The Common Oceans ABNJ Tuna Project

Electronic monitoring system in Ghana

MODERN TOOL for COMPLIANCE

By

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Defining Sustainable Tuna Fisheries

ISSF wants all tuna fisheries to become capable of achieving the Marine Stewardship Council (MSC) certification standard without conditions

Is a main stakeholder of Tuna ABNJ project in Ghana

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OBJECTIVE :

Achieve responsibility, efficiency and sustainability in tuna production and biodiversity conservation in the ABNJ

By

-Improving Management

-Combatting IUU fishing

-Protecting Biodiversity

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Electronic Monitoring System (EMS) in Ghana

Combatting IUU fishing activities requires:

-Best practices in MCS & market control

-Capacity building and networking with a global certification

-Compliance improvement

-Port State Measures implementation

-Pilot trials in implementing Electronic monitoring system on board tuna vessels

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Ghana Pilot Activities

Implementing Electronic Monitoring System (EMS)

-EMS deployment started with 5 vessels in Sept. 2015.

-The whole fleet equipped in March 2016.
(*17 PS targeted but only 11 really active for now*)

-The supplier selected provided software, hardware, training session, assistance to improve capacity of Ghanaian staff in monitoring Tuna fleet.

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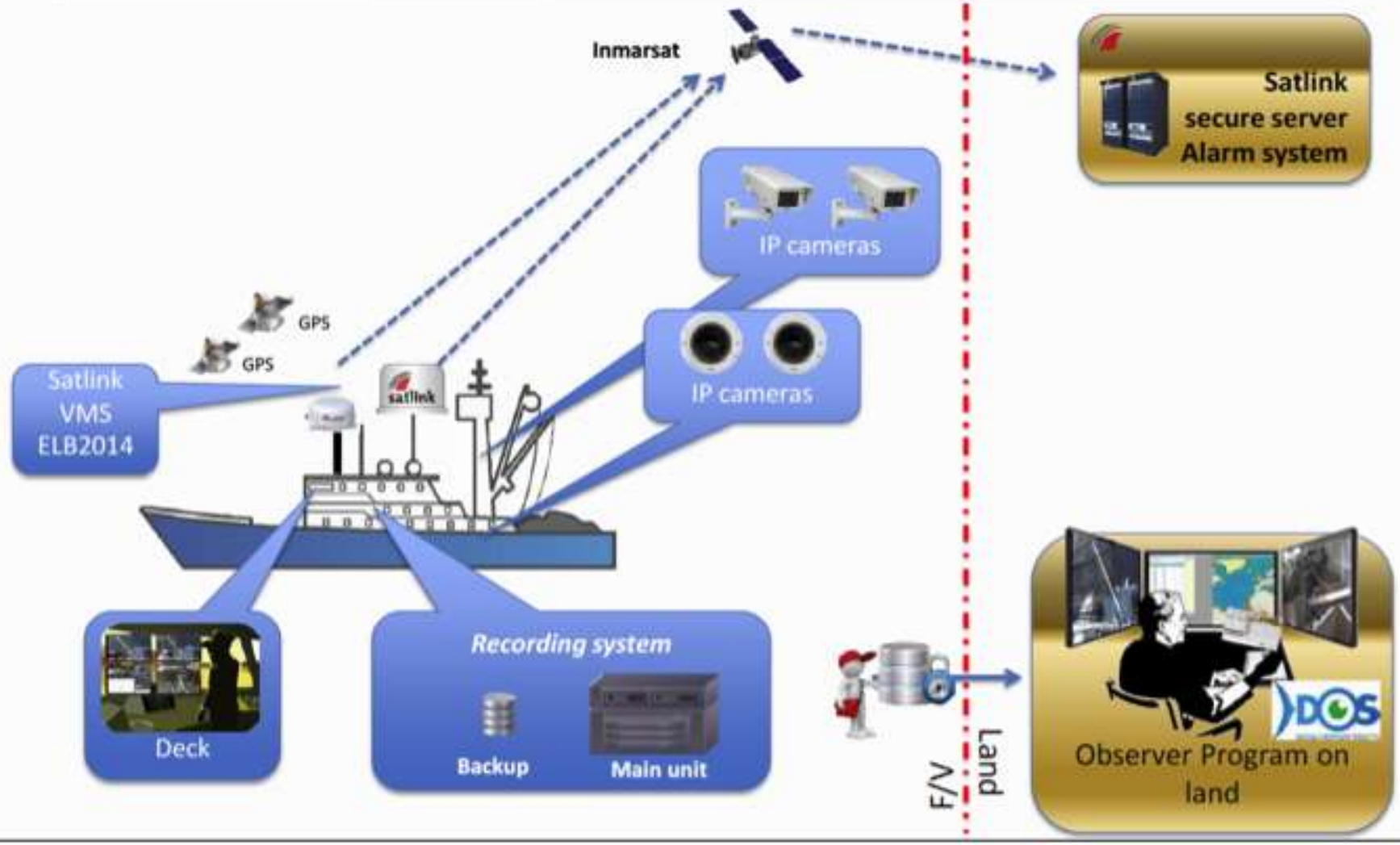
satlink

