

Pacific Tuna Tagging Programme

WCPFC-SCI4-2018/RP-PTTP-02

SPC-OFP

14th Regular Session of the Scientific Committee

9-16 August

Busan, Republic of Korea



**SCIENTIFIC COMMITTEE
FOURTEENTH REGULAR
SESSION**

Busan, Republic of Korea
8-16 August 2018

**PACIFIC TUNA TAGGING
PROGRAMME STEERING
COMMITTEE**
17:30-19:00, Thursday 9
August 2017
(Pearl Room)

WCPFC-SC14-2018-08

PTTP SC AGENDA



1		PRELIMINARIES
	1.1	Review and adoption of agenda
2		PTTP PROGRESS REPORT
	2.1	PTTP Activities (RP-PTTP-02)
	2.1.1	<i>At-sea</i>
	2.1.2	<i>Tag recovery</i>
	2.1.3	<i>Tag data analyses</i>
3		WORK PLAN 2018-2021
	3.1	2018 Bigeye research voyage (RP-PTTP-02)
	3.2	Tag recovery network (RP-PTTP-02)
	3.3	2019 Skipjack research voyage (RP-PTTP-02)
	3.4	Research voyages beyond 2019 (RP-PTTP-02)
	3.5	Related work in 2019 and beyond (RP-PTTP-02)
	3.6	Cost-effectiveness of a dedicated vessel (RP-PTTP-02)
4		OTHER REGIONAL OR SUB-REGIONAL TAGGING
5		ADMINISTRATIVE MATTERS
6		ADOPTION OF REPORT

