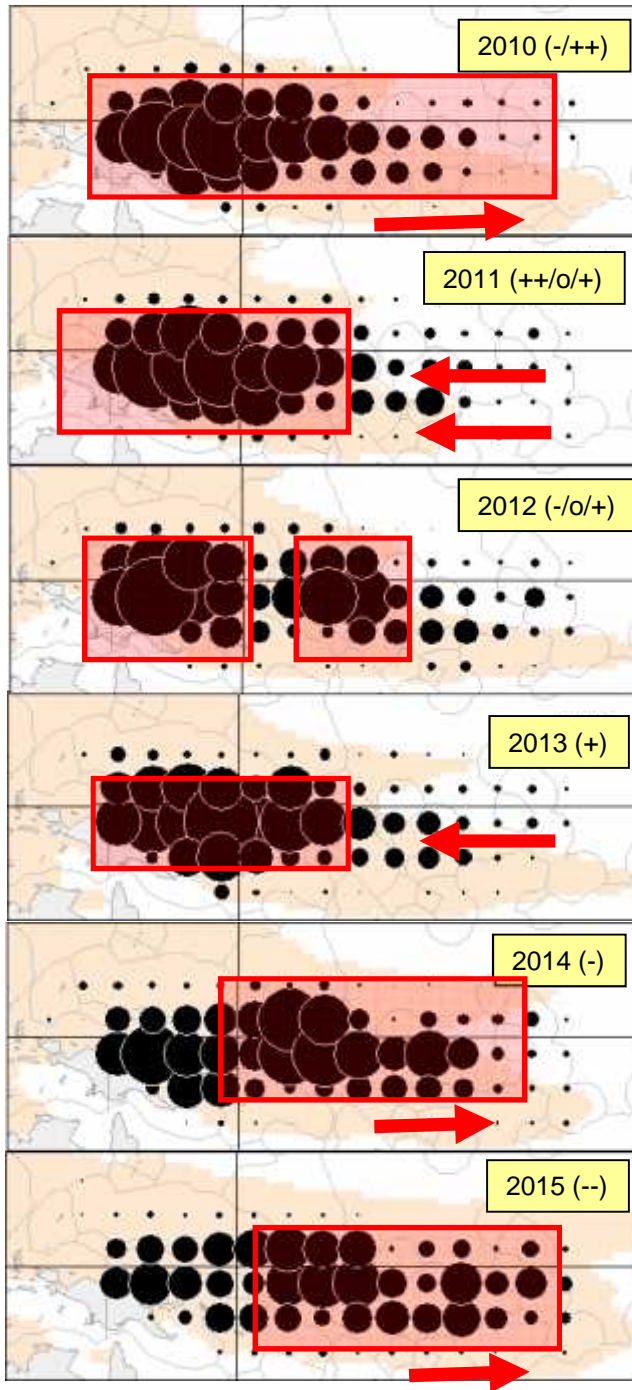
## CATCH



Drifting FAD

2015 Effort = 21% ↓

2015 Catch = 40%



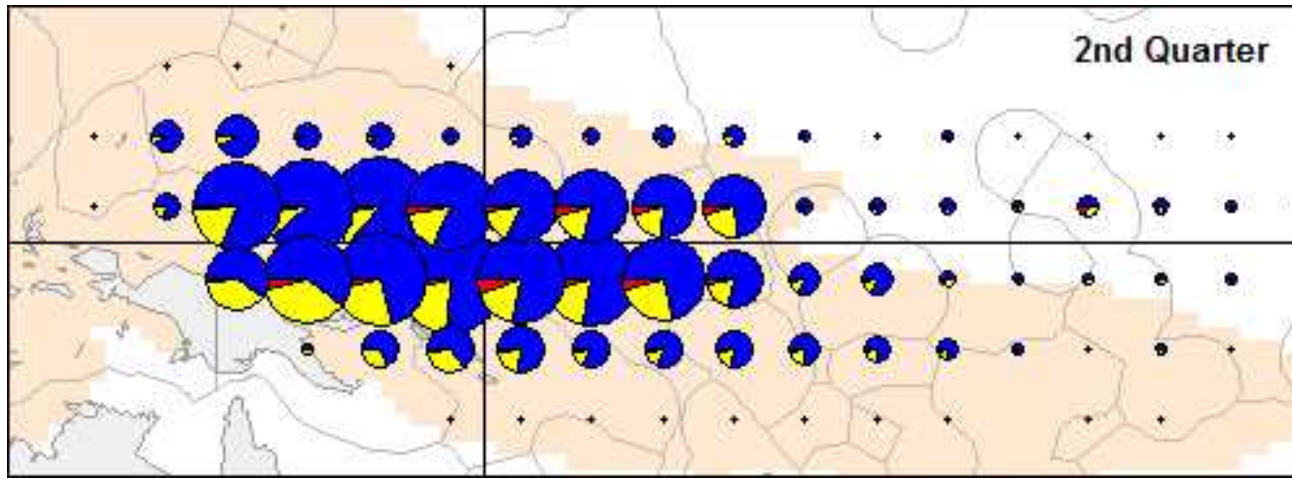
# WCP-CA Purse seine fishery

Distribution of effort

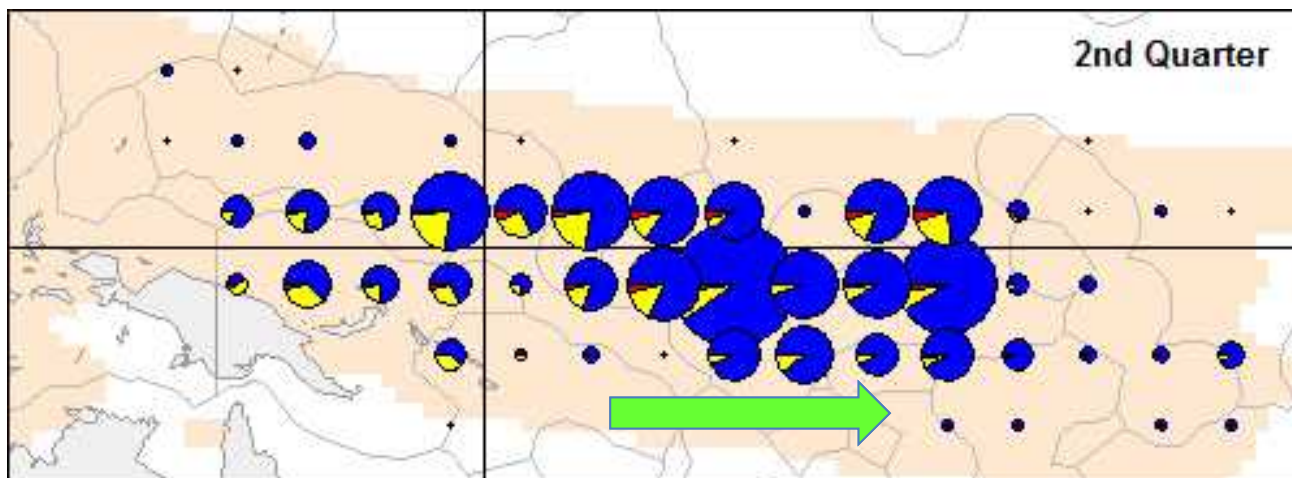
2015 El Nino conditions...  
continuation of activity in east...