SeaTube, Electronic Observer System

Operating diagram



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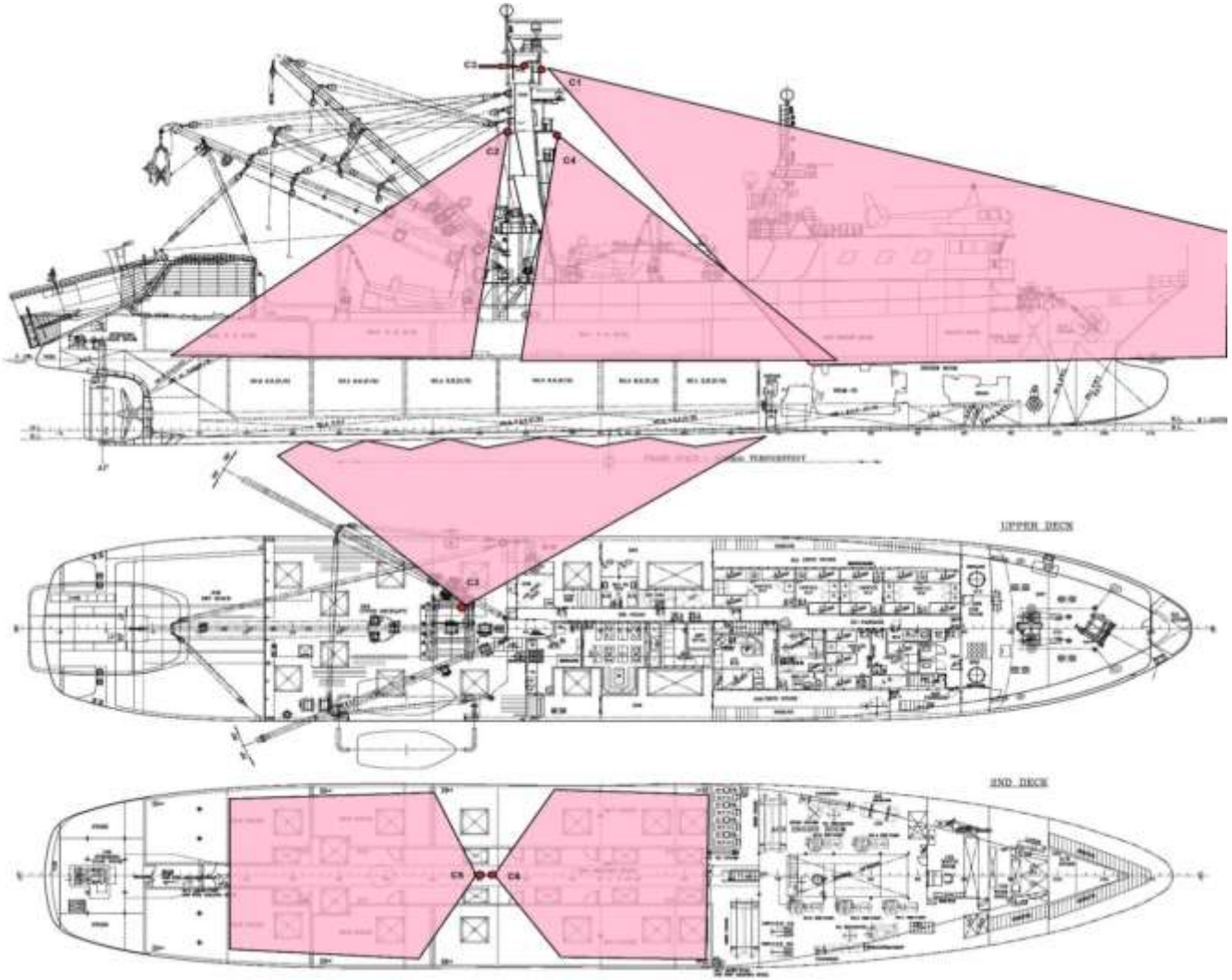
Position of the cameras on the vessels and range of vision

