



**COMMISSION
THIRTEENTH REGULAR SESSION**
Denarau Island, Fiji
5 – 9 December, 2016

COOPERATIVE LONGLINE ELECTRONIC MONITORING PROJECT

WCPFC13-2016-OP20
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Submitted by ISSF

Cooperative Longline Electronic Monitoring Project



Craig Heberer
Deputy Director
Indo-Pacific Tuna Program

Project Goal

Develop the institutional capacity of Pacific Island fisheries management authorities to integrate EM systems into national and regional observer and MCS programs.

Five country ~24 vessel project including FSM, Palau, RMI, the Solomon Islands and Japan.



Project Partners

Domestic Fisheries Authorities

- BMR Palau
- NORMA Federated States of Micronesia
- MIMR Republic of Marshall Islands
- MFMR Solomon Islands
- National Offshore Tuna Fisheries Association of Japan

Industry

- Luen Thai Fishing Ventures, China
- Okinawa Tuna Fisheries Assoc., Japan
- Solomon Islands
 - Southern Seas Investment Ltd
 - Solong Seafood Development Ltd
 - Global Fishery Ltd
 - National Fisheries Developments Ltd/TriMarine International



Project Deliverables

- Install EM systems & train support staff
 - Local technicians on the docks
- Establish In-country EM Data Review Centers
 - Recruit and train observers and supervisory staff
 - SPC RFO trained
 - Convert EM records to EM data & link with TUBs
- Final report with recommendations
 - EM data review challenges
 - Scaling up regional EM coverage
 - Legislative/regulatory hurdles
 - Cost recovery potentials



Progress to Date

- Palau (MOU & installs completed)
 - 4 vessels, Koror-based
 - 3 vessels, Okinawa-based
 - Palau DRC established, EM records review underway
- FSM (MOU & installs completed)
 - 5 vessels, Pohnpei-based
 - Pohnpei DRC establishment scheduled January 2017
- RMI (MOU completed)
 - ~6 vessels, Majuro-based installs & DRC establishment February 2017
- Solomon Islands (MOU pending)
 - ~6 vessels, Honiara and Noro-based (install & DRC schedule TBD)





SeaTube System Components

- Cameras, sensors, hardware and software custom installed on vessel



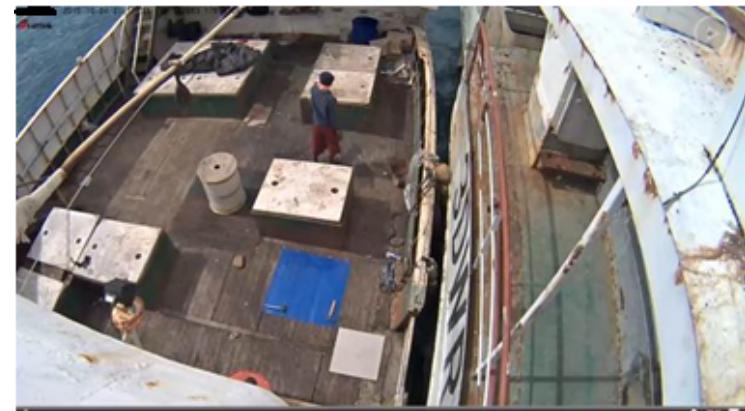
- Remote Maintenance
- Multi-camera system, integrated
- Full temporal coverage 24/7;
- 5-7 month onboard storage capacity
- Tamper proof GPS/VMS date and time watermark
- SeaTube OPEN ALARM WARNING SYSTEM
- Secure backup system



SeaTube, Electronic Observer System

Installation, design and positioning of cameras onboard

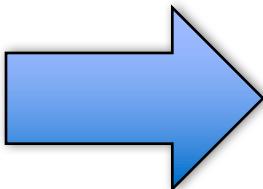
View from camera feeds via the monitor onboard the vessel.