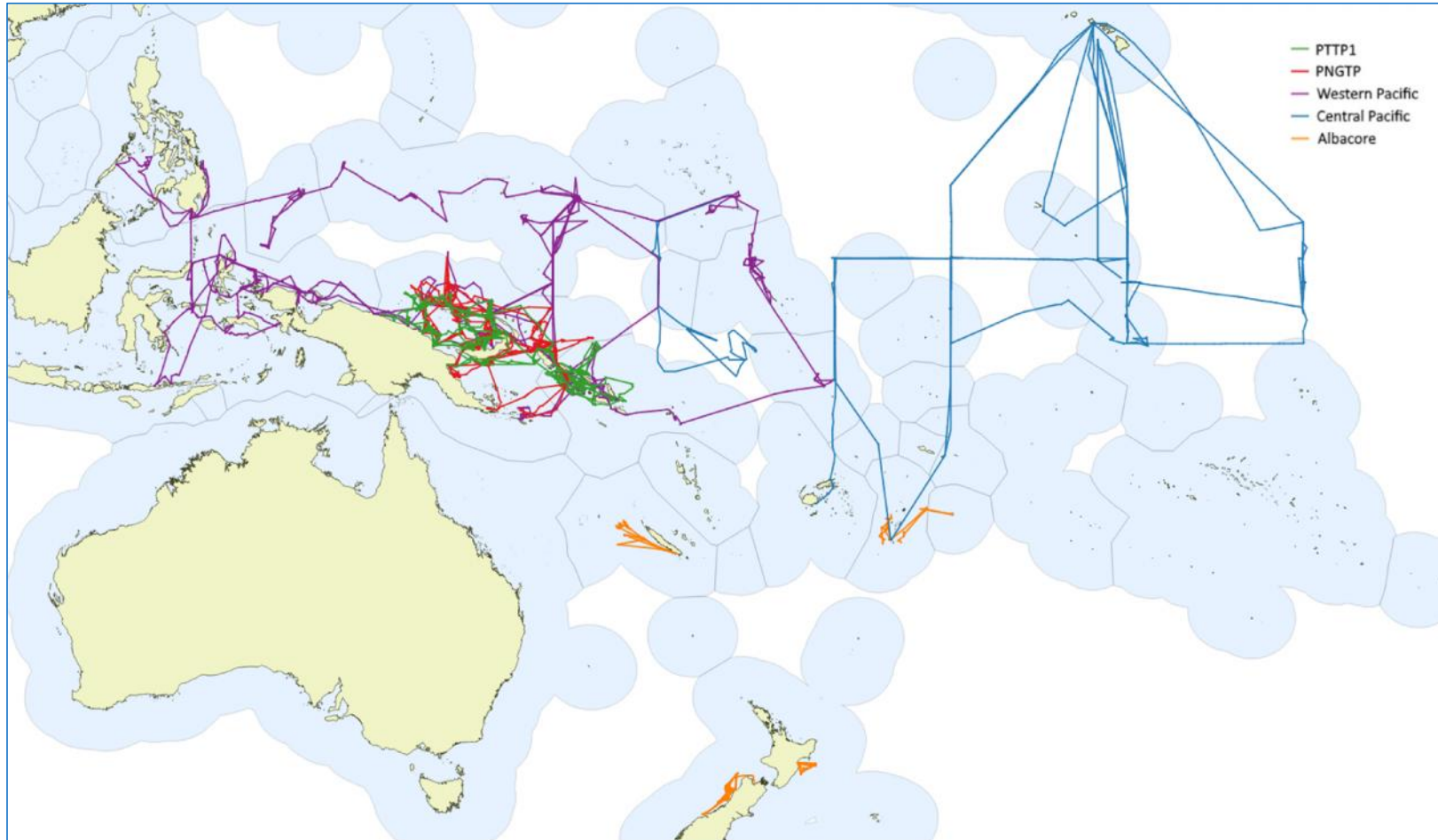
OVERVIEW

- Context
- PTTP Activities
 - At-sea
 - Tag recovery
- Work Plan
- Recommendations

EU
ISSF
Papua New Guinea
New Zealand
Australia
Republic of Korea
WCPFC
Pacific Community
(SPC)

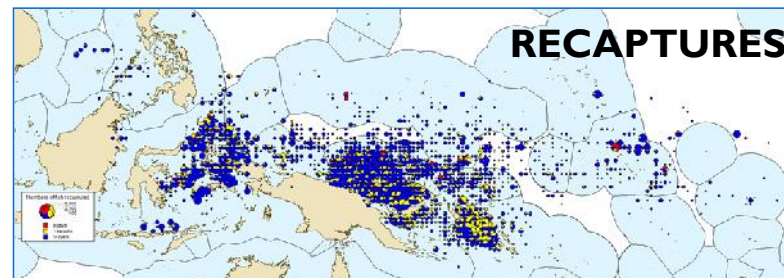
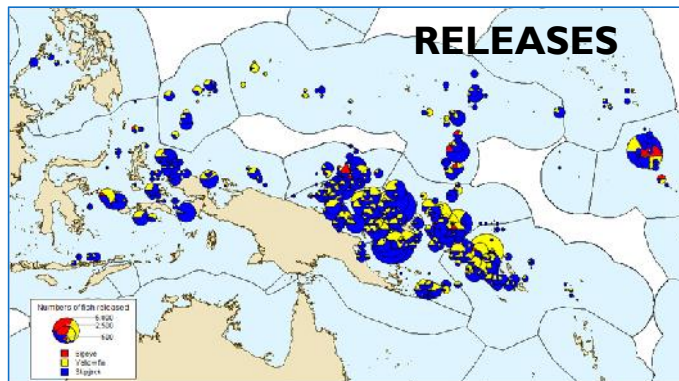


CONTEXT: Previous campaigns



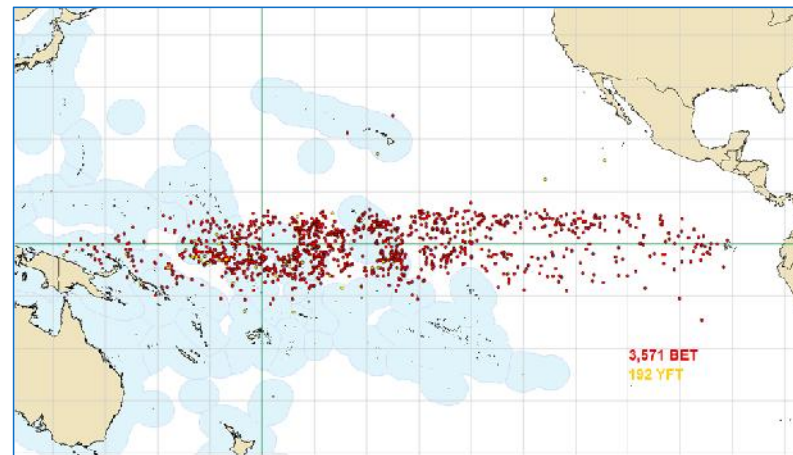
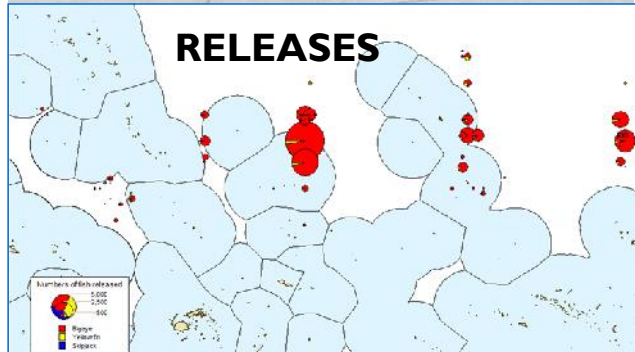
CONTEXT: Previous campaigns