1- 6 cameras in the vessel and their position depends of each vessel

2- a server on board with 8 HDDs with a capacity for 4 Teras. (recording for 4 months) 24/7 recording images.

3. VMS to control health status of the system



4- standalone system & no human action needed.

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Type of information collected from the image analysis

1) Near-real-time information (system health statements)
2) Information during searching activities
3) Location and time of a set
4) Type of set (free school or associated school, FADs, logs)
5) Information of Fish Aggregating Devices (FADs)
6) Estimates of total catch
7) Estimates of species and size composition of target tunas
8) Estimation of bycatch of large individuals.
9) Estimation of bycatch of small individuals
10) Estimation of discards of target tunas
11) Compliance with national and/or regional requirements

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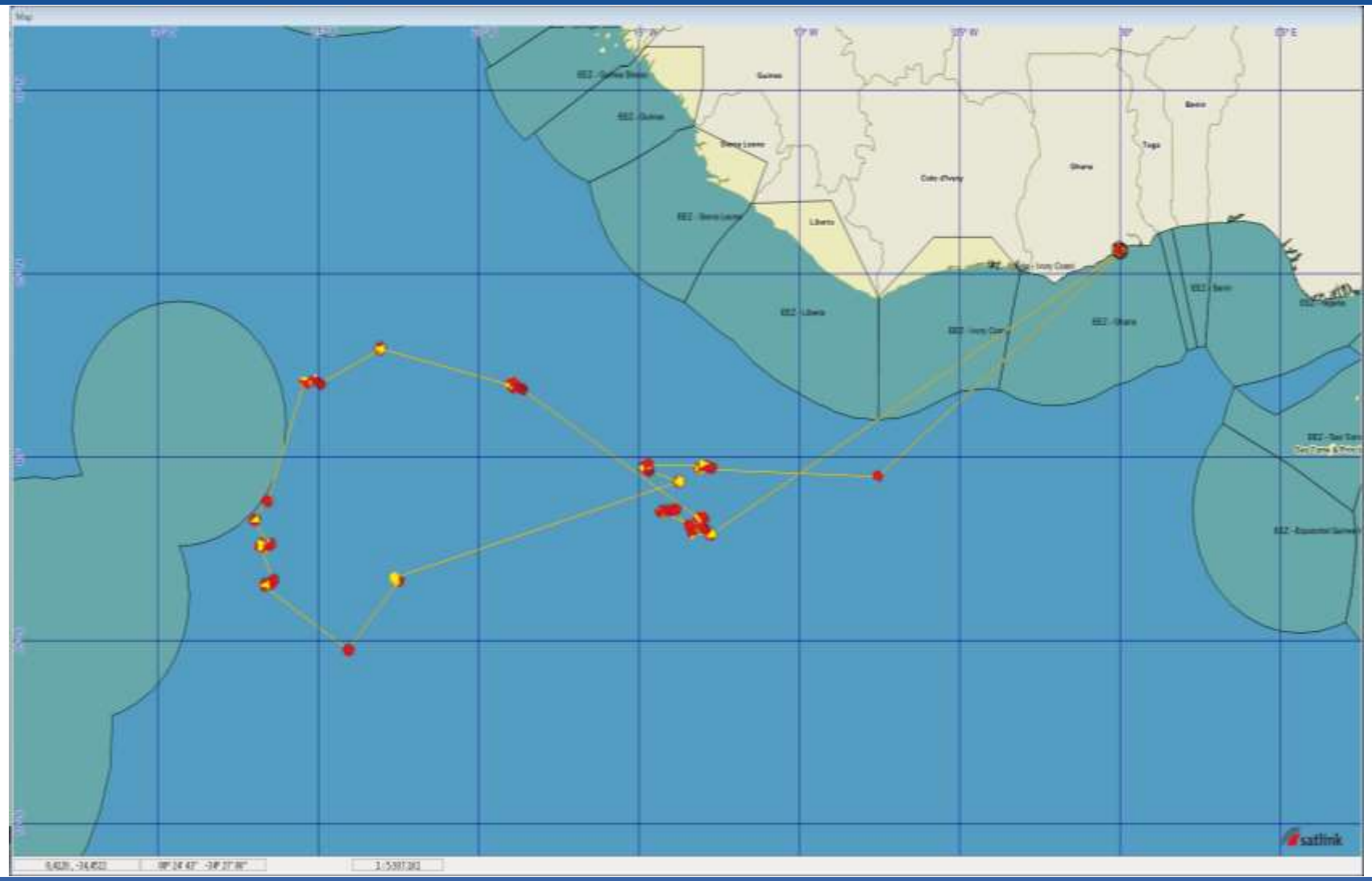

