Pacific Community
Communauté du Pacifique

Agenda item 2.1 Status of the south Pacific Albacore stock, and recent catch estimates
and
2.2 SC13 recommendations

Intersessional Meeting to progress the draft Bridging CMM on South Pacific Albacore

Pohnpei, FSM, 4th October 2017

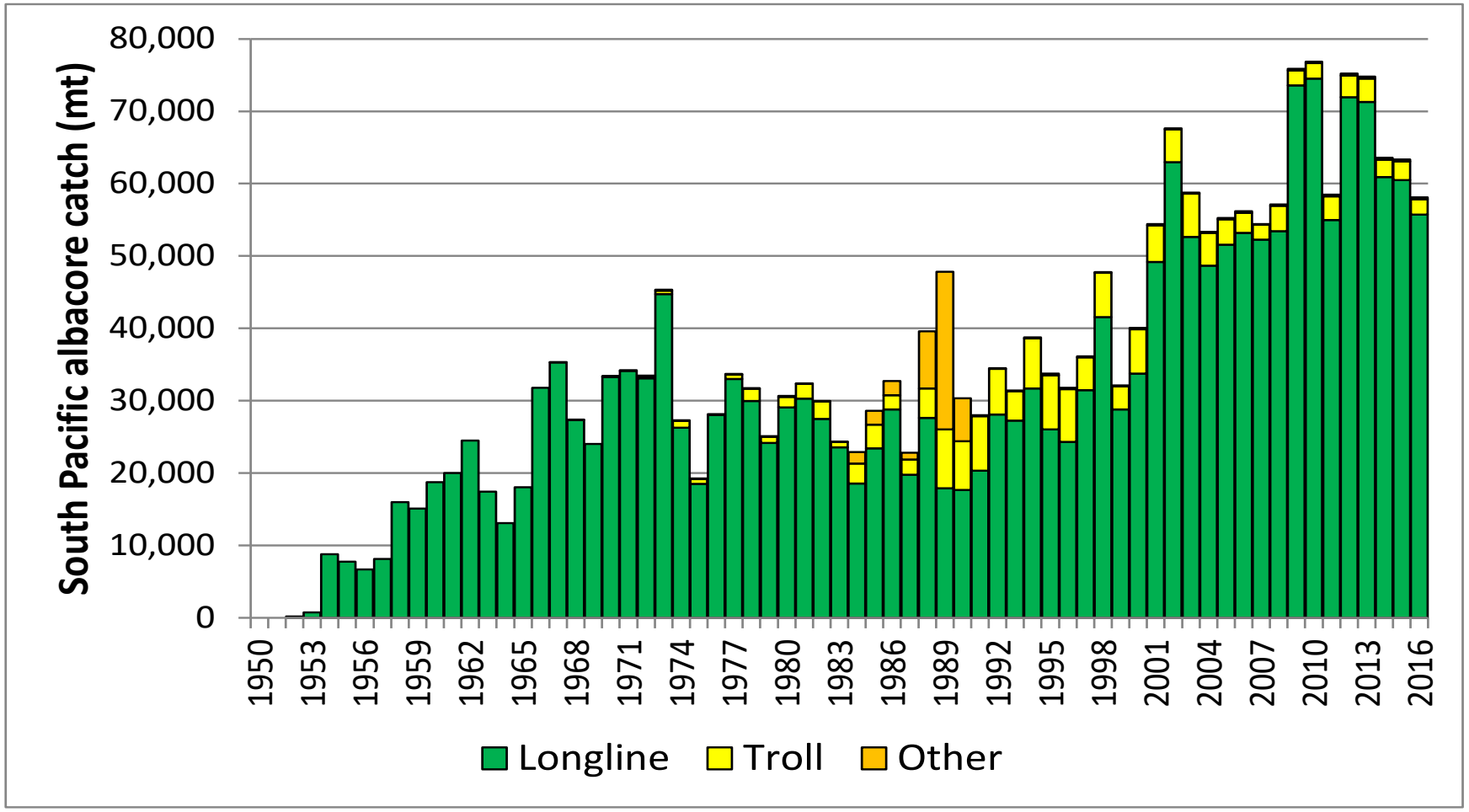
Oceanic Fisheries Programme, SPC

Overview

- Update on catch/effort/CPUE trends in fishery
- Summary of current and future stock status
  - Updated stock projections based on recent fishing patterns
- Recommendations from SC13
- Background work on candidate TRP options

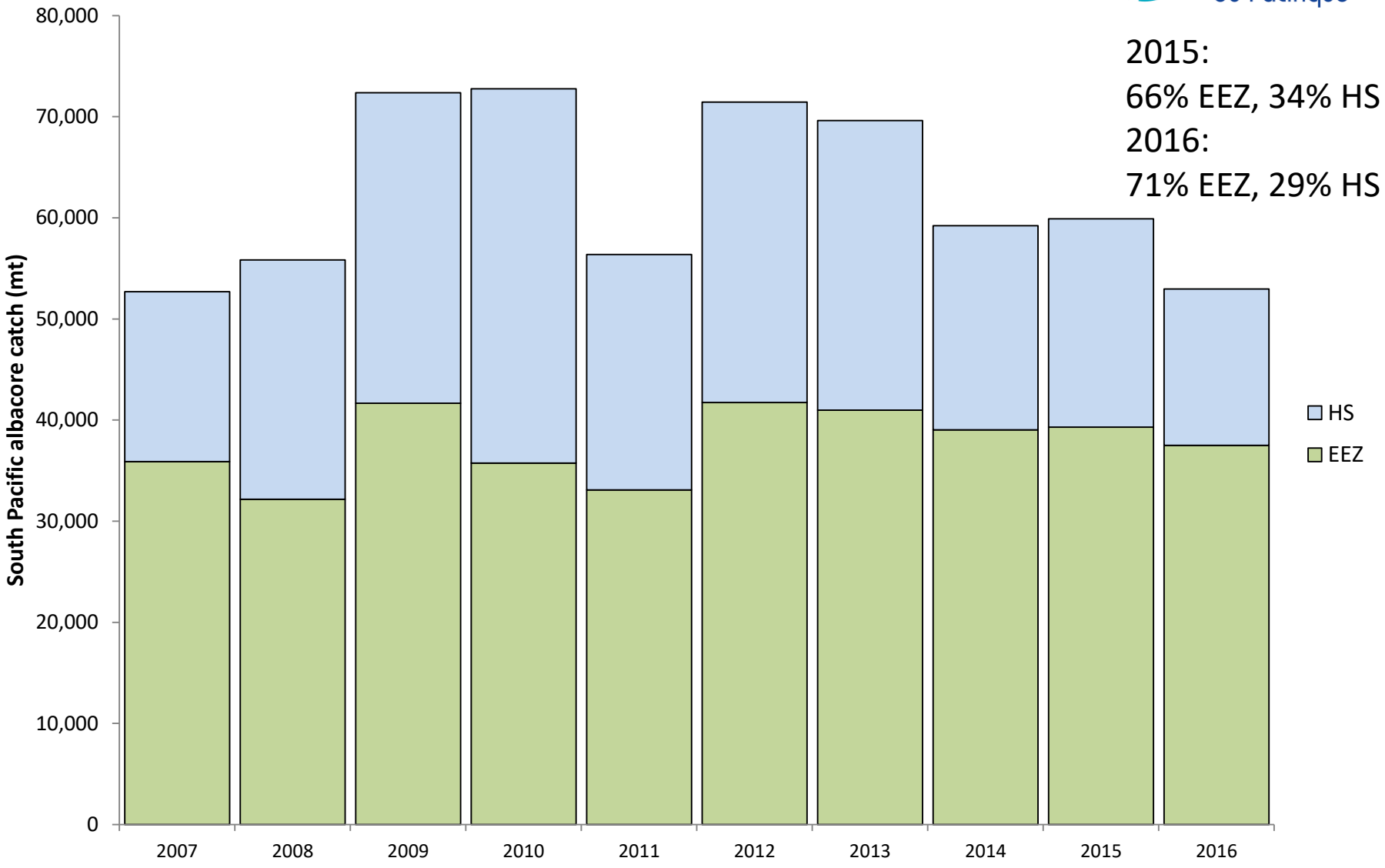
WCPFC-SC13/SA-WP-08
WCPFC-HSW/WP05
WCPFC-SC12/MI-WP-01