- **Pole and line:** Focus on SKJ and YFT, limited by bait grounds and boat availability



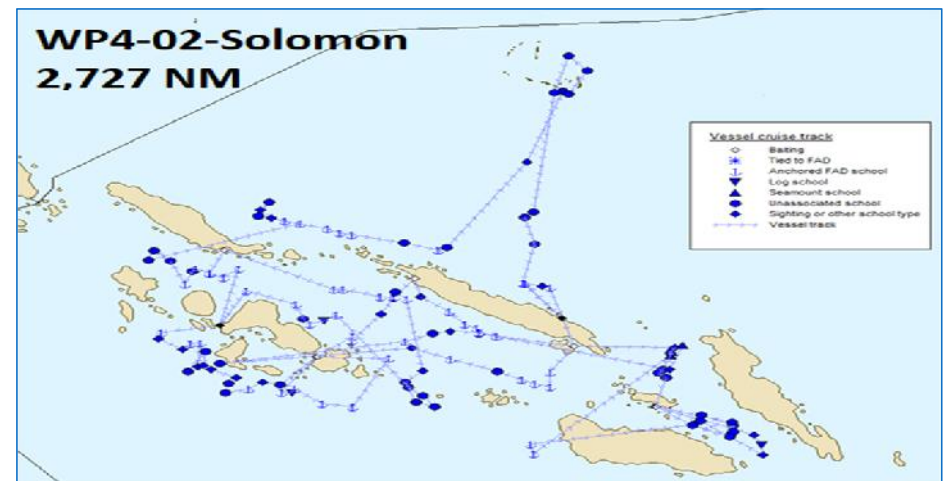
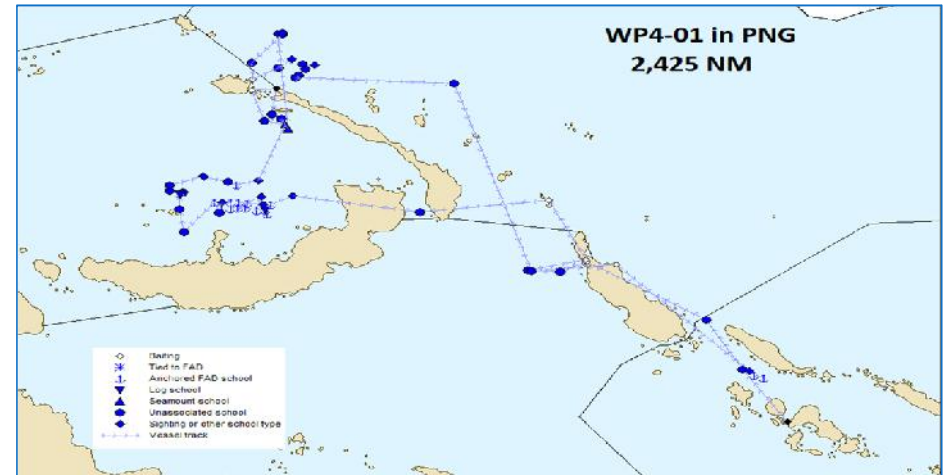
CONTEXT: Previous campaigns

- **TAO and dFAD:** Focus on BET, limited by long-range boat availability and dFAD access



PTTP ACTIVITIES: At-sea WP 4 Sep-Nov 2017

- First pole and line voyage since 2013
- Chartered *Soltai 105* from NFD, based in Noro
- Two legs, one in PNG and one in Solomon Islands, started 17th Sept 2017 for 50 days
- PNG leg, 6,641 fish tagged (@390 per day), 87% SKJ, 13% YFT and 2 bigeye. Releases around seamounts (37%), aFADs (37%), and 23% freeschool.
- SI leg, 21,139 fish tagged (@845 per day), 93% SKJ, 7% YFT and 18 bigeye. Releases around aFADs (62%) and freeschool (23%).



