Comisión Interamericana del Atún Tropical
Inter-American Tropical Tuna Commission

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Electronic Monitoring (EM) of Purse-Seine Vessel Activities and Catches (SAC-10-15) – Progress Report

Marlon H Román – Cleridy Lennert-Cody – Enrique Ureña

10th Meeting of the Scientific Advisory Committee San Diego, California USA, 13-17 May 2019

Outline

- **Project overview**
  - Introduction
  - Project description
  - Current situation: Timeline – Budget
  - Discussion: Challenges

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Introduction

- High-quality data from fisheries e.g., catch composition and effort information are required for science-based fisheries management.
- **Current sources of detailed data**: Observers, vessel logbooks, port sampling
  - Vessel logbooks (Class 1-5 vessels): limited information on non-target species, and none on discards of target species.
  - Port sampling: Species and size composition data for target species only.
  - Observers (mostly Class-6 vessels): Rarely sample Classes 1-5 vessels. Current duties keep them from collecting detailed size composition data for target and most non-target species.
- **EM** offers potential solutions to some of these challenges.

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Project description

- **Goal**: Evaluate if EM can be used to collect reliable information on set type, FAD deployments, catches, and bycatches.
- Study originally intended for Class 1-5 vessels, but extended to Class-6 vessels.
- **Two components**:
  - Evaluate implementation on Class 1-5 vessels to complement for data provided in logbooks;
  - Evaluate implementation on Class-6 vessels for some of the data currently collected by on-board observers.

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Project description: EM data collection and evaluation

- Collect data at sea using both EM and an on-board observer, simultaneously.
- Compare EM and observer data to obtain a preliminary evaluation of EM performance.
- **Class 1-5 vessels**
  - If EM appears promising, develop a sampling design for a pilot study aboard Class 1-5 vessels.
- **Class-6 vessels**
  - Identify those activities which EM can record with equal or greater accuracy than a human observer.

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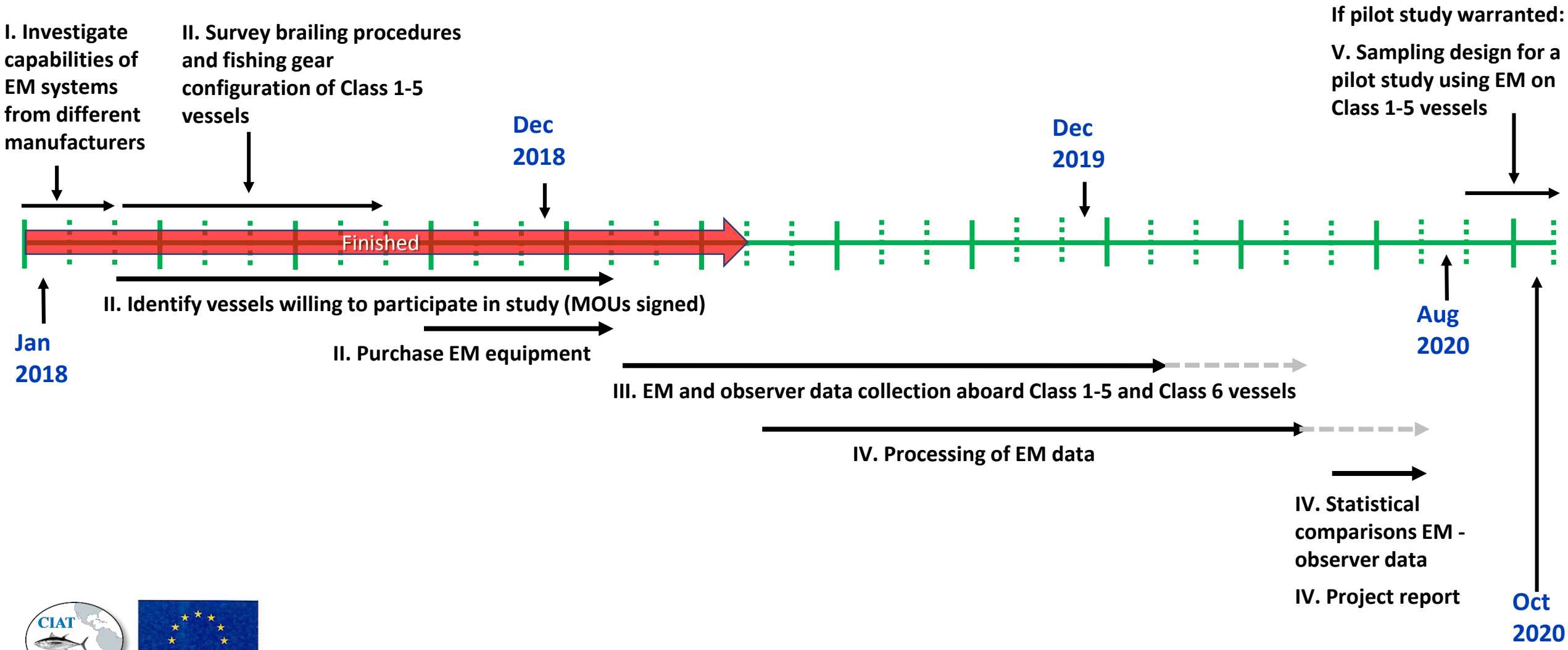
Current situation - Timeline