Southern WCP_CA albacore catch by gear



- 2016 LL catch down 8% from 2015, 13% from 2011/2015 avg
- 2016 troll catch down 17% and 24% respectively
- Longline ~97% of the catch

Southern WCP_CA, albacore catch by area



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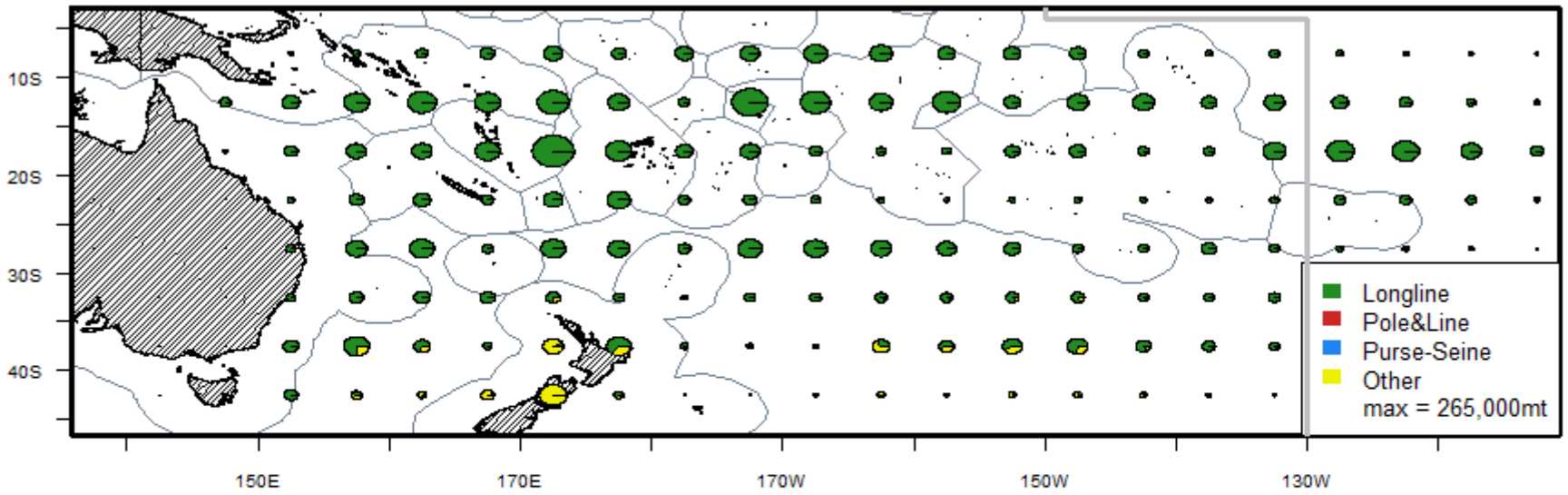
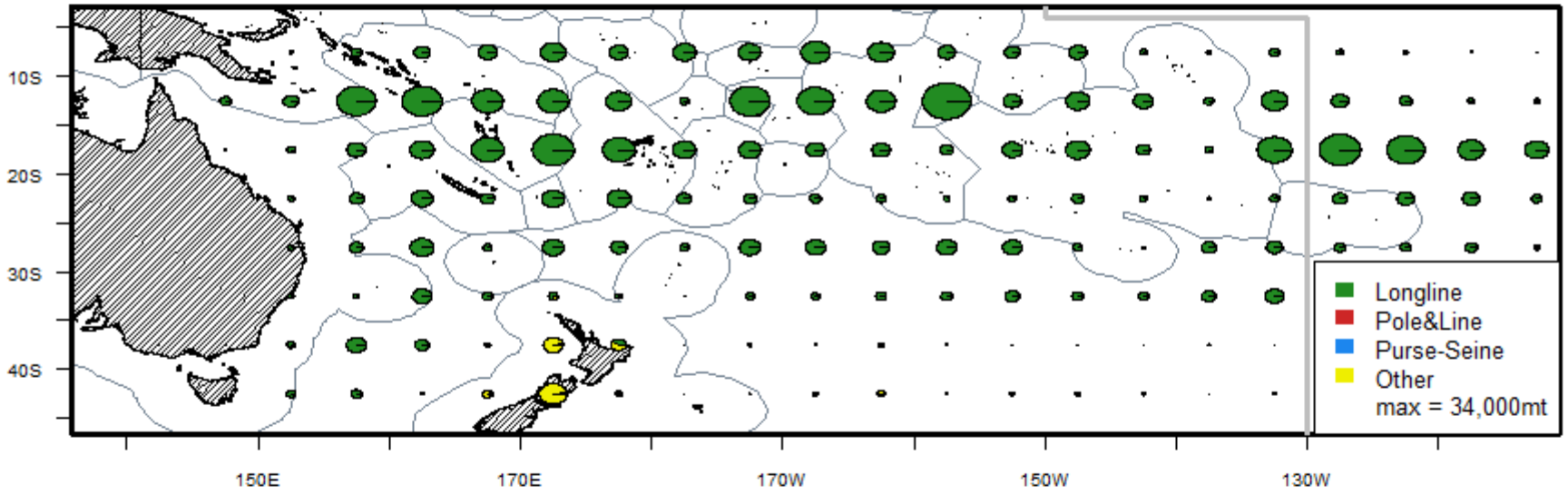
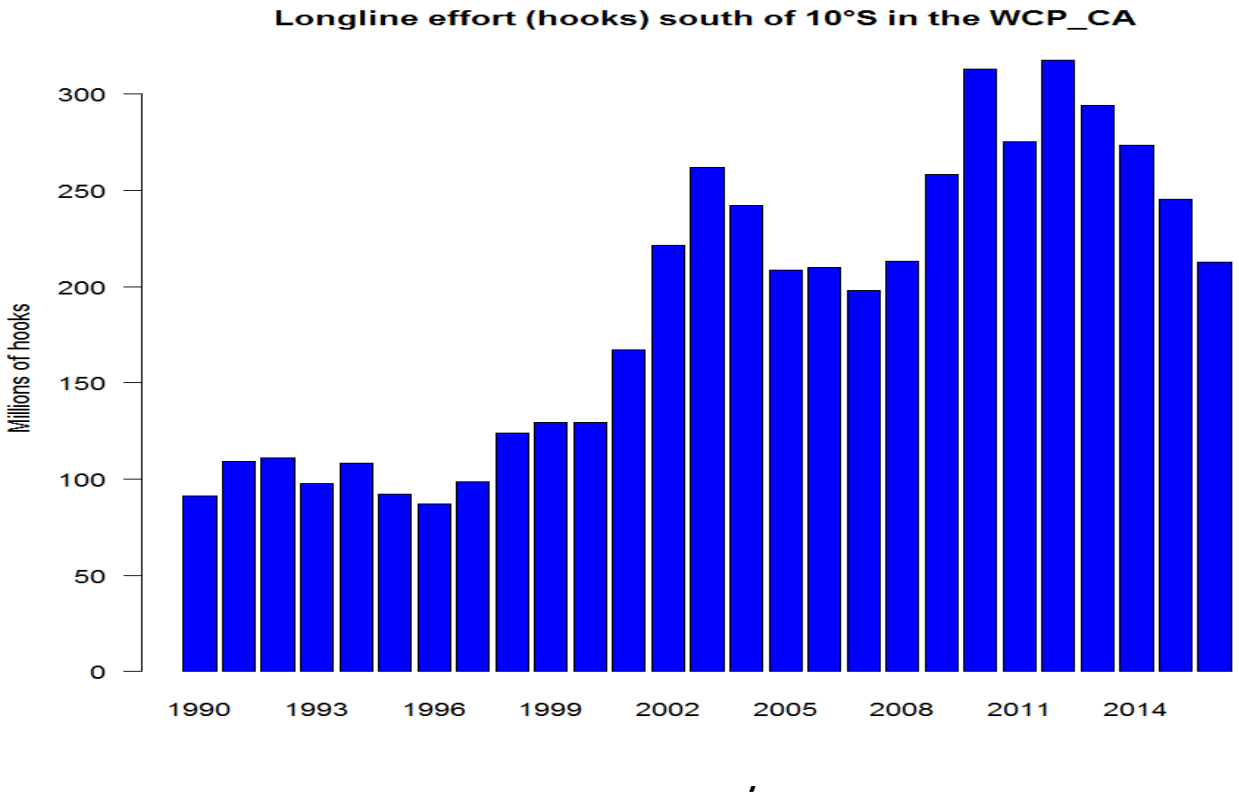
1950 - 2016