POTP ACTIVITIES: At-sea WP 4 Sep-Nov 2017

<i>Species</i>	Gonad	Liver	Muscle	Otolith	Spine	Stomach	Total
FRIGATE TUNA	4	4	4	3	4	4	23
MAHI MAHI / DOLPHINFISH	11	11	11	7	1	11	52
OCEAN TRIGGERFISH (SPOTTED)	1	1	1	1		1	5
RAINBOW RUNNER	13	13	13	9	1	13	62
SKIPJACK	183	182	182	178	173	183	1081
YELLOWFIN	79	79	79	78	69	78	462
Total	291	290	290	276	248	290	1685

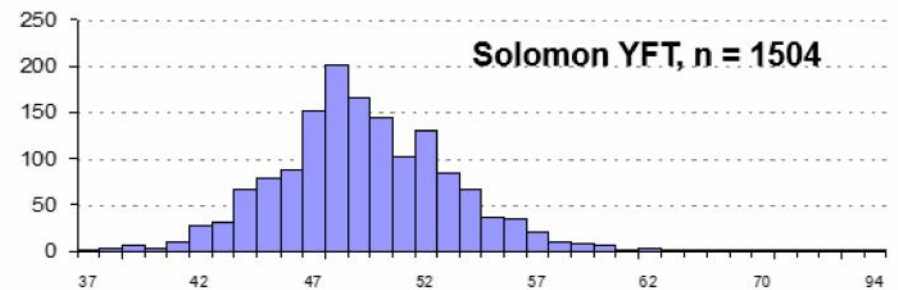
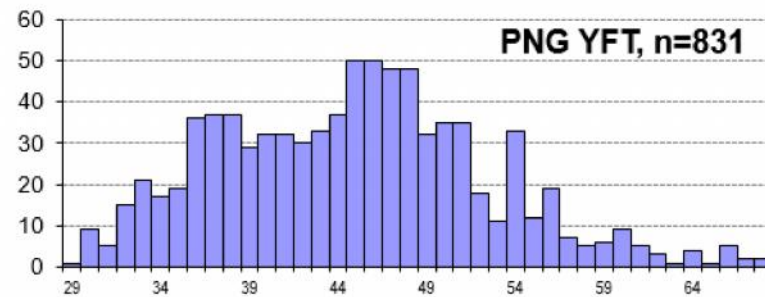


Figure 5: Length frequencies for tagged yellowfin in PNG (top) and Solomon (bottom).

PTTP ACTIVITIES: At-sea WP 4 Sep-Nov 2017

PNG Support

- Tagging staff, security
- Vessel logistics

WP4 Key Lessons

- Better access to reliable bait grounds in PNG is needed to ensure successful fishing, requiring more work in advance of voyages
- Suitable vessel(s) and the future of pole and line based research
 - Cost, availability
 - Suitability, age



