

PACIFIC TUNA TAGGING PROJECT WP 4

CRUISE REPORT No. 2

8th October to 5th November 2017

INTRODUCTION

This report summarizes activities of the second cruise of the Pacific Tuna Tagging Project (PTTP) Phase 2, WP4 (WP4-02), during a 29 day period. All fishing occurred in the Solomon Islands EEZ, with a full moon break (8th and 9th October) and a technical stop (17th Oct) in Noro.

Scientific SPC and in-country personnel onboard the FV Soltai 105 during the cruise are listed in Table 1.

Table 1. SPC and In-Country personal onboard during Cruise 2 (WP4-02).

Name	Title	Affiliation	Period
Bruno Leroy	Cruise leader	SPC	08/10/17 – 05/11/17
Valerie Allain	Fisheries Scientist	SPC	08/10/17 – 16/10/17
Joe Scutt Philips	Tagging technician	SPC attachment	08/10/17 – 16/10/17
Jeff Muir	Tagging technician	SPC contractor	08/10/17 – 16/10/17
Marion Boutigny	Tagging technician	SPC contractor	08/10/17 – 05/11/17
Sifa Fukofuka	Tagging technician	SPC	17/10/17 – 05/11/17
Malo Hosken	Tagging technician	SPC	17/10/17 – 05/11/17
Patteson Omi	Observer	MFMR-Solomon Isl.	17/10/17 – 05/11/17

GENERAL DESCRIPTION OF SEARCHING and FISHING ACTIVITY

After the full moon break, the vessel departed Noro late on the evening of October 9th, and went baiting in Munda. Using the Marovo lagoon bait grounds (mainly Seghe), one week was spent fishing around the New Georgia Island group with very good success (over 1100 fish tagged per day on average). The 17th October was spent in Noro for re-provisioning and partial scientific personal change. After a baiting night in Munda, the vessel went fishing toward the south part of Choiseul Island and the north east of Isabel Island before making a 2-day trip to Ontong Java, then steaming back to the east coast of Isabel. Fishing was quite slow during these 6 days with very few schools seen around Ontong Java resulting in less than 250 releases per day on average.

After a short stop in Noro to disembark an injured crew member, the vessel moved to the Malaita-Guadalcanal area with San Jorge and Taroniara for bait grounds. Good numbers of fish were released from free schools between Malaita and Isabel and inside Indispensable Strait. A day was also spent tagging and releasing fish on the west coast of Guadalcanal. On average, close to 850 fish per day were tagged in this area. The last two charter days were spent releasing fish along the south coast of Isabel and

Choiseul Islands. The cruise ended up back in Noro on the 5th November after a morning fished near Kolombangara Island.

The track of the cruise, based on schools and 1800 positions, is found below as **Figure 1**, and a summary of general movements and tag releases follows as **Table 2**. A compilation of the daily log extracts, detailing daily activities, is provided as **Appendix 2**.

Figure 1: Cruise track (2,727 nautical miles) during WP4 Cruise 2 (WP4-02).

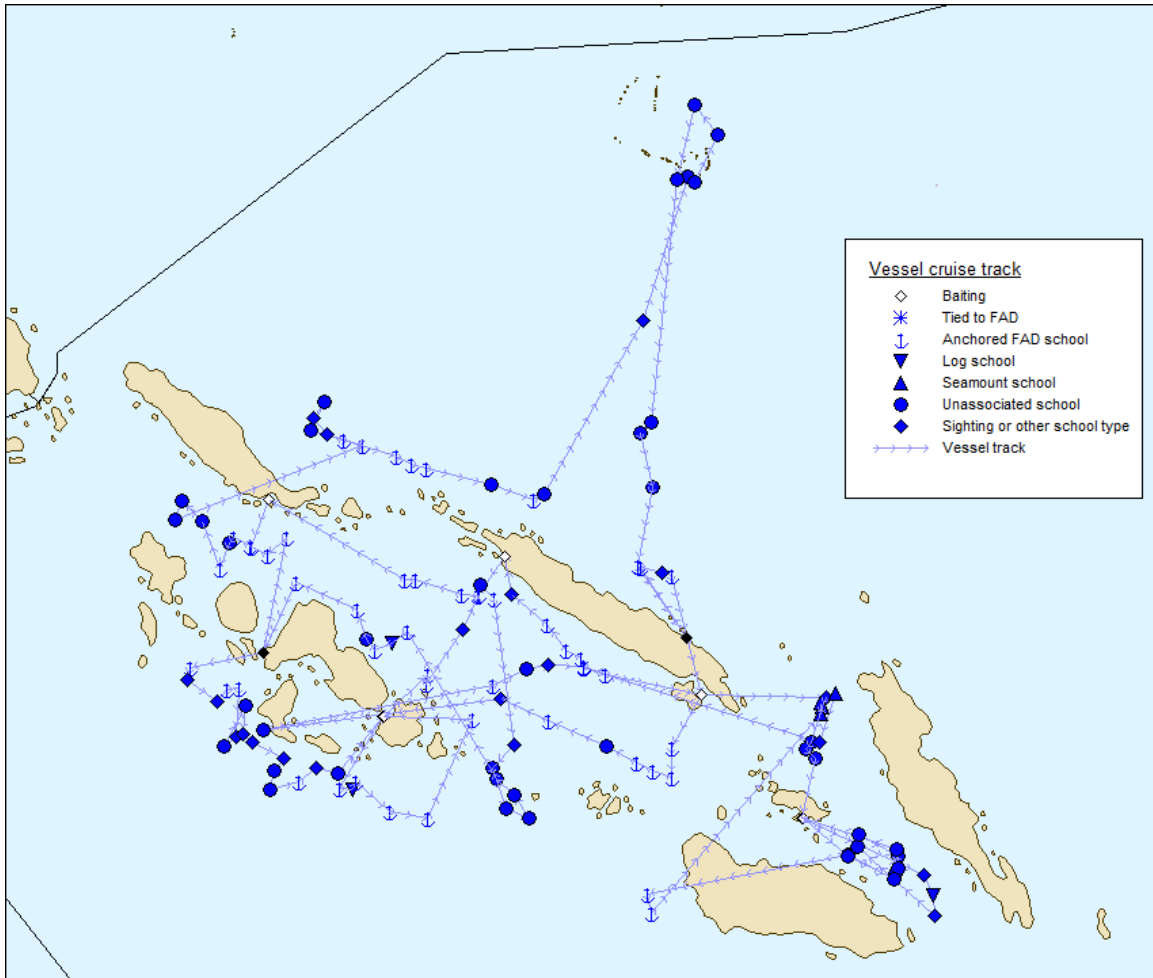


Table 2, Summary of Cruise 2 activity, with the number of conventional tag releases per day per species,