2012 - 2016



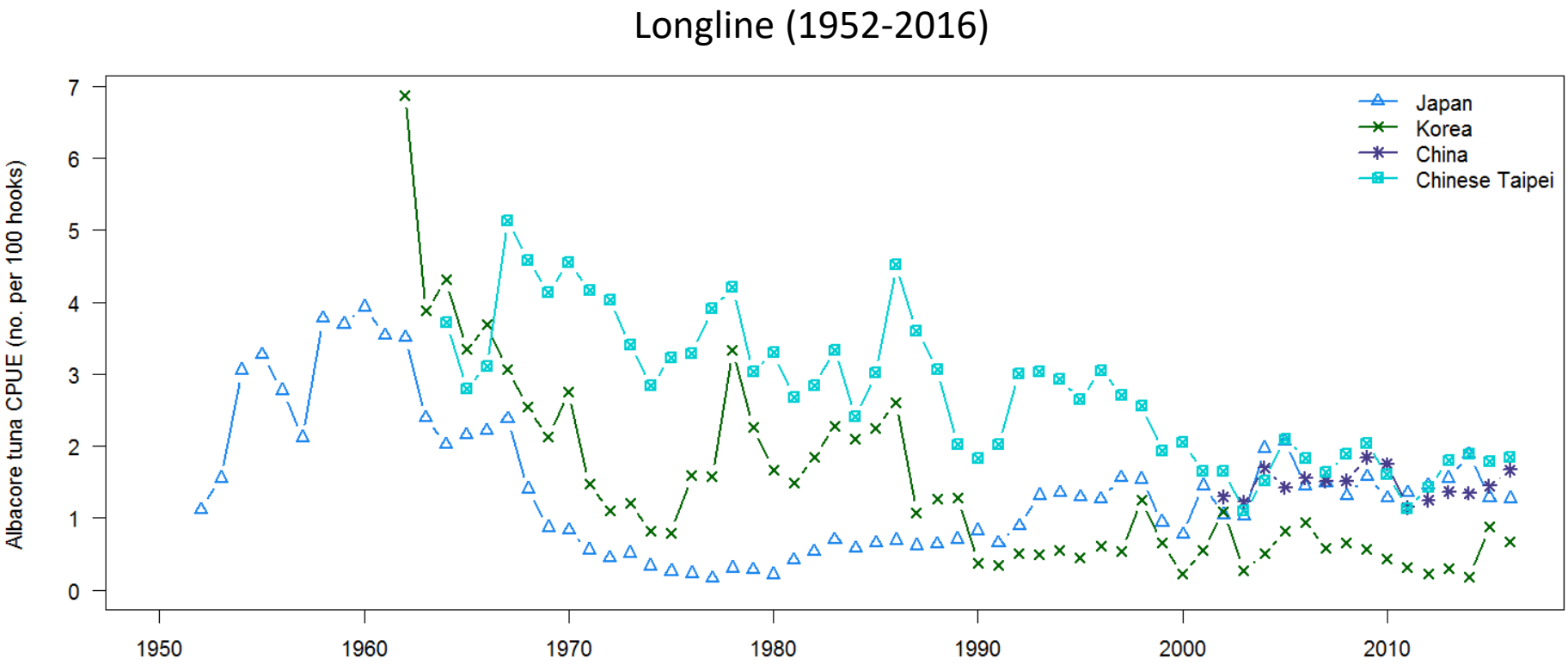
South Pacific (S 10degS) albacore effort



	2010	2011	2012	2013	2014	2015	2016
EEZ	70,435	73,095	75,661	78,485	64,471	65,308	72,627
International waters (IW)	21,379	23,803	24,038	32,500	28,141	23,956	21,627
Total	91,814	96,898	99,699	110,985	92,612	89,264	94,254
% EEZs	77	75	76	71	70	73	77
% High Seas	23	25	24	29	30	27	23

- 2016 effort: 13% less than 2015
- VMS days most “up to date”
- 2016 effort +6% from 2015
- High seas effort proportion ~ 25-30%

Trends in LL CPUE by key flag



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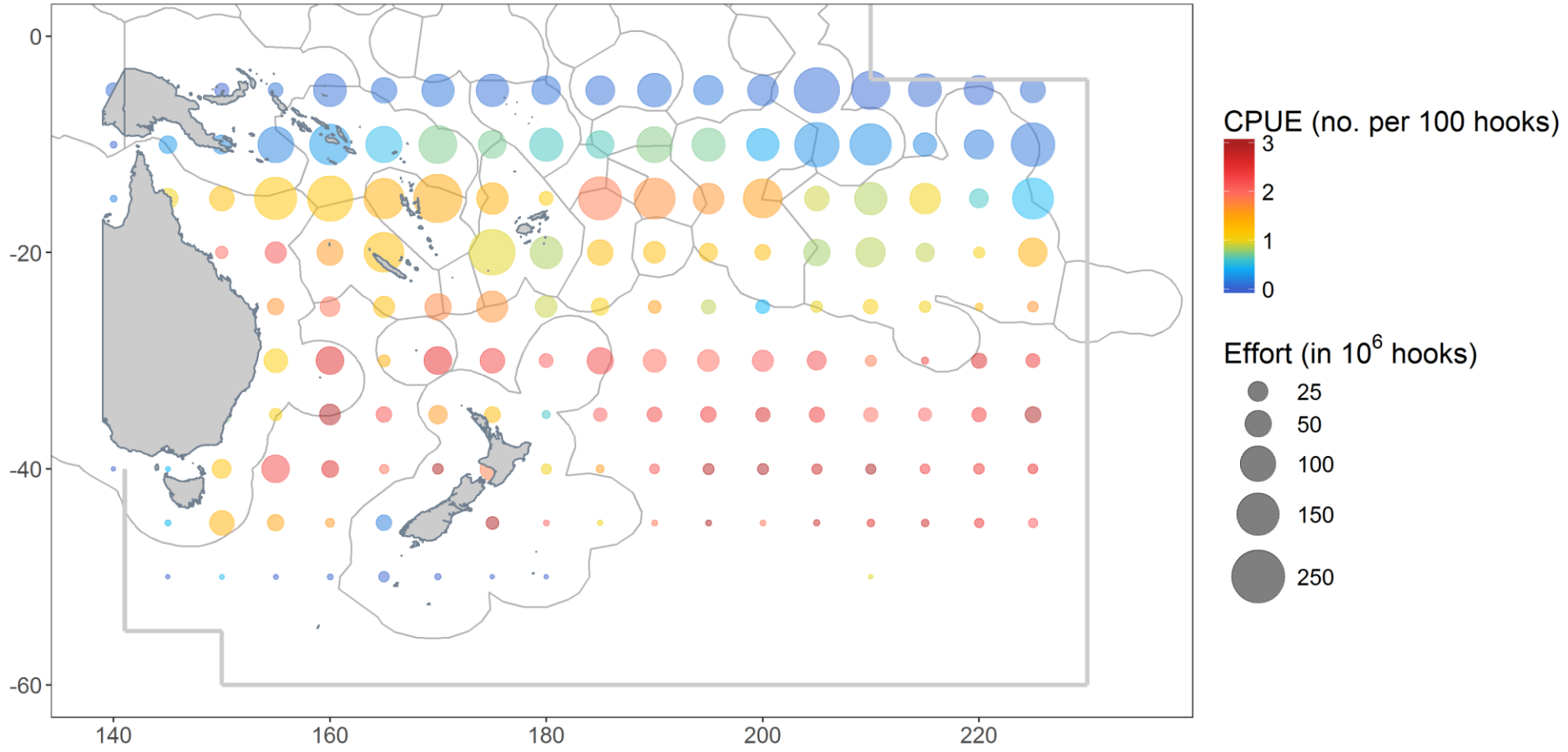
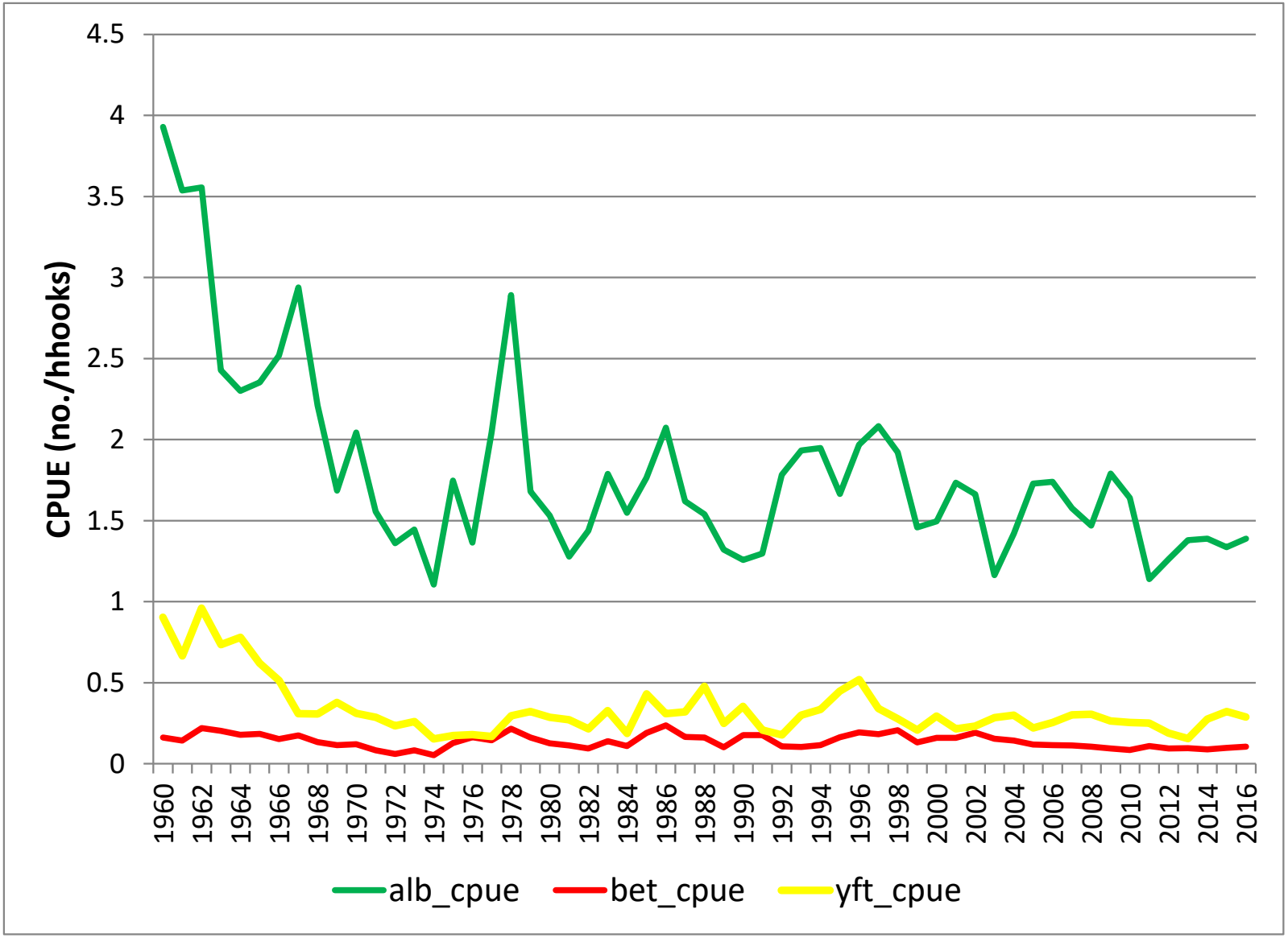
2001-2016