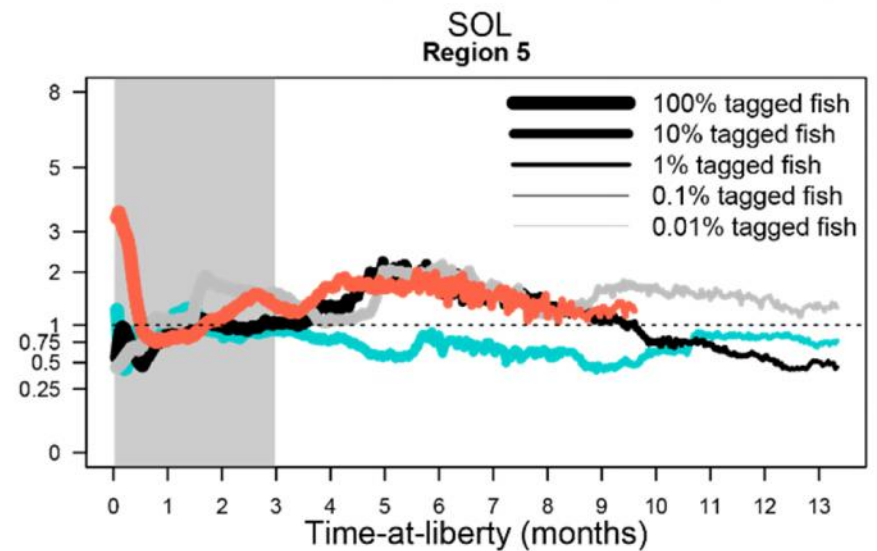
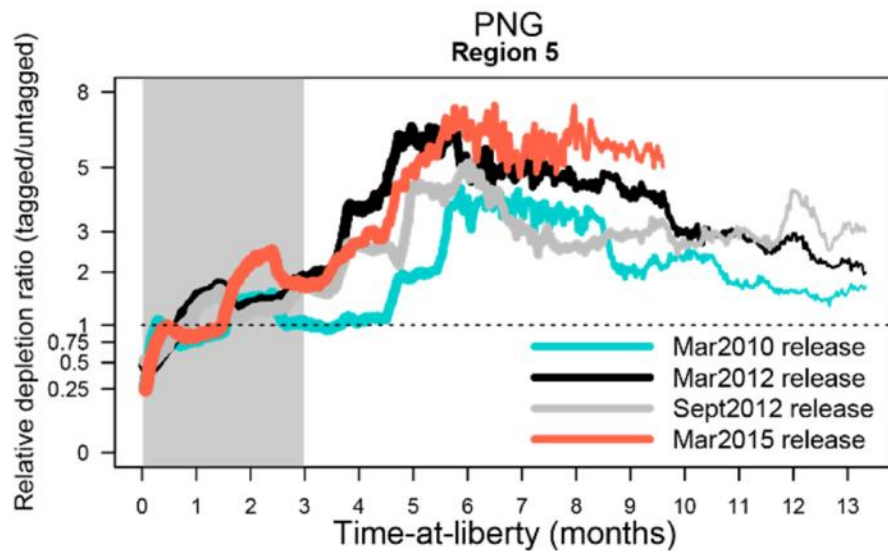
PTTP ACTIVITIES: Tag recoveries

- As at 21 June 2018, a total of 431,158 tagged tuna and 78, 259 had been recaptured (18.2) and the data reported to SPC
- WP4 returns to date : 4166 (15%), noting SKJ (15.5%) and YFT (9%)
- Most recoveries across the PTTP come from purse-seine vessels (92%)
- The part-time Tag Recovery Officers continue with mixed duties at their respective local fisheries agencies/fishing company
- New TRO staff in Honiara and Noro, and data entry in Noumea
- Maintaining the TRO network requires continuous effort (e.g., regular emails, visit in countries, meetings at SPC)
- Tag seeding continues, with 9 kits and a total of 237 tags deployed in 2017-18

PTTP ACTIVITIES: Database improvements

- New dedicated web application allowing access to TagDager for approved users:
 - identify fake recovery: e.g. tags used for training/tag already recovered;
 - access the release information (vessel, date of release, latitude and longitude of release, species, length);
 - help to validate “date found” (the “date found” cannot be a date before the “date release”)
 - estimate “date caught” when date found is only provided
 - search release information relative to tags seeded; and
 - provide full access to the TagDager DB from any authorised users connected to the web.
- These improvements to the tag databases will improve tag quality and reduce the risk of attempted tag reward fraud.

PTTP Activities: Data analyses



Example comparison of relative depletion ratios between simulated tagged schools and the untagged cohort in assessment regions 5, during the first 14 months at liberty for skipjack released at 40cm FL. Results are shown for releases from a Bismarck Sea location (left, 'PNG') and Solomon Sea location (right, 'SOL'). Line colours denote different temporal release scenarios, with line widths showing the percentage tag fish in region. Note non-linear scales for the y-axes and line-width.