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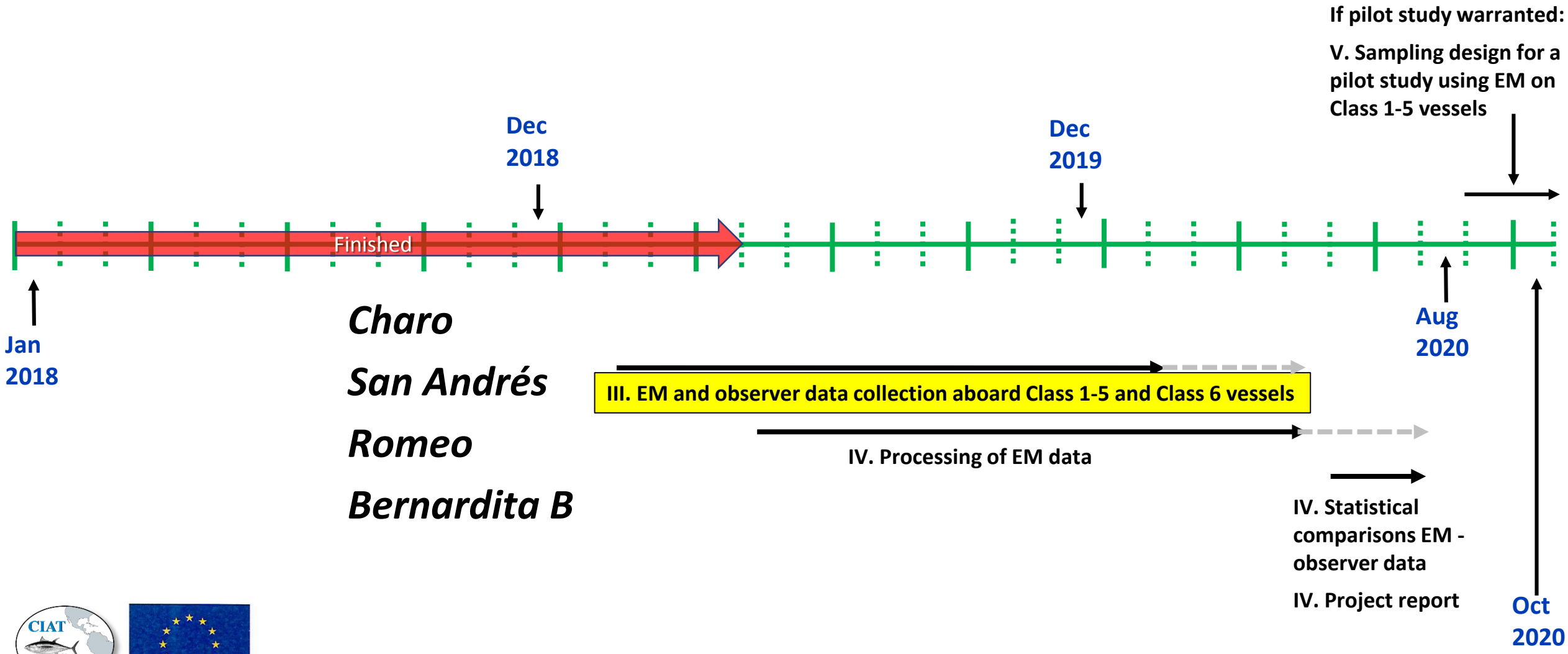
Current situation - Timeline