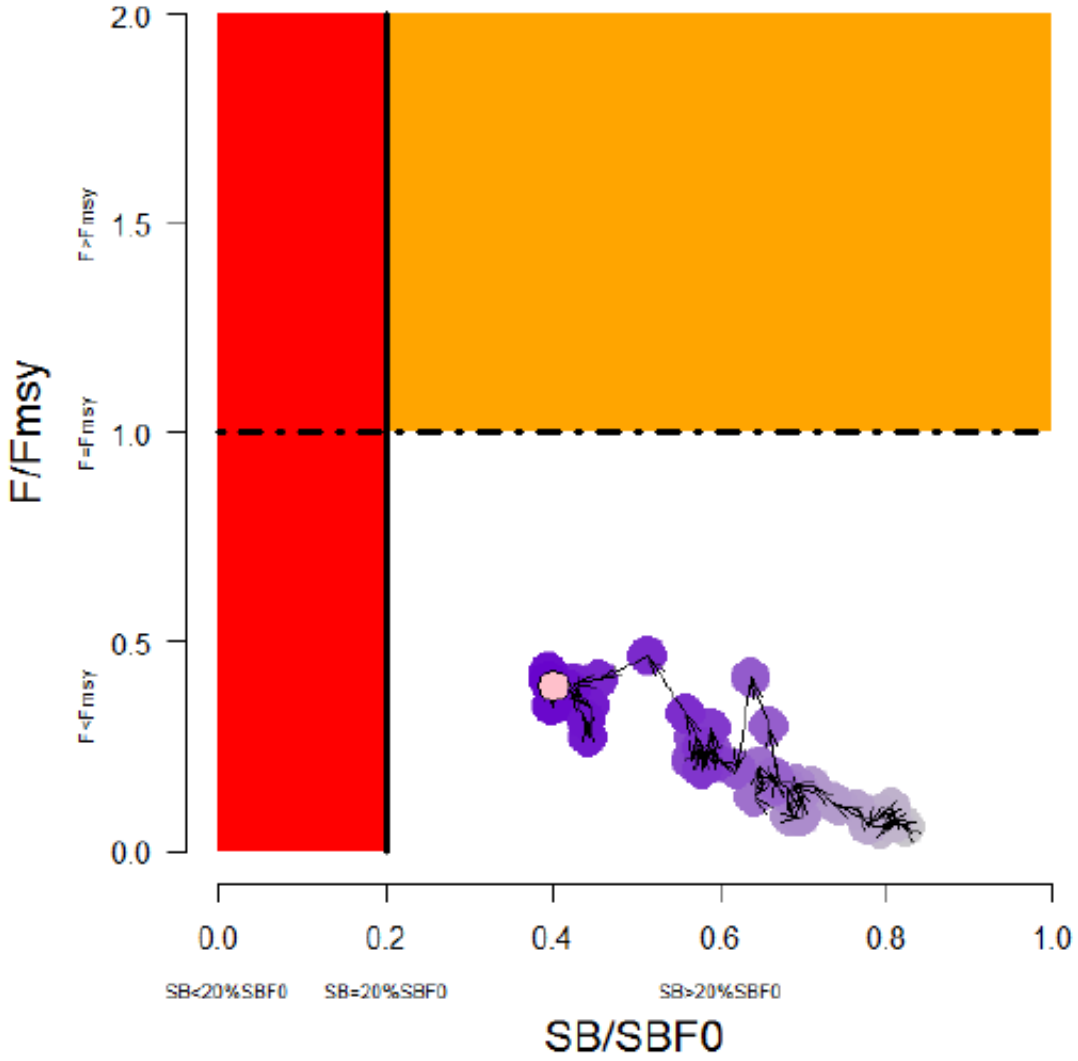


LL CPUE southern WCP_CA 10degS



South Pacific Albacore stock status

- Last assessment in 2015 (2013 status)