Date	Activity	Conventional releases			Total releases
		SJ	YF	BE	
Oct 8 th	In port Noro; boat office door change	-	-	-	-
Oct 9 th	In port Noro; boat repairs, provision, bait Munda	-	-	-	-
Oct 10 th	Searching Fishing – bait Munda	834	57	1	892
Oct 11 th	Searching Fishing – bait Seghe	201	41	-	242
Oct 12 th	Searching Fishing – bait Manabusu	692	274	1	967
Oct 13 th	Searching Fishing – bait Seghe	820	82	-	902
Oct 14 th	Searching Fishing – bait Seghe	2033	41	-	2074
Oct 15 th	Searching Fishing – bait Seghe	614	-	-	614
Oct 16 th	Searching Fishing – In port Noro end afternoon	2215	331	-	2546
Oct 17 th	Noro; personal change, provision, bait Munda	-	-	-	
Oct 18 th	Searching Fishing – bait Ropa	179	26	-	205
Oct 19 th	Searching Fishing – bait Suri	284	218	13	515
Oct 20 th	Searching Fishing – bait Rakata	236	68	1	305
Oct 21 st	Searching Fishing – bait Luaniua	38	10	-	48
Oct 22 nd	Searching Fishing – bait Luaniua	69	-	-	69
Oct 23 rd	Searching Fishing – bait Buala	269	14	-	283
Oct 24 rd	Searching Fishing – bait San Jorge	1329	11	-	1340
Oct 25 th	Searching Fishing – No baiting	1071	31	-	1102
Oct 26 th	Searching Fishing – bait Seghe	476	19	-	495
Oct 27 th	Searching Fishing – bait San Jorge	684	32	-	716
Oct 28 th	Searching Fishing – bait Taroniara	587	28	-	615
Oct 29 th	Searching Fishing – bait Taroniara	1020	8	-	1028
Oct 30 th	Searching Fishing – bait Taroniara	1227	27	-	1254
Oct 31 st	Searching Fishing – bait Taroniara	319	1	-	320
Nov 1 st	Searching Fishing – bait San Jorge	1300	61	2	1363
Nov 2 nd	Searching Fishing- No baiting	980	20	-	1000
Nov 3 rd	Searching Fishing – bait Kolokofa	696	17		713
Nov 4 th	Searching Fishing – bait Posarae	233	12		245
Nov 5 th	Searching Fishing – Arrive Noro – end of cruise	1203	76		1279
	CRUISE TOTAL	19617	1504	18	21139

TAG RELEASES

Of the 29 days of the cruise, 25 days were spent searching and fishing and 4 full or partial days in port.

A total of **21,139** fish were tagged and released during the cruise, at an average of **845** fish per day. The species composition in total was **93%** skipjack, **7%** yellowfin with only

18 individual bigeye tuna tagged. These percentages are quite different from previous tagging in the same area (**33%** of Y and B combined in 2007 and **61 %** in 2008), and bigeye tuna have never been observed in good numbers.

Less than 12% of the releases were with the smaller 11 cm tags and to be noted that these tags were used for fish between 40 and 50 cm to save the bigger 13 cm tags. This means that we almost did not see any fish under 40 cm FL.

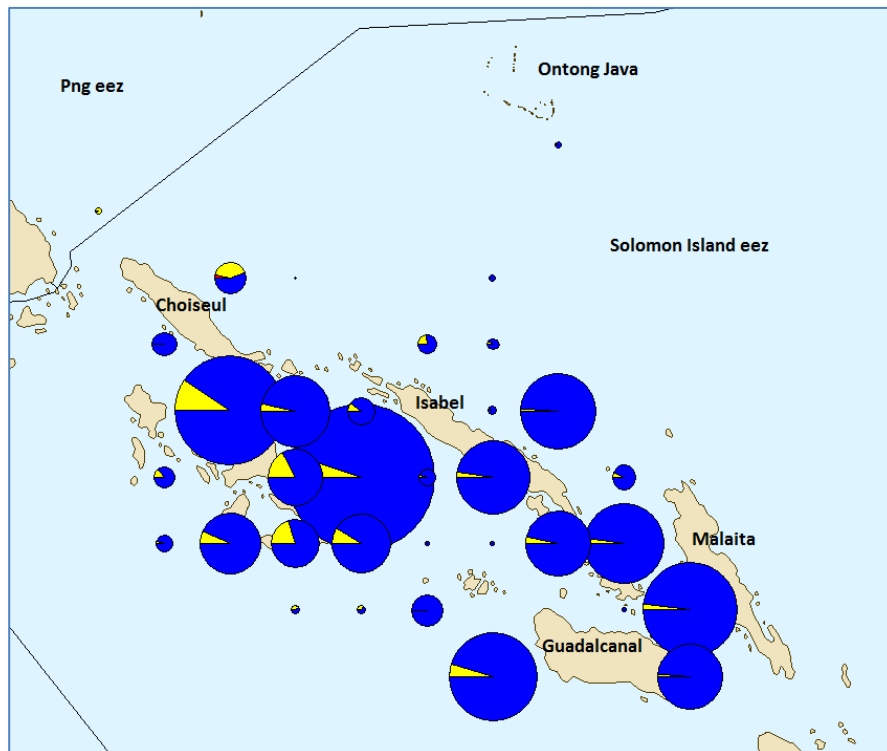
62% of releases were in association with anchored FADs, and the free school releases represented **23%**. The rest of the tags were released on a few logs, drifting fads, whale sharks and seamounts (see Table 3).

Table 3. Number of fish releases per school association and per species.

School association	BET	SKJ	YFT	TOTAL	%
Seamount	-	853	20	873	4
Whale shark	-	436	25	461	2
Drifting FAD	2	810	38	850	4
Anchored FAD	4	12213	895	13113	62
Log	-	794	223	1017	5
Unassociated / Free	12	4510	303	4825	23

The releases are summarized by school, location, school type day and area in **Appendix 1**, whereas **Figure 2** shows the distribution of releases during the cruise.

