

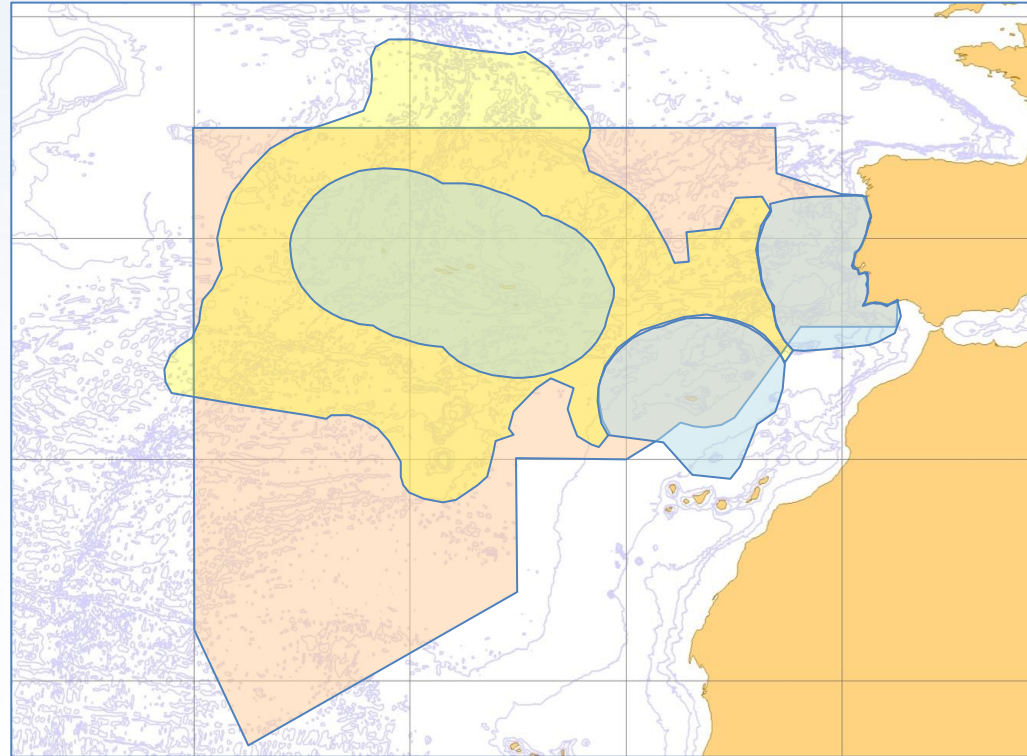
Copernicus Maritime Services – Safety and Security at sea

CFR Bessa Pacheco
PO Navy, Naval Command, CADOP



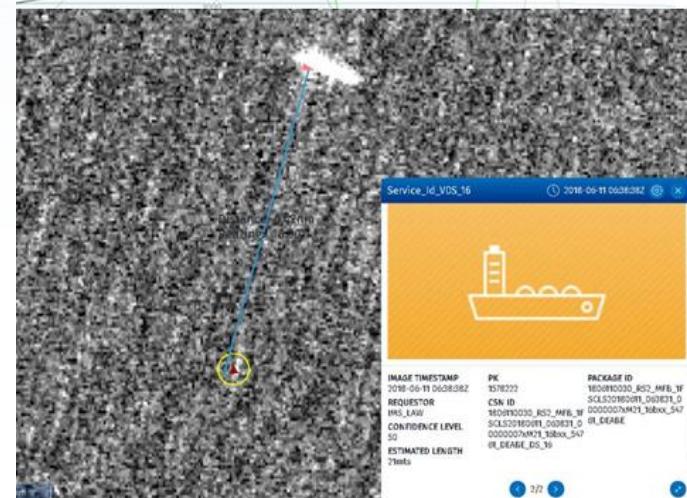
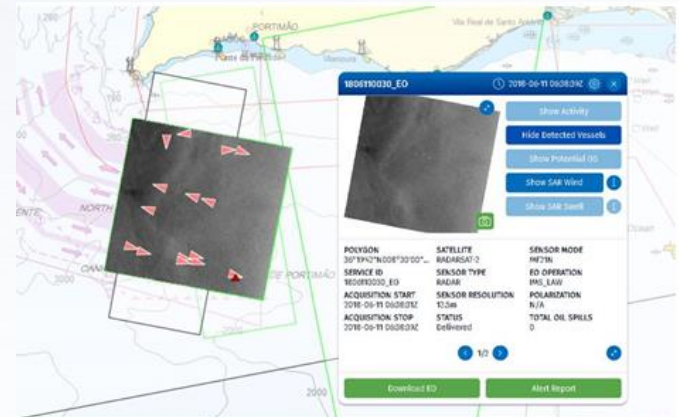
- Problem
- System 1
- System 2
- Challenges
- Conclusions