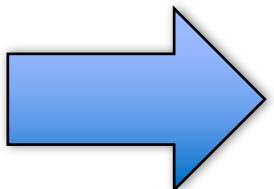
SeaTube, Electronic Observer System

SVM software designed for video footage review

Office Observer



Inspection Report



Satlink View Manager Report

Página 1 de 1

JHE // Y // TST // DOHO // 18SEP
2013-09-18 09:40:14 20,2094 -18,6999 0,3 270 Y/C1_HU20130918AMC1_H20130918-093820-179497130.mp4
(Camera watermark)

Report

Date (UTC)	LAT (deg)	LNG (deg)	Speed	Courses File
2013-09-18 09:40:14	20,2094	-18,6999	0,3	Y/C1_HU20130918AMC1_H20130918-093820-179497130.mp4

Observation: 2013-09-18 09:40:25 270(2°54' -18°41'15")
(Camera watermark)

2013-09-18 09:40:59 20,2094 0 270 Y/C1_HU20130918AMC1_H20130918-093820-179497130.mp4
(Camera watermark)

2013-09-18 09:42:44 20,2094 0 270 Y/C1_HU20130918AMC1_H20130918-093820-179497130.mp4
(Camera watermark)

2013-09-18 09:43:55 20,2094 -18,6999 0 270 Y/C1_HU20130918AMC1_H20130918-093820-179497130.mp4
(Camera watermark)

satlink

Satlink View Manager 1.1.5.37
© 2013 by Satlink S.L.

SPC/FFA REGIONAL LONGLINE OBSERVER CATCH MONITORING FORM LL-4									
REVIEW PERIOD		OBSERVER NAME		SET NO.		PAGE OF			
		P. _{veschelname} _201112_SET15		15		1 1			
VESSEL NAME	assessor	MEASURING INSTRUMENT	SHIPS/STAN OF SP/DEPARTURE TIME	START OF HOURS	END OF HOURS	Y Y	M M	D D	h h m m
assessor									
1	5	1	2	1	6	1	8	3	3
1	5	1	2	1	7	1	5	1	7
CATCH DETAILS									
SHIPS	HOOK	SPECIES	CONDITION CODE	LENGTH	WEIGHT	FATE	SEX	M/F	COMMENTS
TN	Ni	COD	CAUG DISCA	(cm) COI	(kg)	%	%		
14,28	6	YFT	A0	105,39	UF	RGG	I		
14,39	6	ALB	D	96,24	UF	RGG	I		
14,48	6	ALB	D	NM		DSD	I	Head without body!	
14,49	6	YFT	D	104,02	UF	RGG	I		
14,52	6	ALB	D	85,93	UF	RGG	I		
14,51	12	WAH	D	95,78	UF	RGG	I		
15,06	6	ALB	D	85,76	UF	RGG	I		
15,24	6	SKJ	D	74,47	UF	RGG	I		
15,31	6	ALB	D	102,63	UF	RGG	I		
15,35	6	YFT	D	111,12	UF	RGG	I		
15,35	6	YFT	A0	116,5	UF	RGG	I		
15,36	6	ALB	D	97,5	UF	RGG	I		
16,04	6	ALB	D	92,28	UF	RGG	I		
16,13	12	WAH	D	103,35	UF	RGG	I		
16,13	6	WAH	A0	84,76	UF	RGG	I		
16,14	6	DOL	A0	104,2		RCC	M		
16,14	6	DOL	A0	71,16		RCC	F		
16,16	6	WAH	A0	97,17	UF	RGG	I		
16,26	6	SKJ	D	NM		DUS	I		
16,31	6	PLS	A0	A2	NM	DUS	U		
16,33	6	ITX	U	A2	56,4	DPU	I		
16,44	6	AI R	O		101,58	UF			RGG II

Machine Learning Competition

Objective: Automate/Accelerate EM Data Analysis

\$150,000 Competition to develop software that can automatically detect sharks, turtles, tunas. Software will be made available in open-source format.

Status: Competition launched in mid-November and already has >500 teams competing—will run through early spring.

<https://www.kaggle.com/c/the-nature-conservancy-fisheries-monitoring>



Australian Government

Australian Fisheries Management Authority



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