



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

COOPERATIVE LONGLINE ELECTRONIC MONITORING PROJECT

WCPFC13-2016-OP20
7th December 2016

Submitted by ISSF

Cooperative Longline Electronic Monitoring Project



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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

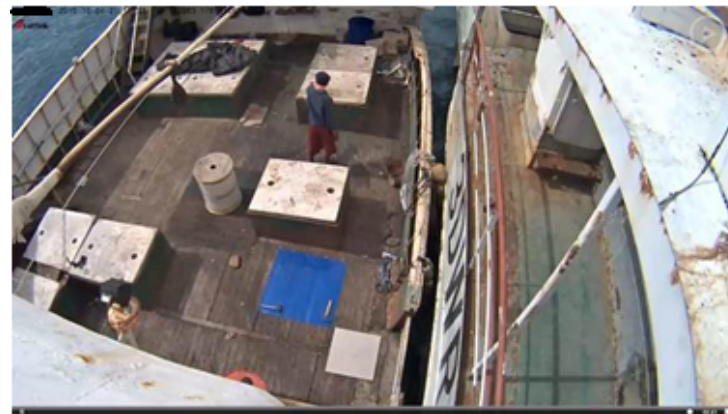


- Remote Maintenance
- Multi-camera system, integrated
- Full temporal coverage 24/7;
- 5-7 month onboard storage capacity
- Tamper proof GPS/VMS date and time watermark
- SeaTube OPEN ALARM WARNING SYSTEM
- Secure backup system



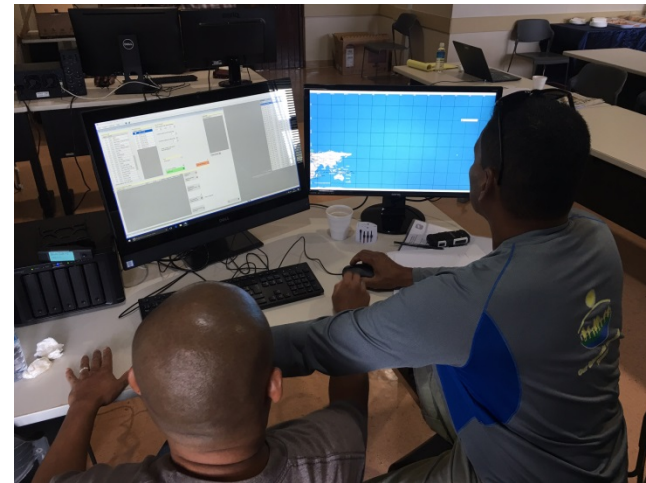
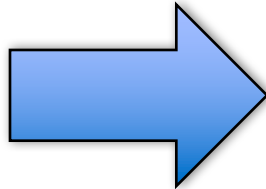
SeaTube, Electronic Observer System Installation, design and positioning of cameras onboard

View from camera feeds via the monitor onboard the vessel.

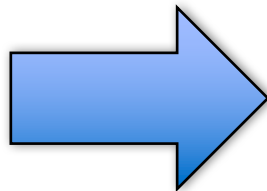


SeaTube, Electronic Observer System SVM software designed for video footage review

Office Observer



Inspection Report



Satlink View Manager Report Página 1 de 1

Inspection report JHE // Y // TST // DOMO // 18SEP
 2013-09-18 09:40:14 2013-11-27 20:08:11

Project no: 62 Vessel: xxx External marking: xxx CFB: no
 Project date interval: 2013-09-18 - 2013-09-18
 Detection filter: All observations
 Zone filter: All zones
 Speed filter: All speeds
 Image filter: Showing data/time watermark and showing mini image

Date (UTC)	SVC time (UTC)	Lat (Dec)	Long (Dec)	Speed	Course (Deg)
2013-09-18	09:40:14	20,2094	-18,6959	0.3	0
2013-09-18 09:40:59 2013-09-18 09:42:44 20,2094 -18,6959 0 270 V Y V1_H0203091800R/C3_H02030918-092030-1379497100.mpg Normal Camera showing sorting of fish (Camera watermark)					
2013-09-18 09:42:44 2013-09-18 09:43:55 20,2094 -18,6959 0 270 V Y V1_H0203091800R/C2_H02030918-094207-1379497100.mpg Over Camera showing unloading of fish (Camera watermark)					
2013-09-18 09:43:55 2013-09-18 09:44:21 20,2094 -18,6959 0 270 V Y V1_H0203091800R/C4_H02030918-094355-1379497100.mpg Other mast mounted camera showing unloading on deck of fish (Camera watermark)					

Satlink View Manager v. 1.1.0.17
© 2013 Satlink S.A.

SPC/FFA REGIONAL LONGLINE OBSERVER CATCH MONITORING										FORM LL-4		
VESSEL NAME		OBSERVER TRIP ID NUMBER		SET NO		PAGE		OF				
vesse		P_vesseName_2015112_SET15		15		1		1				
VESSEL NAME		OBSERVER INSTRUMENT		SHIP EFFORT OF SET		DATE/TIME		START OF HOLD DATE				
vesse		1 5 1 2 1 6 1 8 3 3		Y Y M M D D		h h m m D D		Y Y M M D D				
CATCH DETAILS												
SHIPS TRAIL	HOOK NO	SPECIES	CONDITION	CODE	LENGTH (cm)	WEIGHT (kg)	FATE	SEX	COMMENTS			
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			102.65	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 TTX	U	A2		66.4		DPV	I				
16.44	6 ALB	Ih			101.48	UF	RGG	I				

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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