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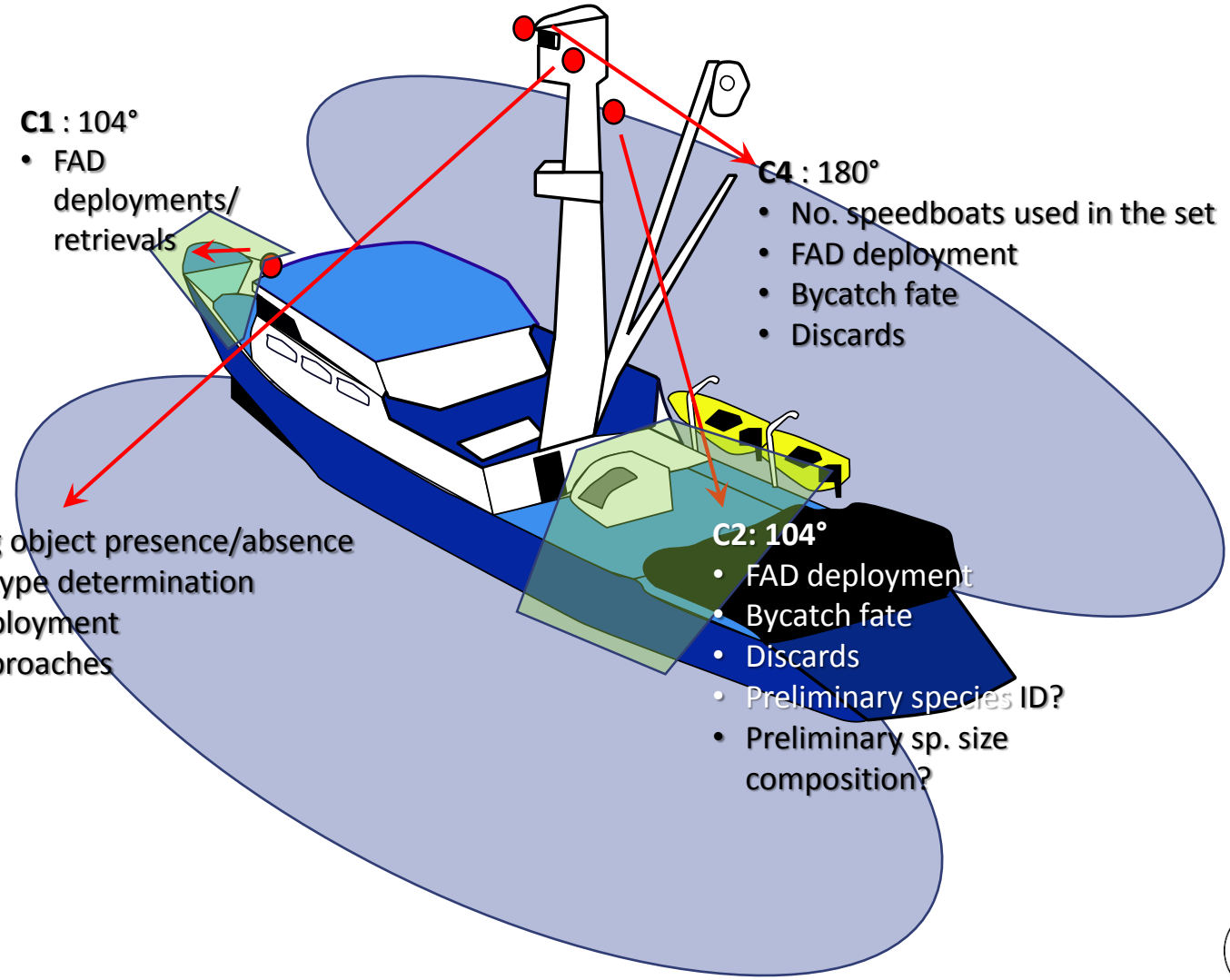
Participating vessels – Class-6