You can track the vessel trajectory during all fishing trip

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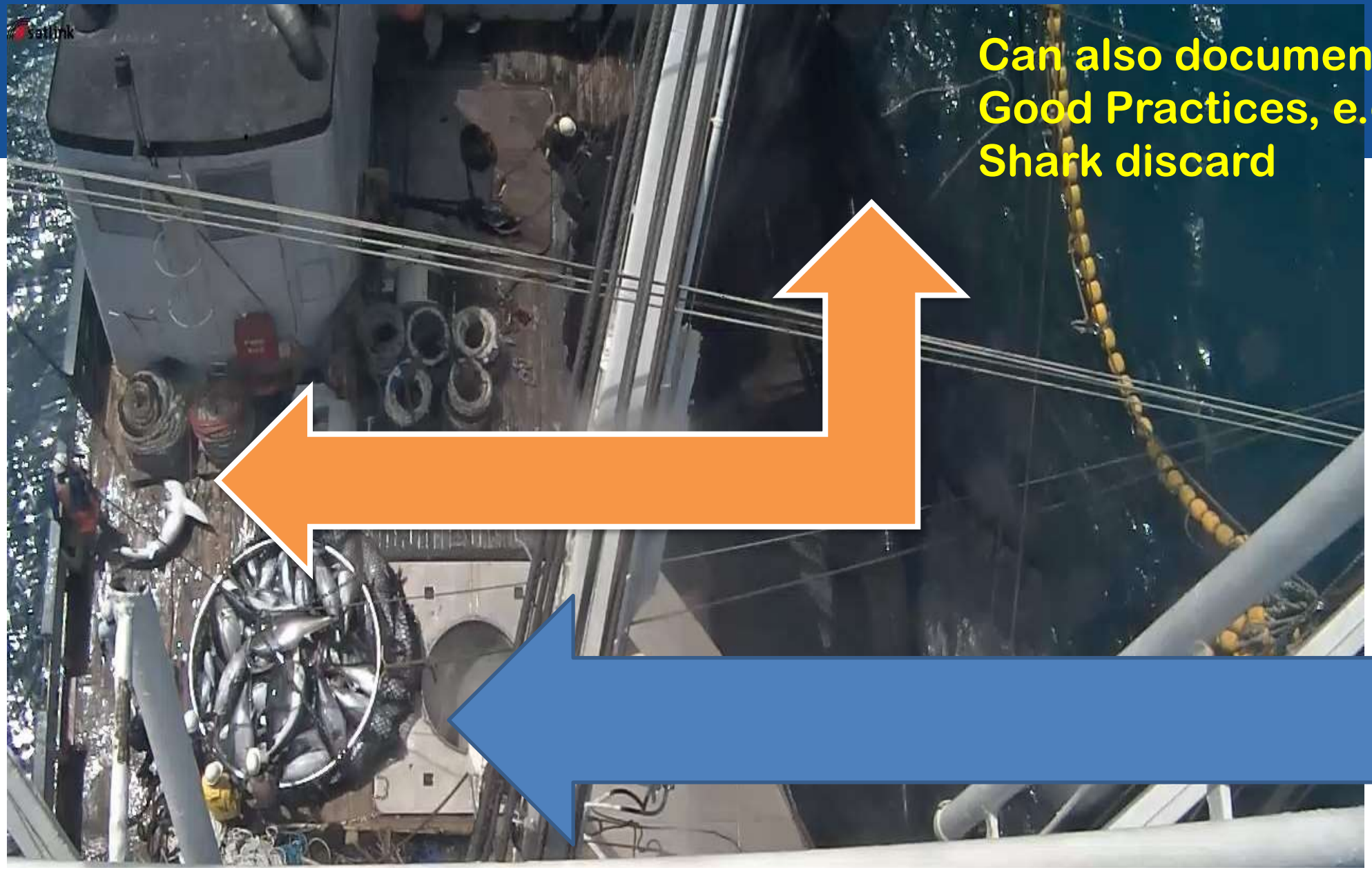