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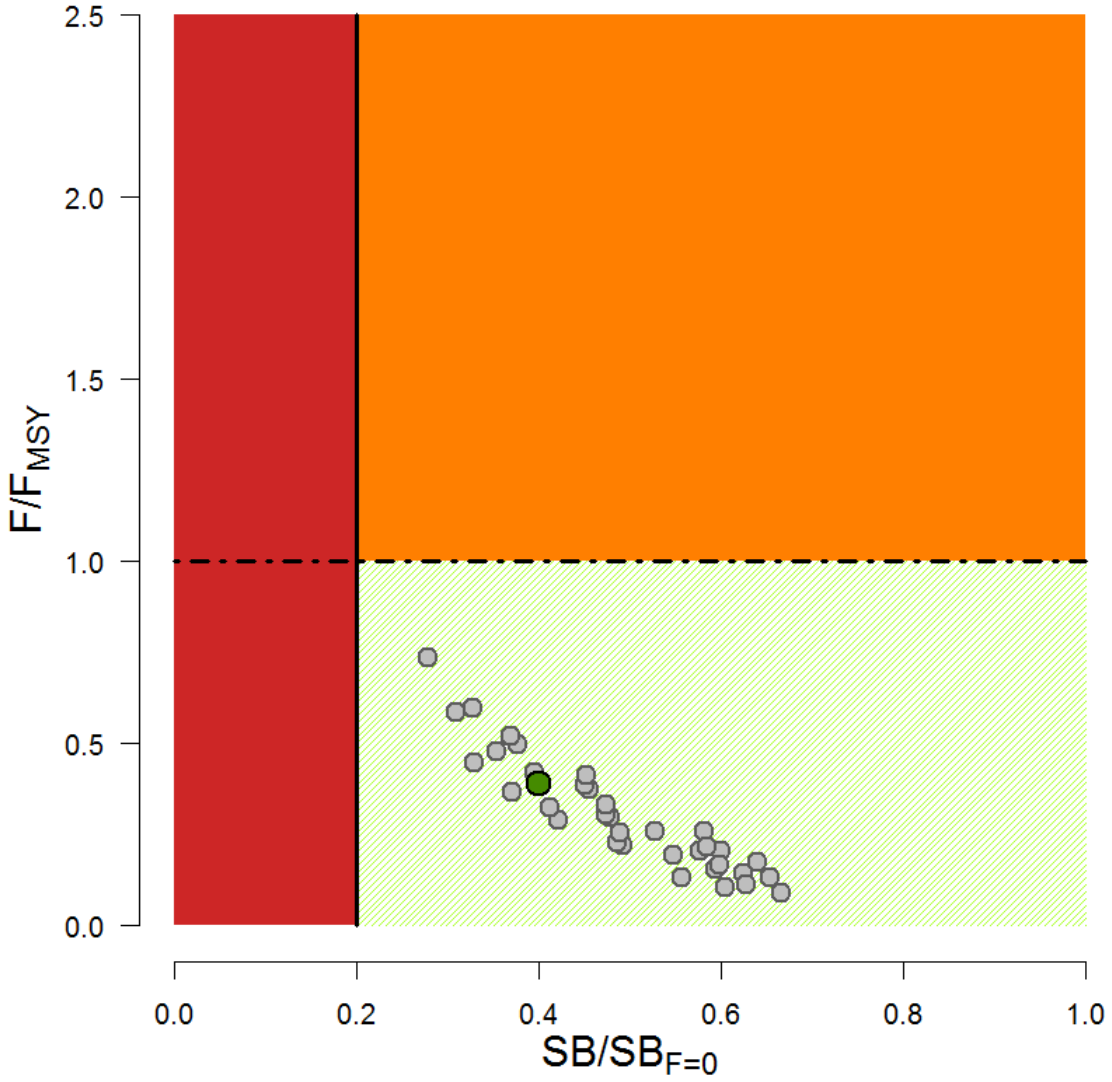
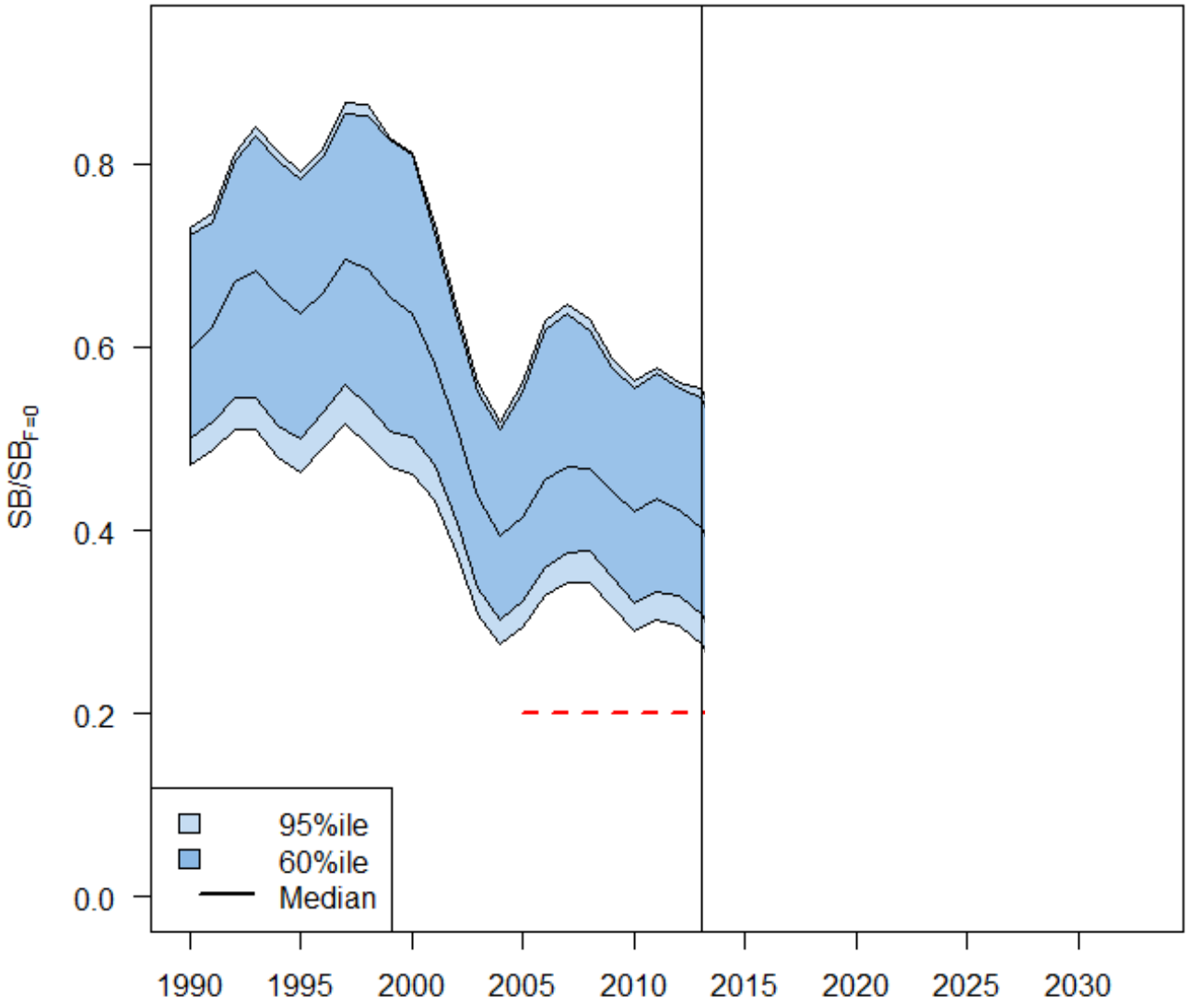


Albacore stock status



9 models

9 models x 200 projections

Projections using 2015 effort levels (note catch-based projections are more pessimistic)

Stock status from 41% $SB_{F=0}$ to 35% in 2033

Risk SB < LRP = 7% in 2033

CPUE (VB) -7% from 2013 levels

SC13 Advice

- No assessment conducted in 2017
  - Stock status description from SC11 still current
- Noted decrease in total catch (~8% from 2015; 13% from 2011-2015) and effort (~ 15% from 2015)
- Noted results of projection analyses
  - Reduction in average biomass, 7% risk of falling below the LRP, declines in vulnerable biomass (CPUE)

SC13 Advice

- Pending a new assessment in 2018, SC13 noted SC11 and SC12 advice:
  - longline fishing mortality and longline catch be reduced to avoid further decline in the vulnerable biomass so that economically viable catch rates can be maintained, especially for longline catches of adult albacore.
- SC13 recommends that this advice be taken into consideration when the TRP for South Pacific albacore is discussed at WCPFC14.