ISSUES ARISING

- PTTP continues to be very successful, recently with WP4 and right now CP13
- Significant commitment from the Commission to ongoing funding
- Set to continue as a strong part of WCPFCs science for the medium term, but significant issues to resolve
- Increasing costs of vessel time -
 - increase funding, or
 - decrease tagging-time / or spatial distribution of tag deployment
- Availability of suitable research vessels
 - real challenge for pole and line
 - ageing southern fleet
 - Significant cost pressures
 - (e.g. SPC 1/3 funding of WP4)
 - although can access longline suitable for dangler/troll, none designed for research
 - space for science staff, vessel range
 - needs a longer term solution
- Propose investigation of obtaining a long-term multi-purpose tagging platform for the WCPFC area
 - Raise project to high priority ?

WORKPLAN 2018

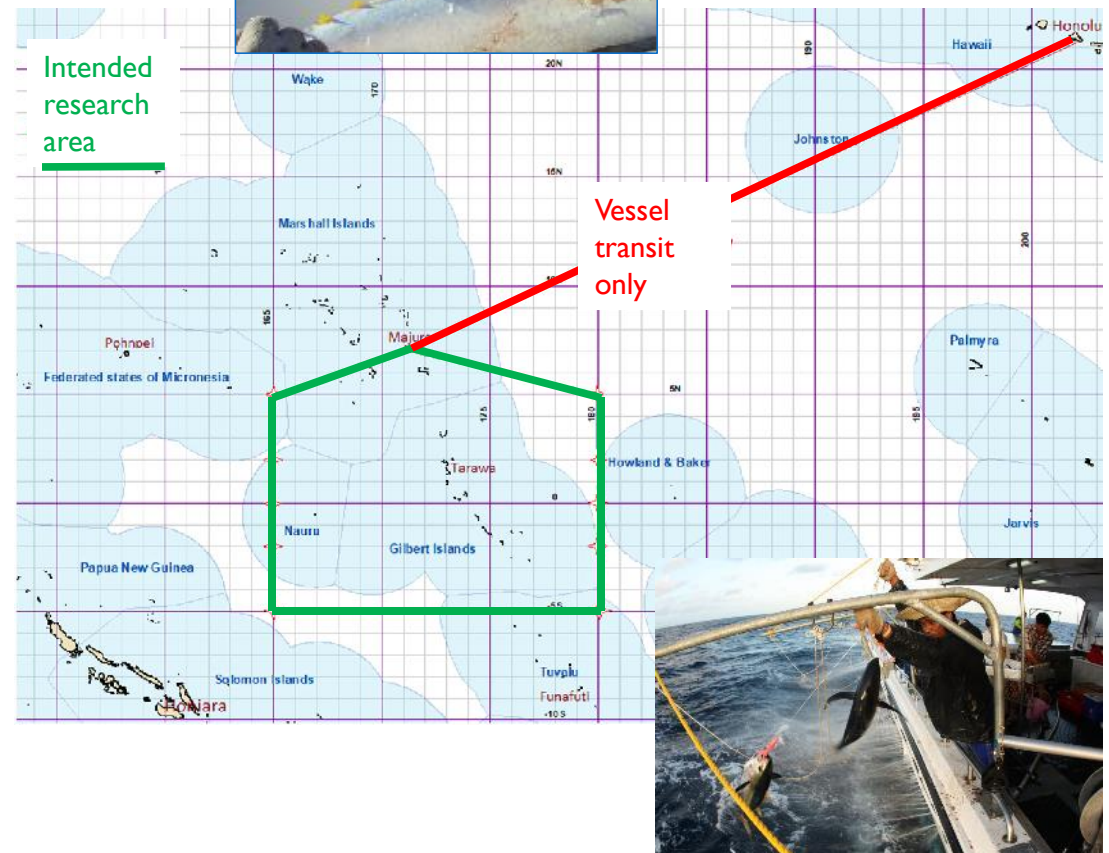
All on track

CP13 - tagging research plan for 2018

- Dangler/troll cruise focussing on BET and YFT
- Charter Gutsy Lady IV
- 5 weeks –left port 16 July

Tag recovery network

- Continue to refine and improve
- Continue development of better tools
- Further develop operator and cannery support

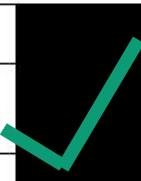




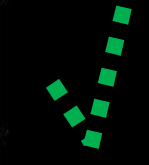
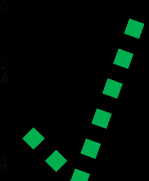

Workplan 2018-2021

ACTIVITIES		2017
TAGGING		
1.	Pole and line tagging research voyage	A charter arrangement has been concluded with the NFD fishing company to use their P&L FV Soltai 105 to implement a 50 day cruise from mid-September.
	Target is skipjack, with secondary target of yellowfin	
	Following SC12 recommendation to implement a skipjack tagging experiment every second year, a pole and line cruise is scheduled for 2017 and biennially thereafter.	
	Note also critical component of biological sampling in support of Project 35b.	