Estimation of total catch and the type of purse seine fishing (FAD or Free School)

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- **ESTIMATED CATCH**
  - Target species

	FS	FAD	TOTAL
SKJ	0	172	172
YFT	0	124.5	124.5
BET	0	76	76
FRI	0	0	0
Other2	0	0	0
TOTAL	0	372.5	372.5

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Compliance with national and regional requirements

	Yes	No	Comments
ICCAT Rec. 04-10			
Full utilisation of sharks caught (excepting head, guts and skins)		√	
ICCAT Rec. 09-07			
Bigeye thresher caught		√	
Release of all bigeye thresher sharks caught unharmed			N/A
Release of all other thresher sharks caught unharmed			N/A
ICCAT Rec. 10-06 (if Ghana is not reporting T1 data for shortfin mako)			
Shortfin mako sharks (Isurus oxyrinchus) caught		√	
Release of all shortfin mako (Isurus oxyrinchus) caught unharmed			N/A

Table of compliance issues drafted by land observers, other facility offer by the system

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Discard at sea

Estimation of quantity discarded at sea

Opportunities for Ghana

- To verify compliance of fishing vessels with national and/or regional requirements
- To get better estimates of catch composition and the fishing effort to attain the catches.
- To complement and improve its human observer program system with the EMS systems
- To develop human observer capacity through training, provision of equipment and software.
- To develop good practices in their tuna fisheries

Lack of data and concern about lack of compliance has long been an issue off the Atlantic Coast of Africa, and this information will allow the Ghanaian government to improve data reporting and meet international (ICCAT) obligations.

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Conclusions

EM is a Valuable Monitoring Tool for Tuna Seine Fisheries

Strengths: Fishing Location and Effort
Target Species and Total Catch
Large Bycatch Species

More Work Needed: Tuna Catch Composition Methods
Small Bycatch Composition Methods
On Board Catch Handling Protocols
Improved CCTV Image Quality

Adoption of EM Requires Operational Design and Planning
Methods developed can be transferred & adopted globally.
Business case under development to evaluate sustainability.

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