Charo and San Andrés

- *4 cameras (Deck)*
- *3 cameras (Wet-deck)*



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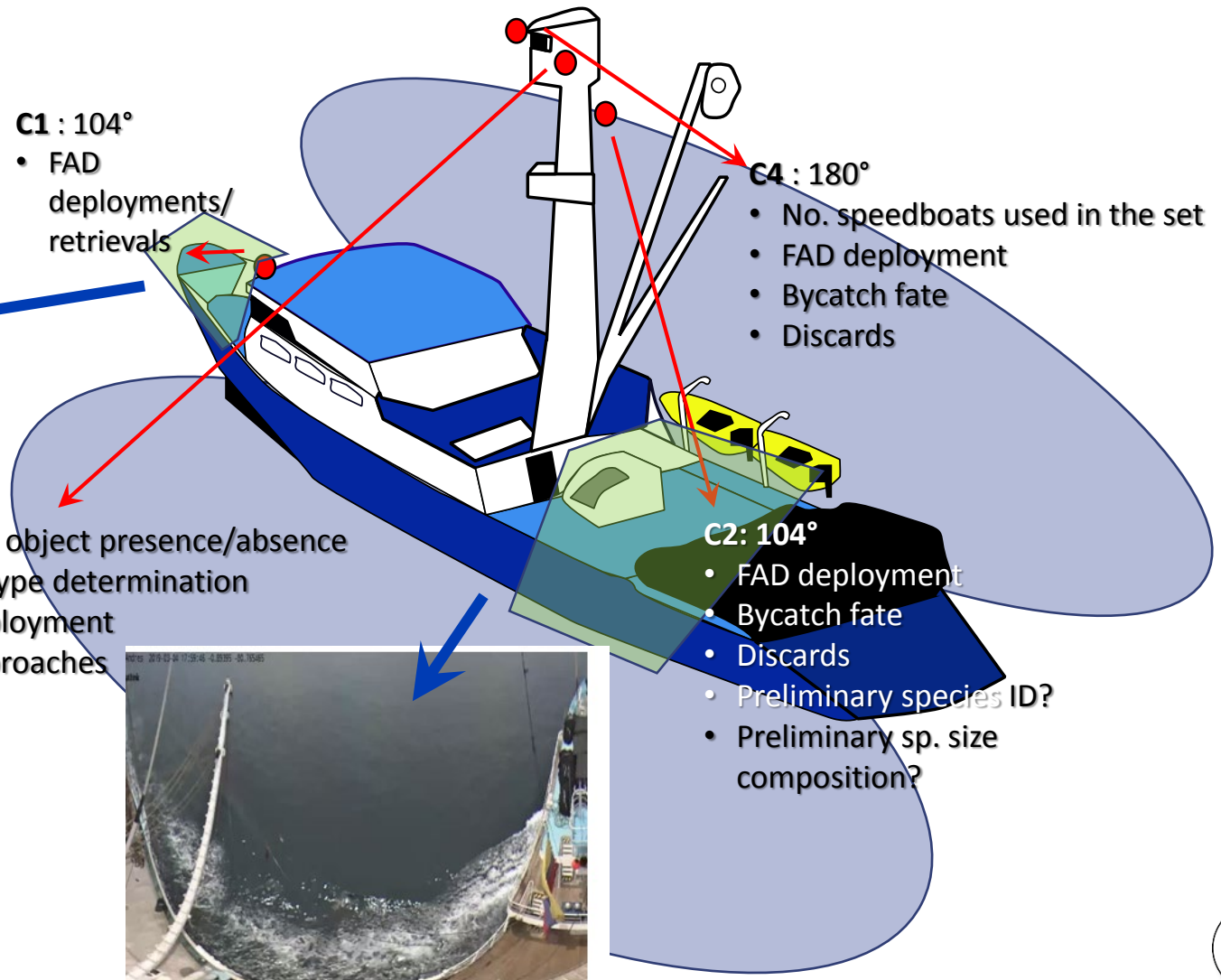

