





# **RPAS Operations on board EFCA chartered vessel**

**Cooperation between EFCA  
and EMSA**

2<sup>nd</sup> RPAS User group meeting 30 Sep 2019



# EFCA Chartered OPV Lundy Sentinel



## EFCA operational capacity

is available for Multipurpose Operations in cooperation with FRONTEX, EMSA and Member States relevant authorities in its support to coast guard functions

### Primary

-  Fisheries inspection and control

### Support role

-  Search and rescue
-  Border Control and Customs control
-  Law enforcement
-  Maritime environmental protection and response
-  Maritime monitoring and surveillance
-  Maritime safety
-  Maritime accident and disaster response



# Why to use RPAS?

- **Improve the Maritime Picture:**
  - ✓ Detect and record fishing activities carried out by vessel not transmitting transponder signal.
  - ✓ Reduce manned aircraft operations in unfair conditions e.g. weather, airspace (increase flight safety)
- **Close range analysis of fishing vessels (in vicinity of the EFCA vessel)**
  - ✓ Pre-boarding, boarding and post boarding analysis
  - ✓ Improve decision making and targeting before boarding
  - ✓ Minimise unknown risks during boarding operations
  - ✓ Keep the target fishing vessel under close monitoring during notification, boarding, inspection and after having left the fishing vessel



# First experience on board



- Cooperation EMSA - EFCA



- Dates: 1 – 14 September 2019
- Area: Central Mediterranean Sea
- The RPAS: Lockheed Martin Indago - Nordic Unmanned

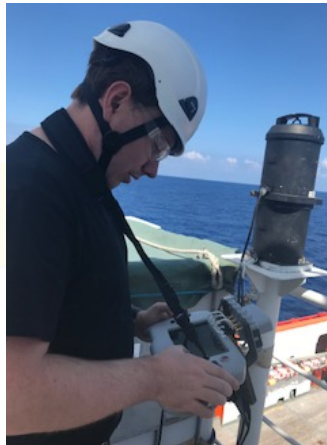




# Actors



Vessel master



RPAS Pilot with  
Ground Control  
Station



EFCA liaison officer  
on board (LOB)

# Procedure (1/2)



Pilot and assistant  
preparing the quadcopter



RPAS pilot assisted  
for cable handling  
and Facilitating  
communications



RPAS in operation

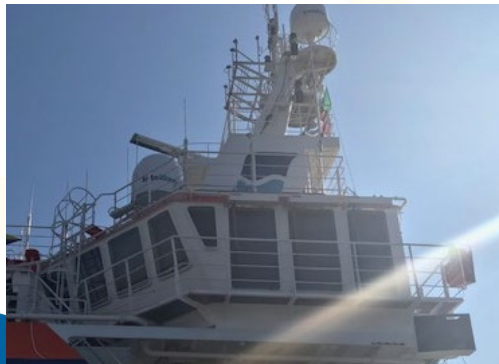
## Procedure (2/2)



EFCA liaison Officer on board (LOB) in front of the bridge flight console in contact with pilot by handheld VHF  
Need for procedures



Bridge flight console with direct image streaming from Ground Control Station to LOB



Direct image streaming  
By Satellite internet link  
to all stakeholders



# Images MAX Zoom



6 Km



5 Km



4 Km



3 Km



2 Km



1 Km



0.5 Km



# Operational considerations (1/2)



System used for close range **analyse of fishing vessels in vicinity the EFCA chartered vessel**



# Operational considerations (2/2)

- **Very good picture quality**
- **RPAS unlikely to be detected if at 400-500 from target**
- **Range:**
  - Technical Range is 9 km or 4,5 Nm – licence range is 5 Nm outside TTW
  - Speed is 30 kts or 30 Nm/h = 1 Nm per 2 min
  - **E.g. Fishing Vessel at 2.5 Nm from mother vessel**
    - **Intercept distance: 2.5 Nm at 1 Nm per 2 min = 5 min to go and 5 min to return**
    - **So endurance of 35 min - remaining 25 min on target**
- **Meteo constraints:**
  - 20-25 kts – slight rain
  - Turbulence at the deck height
- **There is a need for documented procedures**

**Thank You!**

**Excellent cooperation between  
EMSA – EFCA - Nordic Unmanned**