- Large maritime area
- Scarce intervention resources
- Assure national interests at sea
 - Maritime Safety
 - Maritime Security

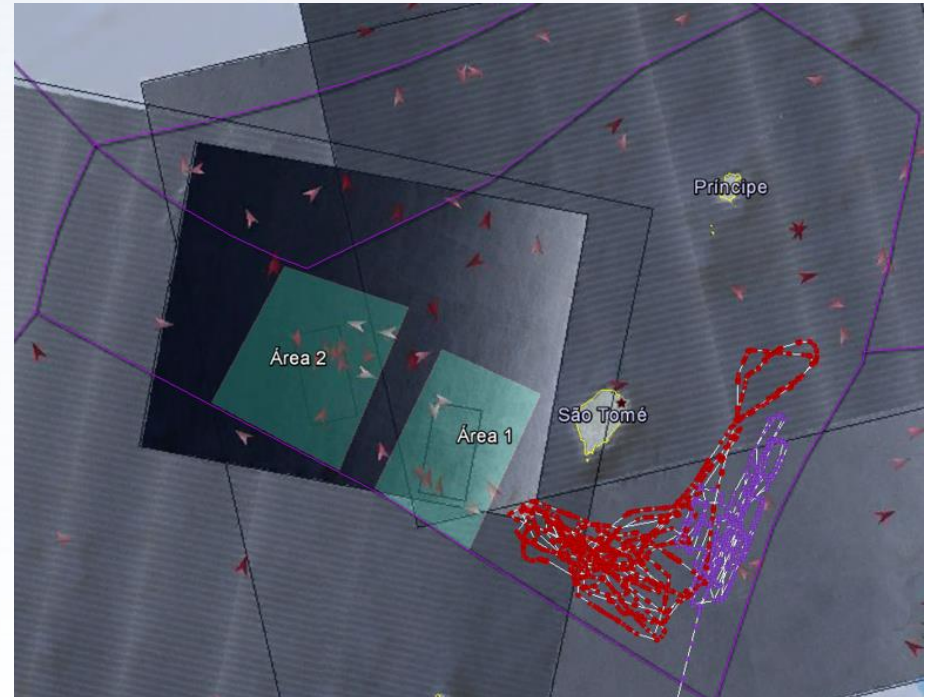


System 1 - Maritime Safety/Law Enforcement.

- Control of ships in the maritime traffic corridors
- Identification of potential targets to target patrol
- Control of fishing vessels
- Control of research vessels in PRT EEZ

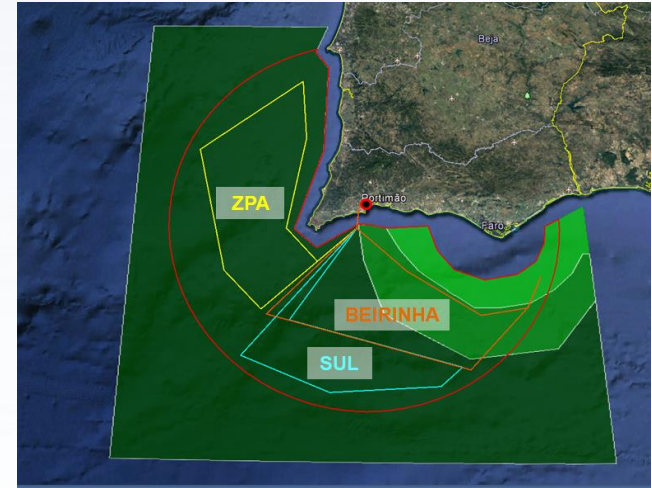


- Identification of areas
 - Fishing grounds used by foreigners countries
- Control of transit traffic in the EEZ
- Detection of ships to be operated without shinning AIS



System 2 - Triggering information for RPAS use

- Area assigned for RPAS covered with satellite
- RPAS schedule flight based on satellite imagery
- Patrol boat in the area