# WCP-CA Purse seine fishery

Quarterly Distribution of catch by species



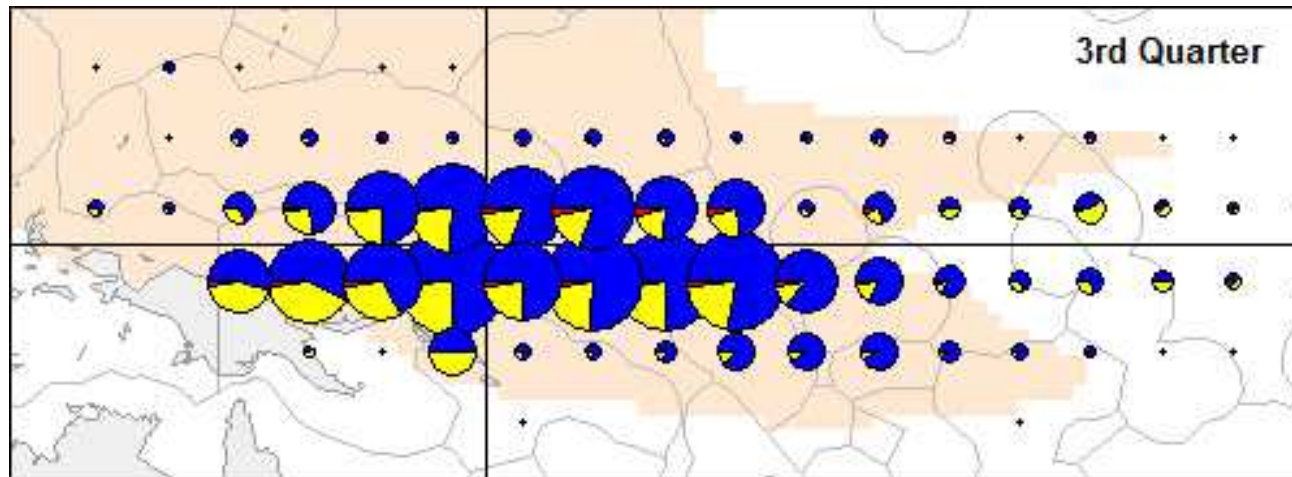
Average  
2000-2014



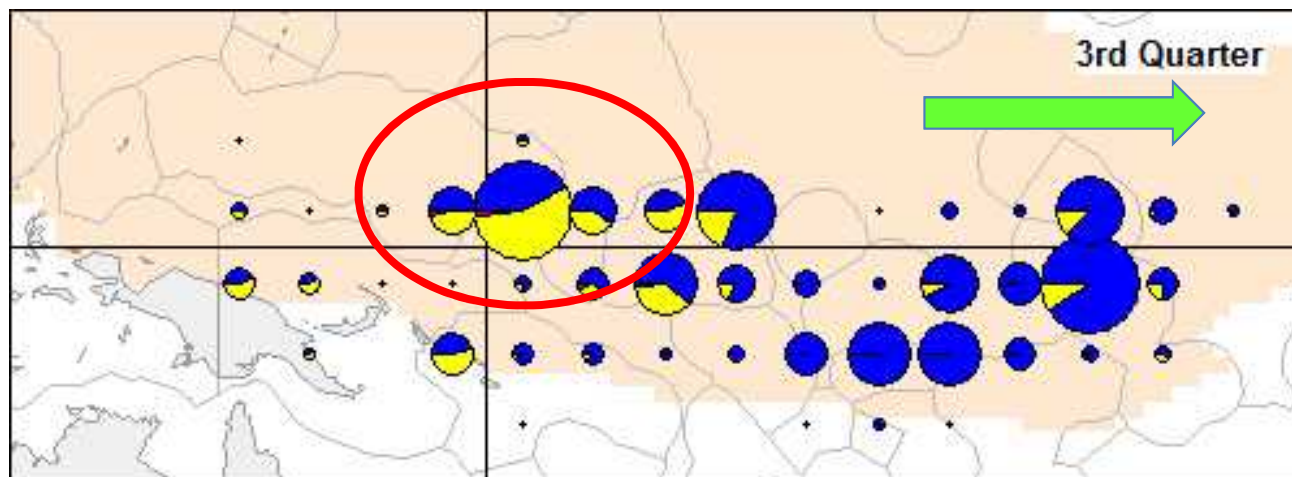
2015

# WCP-CA Purse seine fishery

Quarterly Distribution of catch by species

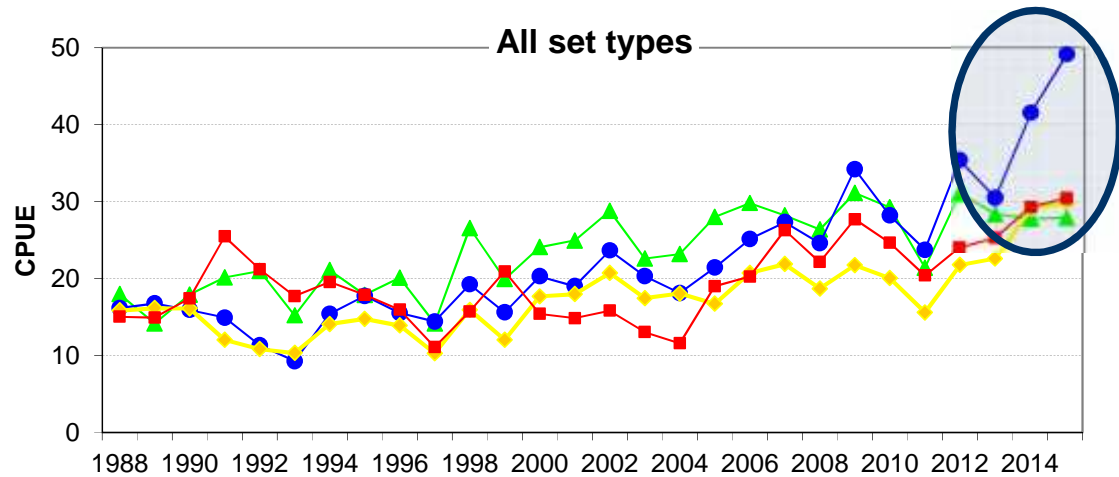


Average  
2000-2014

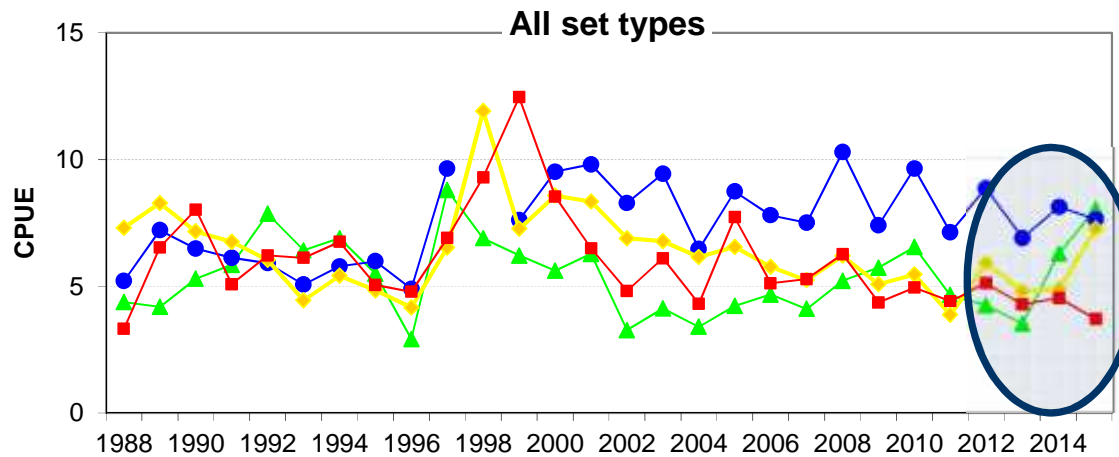


2015

# WCP-CA Purse seine fishery – Nominal CPUE



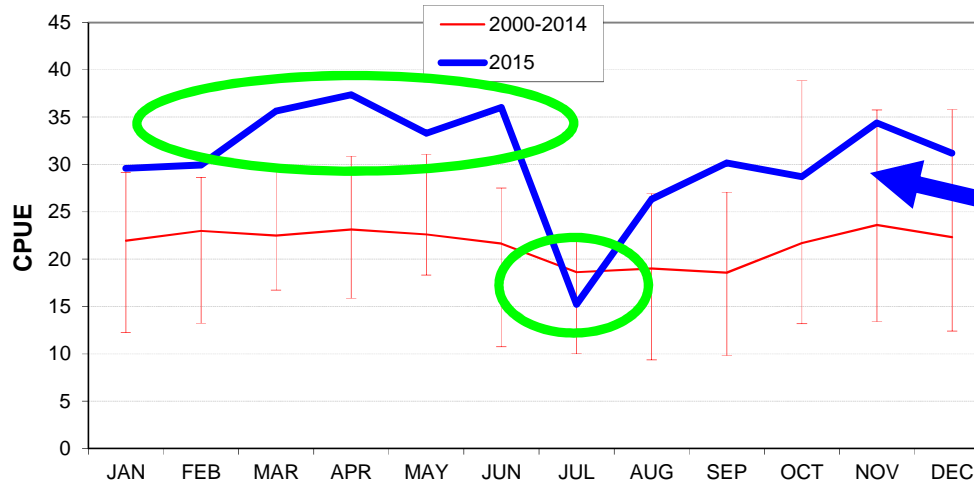
SKIPJACK



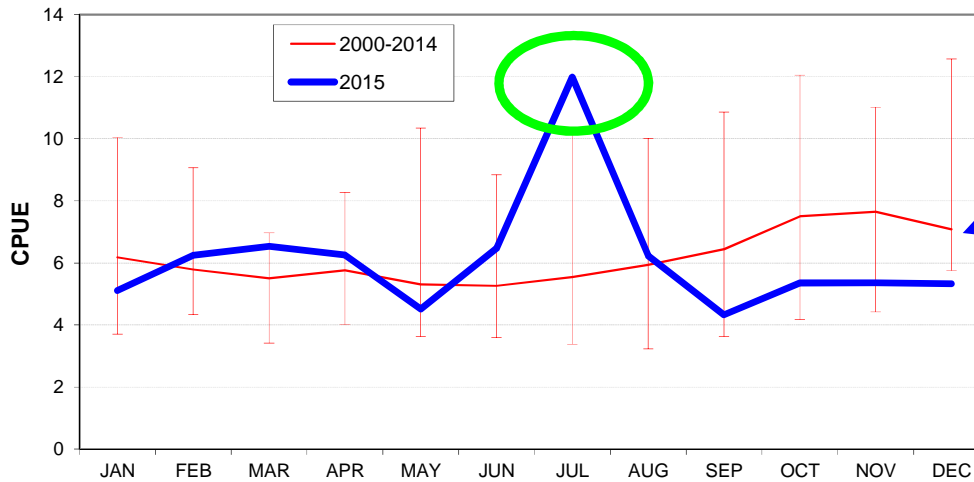
YELLOWFIN

# WCP-CA Purse seine fishery

Average Monthly SKJ (top) and YFT (bottom) CPUE, 2000-2015



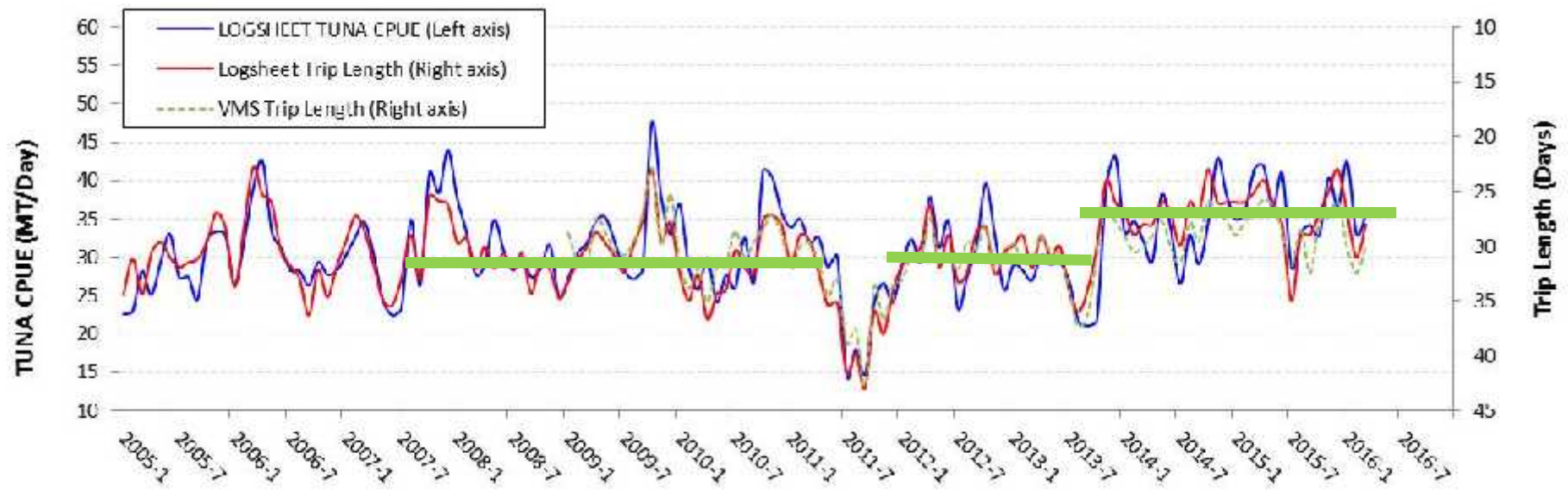
Clearly higher than average



Mostly at or below average ...

# WCP-CA Purse seine fishery

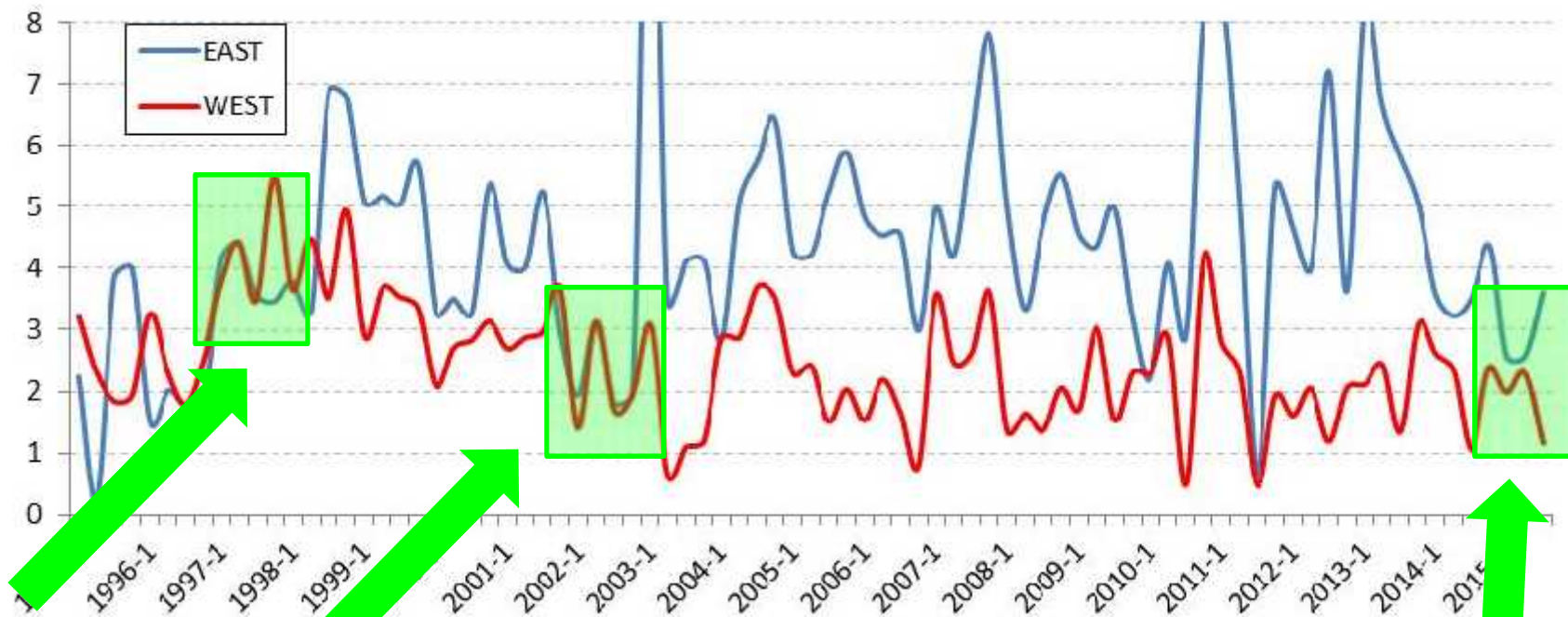
Total tuna CPUE estimates using VMS trip length 2005-2015



# PS Bigeye tuna catch reduction – WHY ?

(26% reduction in catch c.f. 2014)

- Clear reduction in effort during 2015 ...
- ... but unlike SKJ and YFT CPUE, the BET CPUE dropped ....
- ... changes in availability in EASTERN AREAS related El Nino ?