ACTIVITIES		2018	2019	2020	2021
TAGGING					
1.	Pole and line tagging research voyage		Plans to be refined after assessing viable available options		Plans to be refined after assessing viable available options
	Target is skipjack, with secondary target of yellowfin.				
	Following SC recommendations to implement a skipjack tagging experiment every second year, a pole and line research voyage is scheduled for 2019 and biennially thereafter.				
	Note also critical component of biological sampling in support of Project 35b.				
2.	Dangler/troll tagging research voyage	A charter arrangement has been concluded with an Hawaiian LL company to use their FV Gutsy Lady 4 to implement a 35 day research voyage from mid-July	Dependent on outcome of obtaining a suitable pole and line vessel, it may be appropriate to undertake a second consecutive year of dangler/troll research	Focus in the Central Pacific to continue view of bigeye across the WCPO	
	Target is bigeye, with secondary target of yellowfin.				
	Following SC12 recommendation to implement a bigeye tagging experiment every second year, a dangler/troll experiment is scheduled for 2020 and biennially thereafter.				
	Note also critical component of biological sampling in support of Project 35b.				

Workplan 2018-2021

ACTIVITIES		2017
TAG RECOVERY		
3.	Establish new TRO positions where required.	
4.	Ongoing support of TROs in PNG, Philippines, Thailand and key Pacific Island locations.	
5.	Develop new tag recovery poster.	
6.	Review and revise tag rewards scheme.	
DATA MANAGEMENT		
7.	PTTP data verification with VMS and Logbook, and cannery data	
8.	Consolidation of the web tagging database framework	
9.	New tools to consolidate collection of recapture information	

ACTIVITIES		2018	2019	2020	2021
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Workplan 2018-2021

ACTIVITIES		2017
DATA ANALYSES		
10.	Tag reporting and seeding	Purpose: Est Tasks: Routir
11.	Fishing and natural mortality	Purpose: Pro MFCL and id expansion of Tasks: routir
12.	Movement	Purpose: Pro MFCL and S Tasks: Routir
13.	IKAMOANA analyses of optimal design for 2019 research voyage.	
PLANNING		
14.	Review and update research plan	Ongoing ann
15.	Consultancy on cost-effectiveness of a research vessel.	

ACTIVITIES		2018	2019	2020	2021
DATA ANALYSES					
10.	Tag reporting and seeding.				
11.	Fishing and natural mortality.				
12.	Movement.				
13.	IKAMOANA analyses.		Optimal design for 2019 research voyage		
PLANNING					
14.	Review and update research plan	Ongoing annual task for rolling plan.			
15.	Consultancy on cost-effectiveness of a research vessel.				



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Recommendations



SC14 is invited to note the report of ongoing progress in implementation of the PTTP. In particular we recommend that SC:

- Note the successful 2017 research voyage, including participation from local science staff in PNG waters;
- Request members actively support the tag recovery network;
- Support the 2019 tagging programme, and associated budget;
- Support the 2020-2021 tagging programme, and associated indicative budget;
- Support the PTTP workplan for 2018-2021; and
- Support the project to address the increasingly urgent issue of cost-effectiveness of vessel charter in relation to acquiring a dedicated tagging vessel by increasing its priority from medium to high.

4. OTHER REGIONAL OR SUB-REGIONAL TAGGING

5. ADMINISTRATIVE MATTERS

	<i>Approved budget 2017</i>	<i>Estimated expenditure 2017</i>	<i>Indicative budget 2018</i>	<i>Approved budget 2018</i>	<i>Indicative budget 2019</i>	<i>Indicative budget 2020</i>
ANNEX 3 (continued)						
Part 2 - Science & Technical & Compliance Programme						
Section 2 (Item 2)						
Sub-item 2.2	<i>Scientific Research</i>					
Pacific Tuna Tagging Project	250,000	250,000	500,000	500,000	650,000	690,000

6. ADOPTION OF REPORT