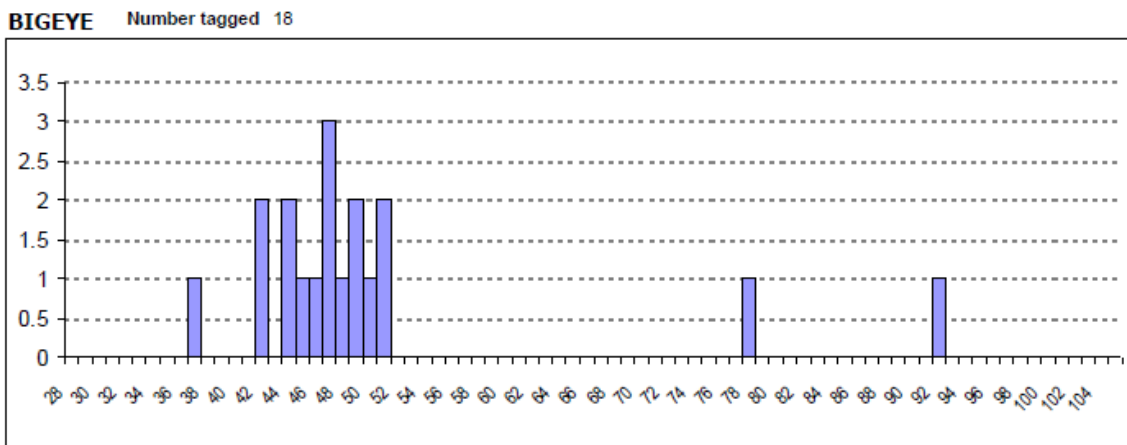
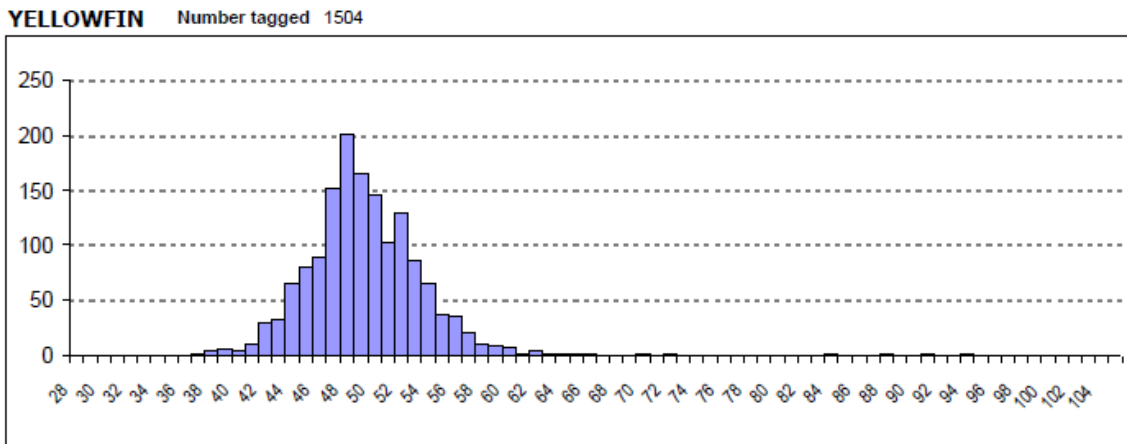
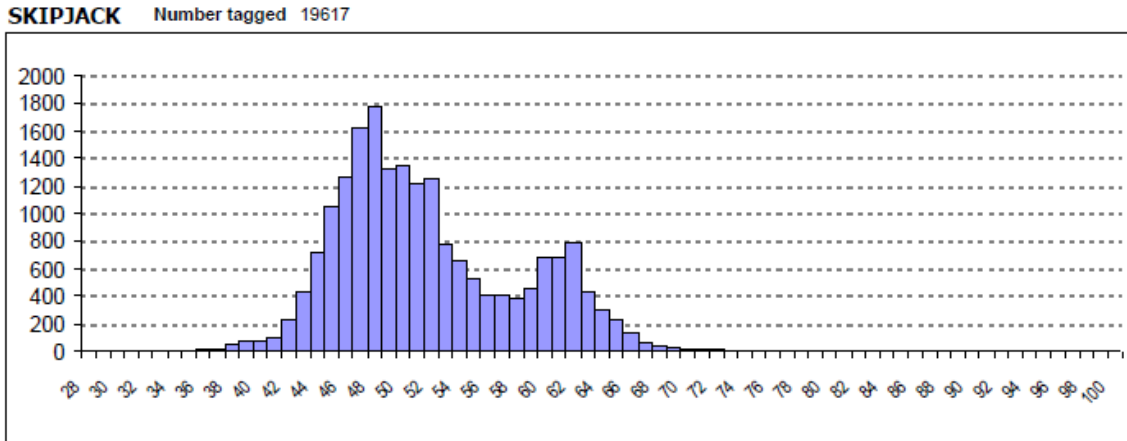
Figure 2: Distribution of tag releases by species (blue SKJ, Yellow YFT).



SIZE DISTRIBUTION OF TAGGED FISH

Figure 3 shows the size distribution of fish tagged during WP4-02. The skipjack size distribution was multi-modal with very few fish under 40 cm and an important number of large fish around 60 cm, whereas the yellowfin sizes were mostly small fish (40 to 60 cm).

Figure 3: Size distribution of fish tagged during Cruise 2.



ARCHIVAL TAG SUMMARY

Very limited numbers of good size yellowfin and bigeye were caught during this cruise and only 7 archival tags were released, on five yellowfin and two bigeye tunas. The quite low amount of bait caught on average rarely permitted two consecutive fishing days and discouraged any night fishing attempt around some FADs.

BIOLOGICAL SAMPLING

The collection of biological samples was commonly implemented after most of the tagging events on tuna unsuitable for tagging (injured) and bycatch species. For each specimen, otoliths, dorsal spine (for tuna only), stomach, liver sample, muscle sample and gonads were collected and stored in a dedicated freezer. All samples have been repatriated to Noumea by the different SPC staff teams who participated to the cruise. Table 4 gives the number of samples collected in Solomon waters.

Table 4. Number of samples per species and sample type.

Species	Muscle	Liver	Stomach	Otoliths	Gonads	Dorsal spine	Total
FRI	2	2	2	2	2	2	12
CNT	1	1	1	1	1	1	6
DOL	9	9	9	7	9	9	52
RRU	12	12	12	8	12	12	68
SKJ	111	110	111	109	111	111	663
YFT	45	45	44	45	45	45	269
Total	180	179	179	172	180	180	1070

BAITING

NFD has currently some fishing agreements with a limited number of bait grounds, mostly located in the north part of the archipelago and concentrated around New Georgia (see Table 5). In addition, the boat bait-well water circulation was sub-optimal, preventing the possibility of filling the tanks as we did in the past tagging experiments with over 300 buckets of bait. The maximum bait capacity during the WP4-02 cruise was about 240 buckets, with anything above this causing high mortality. The baiting success was also limited, often bringing only just the sufficient amount of bait for the day (see Table 6), with the average size fish present in the area not helping on saving the chum...

This situation did not allow the vessel the possibility to fish everywhere, especially in the south part. Some baiting nights were spent in places with no agreement, like in Isabel (Rakata, Buala and Kolokofa) and Ontong Java, but this was not possible elsewhere.

The moon phase really started to limit the baiting the last three days with only one bait net possible per night after moon set. Providentially, these “one net” nights were quite productive and allowed the release of good numbers of fish!

Table 5. Bait ground availability and if visited during WP4-02.

Baitground	NFD agreement	Visited during WP4-02
Lodumaho-Munda	yes	yes
Sabunu-Marovo	yes	
Ropa-Choiseul	yes	yes
Lambagha-Choiseul	yes	
Posarae-Choiseul	yes	yes
Taroniara-Ngella	yes	yes
San Jorge-Isabel	yes	yes
Raduvu-Marovo	yes	
Vituna-Marovo	yes	
Manabusu-Marovo	yes	yes
Kirighi-Isabel	yes	
Kindu-Munda	yes	
Rakata- isabel	No	yes
Buala-Isabel	No	yes
Luaniuva-Ontong Java	No	yes
Kolokofa-Isabel	No	Yes

Table 6. Summary of bait fishing activity during WP4 Cruise 2.