SC13 activities on PIs and MS

- SC13 SWG on performance indicators and monitoring strategies (MI-WP-02/ISG8) - technical review for southern longline fishery

Objective type	Candidate Objective	Performance indicator
Biological	Maintain stock(s) biomass at sustainable levels	P(SB<LRP) from modelling
Economic	Maximising economic yield	Predicted effort v E_{MEY} (incl. multispp) and B_{MEY}
	Maximise catch	Avg expected catch
	Maintain acceptable CPUE	Predicted CPUE cf reference levels
	Maximise SIDS revenues	Avg value of SIDS/non-SIDS catch
	Catch stability	Avg annual variation in catch
	Effort predictability	Effort variation cf reference period
	Maintain stock(s) around TRP	$P(SB/SB_{F=0})$ ~ TRP

SC13 activities on PIs and MS

Objective type	Candidate Objective	Performance indicator
Social	Food security in developing states	Proxy: avg proportion of CCM's catch/total in regions
	Avoid adverse impacts on small scale fishers	Proxy: avg catch for small scale fisheries
	Maintain/develop domestic fisheries	Level of effort/catch in domestic fishery
	Human resource development	Employment: Proxy: domestic catch
Ecosystem	Minimise catch of non-target spp	Expected catch of other spp

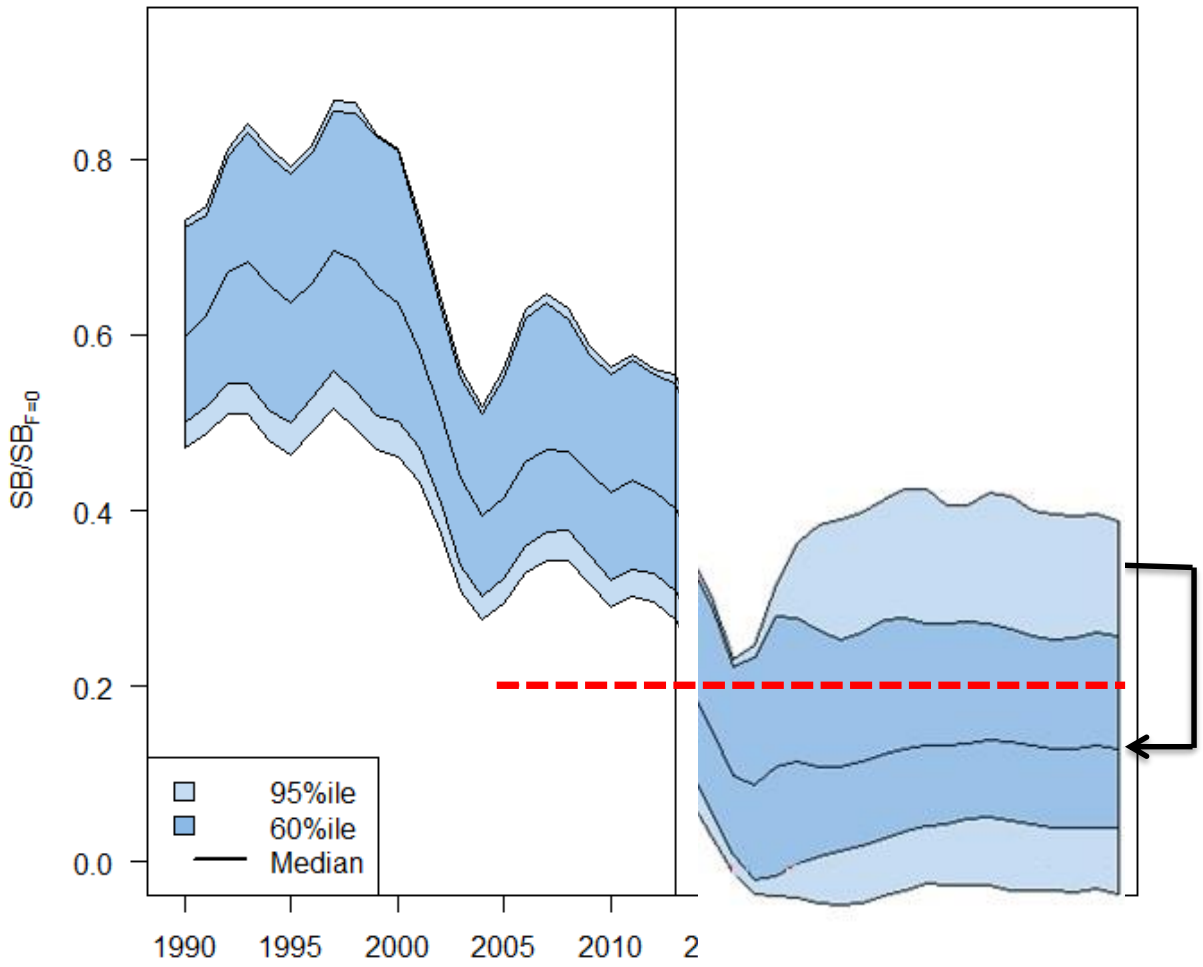
SC13 recommendations

- Recommended WCPFC14 note the candidate performance indicators and monitoring strategies for each of these fisheries, and provide advice on those to be included for development of harvest strategies under CMM 2014-06.
- SC13 noted best practice to support a broad range of performance indicators in support of the multiple management objectives already identified by the Commission. There will be scope to iteratively refine both the management objectives and related performance indicators and monitoring strategies.

- Thanks for listening. Any questions?

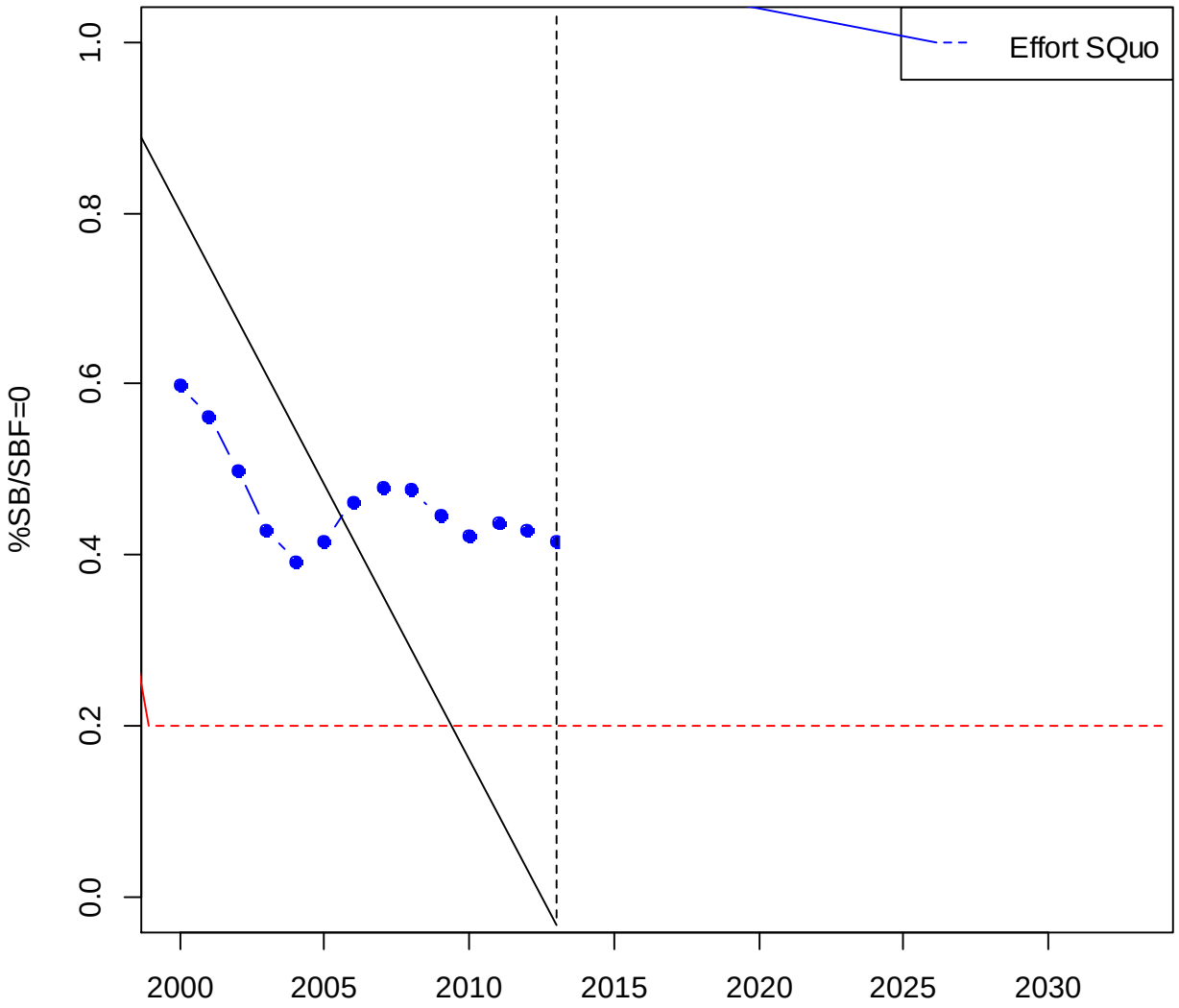
SPA TRP analyses (cut down)