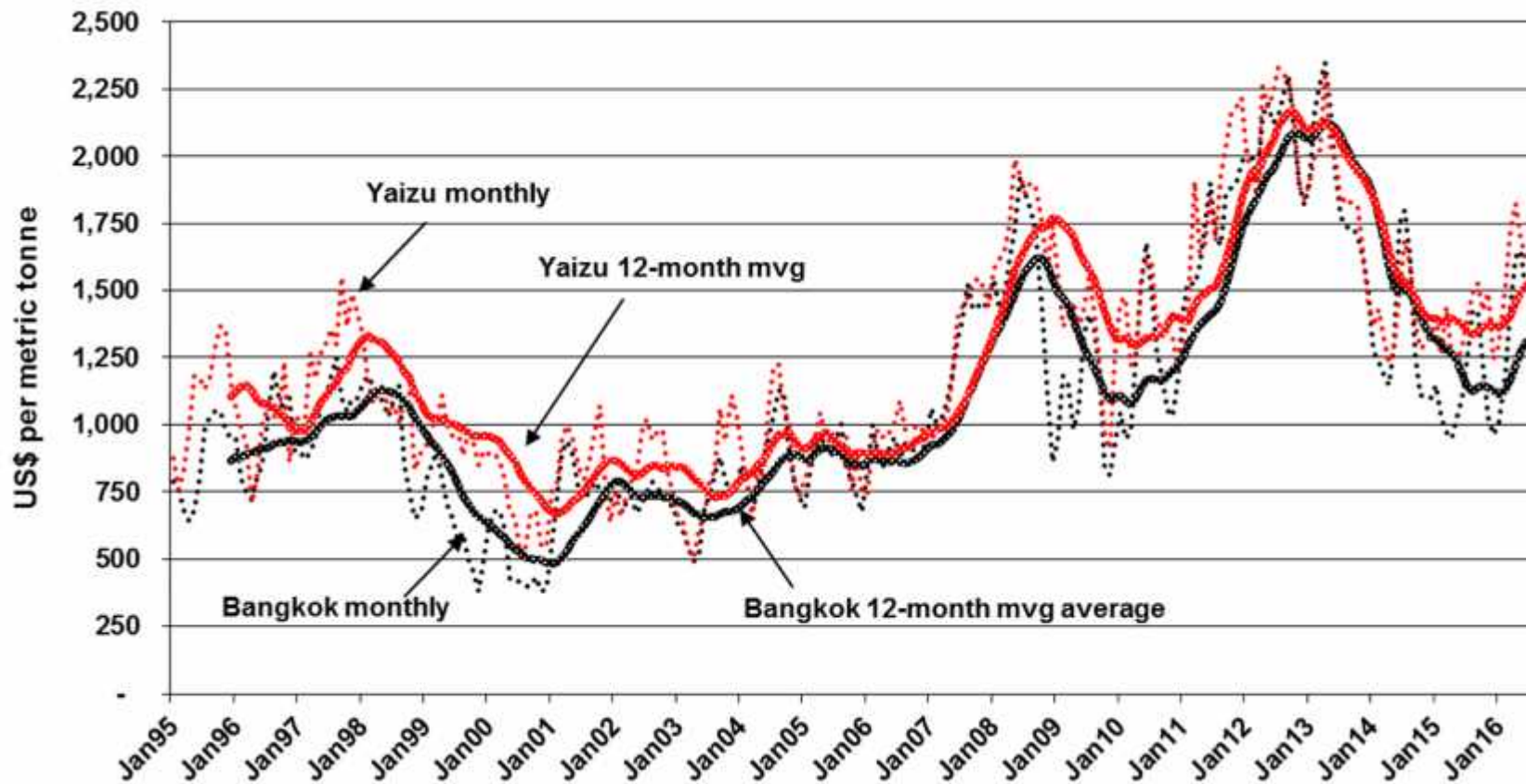


For more information ...  
See BET and YFT Indicators Paper  
SC12 SA WP-3 (Pilling et al., 2016)



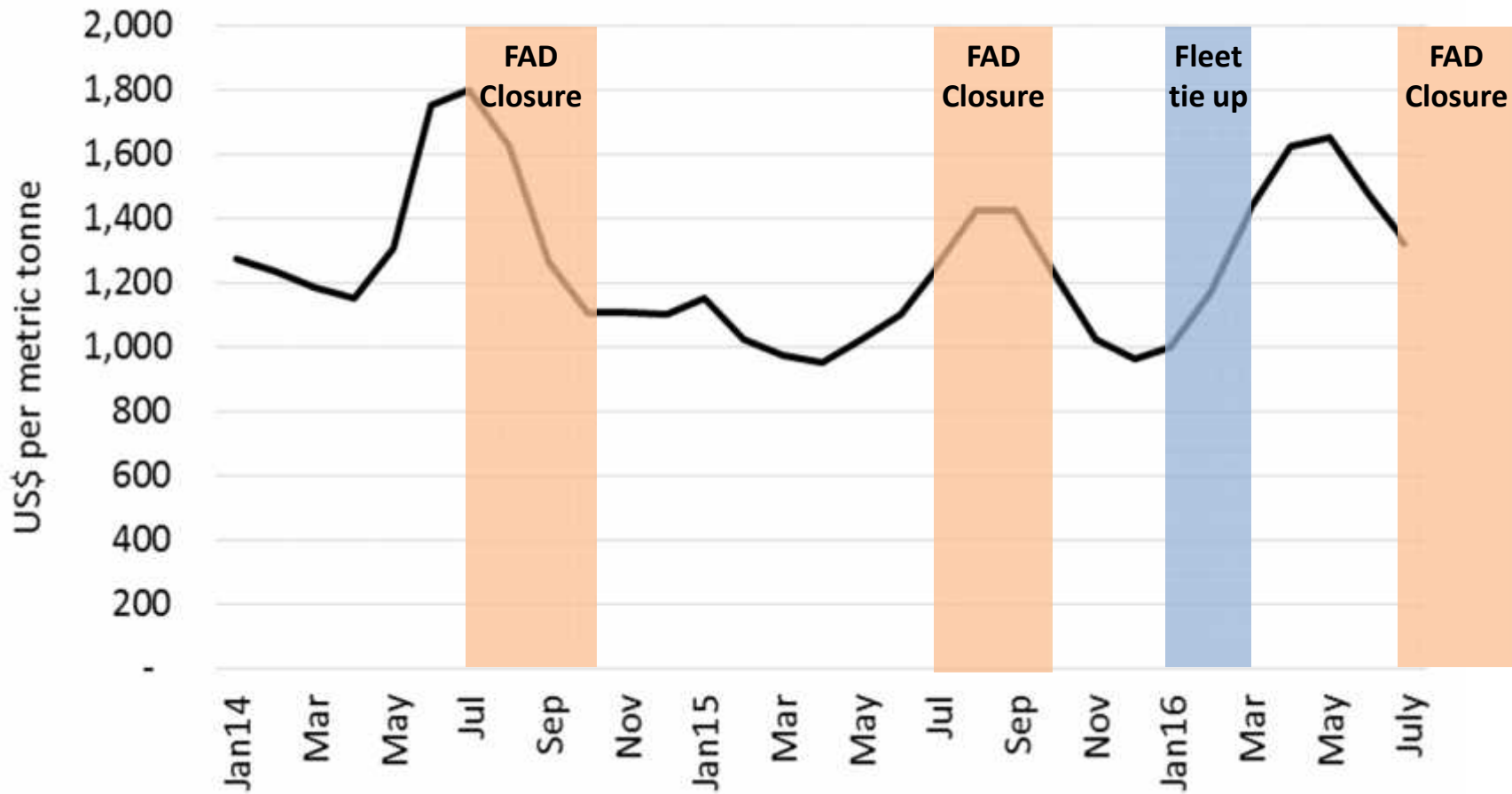
# Purse seine – Economic Overview

## Skipjack Prices, Long term trends



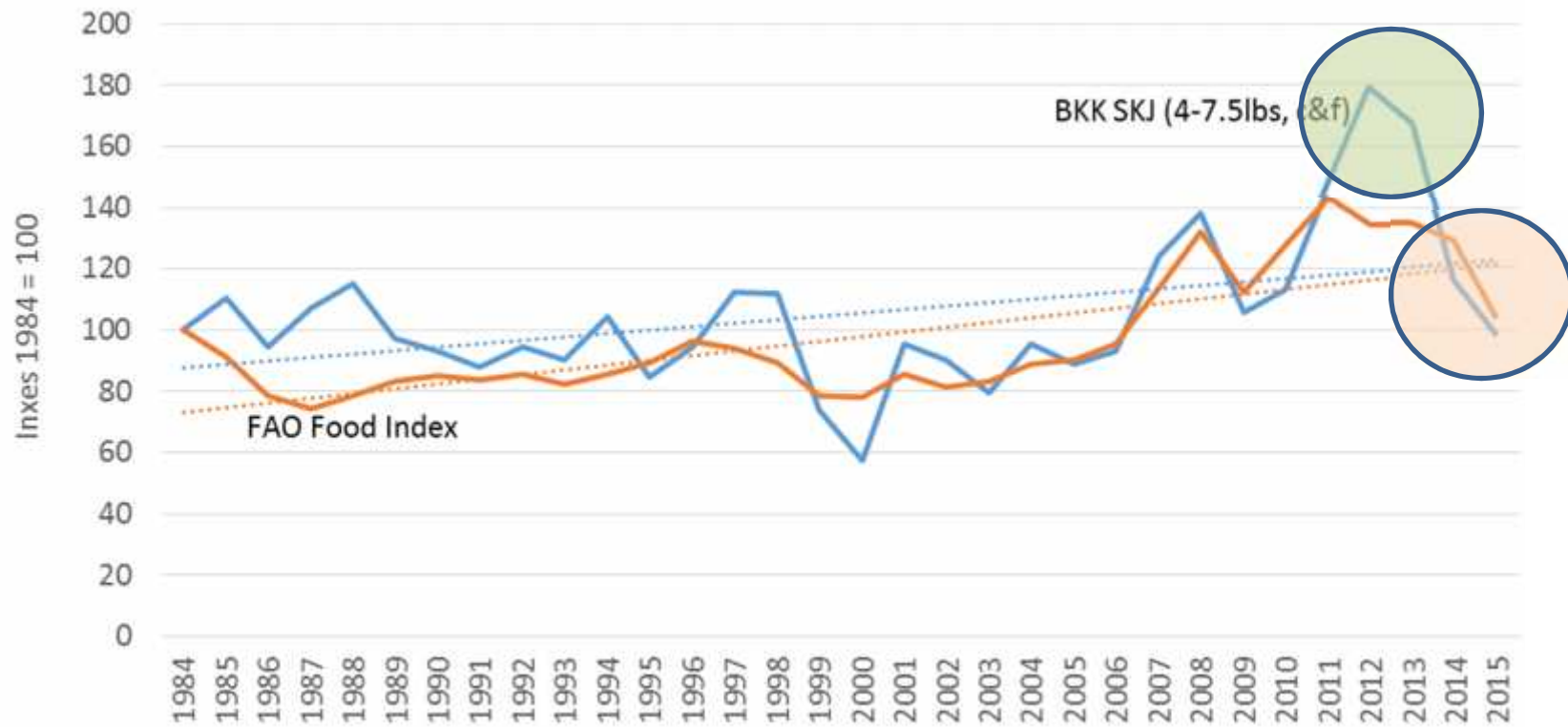
# Purse seine – Economic Overview

## Bangkok Skipjack Prices - Recent movements



# Purse seine – Economic Overview

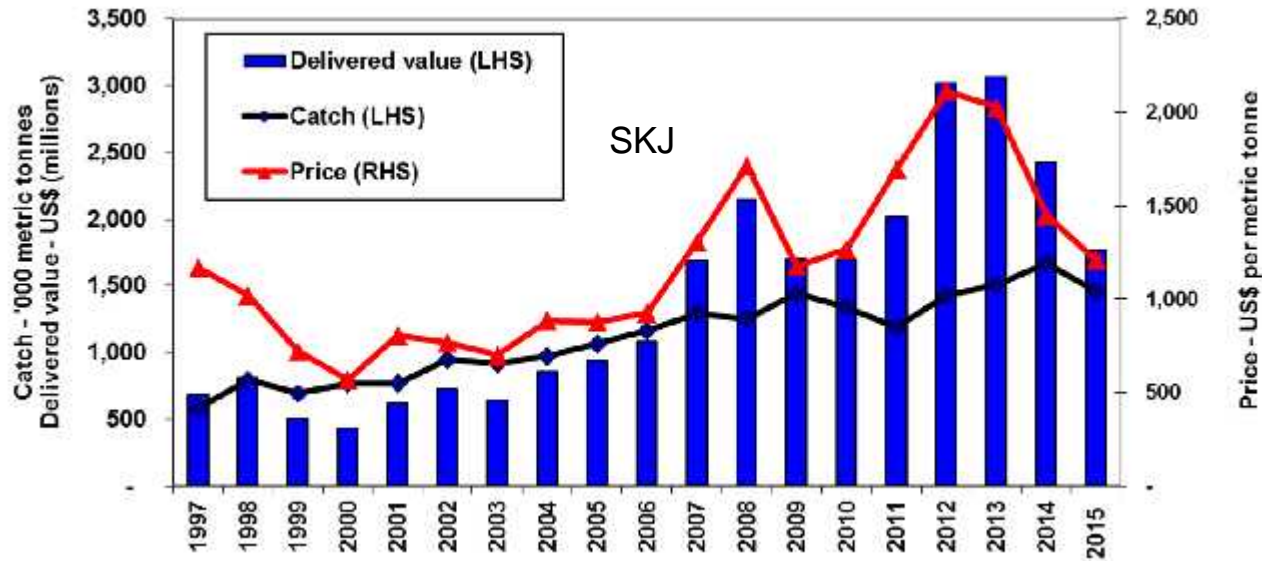
## Skipjack prices and global food prices