Date	Location	Catch (bkts loaded, hauls)	Species
10 Oct	Munda	184 (1)	Anchovies (dev)
11 Oct	Seghe	240 (1)	Anchovies (dev)
12 Oct	Manabusu	34 (2)	Anchovies (dev)
13 Oct	Seghe	190 (1)	Anchovies (dev, heter)
14 Oct	Seghe	290 (1)	Anchovies (dev, heter)
15 Oct	Seghe	271 (1)	Anchovies (heter and dev)
17 Oct	Munda	200 (2)	Gold anchovies
18 Oct	Ropa	150 (2)	Sprats (gr) anch. (dev), rastrelliger juv.
19 Oct	Suri	194 (2)	Sprats (gra & lew), few gold anch
20 Oct	Rakata	119 (1)	Anch (het), sprat (lew), sardinella, fusil.
21 Oct	Luaniu	102 (1)	Small turquoise sprats
22 Oct	Luaniu	50 (1)	Sprats (lew)
23 Oct	Buala	100 (2)	Fusiliers, few gold anchovies
24 Oct	San Jorge	240 (1)	Fusiliers, small anch (dev)
26 Oct	Seghe	194 (2)	Anch (dev), pellona, small rastrelligers
27 Oct	San Jorge	139 (2)	Anch (dev), sardine, juv. rastrelligers
28 Oct	Taroniara	116 (2)	Sprats (gra), gold anch, fusil, sardines
29 Oct	Taroniara	104 (2)	Sardines, sprat (gra), anchovies (dev)
30 Oct	Taroniara	118 (3)	Sardines, sprat (gra), anchovies (dev)
31 Oct	Taroniara	102 (2)	Anchovies (dev), few sardines & sprats
1 Nov	San Jorge	207 (1)	Anchovies (dev)
3 Nov	Kolokofa	148 (2)	small anchovies (dev), g spot herrings
4Nov	Posorae	155 (1)	Anchovies (dev), sprats (Grac.)
Total		3447 (35)	

CONCLUSIONS

A very successful cruise in terms of numbers of fish releases (better than any previous tagging experiment in the area) with a relatively good balance of different school associations tagged. On the other hand, we did not have the opportunity to increase the coverage of our releases past the Main Group Archipelago due to poor fishing in the north (Ontong Java), and due to limited baiting options in the south-east with Taroniara been the last bait ground toward the south west of the EEZ.

The low proportion of yellowfin releases in the catch (7%) in any type of school association (except a few logs with 23% Y), the scarcity of the bigeye (<0.1%) and the

large amount of large skipjack in most of the fished schools were observed with surprise during the cruise. Are the skipjack really taking over?

The enthusiasm and professionalism of the SPC and contracted staff greatly contributed to the success of the cruise as did the dedication of the officers and crews of FV Soltai 105. Special thanks to the Chief Engineer Naule who released 16% of our tags! Solomon Islands Fisheries Observer Pateson Omi made very useful contributions to the work of the cruise.

Although FV Soltai 105 is showing some serious signs of ageing, it performed well in general. Special thanks to the great contribution and support of Cynthia Wickham, the NFD Pole and Line Manager!

It is expected that high numbers of recaptures will be observed in the following month. Following our demand, an agreement has been made with the NFD management asking the PS vessels not to fish the tagged anchored FADs for at least 2 weeks after the date of the releases. However, fish are moving and some have already been recaptured relatively far from their release location by some PS vessels (>380 fish) and the tagging vessel (23).

Appendix 1.

Releases of tagged fish by date, location, school type and species

Event no	Tagged sch no.	Date	Lat	Lon	type	Assoc.	Sch		YFT	BET	TAG TOTALS		
							Start	Stop			SKJ	OTH TOT	
AL													
1	1	2017 0818.700S	15647.000E	10-Oct-	1	3	0558	0624	19	0	50	0	69
3	2	2017 0830.000S	15656.210E	10-Oct-	1	4	0850	0915	29	1	9	0	39
4	3	2017 0825.860S	15659.840E	10-Oct-	4	3	1014	1105	1	0	234	0	235
7	4	2017 0845.000S	15658.800E	10-Oct-	4	1	1431	1523	7	0	243	0	250
8	5	2017 0831.050S	15706.200E	10-Oct-	4	1	1714	1728	1	0	298	0	299
12	6	2017 0853.000S	15715.600E	11-Oct-	3	1	0921	0946	1	0	18	0	19
13	7	2017 0859.600S	15714.500E	11-Oct-	3	1	1035	1047	0	0	1	0	1
14	8	2017 0856.800S	15723.900E	11-Oct-	1	3	1153	1208	40	0	79	0	119
16	9	2017 0853.800S	15737.095E	11-Oct-	1	1	1405	1429	0	0	103	0	103
17	10	2017 0858.800S	15737.800E	12-Oct-	1	3	0620	0648	38	0	139	0	177
18	11	2017 0859.430S	15742.350E	12-Oct-	1	2	0725	0758	115	0	233	0	348
19	12	2017 0856.600S	15743.430E	12-Oct-	3	3	0816	0900	1	0	133	0	134
20	13	2017 0906.870S	15754.900E	12-Oct-	1	3	1130	1150	61	1	86	0	148
21	14	2017 0909.000S	15807.700E	12-Oct-	2	3	1350	1435	59	0	101	0	160
22	15	2017 0836.000S	15822.800E	13-Oct-	1	3	0626	0727	82	0	820	0	902
23	16	2017 0821.000S	15807.600E	14-Oct-	1	3	0623	0710	6	0	709	0	715
24	17	2017 0824.100S	15806.930E	14-Oct-	4	3	0750	0845	8	0	1084	0	1092
26	18	2017 0754.140S	15825.000E	14-Oct-	1	3	1236	1243	0	0	4	0	4
27	19	2017 0750.944S	15825.339E	14-Oct-	3	1	1258	1328	3	0	38	0	41
28	20	2017 0755.190S	15829.800E	14-Oct-	4	3	1410	1427	24	0	198	0	222
30	21	2017 0852.000S	15829.380E	15-Oct-	4	1	0812	0830	0	0	15	0	15
32	22	2017 0909.000S	15841.800E	15-Oct-	4	1	1126	1142	0	0	250	0	250
33	23	2017 0901.200S	15836.680E	15-Oct-	4	1	1424	1440	0	0	260	0	260
34	24	2017 0855.600S	15830.720E	15-Oct-	4	1	1535	1600	0	0	89	0	89
35	25	2017 0806.324S	15800.670E	16-Oct-	1	3	0658	0735	89	0	368	0	457
36	26	2017 0810.200S	15755.700E	16-Oct-	1	2	0813	0848	107	0	339	0	446
37	27	2017 0812.800S	15749.500E	16-Oct-	1	3	0929	0956	43	0	386	0	429
39	28		16-Oct-										