	Effort change (LL effort scalar v 2013)	Median $SB_{2033}/SB_{F=0}$	Median longline VB_{2033}/VB_{2013}	Median albacore catch (C_{2033}/C_{2013})	Risk SB_{2033} < LRP
MEY					
costs $0.9-1.3 per hook	-75%	0.59	+49%	-59%	0%
10% revenue margin over costs					
cost $0.9 per hook	-12%	0.34	-8%	-30%	9%
cost $1.1 per hook	-33%	0.40	+5%	-36%	0%
Break-even					
cost $0.9 per hook	0%	0.32	-14%	-28%	20%
cost $1.1 per hook	-23%	0.37	-1%	-33%	4%
MSY					
	+150%	0.14	-56%	-22%	74%

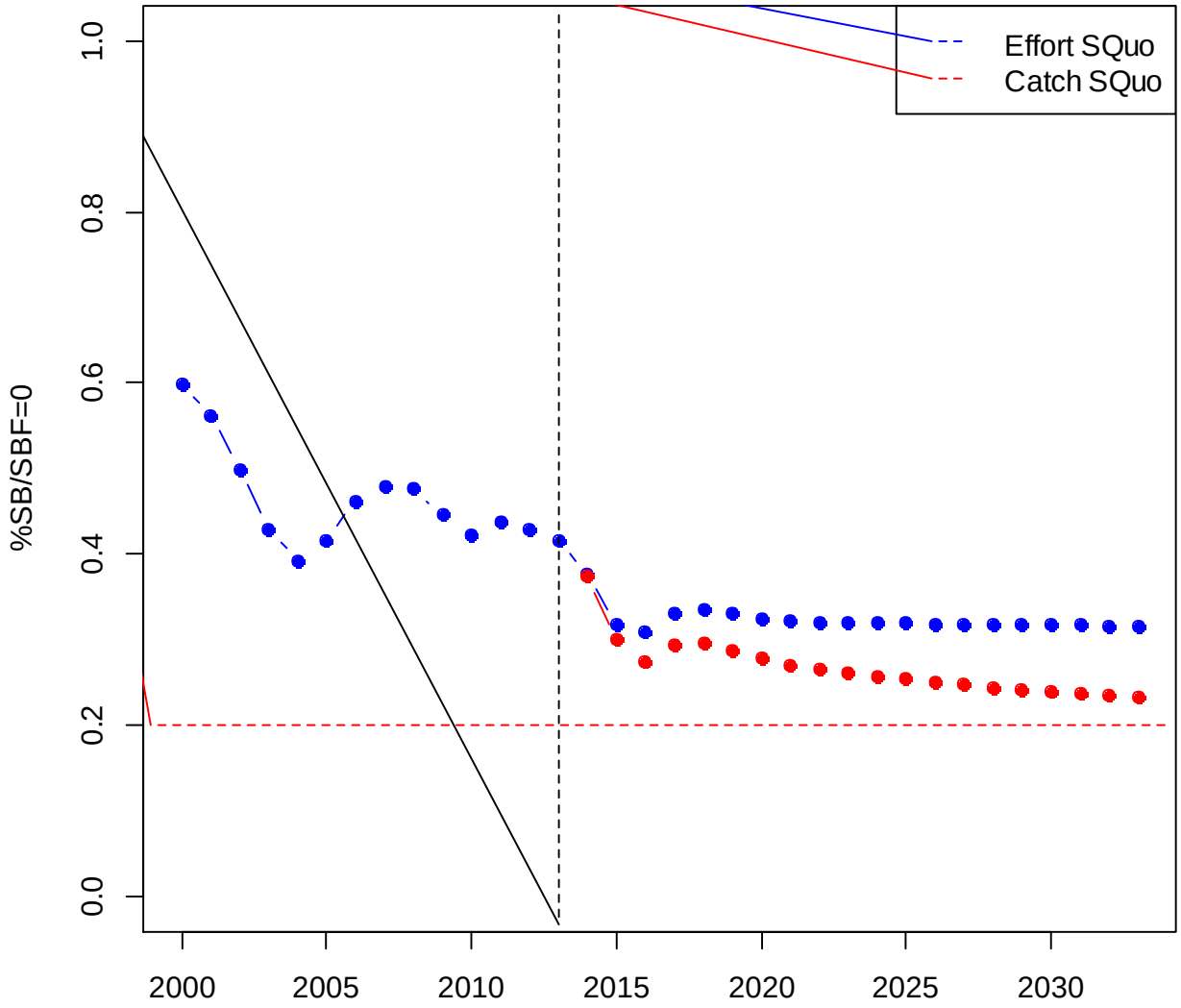

0.8
0.6
0.4
0.2
0.0
SB/SB$_{F=0}$
95%ile
60%ile
Median
1990
1995
2000
2005
2010
2

How to achieve a TRP

Status quo (2013)