FAO food price index and Bangkok skipjack price index

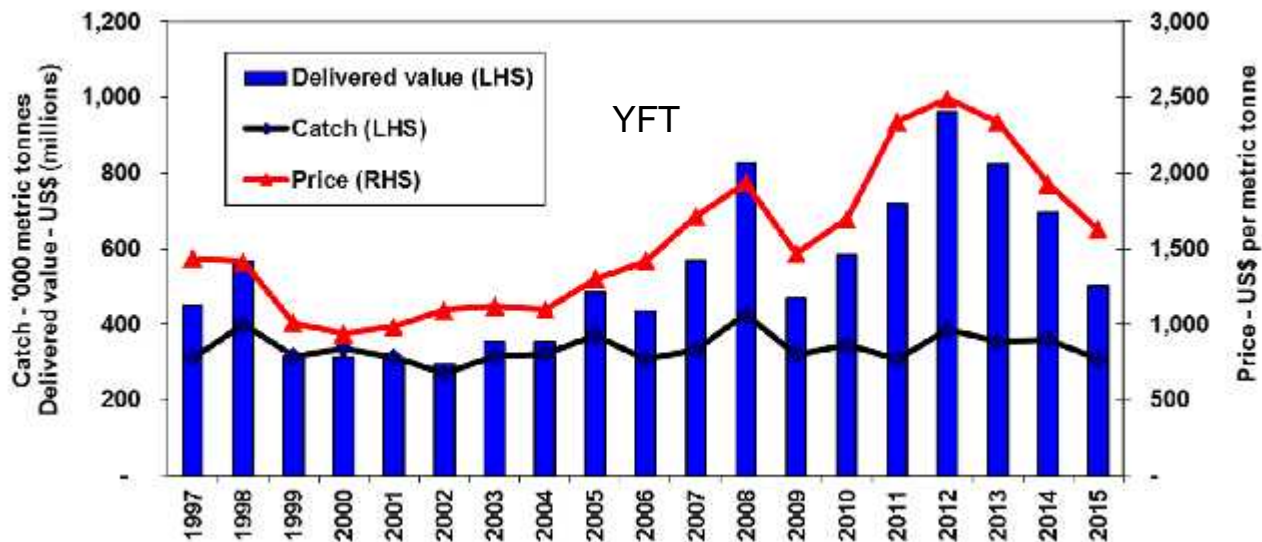
# Purse seine – Economic Overview

WCPFC purse seine fishery – Catch, delivered value and price



SKJ: Est. value in 2015 ~\$1,765m

- Decline of \$659m (27%)
- Catch ↓ 13%
- Price ↓ 16%

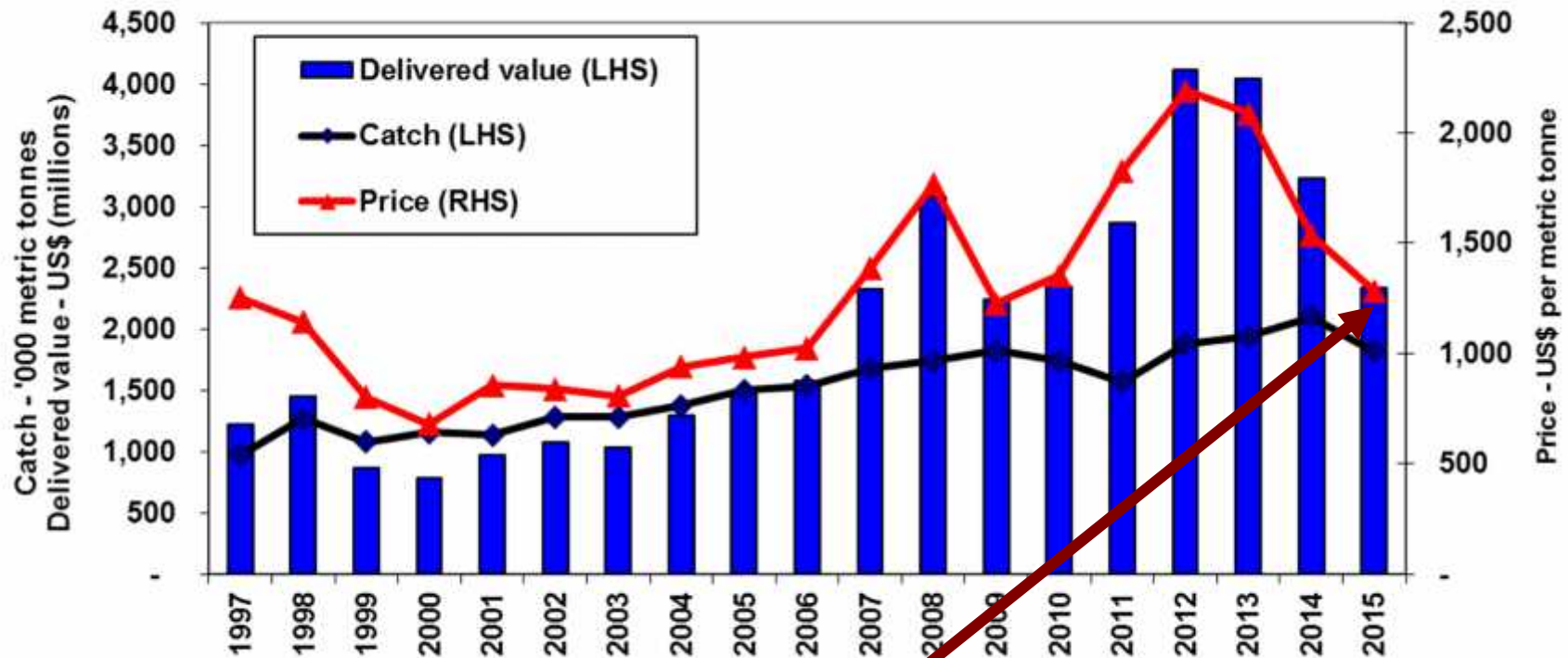


YFT: Est. value in 2015 ~\$499m

- Decline of \$196m (28%)
- Catch ↓ 15%
- Price ↓ 16%

# Purse seine – Economic Overview

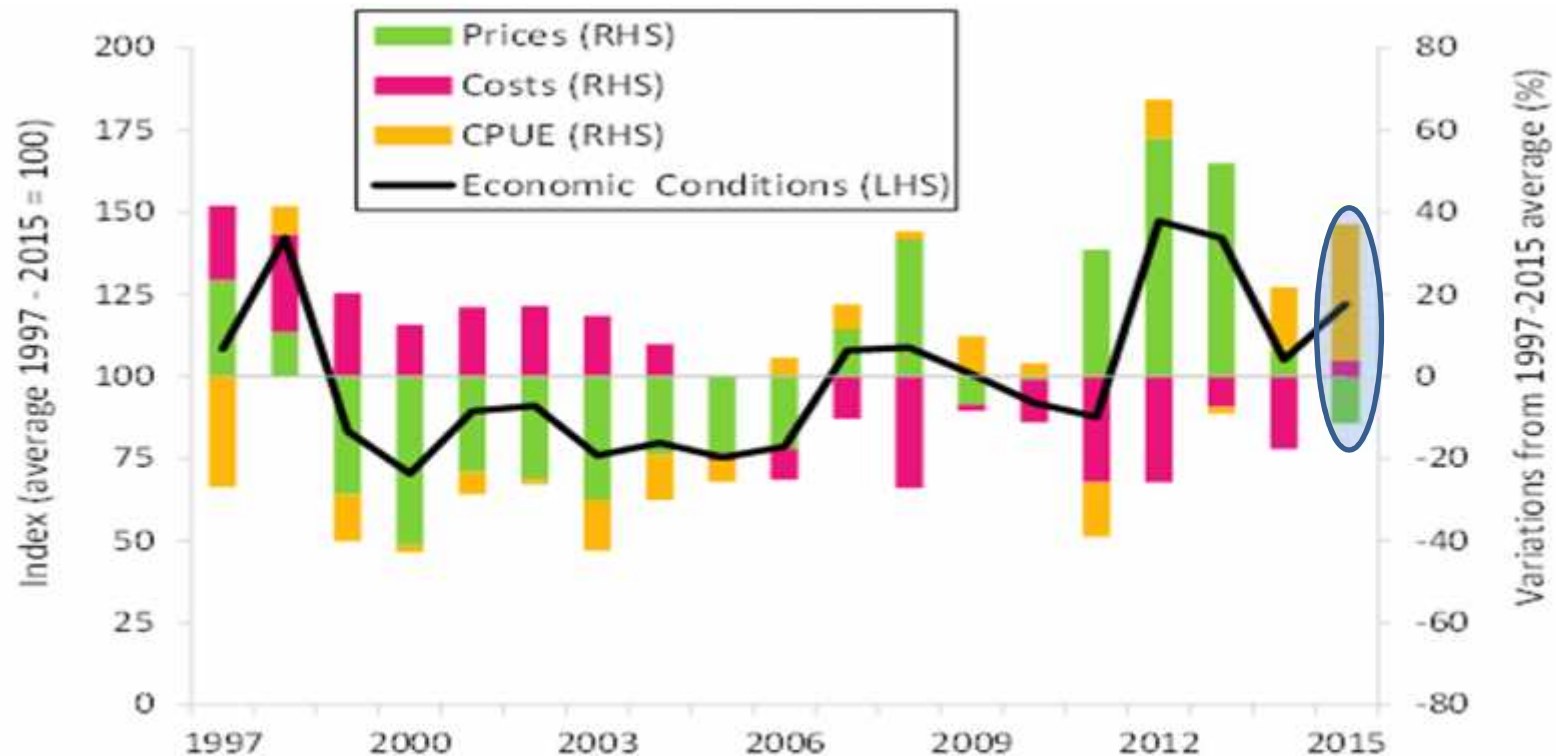
Total catch, delivered value and price



- 2015: US\$2,331m
- Decrease of US\$894m (28%)
  - Lowest since 2009

# Purse seine – Economic Conditions

Index of economic conditions in the purse seine fishery

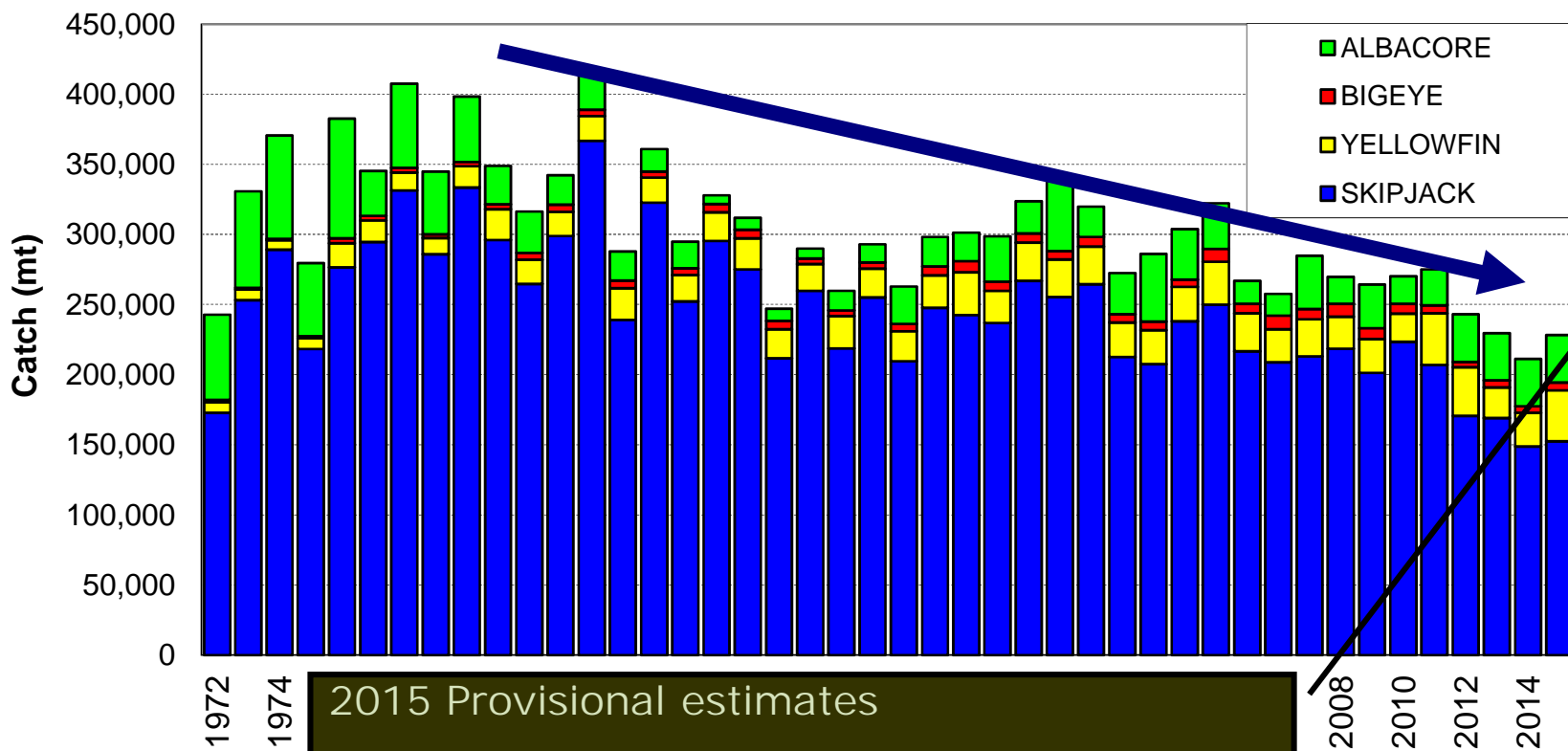


2015 saw an improvement on 2014 to be significantly above long term average

- Driven by catch rates increasing to record levels and fishing costs declining as fuel prices fell dramatically.