2017	0758.900S	15743.800E	1	3	1132	1200	34	0	934	0	968		
40	29	16-Oct-											
2017	0749.855S	15723.200E	1	3	1427	1445	58	0	188	0	246		
41	30	18-Oct-											
2017	0734.930S	15720.000E	4	3	0640	0700	5	0	78	0	83		
42	35	18-Oct-											
2017	0740.700S	15713.400E	1	3	0748	0752	6	0	0	0	6		
43	31	18-Oct-											
2017	0737.400S	15707.500E	1	3	0832	0850	5	0	0	0	5		
44	32	18-Oct-											
2017	0735.000S	15702.000E	1	3	0930	0948	7	0	39	0	46		
45	33	18-Oct-											
2017	0736.600S	15700.460E	4	1	1000	1009	1	0	49	0	50		
46	34	18-Oct-											
2017	0745.140S	15657.400E	1	3	1106	1124	2	0	12	0	14		
49	36	18-Oct-											
2017	0729.063S	15642.210E	1	1	1801	1813	0	0	1	0	1		
53	37	19-Oct-											
2017	0654.870S	15729.162E	1	4	1405	1445	2	1	3	0	6		
54	38	19-Oct-											
2017	0649.450S	15732.830E	1	1	1533	1547	14	1	22	0	37		
55	39	19-Oct-											
2017	0659.000S	15728.000E	4	1	1652	1746	202	11	259	0	472		
60	40	20-Oct-											
2017	0722.160S	15843.430E	4	3	1450	1530	68	1	57	0	126		
61	41	20-Oct-											
2017	0720.150S	15846.760E	4	1	1600	1638	0	0	179	0	179		
62	42	21-Oct-											
2017	0622.000S	15920.400E	4	5	0803	0823	0	0	1	0	1		
63	43	21-Oct-											
2017	0533.800S	15935.500E	4	1	1333	1349	0	0	3	0	3		
64	44	21-Oct-											
2017	0535.600S	15837.800E	4	1	1604	1650	10	0	34	0	44		
68	46	22-Oct-											
2017	0534.600S	15931.800E	4	1	1657	1726	0	0	69	0	69		
69	47	23-Oct-											
2017	0656.300S	15923.250E	4	1	0756	0805	0	0	96	0	96		
71	48	23-Oct-											
2017	0717.800S	15923.900E	4	1	1026	1051	14	0	172	0	186		
72	49	23-Oct-											
2017	0744.500S	15918.500E	4	3	1346	1430	0	0	1	0	1		
73	50	24-Oct-											
2017	0745.000S	15919.700E	3	3	0658	0740	3	0	165	0	168		
75	51	24-Oct-											
2017	0747.750S	15930.100E	3	3	0851	1029	8	0	1164	0	1172		
76	52	25-Oct-											
2017	0845.180S	15930.030E	1	3	0544	0628	10	0	405	0	415		
77	53	25-Oct-											
2017	0855.470S	15930.200E	2	3	0747	0841	19	0	575	0	594		
78	54	25-Oct-											
2017	0853.100S	15923.500E	1	3	0920	0937	2	0	75	0	77		
79	55	25-Oct-											
2017	0850.190S	15918.400E	1	3	1008	1024	0	0	11	0	11		
80	56	25-Oct-2017	0845.000S	15907.900E	4	1	1145	1150	0	0	5	0	5
83	57	26-Oct-											
2017	0839.250S	15711.800E	4	1	1414	1515	19	0	476	0	495		
84	58	27-Oct-											
2017	0824.250S	15829.400E	1	3	0642	0705	13	0	14	0	27		
85	59	27-Oct-											
2017	0819.000S	15840.800E	2	1	0822	0839	0	0	6	0	6		
87	60	27-Oct-											
2017	0818.200S	15900.420E	1	3	1122	1136	19	0	373	0	392		
88	61	27-Oct-											
2017	0820.730S	15907.700E	1	3	1222	1255	0	0	299	0	299		
89	62	28-Oct-											
2017	0828.600S	16022.500E	4	5	0700	0721	25	0	275	0	300		
90	63	28-Oct-											
2017	0831.500S	16021.230E	4	8	0747	0758	0	0	34	0	34		
92	64	28-Oct-											
2017	0845.800S	16015.500E	4	1	1115	1147	0	0	40	0	40		

93	65	28-Oct-										
2017	0848.800S	16018.700E	4	1	1216	1239	3	0	238	0	241	
95	66	29-Oct-										
2017	0935.000S	16058.700E	1	2	0946	1021	1	0	222	0	223	
96	67	29-Oct-										
2017	0941.600S	16059.300E	1	4	1135	1251	7	0	798	0	805	
97	68	30-Oct-										
2017	0918.500S	16033.000E	4	1	0823	0839	0	0	97	0	97	
100	69	30-Oct-										
2017	0927.900S	16045.700E	4	1	1132	1213	27	0	580	0	607	
101	70	30-Oct-										
2017	0925.900S	16046.900E	4	1	1227	1251	0	0	221	0	221	
102	71	30-Oct-										
2017	0919.300S	16046.250E	4	1	1335	1411	0	0	329	0	329	
103	72	31-Oct-										
2017	0921.600S	16029.900E	4	1	0732	0741	0	0	15	0	15	
104	73	31-Oct-										
2017	0929.500S	16045.600E	4	1	1458	1522	0	0	238	0	238	
105	74	31-Oct-										
2017	0921.450S	16029.700E	1	1	1744	1754	1	0	66	0	67	
106	75	01-Nov-										
2017	0934.400S	15921.700E	4	3	1137	1258	22	0	778	0	800	
107	76	01-Nov-										
2017	0941.000S	15923.100E	4	3	1340	1442	39	2	522	0	563	
108	77	02-Nov-										
2017	0833.900S	16020.400E	1	8	1000	1009	2	0	91	0	93	
109	78	02-Nov-										
2017	0830.300S	16020.800E	1	8	1028	1106	18	0	647	0	665	
110	79	02-Nov-										
2017	0827.230S	16025.600E	1	8	1138	1152	0	0	81	0	81	
111	80	02-Nov-										
2017	0843.500S	16020.300E	2	5	1411	1513	0	0	160	0	160	
112	81	03-Nov-										
2017	0818.600S	15900.430E	1	3	0541	0622	6	0	452	0	458	
113	82	03-Nov-										
2017	0815.400S	15859.500E	1	3	0645	0700	4	0	147	0	151	
114	83	03-Nov-										
2017	0812.700S	15854.200E	1	3	0730	0743	0	0	25	0	25	
115	84	03-Nov-										
2017	0804.000S	15847.800E	1	3	0858	0910	6	0	73	0	79	
117	85	04-Nov-										
2017	0754.600S	15824.300E	4	3	0746	0808	12	0	120	0	132	
120	86	04-Nov-										
2017	0748.800S	15759.700E	4	3	1117	1149	0	0	113	0	113	
121	87	05-Nov-										
2017	0737.900S	15707.850E	1	3	0543	0654	76	0	1203	0	1279	

TOTALS

CRUISE 2
1504 18 19617
0 21139

APPENDIX 2

DAILY LOG EXTRACTS

logdate	Activity_Desc	Notes
8/10/2017	in port Noro, full moon break, boat repairs	Change of our office door was done during that day, plus addition of silicon sealant all around and inside the floor. This one was improved with a layer of plastic tiles glued on top the plywood.
9/10/2017	in port Noro, Shopping, boat prep, baiting Munda	Boat repairs (galley door, boat engine control, bridge doors...) continued all day after completion of office door changed yesterday. Fumigation of our rooms also done in the morning. Hopefully it will work on the bed bugs... At the same time shopping was done at crew and passengers levels. Finally left Noro at 18:25 and headed to Munda baitground. First and last set at 9h for 210 bkts of gold anchovies. Plan is to start steaming at 02am to go to Afad SX1 about 30 nm away
10/10/2017	Fish NFD Fads between Simbo and Rendova	Left Munda at 0215; Arrive at SX2 at 05 and wait one hour for first light. 5 local boats (from Gizo) trolling around; good school there but many YF made difficult to keep it, spending too much bait. Stopped after 26 min and 69 fish tagged. SX1 missing so we headed to SX3; small mark but not worth, go to SX4, but was missing. Next one RX4, no fish. An unknown drifting fad produced 39 fish tagged. Following afad, RX10, missing then RX 8 good pure sj school produced 235 tags. RX9 only RRU. Then we passed 3 or 4 afad positions with no fad, passed some Afad not on the boat plotter map...Then found a nice sj free school at about 1425 and tagged 250 fish. With only half of 1 bait tank left we found another free school at 1714 that produced 299 tags. Total for the day 892 (834 S, 57 Y, 1 B)
11/10/2017	Fishing South Rendova and Tetepare islands	For some reason the boat stopped at FAD RX9 (only rru seen yesterday) 10 nm from Munda instead of going to fads south -east Rendova... Started steaming again at 0430. SE swells picking-up. Checked fad RX16 at 0635, no fish. Same for RX18. RX 20 missing, Next Fad R-11 no fish. We found some nice free schools of actively feeding sj between 12 and 17 nm SSW of the south tip of Rendova (Bluff point) but can't keep them on the bite and the weather conditions (2-3 m waves, 20 knts) were not helping. Only tagged 20 fish from 2 school chummed. Then found a small mixed Y/S school under T-36 and tagged 119 fish. TX-1 only RRU. Then we tagged 103 large sj on a free school before running out of bait. Steamed to Seghe baitground, at anchor 1730.
12/10/2017	Fish South Vanguu Fads	Depart from Seghe at 03am, 28 nm to go to reach Fad TX-3; sea conditions worse than yesterday. Started fishing at 0620 and tagged 177 fish in less than half hour. Then found a nice log school that gave 348 tags. Following fad, TX-4 had a large school associated but do not want to play, only 134