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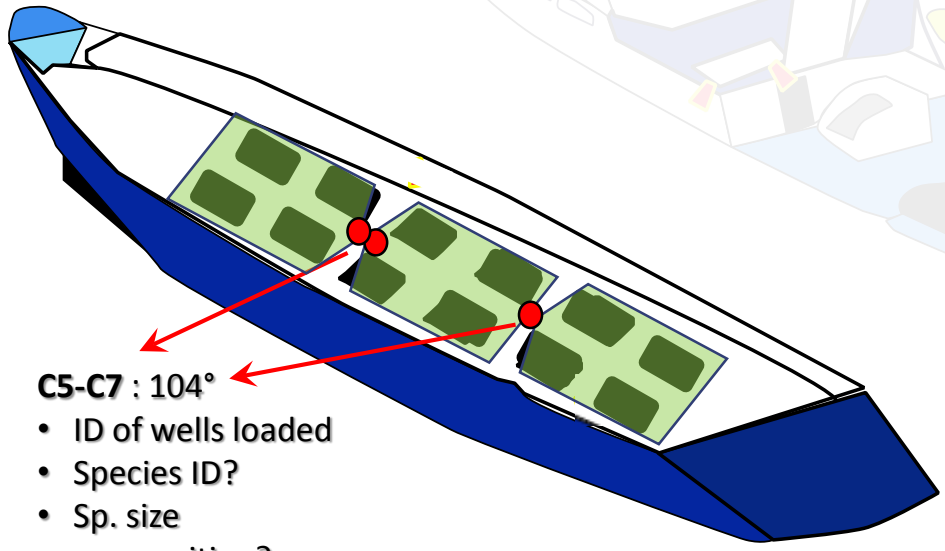

C5-C7 : 104°

- ID of wells loaded
- Species ID?
- Sp. size composition?

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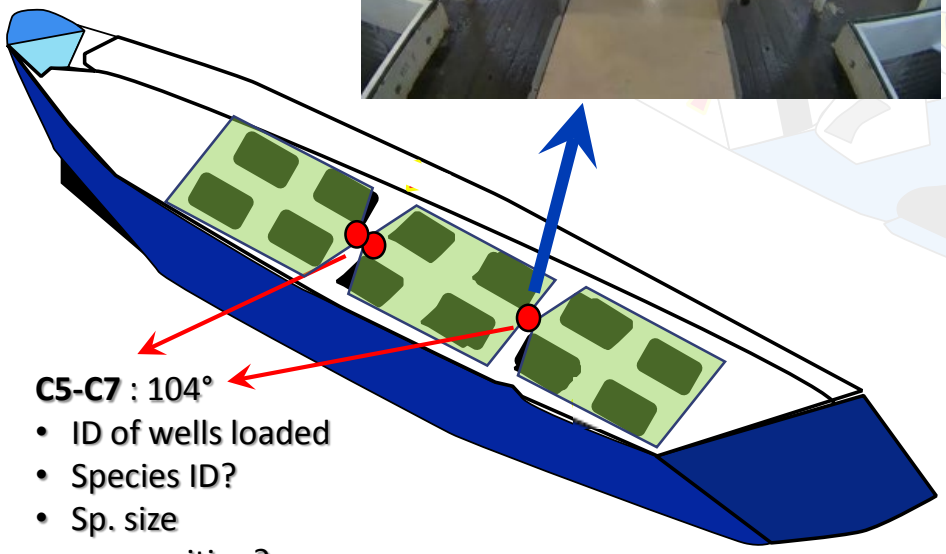

C5-C7 : 104°
- ID of wells loaded
- Species ID?
- Sp. size composition?