- Despite continued price declines which resulted in real prices falling to their lowest levels since 2008.

# WCP-CA Pole-and-line fishery

## Annual catch by species



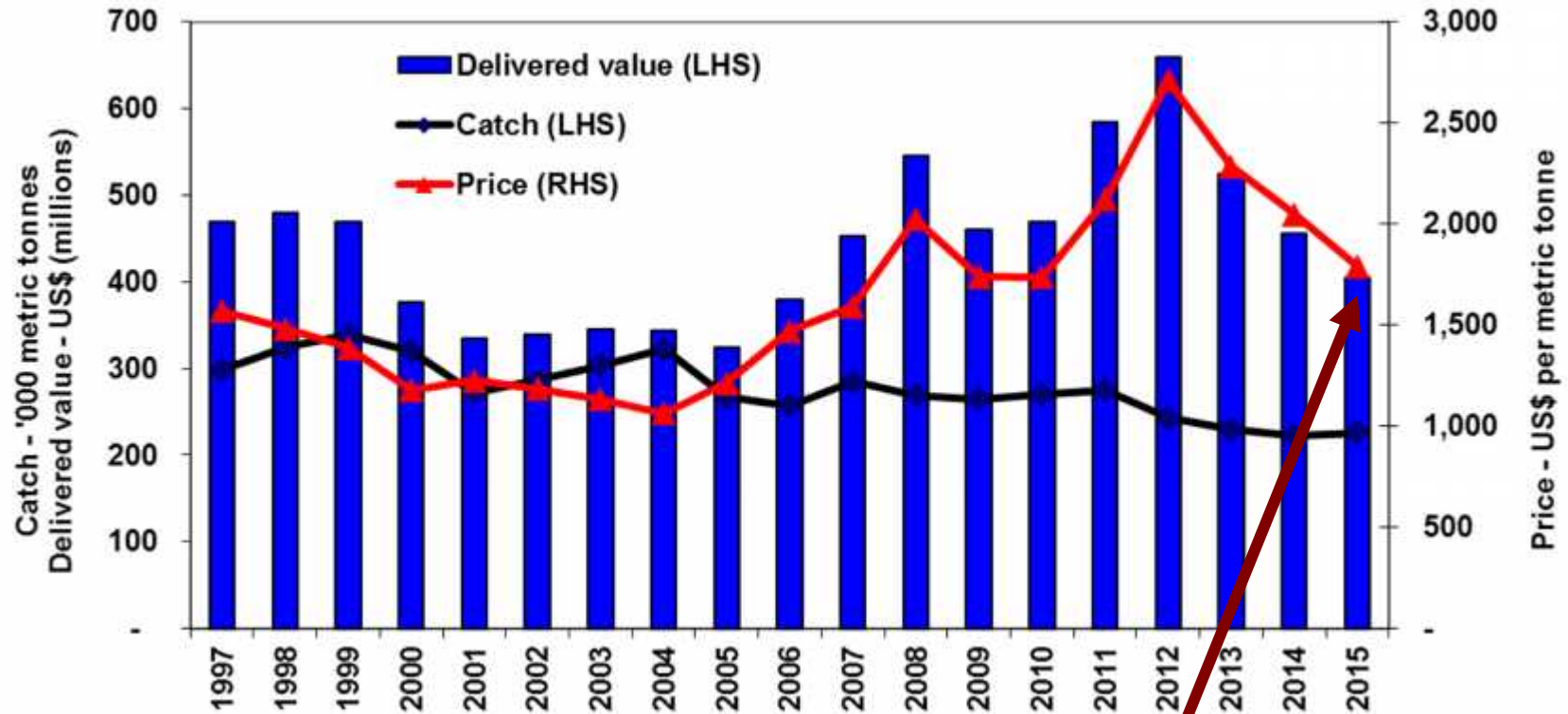
2015 Provisional estimates

TOTAL : 228,129 mt

Slight increase 2014 (i.e. Indonesia) ...  
but amongst lowest since late 1960s ...

# Pole and line – Economic Overview

Catch, delivered value of catch and composite price



**2015: Decreased by US\$52m to US\$405m (11% decline)**

**Catch: steady ...**

**Average USD prices down with Yaizu price for skipjack caught in:**

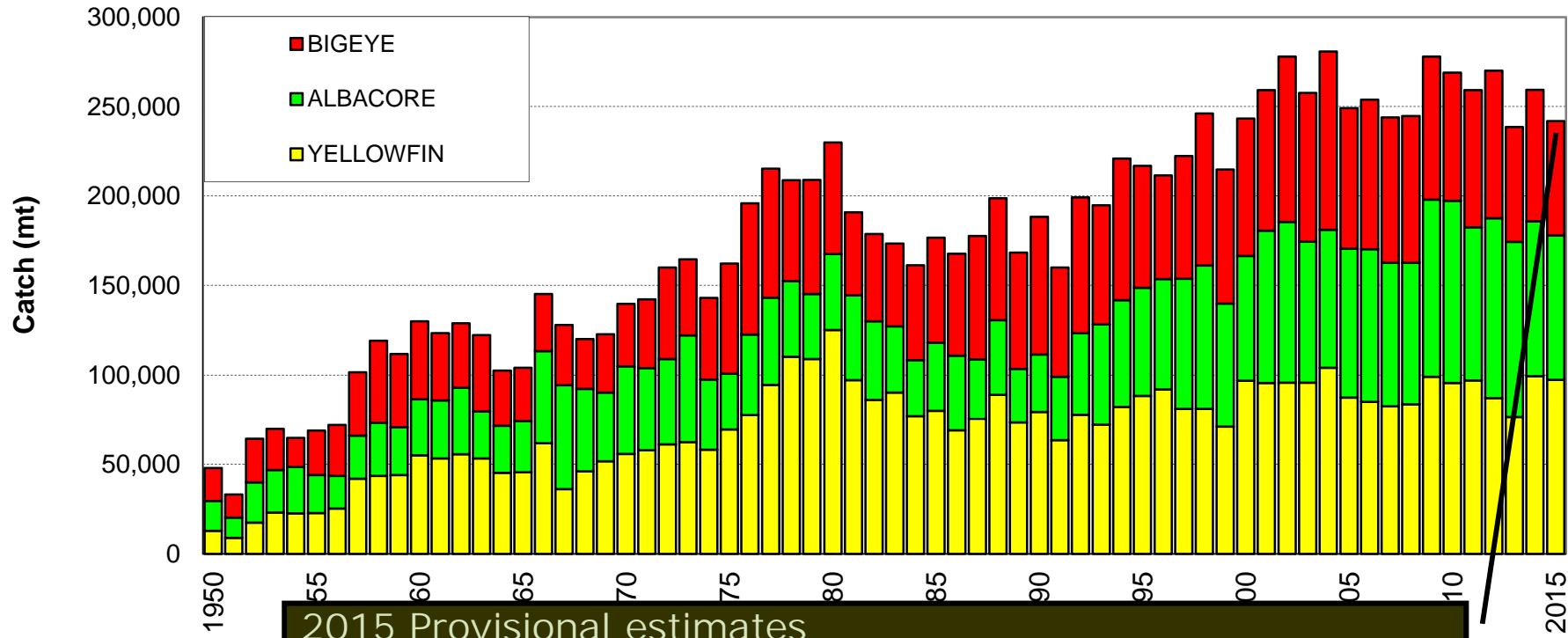
Waters off Japan declined 36% to \$1,942/mt ( 27% to ¥235/Kg)

Waters south of Japan declined 5% to \$2,141/mt ( 9% to ¥259/Kg)



# WCP-CA Longline fishery

Annual catch (mt) by species - Highlighting 2015 catches (prov.)