		<p>tagged. Then TX-5 and TX-6 were missing. Found TX-7 In 30+knts and managed to tag 148 fish in incredible conditions. When we start steaming again, waves broke the AT cradle that was on the below deck... Had to remove bow cradles before they get smashed. Last school on afad TX-9 provided 160 tags before running out of bait. Total for the day 967 with 28% Y, no doubt it would have been a much bigger total in better weather conditions. Started steaming toward Manabusu baitground (east Vangunu) at 14h40. At anchor at 19h. Some tok save with local with usual baitground owner stories; all gud with a basket of fish..Then the net was supposed to happen at 11h30 but fishing master didn't awake before 1h; then net delayed by the current and resulted in a missed set bringing a mere 20 bkts. Second set at 4am only 14bkts</p>
13/10/201	Fish east 7 Vangunu fad	<p>After the missed baiting night, went out M'bili passage at 0520 with low expectations. Arrived at aFad M-9 at 0620 and fish immediately answered to the chum; we then extracted the most of our 34 bkts of bait in tagging 902 fish in about 1 hour. Steamed toward Seghe baitground at 0730; went through the Kokoana passage at 9am. At anchor at Seghe at 11h. Spent afternoon loading tag blocs and resting. First and last bait net at 22h for 190 bkts of anchovies.</p>
14/10/201	Fish between 7 Vangunu and Isabel	<p>Went through Charopoana passage at 5am; arrived at afad NI-59 at 06am but it was missing. Went to NI-58B, big school of large sj, tagged 715 fish in 50 min. Then fad PL-8 (pole and line fad) provided 1092 tags in 55 min. We then go more offshore to NI 48 (missing, then NI-42 (only RRU). FM decided to let the fad to check if any free school closed to the NW coast of Isabel island. But we only seen one free school that cost us plenty baits for only 41 tags. We finished the remaining bait on afad NI-39 (4 tags) and NI-26 (222 tags). A useful day would say some, with 2074 fish tagged (98% S). Back to Seghe at 20H30. First and last bait net at 22h30 for 290 bkts (about 50 let go) of anchovies. Another possible big day tomorrow...</p>
15/10/201	Fishing east 7 Vangunu	<p>As Friday, went through Kokoana passage at about 03am but this time going further ESE to some more offshore afads. Started by M-21 but the thing was missing. M-19 no fish, then M-16 just passed near-by, no fish. A free school chummed at about 0820 just provided 15 fish tagged; few good size YF but bow fishermen couldn't lift them for archival... Next fad MX-4 missing, then MX-3 no fish; a free school checked at 0940 but only large YF. Passed an unknown Fad at 10h10, no fish. Chummed a free school at 1040 but no success. 7 nm south of Borokua isl, just before mid day, a school of large SJ procured a lot of noises and 250 fish were tagged in an epic battle. Slow first part of the afternoon, problem with high mortality in the bait tanks (bad handling last night, too many loaded for the current bad water circulation...half of the baits lost) Finally got 2 decent success with free schools (260 and 63 releases) before running out of bait at 4pm. Could have been a 1000+ day easy but 614 is better than</p>

		a nothing! Back to Seghe at 21:00 and half of the net from the one set at 23h fully loaded the bait tanks...
16/10/2017	fishing N Vangunu and New Georgia, end in Noro	The 3 first fad from 0430 to 6:20 had nothing. Then NI-60 provided 457 tags in less than 40 min. At 0813 we found a nice log that gave us a useful 446 tags (24 % Y). Next Fad NI 65B missing. Then we tagged 429 fish on a P&L Fad anchored closed to Kororo passage (New Georgia North coast). We tried with no success to chum an YF free school. Afad NI-71 produced an amazing show with 968 fish tagged in less than 30 min...Then finished the baits on CK-19 at 14h30 for 246 fish released. Total of the day: 2546 fish tagged (13%YF). Steamed to Noro, arrived in port at 17h15.
17/10/2017	In port Noro, scientist personal change, provisioning, baiting Munda	Spent the morning doing market/food shopping; left Noro at 18h for Munda baitground. At anchor at 1845, first set at 22h15 for 128 bkts, second set on the auxiliary light at 23h30 for 73 bkt. Left Munda at 24h30
18/10/2017	Fishing SW of Choiseul Island in aFAD field and opportunistic fishing on free schools.	First FAD CK19 inspected at 0540 - missing. Going to FAD CK-8. Arrived at CK-8, tagged 83 fish. aFDAD float missing. Very large area covered with fish feeding on natural bait - hard to catch (message to PS boat sent). Then KX-5 only 6 Y tagged at stern. KX-7B doubled with a "gaz bottle" type raft less than 1 nm apart- some fish around but too many RRU prevent us to tag them; only 5 Y tagged at stern. Next fad KX-7A had a small school, tagged 46 fish (15% YF). Found a school of large S at 10am, difficult to keep it, 50 fish released. We passed KX-9 with no sign of life, tried to steam to a bird school seen on the radar but vanished before our arrival. Met a YF school at 13h but, as usual, can't catch. Then VX-1 at 14h15, nothing. Continue to VX-6, steamed pass the aFAD position as the raft was missing. Decided to steam towards TriMarine dFAD 14nm away. En route, spotted free school, started chumming at 16h47 until 17h10, fish did not come to the boat. Then last chance at 18h with a free school, but only one large S tagged. Started steaming to Ropa. Arrived at 21h, dropped the battery light , at anchor at 21h13.1st bait set start 00h40 - end 01h20 for 70 buckets. Second set on light boat. Noticed a few holes (15 to 25 cm in diameter) in the bait net. Arrived at the auxiliary light and F/Master decided to use the boat under water lights and give more waiting time prior to hauling, sounder shows not enough baits underneath. Second set at 3H30 for 80 bkts
19/10/2017	Fishing SE Choiseul, baiting Suri	Left Ropa baitground at 04:30 toward North East coast of Choiseul via Manning strait. First fad SI-50 at 11:45, some small tuna and RRU seen but no bite. 2 other fads CH-2 and CH-4 same thing. Arrived at Trimarine dFAD +181216 at 14h05 but not much associated and we only tagged 6 fish. Caught a few RRU and DOL for kai kai. We then chased 2 free schools that gave 37 (1 Y archival) and a useful 437 fish (2Y and 1 B archival) that saved