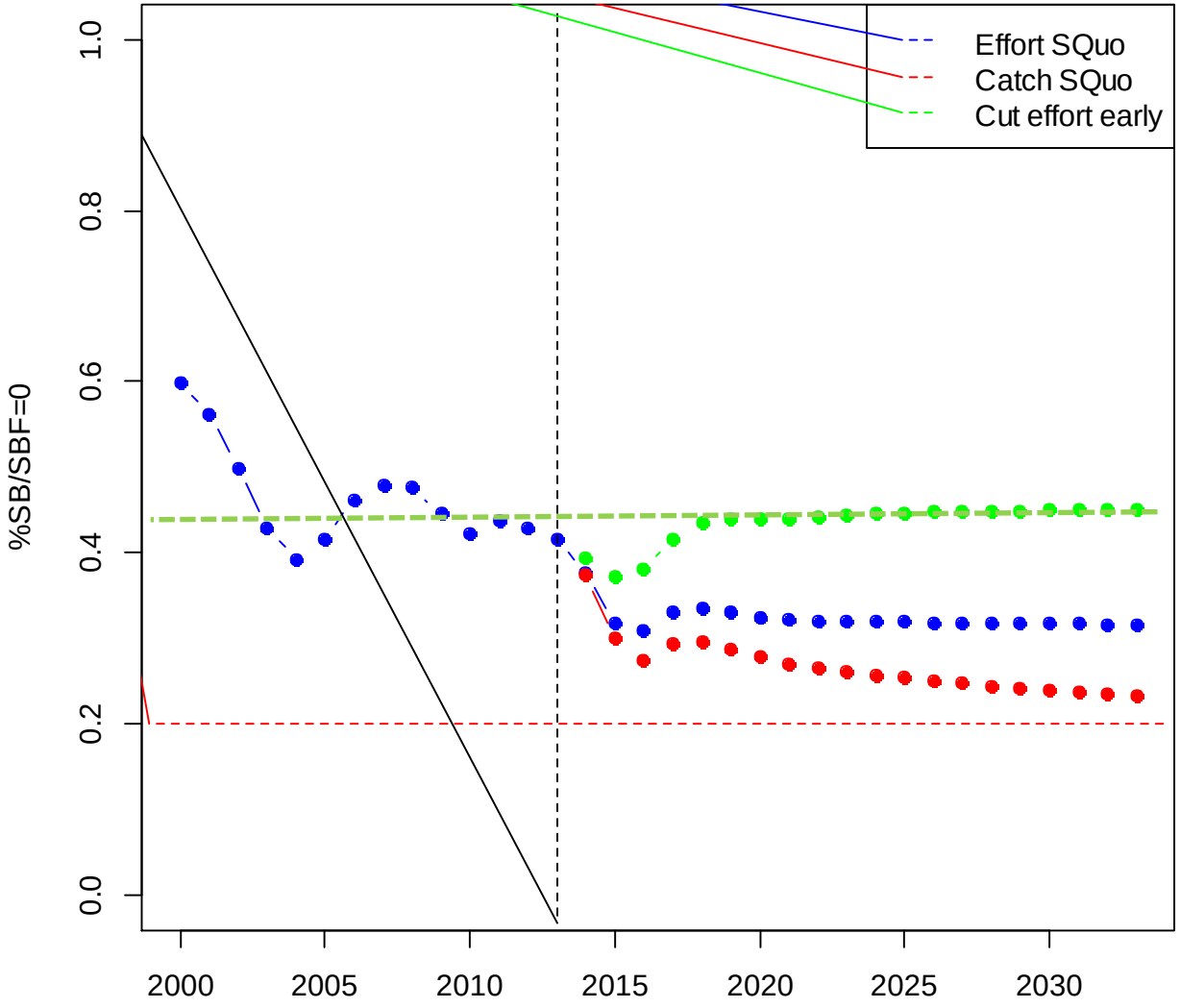


Status quo

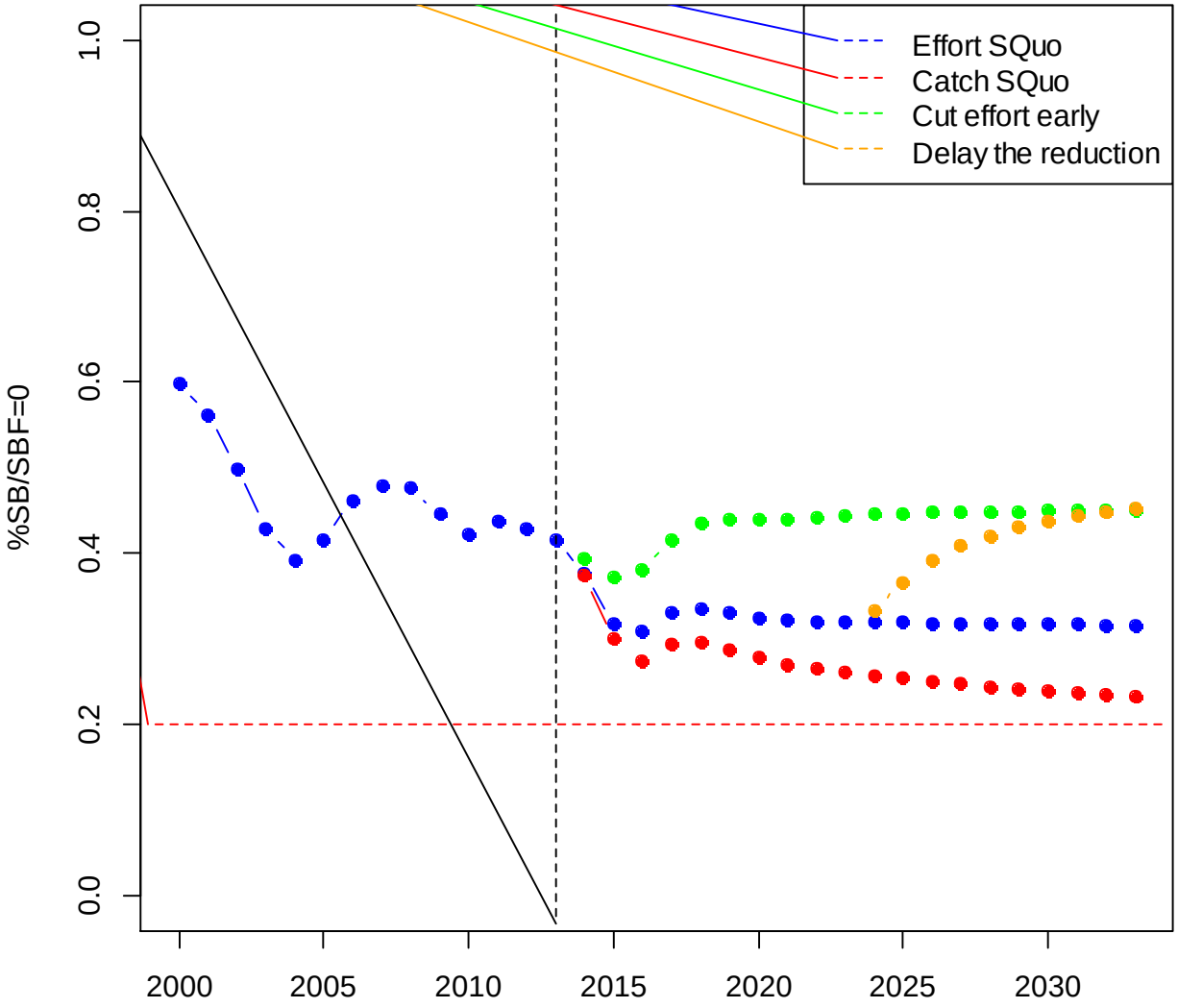


LRP Risk: 41%
Some risk of stock collapse

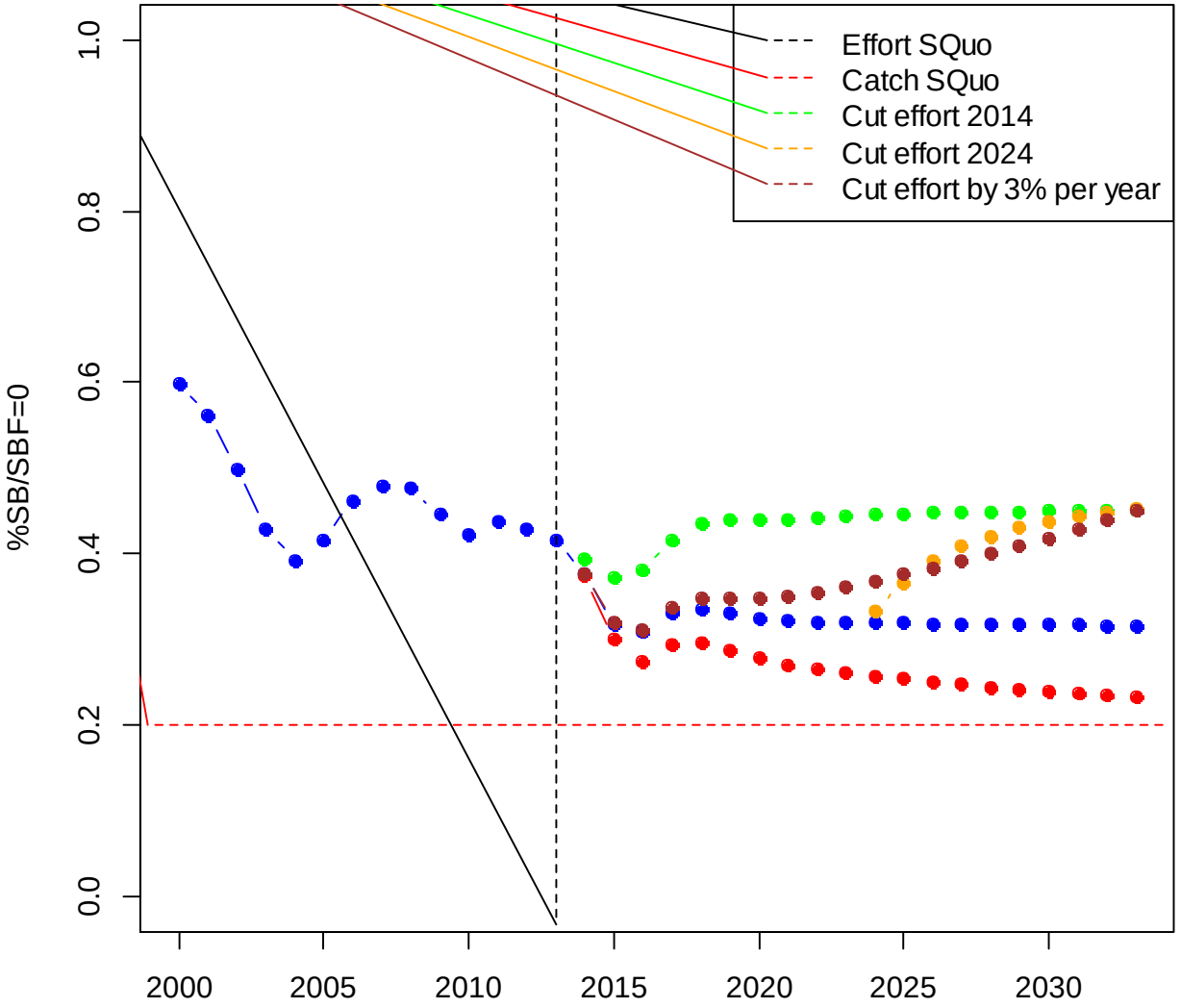
‘Take reduction early’



‘Delay the reduction’



‘Spread the reduction’



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