2015 Provisional estimates

**TOTAL : 243,547 mt ( )**

**YFT : 97,289 mt (40% - ↑ amongst the highest over past decade)**

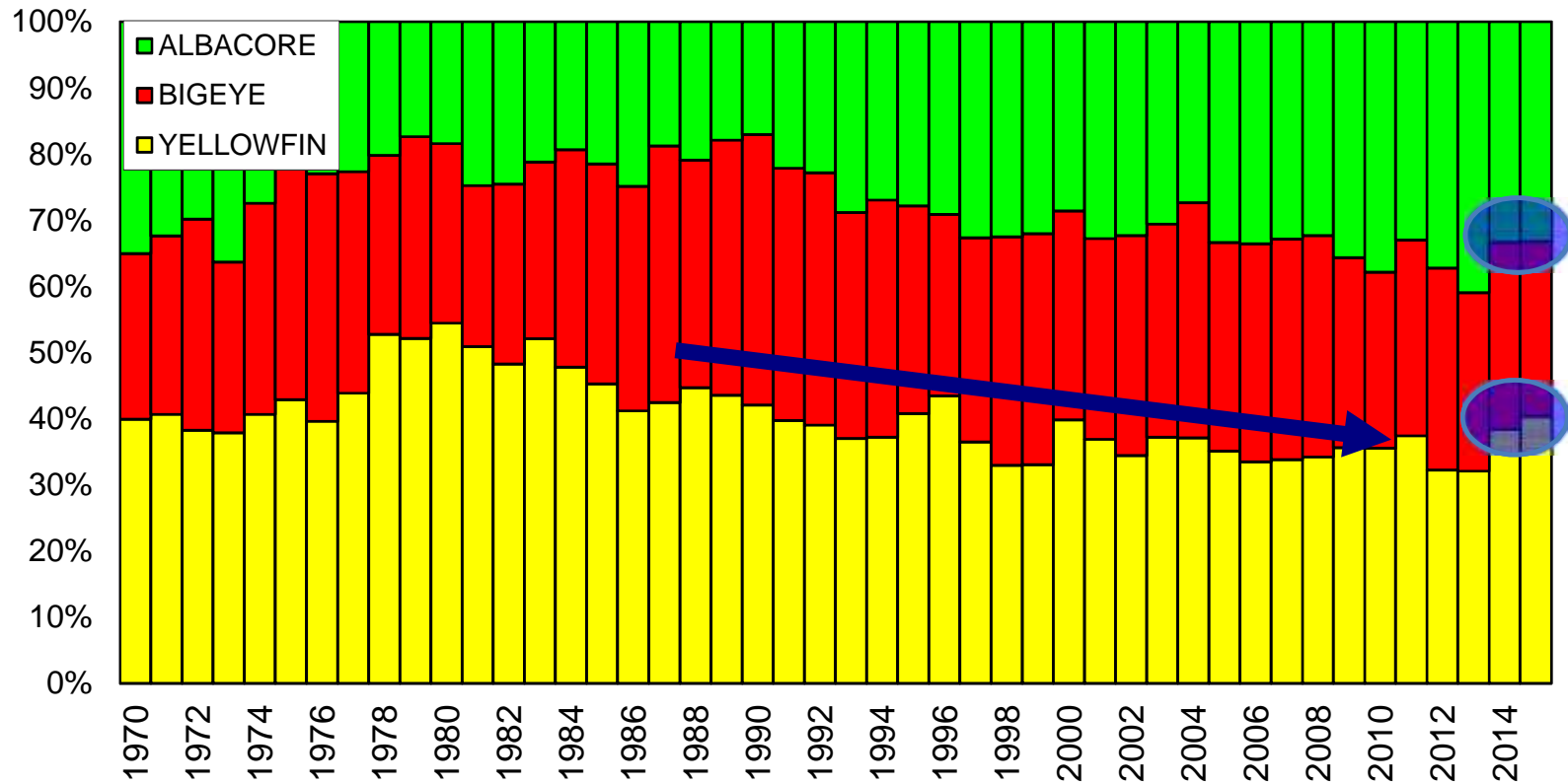
**BET : 63,986 mt (26% - lowest since 1996; provisional ??)**

**ALB : 80,596 mt (33% - lowest since 2012)**

(+ small amount of SKJ)

# WCP-CA Longline fishery

## Annual TUNA SPECIES COMPOSITION

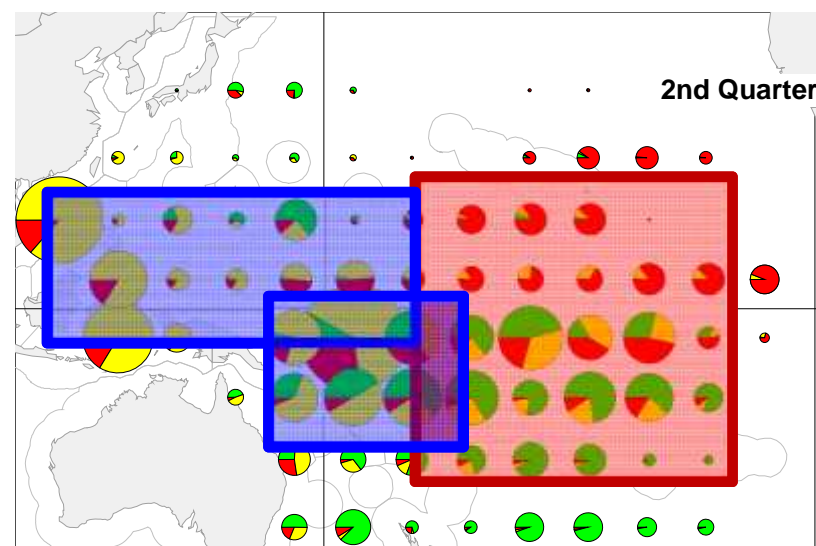
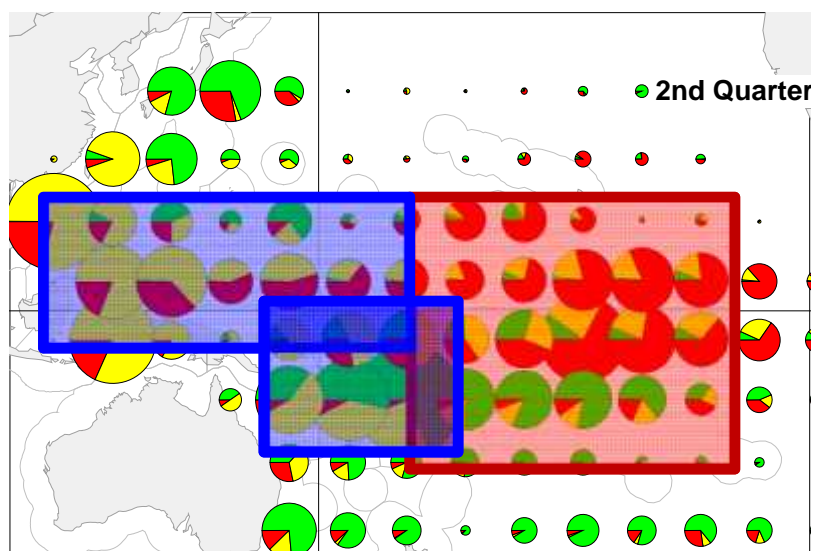


# WCP-CA Longline fishery

Quarterly Distribution of Catch by species  
2000-2014 compared to 2015

Average 2000-2014

2015



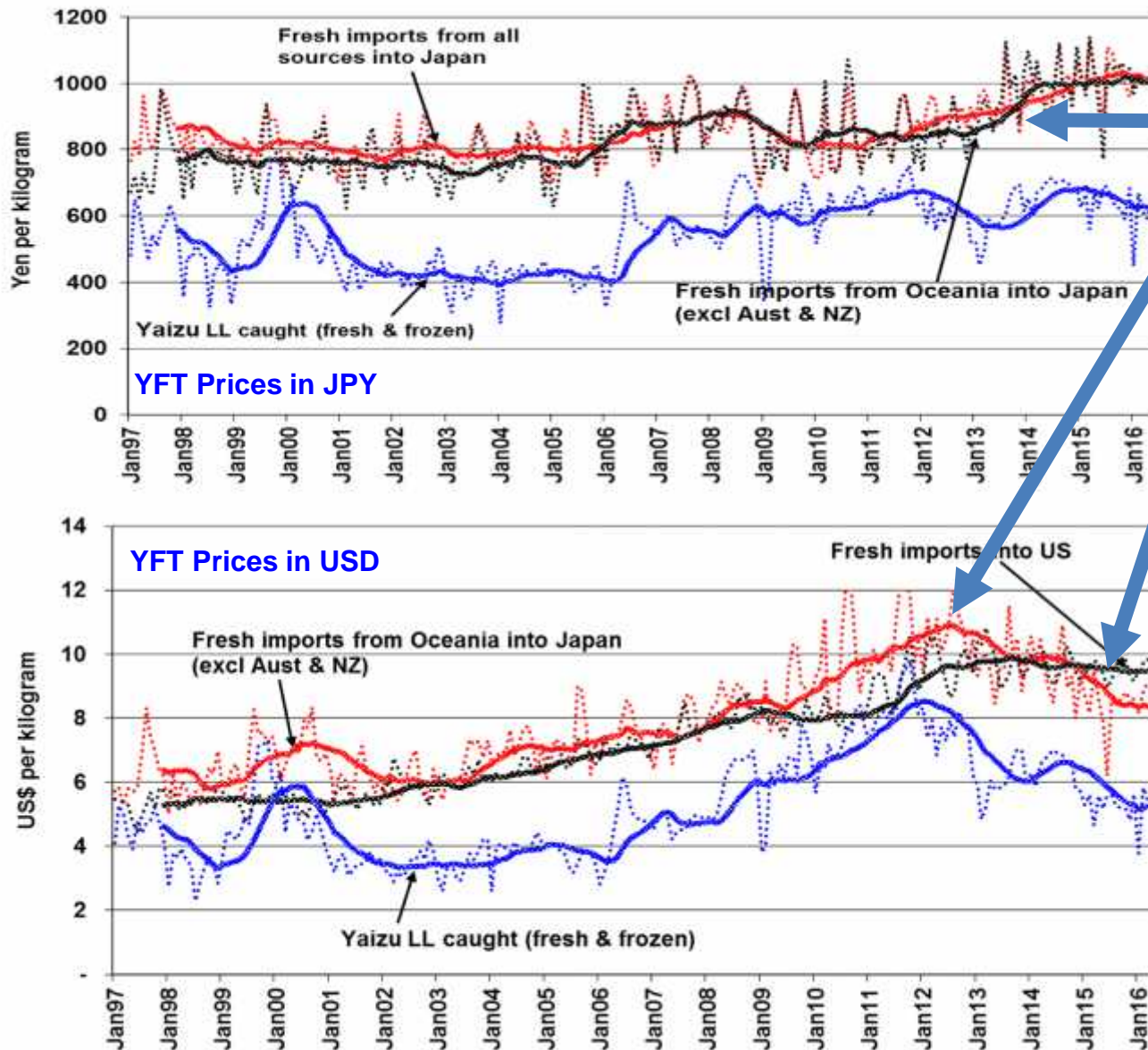
● Yellowfin

● Albacore

● Bigeye

# Economic Conditions – Longline

## Yellowfin prices



### Long term trends:

#### Japan fresh imports

*JPY prices:* Flat trend from 1997 to 2012 then upward trend to late 2015 driven by tight supplies and Yen depreciation.

*USD prices:* Increases from 2003 to 2012 but falls to late 2015 as USD appreciated against the JPY.

#### US imports

Fresh imports prices increased to 2012 then broadly steady

### 2015

#### Japan

YFT JPY prices mixed (declines in USD prices)