		the day. Steamed to Suri baitground and arrived a bit too late (19:50) for easily find a good anchorage (no position recorded on previous visit). Anchored outside Suri Pt in 45 m. First set at 1150 for 124 bkts of mainly silver sprat. Second haul at 0430 hrs with 70 buckets.
20/10/2017	Fishing NE tip of Isabel island, bait Rakata	Left baitground at 0505 hrs and steamed to the afad SX-2, north of Manning Strait. Arrived 08h30, no answer to chumming. 09h20 aFAD SIX-3 - same thing, small YF jumping but no takers. Next Fad SIX-5 at 10h00, nothing under so we did not even bother chumming. Changed course at 11 to steam toward the Dufour Ridge. Found a lost drifting Fad at 1150 but nothing underneath. Chase a free school at 1230 but no success; passed by 2 Afad xx? and SI-32 (13h30) but nothing. Then we managed to have some moderate success on Fad SIX-12 (126 releases) and on a free school between 3 and 4:30pm (179 fish tagged). Last fad on the way to Rakata had nothing to offer. At anchor at 19h, first and last set at 10:30 for 119 bkts of a good mix. Depart for Roncator at 23:30
21/10/2017	Fishing Roncator reef and ontong Java area. Baiting in Ontong Java	Good passage overnight in calm weather. Arrived at the SW corner of Roncator at 08am. Chummed a whale school (Minky), mixed large y/S but only tagged 2 S. No other school spotted until OJ. Chummed a free school at 13:30 closed to the SE corner of the atoll but too many Y and just tagged 3 S. Decided to go check the passage, enter some waypoint and go back fishing at the good afternoon time (4pm). Inside the passage at 2:30 PM, escorted by a pod of dolphins. Discussed with a couple of elders until 15:10. They would like that we take 6 people to the Isabel airport to go to Honiara. Accepted to do this on Monday after the second baiting night. Out passage at 15:30. Chased a very fast running mixed S/Y from 16h04 to 16h50 which produced 44 fish only and 1 Y archival. Pulled the plug as the sun was setting. At anchor by 18h30. Same shore party came back onboard with green coconuts and confirmed that baiting is ok and that nothing is owed (compensation wise). Total for the day 48 (21%Y). First bait net scheduled for 22h30 but happened at 3 am for some reason.
22/10/2017	Fish around OJ atoll	Departed OJ at 05h40 en route for the free schools and aFADS (if any) around the atoll. Passed by OJ-4 aFAD position but it was missing. Passed by OJ-5 aFAD position, missing. 07h51 chased fast moving Y school, small response to the chum but never came close enough to the boat. Same thing at 0910, free school of what looked like sj actively feeding, responded only briefly to the chum. All fads seems to be missing although deployed last year, reasons are probably a mix of rough weather and local cutting them...Steamed to the north tip of the atoll and turn back at 11am to be at the good fishing time in the SE corner. Passed closed to large YF schools around mid-day. Found a drifting fad but nothing associated. Steamed back towards OJ channel entrance. A free school in the same area than yesterday at 16h57 with 69 S tagged. Back at anchor at OJ at 19h00. First and last bait net at 22h. OJ passengers onboard, better to

		leave asap to be in position to fish Isabel fads before the end of the day tomorrow.. Up anchor at 23h.
23/10/2017	Steaming and fishing from OJ to North Isabel coast	Godd passage overnight. Started finding free school about 50 nm from Isabel. First one provided a quick 96 S released. Second one no success with probably more Yf in it. At 10h26 a free school produced 186 fish (8%Y). Inspected Afad (not numbered) at 11h15 but there was nothing. At 12h05 birds resting on the water were inspected but nothing. Heading towards SI-5B, nothing underneath, steamed toward Buala. Checked SIX-29 at 14h; large area covered by school of fish but could not make them biting; only one S tagged after many attempts; probably a high % of YF. Might be worth coming back here tomorrow morning, if we find bait near Buala after dropping there our passengers. Arrived at Buala at about 1715. Got baiting permission for the area in exchange of fish. All gud... Depart from the little wharf at 18:40. At anchor in 30 m at 18:50. First set at 2330 for 60 bkts of mostly small fusiliers. Second set at 3am for 40
24/10/2017	Fishing afad East Isabel coast	After a half successful baiting night at Buala (only 3 full bait tanks), we started steaming to SIX-29 where we saw so many fish yesterday. Fished the fad for about 40 min from 7am for only 168 releases. Fish demanding too much bait to stay at the spray, already feeding on some local bait. Also some perturbation from 3 small boats trolling around us. Then the following Fad had a large cooperative almost (only 9 Y) pure S school where we spent all our bait to release 1173 fish, just stopping 10 minutes to reload tag blocks; a very useful one! Started steaming at 10:30 toward San Jorge bait ground. Total for the day 1341 (99% S), passed the 11,000 tagged fish for the Solomon waters. Anchored at St Jorge 18h. Bait net at 1:30 using a spare dimmer light operated from dinghy (main not working) on a battery. 240 bkts loaded and let go about 50. Up anchor, a bit of drama when pick-up the auxiliary light, its anchor rope went in propeller; hopefully quickly spotted and bosom dived to rescue.. start steaming at 3:20 am toward first fad
25/10/2017	fishing SW isabel	05h44 - first Fad RI-2B had a school; tagged 415 fish in 44 min; second fad, RI-1C give 594 releases. After that, fished on 4 aFADs (one with no fish) and one free school allowing releasing another 93 fish. Mid morning, bait boy Sam Pada was in severe back pain and unable to move his right leg. Decision was made to steam back towards Noro to disembark him. It would also give us the possibility to get a spare bulb for the dimmer under-water light which stopped functioning yesterday. Decided to continue searching and fishing a little bit en route until we finished a third bait tank. Used 3 out of 6 bait tanks. We will use the 3 remaining tanks for tomorrow's fishing as we won't be able to set a bait net this evening. ETA in Noro 1am. Total for today 1102 (3% Y).
26/10/2017	After short stop in Noro, fish	Arrived in Noro just before 1 am. Sam the bait boy wasn't evacuated to Munda hospital before 8am. Little shopping and market was organized;