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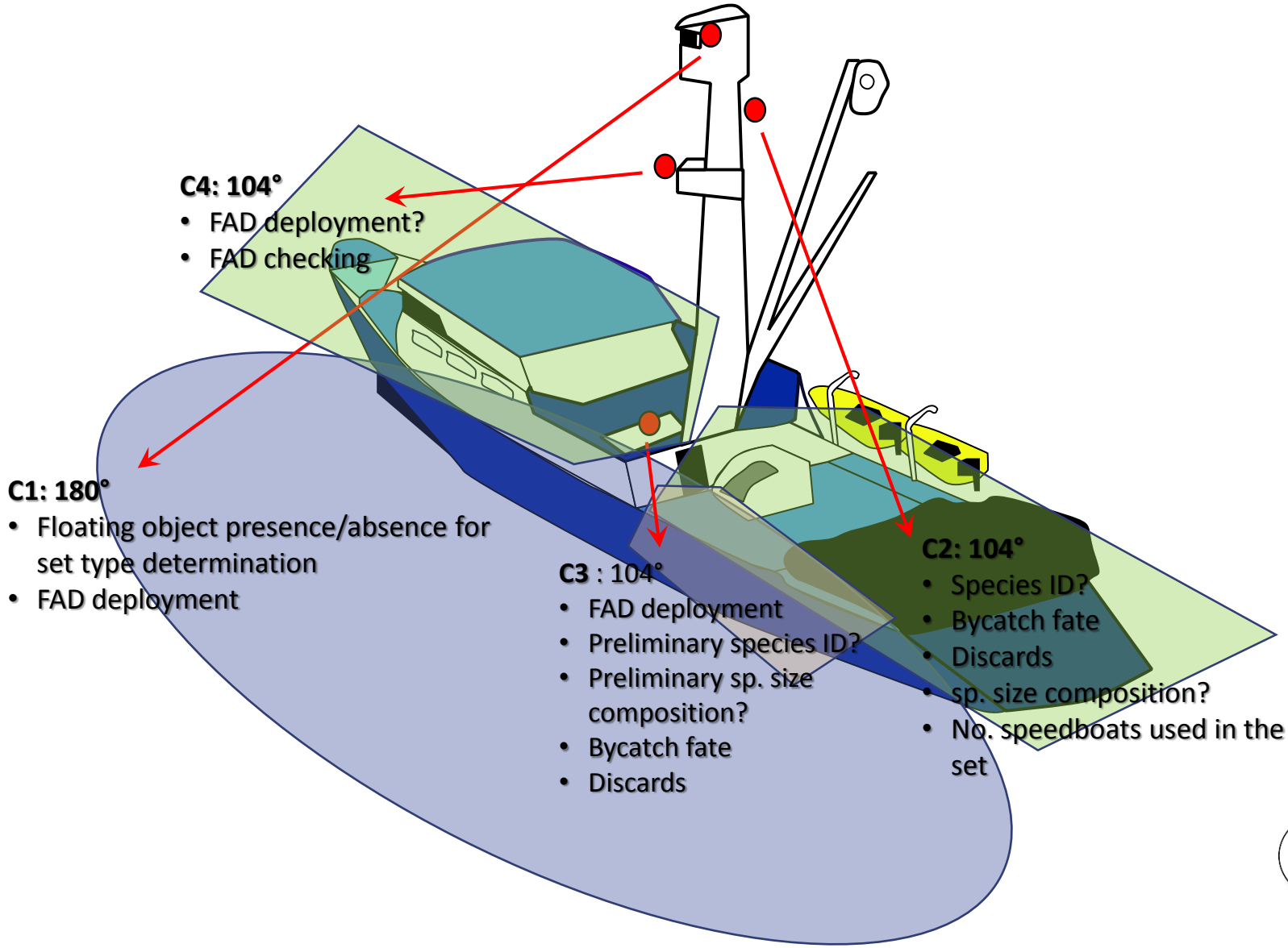
Participating vessel – Class-2

Romeo

- *4 cameras (Deck)*



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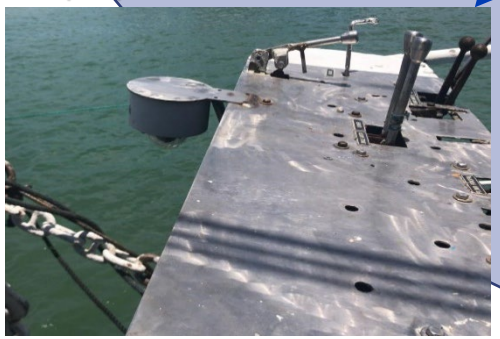
Participating vessel – Class-2

Romeo

- *4 cameras (Deck)*

C1: 180°
- Floating object presence/absence for set type determination
- FAD deployment



C3 : 104°
- FAD deployment
- Preliminary species ID?
- Preliminary sp. size composition?
- Bycatch fate
- Discards

C2: 104°
- Species ID?
- Bycatch fate
- Discards
- sp. size composition?
- No. speedboats used in the set

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Current situation - Budget

Activity	Budget (US$)	Spent (US$)
Investigating EM equipment	8,927	4,387
Purchasing EM equipment	77,010	30,495
EM data interpretation	17,798	6,500

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Discussion – Challenges to date

- **Initial lack of support from Class 1-5 vessels:**
  - Delayed the study eight months;
  - Indirectly led to expanded project scope (Class-6 vessels now included).
- **Space limitations**. Accommodating an observer on a Class-2 vessel was only made possible by taking crew space.

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Questions