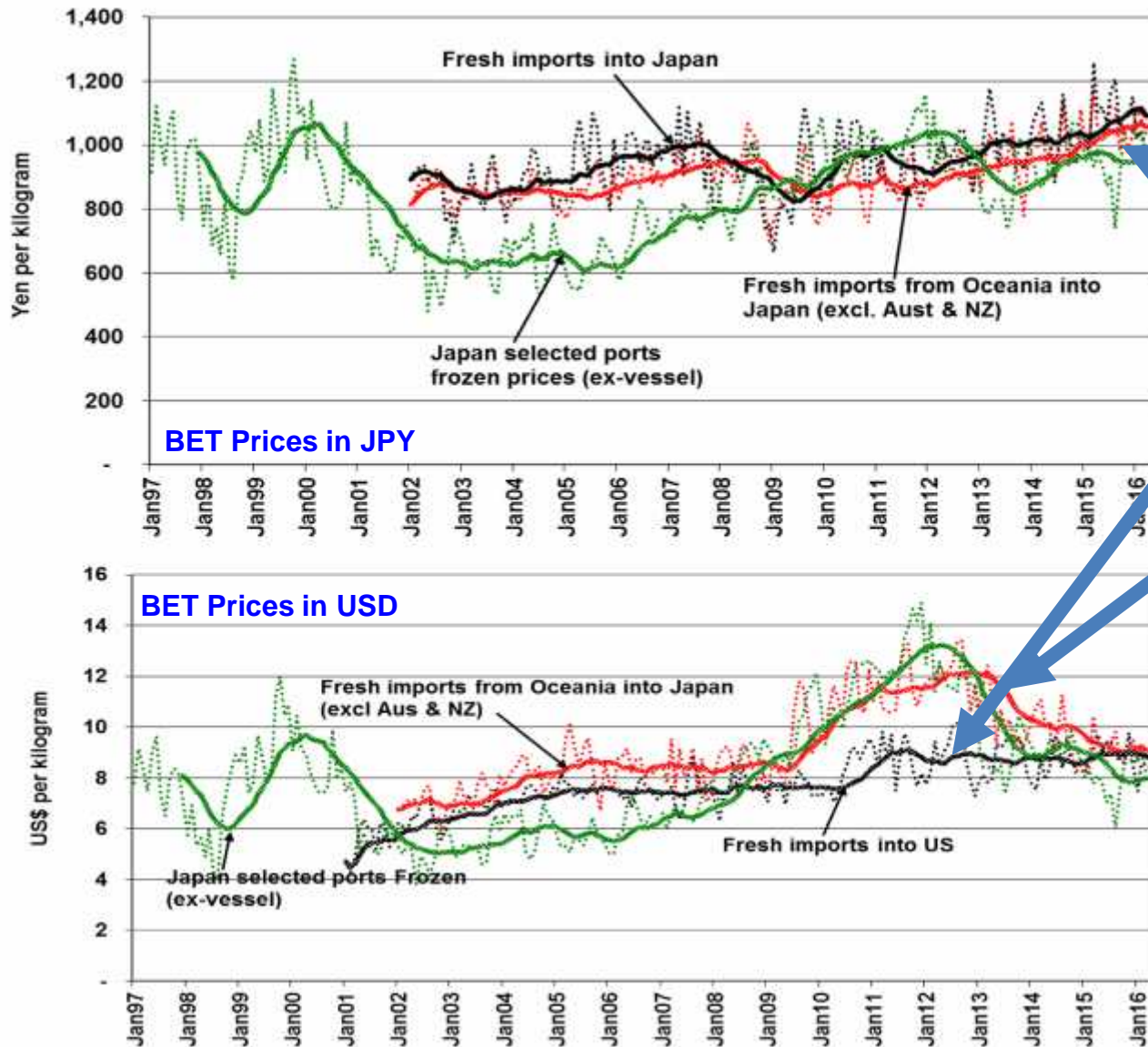
- Fresh imports ¥1,021/Kg 2% [\$8.44/kg 11%];
- Oceania fresh imports ¥1,355/Kg 3% [\$11.19/kg, 10%];
- Yaizu (fresh/frozen) ¥643/kg 6% [\$5.31/kg 18%]

#### US

2015 price similar to 2014

# Economic Conditions – Longline

## Bigeye prices

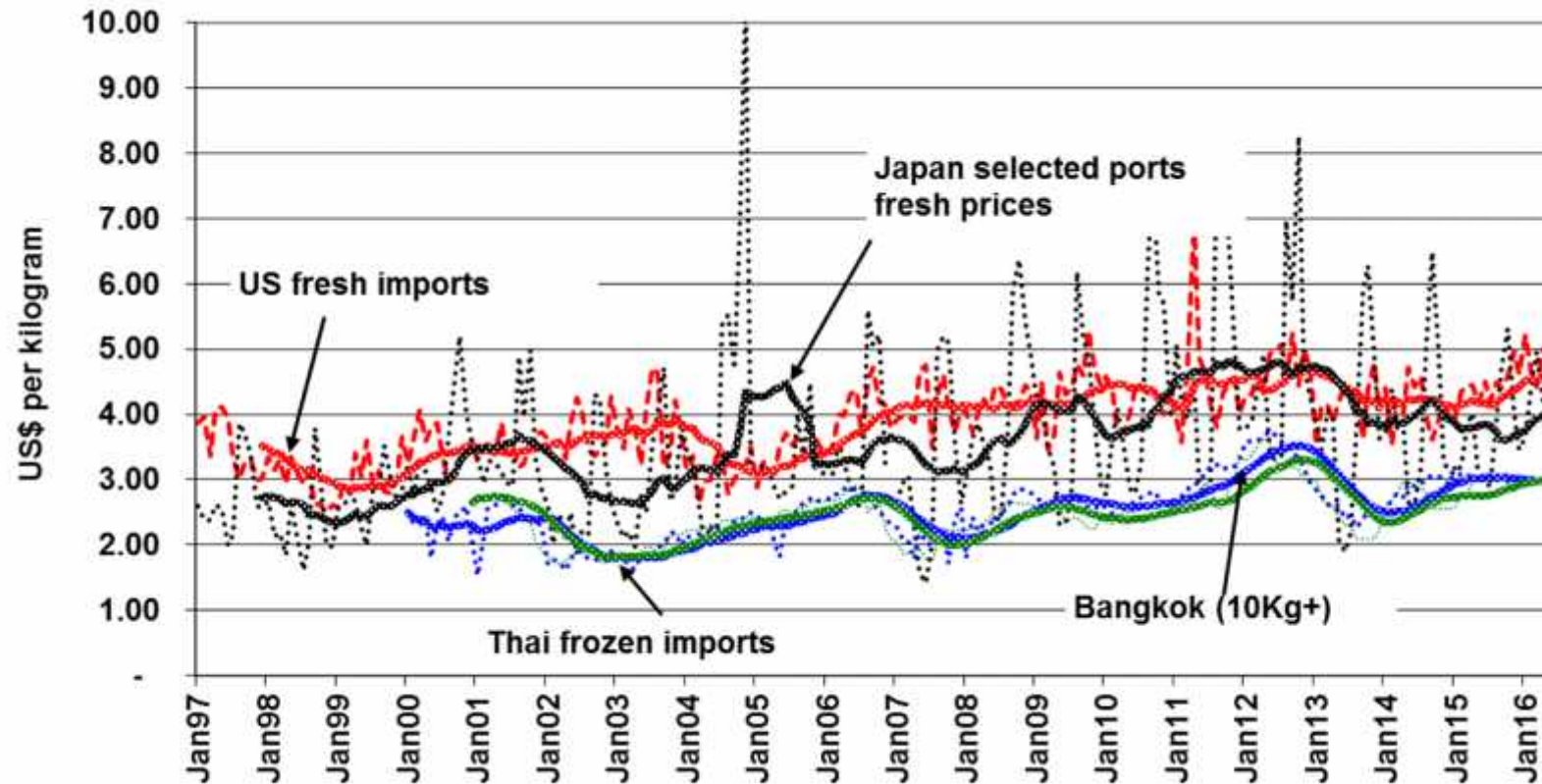


**Long term trends**  
 Japan fresh imports  
 Similar to yellowfin:  
 • Increases in Yen price in recent years  
 • But declines in USD prices

**US**  
 Steady since 2011

**2015**  
 Japan  
 Fresh import price ¥1051/Kg  
 5% [\$8.68, 8%]  
 Frozen prices from selected ports ¥937/kg 2% [\$7.74, 14%]  
 US  
 2015 fresh imports moderate increase of 4% to US\$8.99/kg

# Economic Conditions – Longline Albacore prices



## Long term

Upward trend with significant variation around trendline

## 2015

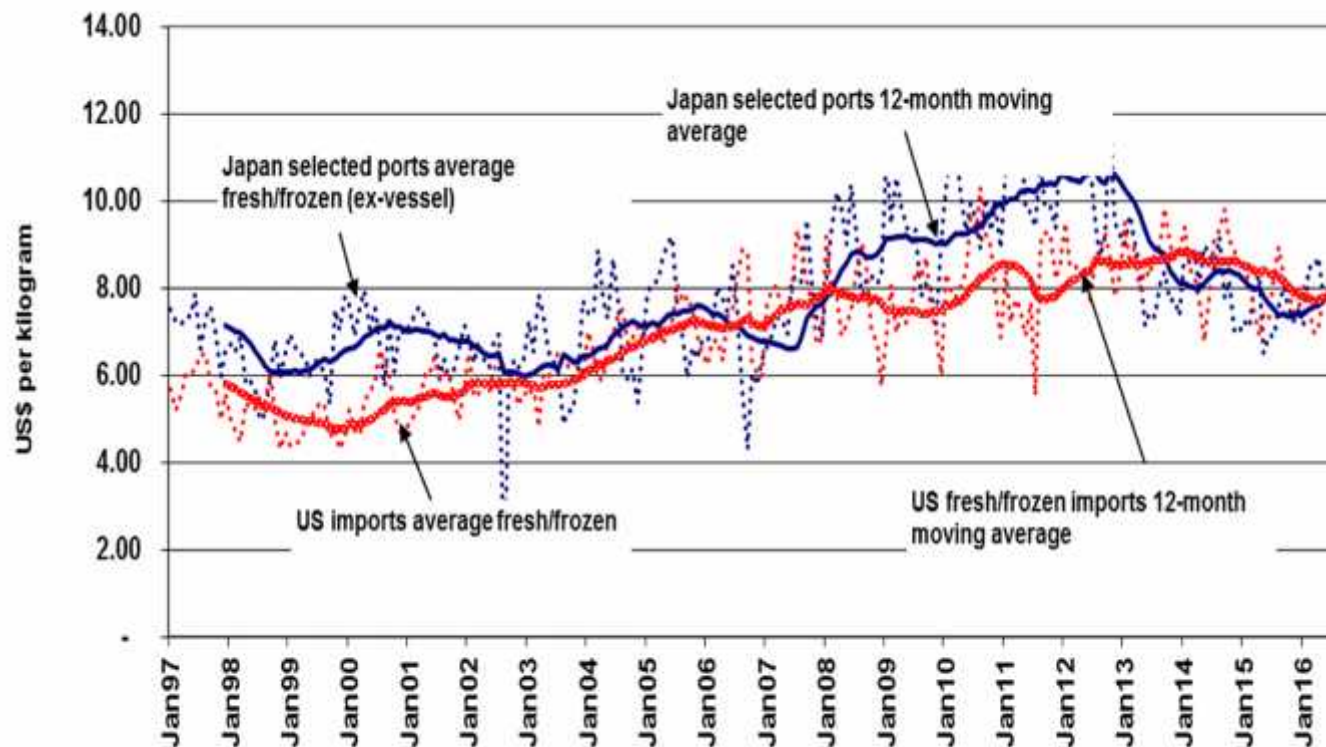
Prices higher with Thai frozen import price up 5%, Japan selected ports fresh up 6% and US imports fresh up 7%.

Prices increases driven by supply shortages and high demand

## 2016 - First half

Bangkok market prices (10kg and up) around US\$3,000/mt.