	south Rendova and Tetepare-bait Seghe	no spare bulb for the underwater dimmer light. We will have to work with the one on battery... Finally left Noro at 11 am, more than 2 hours behind schedule; the usual "Solomon time" occurred one more time! Only one good free school fished in the SE of Rendova island between 2 and 3pm for 496 releases (96% S). Two other free school were chummed closed to the south of Tetepare island but it was only kaw...Arrived in Seghe at about 21h. First set at 01:30 for 110 bkts. Second haul on the auxiliary light hauled in 84 buckets. Anchor up at 0220 and headed to fishing ground.
27/10/2017	Fishing the slot to San Jorge	Went out Marovo lagoon by Kokoana passage and steamed toward NI-31. This one only provided 27 releases. Then we chummed a nice looking free school at about 8:30 but too many Y, only got 6 fish. Then 2 anchored fads chummed between 11:30 and 12:30 provided 384 and 299 releases of mostly large SJ (60+ cm). No more bait... Total of the day: 716 (4% Y), bringing the project tag total short of 44 for the 20,000... At anchor in San Jorge baitground at 17:30. First bait net at midnight for 91 bkts. Second bait net at 1am for 48 bkts. Started steaming toward Malaita north tip.
28/10/2017	Fish the NW coats of Malaita-Baiting Taroniara	Left St Jorge bait ground 01h42 heading SE past Victoria Island then headed NE towards North of Malaita. First set on whale shark (about 10 m) associated school at 07h00 which produced 300 fish. Second set at 07h47 on a splasher associated to this shallow area/ seamount which produced 34 fish. Headed back towards the West, chasing free schools (YF - too fast), saw a small pod of dolphin en route. Chummed a couple of these schools but constituted of mostly large fish (60 cm) and can't fix them. Only 40 tagged. Then last school at about 12:15 with smaller S (50cm) fish that could have been a very good one if we had more bait... Tagged 241 before running out of ammunitions... Steamed to Florida and through the narrow Mboli passage to Taroniara bait ground. At anchor at 15:20. Total for the day 615 (5%Y) and passed the 20,000 tagged for WP4 plus 4th bonus for the boys. Not a bad day after all...First set at 01:30 for 86 bkts, second on the auxiliary light at 2:30 for only 30 bkts of the same mixed bag. Not enough to go to Ulawa isl...
29/10/2017	Fishing west Malaita fads	Left again (at 3:30am) the baitground with only half of the tanks with baits. Can't run to Ulawa with this, so today will be a SW Malaita only. 3 first fads missing...some heavy rain perturbed the spy job. First tags on a log just before 10 am (223tags). Then we found at about 11:30 a lost drifting fad associated with a school of large SJ and we had to battle for 1h20 to release 806 tagged fish (only 7 Y) mostly between 60 and 75 cm...Fantastic job from the fishermen with no one injured during this high risk exercise! Total for the day 1029 (8Y) and very closed to the 15,000 for the Solomon waters. Steamed back to Taroniara for about 6 h with wind and sea conveniently in our back. First set at 0315 with 60 bkts of a mixed bag. FM decided to wait a bit with the second net to try attract more baits.

		Second set at 5am for 44 bkts. Up anchor at 0545 and headed to the first fads closed to SW Malaita coast.
30/10/2017	Fish SW Malaita coast	Left baitground at 0545 with 104 bkts of a mixed bag and steamed toward the first fads anchored along the south west Malaita coast. On the way we diverted to check a free school about 20 nm in the SE of Florida and end up chumming 6 free schools in a row, till we run out of bait at about 14:30. Four of the schools provided a total of 1254 releases including only 27 Y. First bait net started at midnight for 50 buckets. Second set at 1am for 30 Bkts. Third set at 0415 for 38 bkts. Up anchor 04:50
31/10/2017	Fishing btween Malaita and Guadalcanal (Indispensable Strait)	Started steaming at 0450 toward the yesterday free school area. The first encountered school at about 7:30 was tagged (15 fish) but none of the following chummed morning schools could be caught. Tried to check fad positions in the south of Indispensable Strait but couldn't find a fad in place. Turned back to the "free school area" at 12. Problem with engine slowing down and making only 8.5 knts then no more engine control (both at the bridge and the fly bridge) at about 13:40. Back to normal 12 min later...Finally spent the remains of the dying baits (too much weak sardines) on 2 free schools at about 15 and 1745 for 238 and 67 releases. Daily total 320 (1Y). Back to Taroniara at 2030. First set at 0340 for 70 bkts of mostly gold anchovies; second set on the auxiliary light at 0420 for 32 bkts; better than yesterday because much less sardines... Left Taroniara at 0520.
1/11/2017	Fish west Guadalcanal, bait San jorge	Left Taroniara baitground at 0520. Steamed around the west coast of Guadalcanal without seeing sign of life; passed the first aFad, GX-2 at 11am but nothing. Then we fished 2 afads with fish, GX-1 and G-1 that allowed the release of 800 and 563 fish before running out of bait at about 1445. One bigeye 78 cm caught at the stern was tagged with a MK9 at the bow. 2 other larger fish (90+ cm) were also caught but too damaged to be tagged with AT. Total of the day 1363 (61 Y and 2 B). Steamed to San Jorge in calm weather, arrived at 22h16. We had to wait till the moon come down to make the first and last set at 04:30 for a nice 207 bkts of almost pure devisi. Left San Jorge at 0550 in direction of north Malaita
2/11/2017	Fishing seamount between south Isabel and north Malaita	Left San Jorge at 0550 in calm weather. Arrived near the seamount area at about 10am and successfully chummed 3 schools, one about 2 nm south of the summit, one close to this summit and one about 5nm to the NE. End at about 12pm with a total of 840 releases. Then steamed to the area we tagged free schools on 28 Oct, about 12 nm south of the seamount. After a few unsuccessful attempts, we managed to release 160 fish on some multiple schools that seemed to be associated to a large whale shark. Stopped fishing at 17h and decided not to go baiting (more than 3 tanks left) to be at the right time on an afad tomorrow morning Total of the day : 1000 (20 Y), passed the 25,000 for the project and just need 1093 fish for the 20,000 in Solomon...

3/11/2017	Fishing fads on south isabel coast-bait Kolokofa	Arrived in proximity of aFAD NI-6 at midnight. We were supposed to fish SJ-6 but nothing there then FM decided to go back to this NI-6 Fad we fished on the 27th Oct. Drifted till morning and started chumming at 0541; had a good 40 min run with 458 releases and also recaptured 4 fish, 2 released on the same fad one week ago, one from another fad nearby (SJ-5) and one from a free school on the 15th Oct, more than 40 nm away. Then we chummed 3 other Fads in a row and released another 255 fish. Two more recaptures from NI-6 were fished on SJ-7 (3nm apart). We finished the bait on a last fad, SJ-12 but with no success. Started steaming to Kolokofa at 11. Total of the day 713 (17 Y) At anchor at baitground 13h. First set at 2010 for a nice 63 bkts of a mixed bag, mostly juveniles gold anchovies; second set at 0445 for 85 bkts of a good mixed of anchovies and GS herrings. Up anchor at 0530.
4/11/2017	Fishings fads along south coast of Isabel/Choiseul-bait Posarae	Left Kolokofa at 0545 with an unexpected fair load of baits. Steamed toward the first Fad, 7 nm away. Nothing there, then checked NI-26 that we fished on the 14 Oct, nothing worth chumming, go to NI-39, school was present, a log drifting nearby, tagged 132 fish only. Then NI-40 with an associated big school of fish actively feeding but too much natural bait in the water, the fish were not interested in ours. NI-52B nothing, NI-53A, some fish but no interest in our bait. NI-53B a large school of actively feeding SJ but hard to fix and then, after 113 releases, we run out of bait that experienced high mortality. Short of 139 fish for the 20,000.. Very disappointing.... Started steaming toward baitground at mid-day. At anchor in Posarae at 1745. Early set at 1930 for a very good 155 bkts of anchovies and sprat. Left Posarae at 01am for Fads closed to Kolombangara
5/11/2017	Fish Fads north Kolombangara-Arrival Noro-End of cruise	Arrived at NFD KX-7B at 4 am and checked detection with echo-sounder; small mark there. Started chumming at dawn and had a very good session during 70 min that allowed the release of 1279 tagged fish. All loaded tags gone just before running out of bait, perfect...! Small real fishing action to carry back a bit of fish for home and we were on our way for Noro...Arrived at 10:50. End of WP4... Total for Solomon Island : 21139 (19616 S, 1504 Y and 18 B)