# Economic conditions - Longline Swordfish Prices



## US fresh & frozen import prices (f.a.s.)

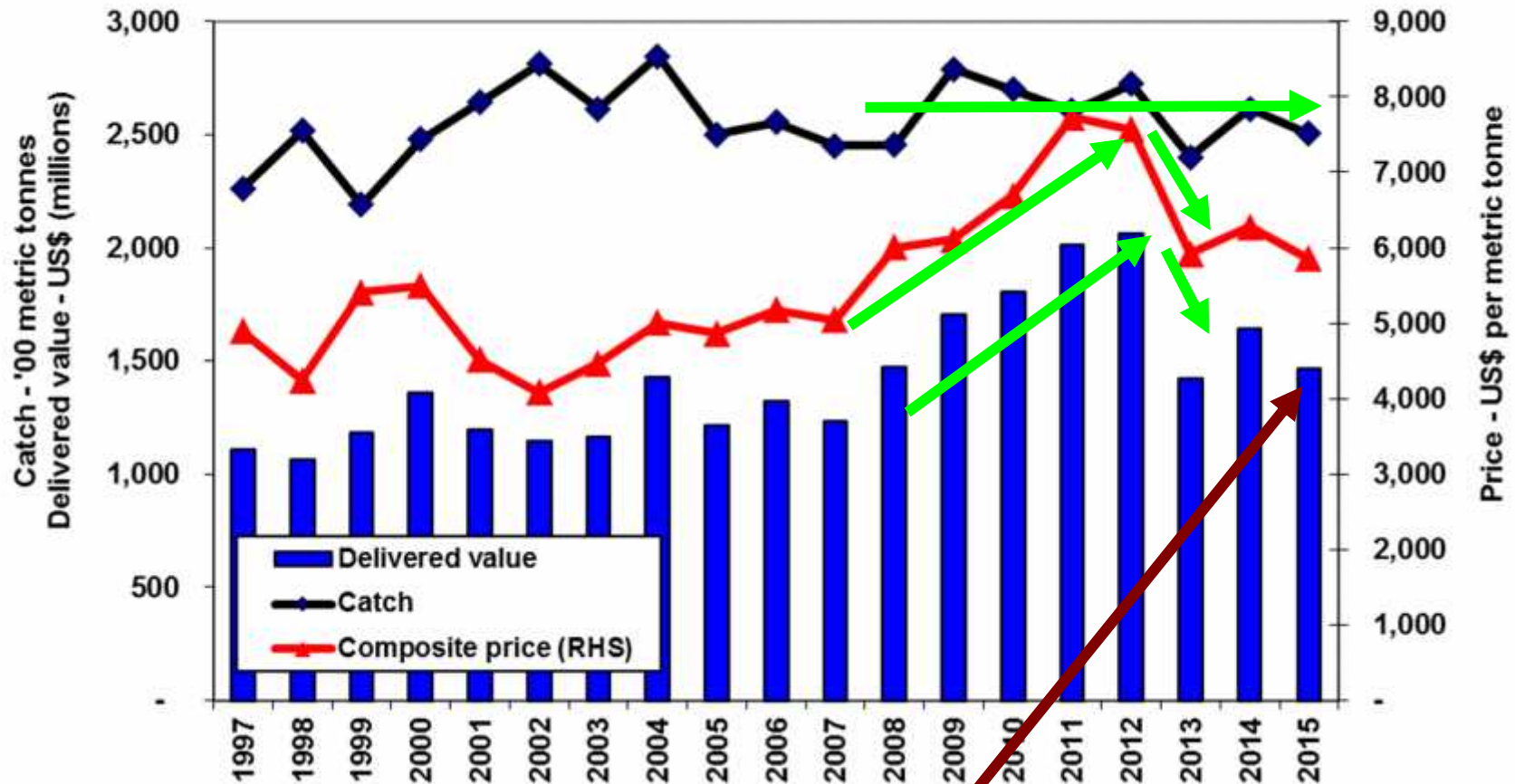
- Upward trend in prices from 2000 when around \$5.00/Kg to 2013 when \$9.00/Kg has since trended down.
- 2015 weighted fresh and frozen (f.a.s.) \$7.90/kg 8%.
- 2016 to June: \$7.45/Kg, 7% compared to the same period last year.

## Japan selected ports (ex-vessel).

- 2015 ¥891/Kg ↑ 3% [\$8.31 10%];
- 2016 to May: Prices up to ¥916/Kg (down marginally in USD terms to \$8.11/Kg)

# Economic Conditions - Longline

Tuna catch, delivered value composite prices



**2015: Value of catch US\$1,466m**

**Decrease of \$176m (11%) on 2014**

ALB ↓ \$6m (2%) to \$243m – decline in catch offset by price increase

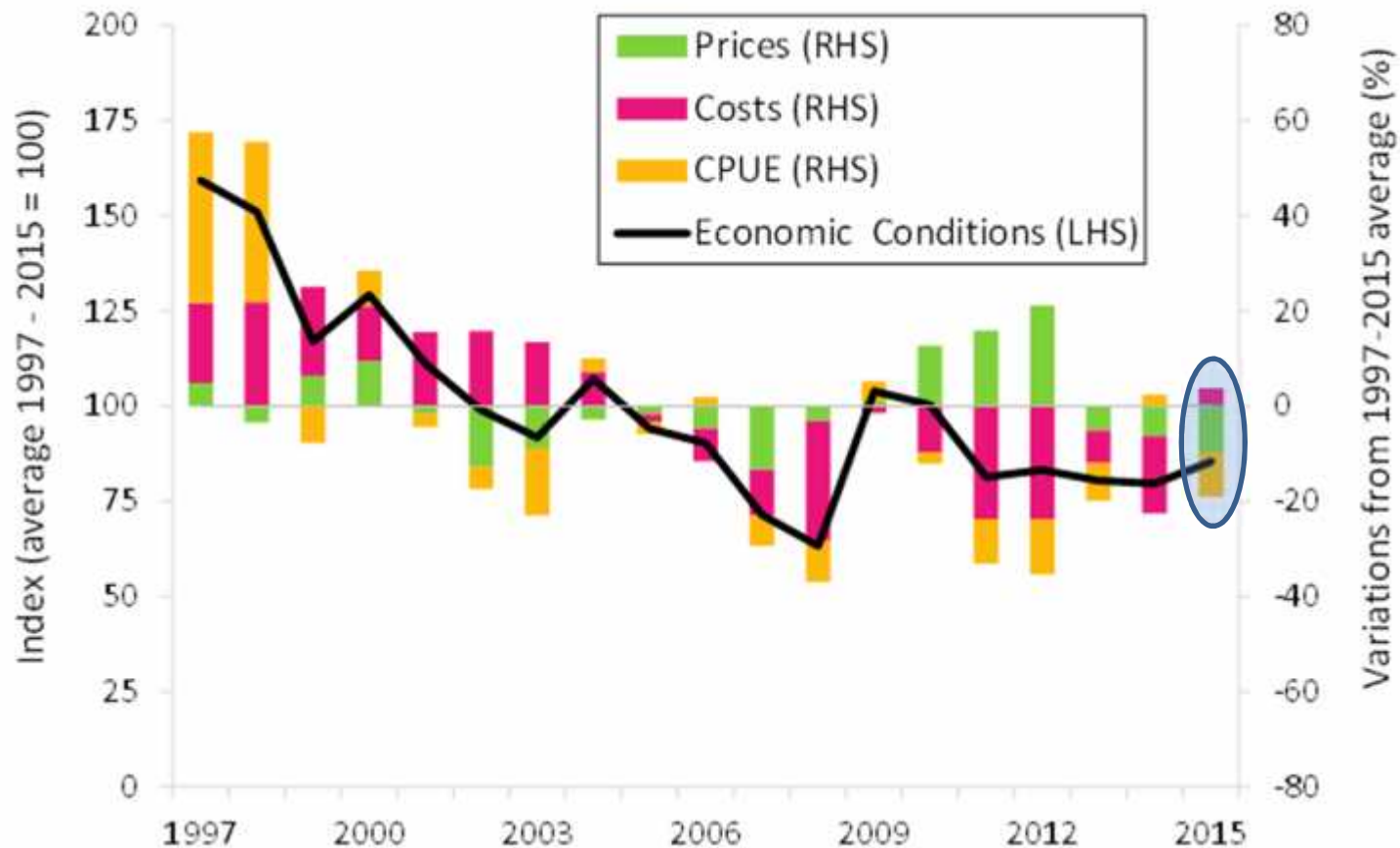
BET ↓ \$107m (17%) to \$514m – significant declines in both catch and price

YFT ↓ \$63m (8%) to \$707m - decline in prices partially offset by catch increase



# Longline – Economic Conditions

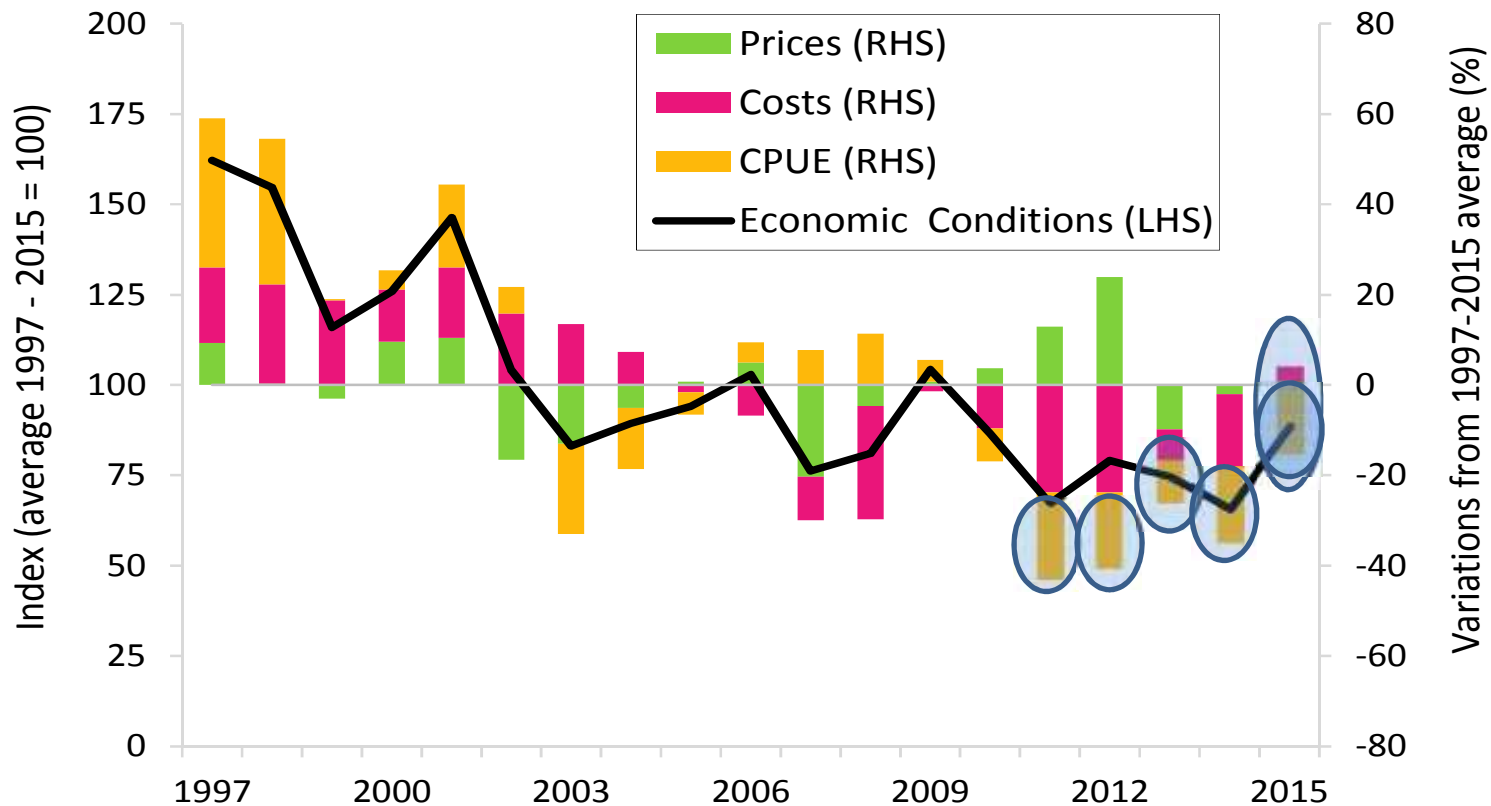
Index of economic conditions in the tropical longline fishery



In 2015 conditions improved marginally compared with 2014. While the significant fall in fuel prices drove costs down this was largely offset by declines in the catch rate and fish price.

# Longline– Economic Conditions

Index of economic conditions in the southern longline fishery



Economic conditions improved significantly in 2015, primarily driven by falling fuel costs with prices steady.

However, persistent low catch rates continue to impact on economic conditions and if they continue the likelihood of economic conditions returning to levels higher than the reference period average remains low

# WCP-CA Tuna Fisheries

## 2015 – MAIN POINTS OF INTEREST

### 1. Reduced purse-seine effort

- Purse seine effort - 15% lower than in recent years

### 2. Clear reductions in several catch estimates ... (c.f. 2014)

- Total catch - 2,687,840 mt (↓ 7%)
- Purse seine catch - 1,766,070 mt (↓ 14%)
- Total Bigeye tuna catch - 134,084 mt (↓ 16%)
- PS Bigeye tuna catch - 48,772 mt (↓ 26%)
- LL Bigeye tuna catch - 63,986 mt (↓ 13%)

### 3. PS high SKJ catch rates & fishery concentrated in central/east

- Strong El Nino conditions sustained → most of the catch east of 160°E
- SKJ CPUE continues to climb -- highest on record for several fleets
  - Increased fishing efficiency and/or increased abundance ?
  - Environmental conditions conducive to fish being more available to gear ?

### 4. Declines in catch values as catch and prices (except albacore) fall

- LONGLINE - US \$ 1.5 billion (11% decrease on 2014)
- PURSE SEINE - US \$ 2.3 billion (28% decline on 2014)
- Total - US\$ 4.8 billion