REF: CNCM Weekly Flight Schedule V2

CADOP


ALTIM TIMES U2

CN Centro Nacional
CM Coordenador Marítimo



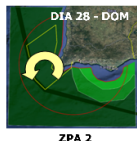
RPAS FLYPRO (26 JANEIRO - 01 FEVEREIRO 2018)

| DIA | MODELO | C/S | 04 | 30 | 05 | 06 | 30 | 07 | 30 | 08 | 30 | 09 | 30 | 10 | 30 | 11 | 30 | 12 | 30 | 13 | 30 | 14 | 30 | 15 | MISSÃO | |
|------------------|--------|--------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|--------|
| 26 (6ªF) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 (SAB) M032 | | | | | | | | | | | | | | | | | | | | | | | | | Fast Boats Search, Ship Lane Search for Pollution and Fishery Control | |
| 28 (DOM) M033 | | | | | | | | | | | | | | | | | | | | | | | | | Ship Lane Search for Pollution and Fishery Control | |
| 29 (2ªF) M034 | | | | | | | | | | | | | | | | | | | | | | | | | Ship Lane Search for Pollution and Fishery Control | |
| DIA | AR 5 | PT 001 | 14 | 30 | 15 | 30 | 16 | 30 | 17 | 30 | 18 | 30 | 19 | 30 | 20 | 30 | 21 | 30 | 22 | 30 | 23 | 30 | 00 | 30 | 01 | MISSÃO |
| 30 (3ªF) M035 | | | | | | | | | | | | | | | | | | | | | | | | | Fast Boats Search, Ship Lane Search for Pollution and Fishery Control | |
| DIA | | | 08 | 30 | 09 | 30 | 10 | 30 | 11 | 30 | 12 | 30 | 13 | 30 | 14 | 30 | 15 | 30 | 16 | 30 | 17 | 30 | 18 | 30 | 19 | MISSÃO |
| 31 (4ªF) M036 | | | | | | | | | | | | | | | | | | | | | | | | | Ship Lane Search for Pollution, Fishery Control | |
| 01 (5ªF) | | | | | | | | | | | | | | | | | | | | | | | | | | |



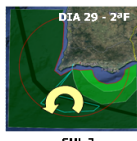
DIA 27 - SAB

SUL 1



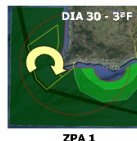
DIA 28 - DOM

ZPA 2




DIA 29 - 2ªF

SUL 2



DIA 30 - 3ªF

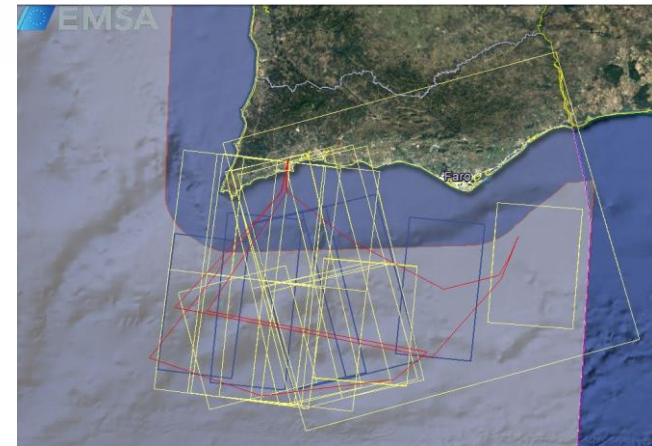
ZPA 1



DIA 31 - 4ªF

BEIRINHA 2

AERÓDROMO: AERO CLUBE LAGOS (N37°07.19' - W008°40.44')



Triggering information for RPAS use

- To monitor ships in the maritime traffic corridors
- Identification of contacts of interest (fishing, etc)
- [Search and Rescue]



EVENTS:

- MMSI: 209724000/ 374559000/ 224513000/ 538005322/ 370430000/ 538090399/ 304138000/ 245712000/ 240625000/ 218504000/ 219117000/ 255805740 investigated regarding behavior and possible pollution. / No suspect behavior visible. / No marine pollution visible
Nothing Special To Report.
- The Liaison Officer requested we continue to 36.40000 -8.60000 to search for a vessel of interest. Nothing special to report.

Triggering information for RPAS use

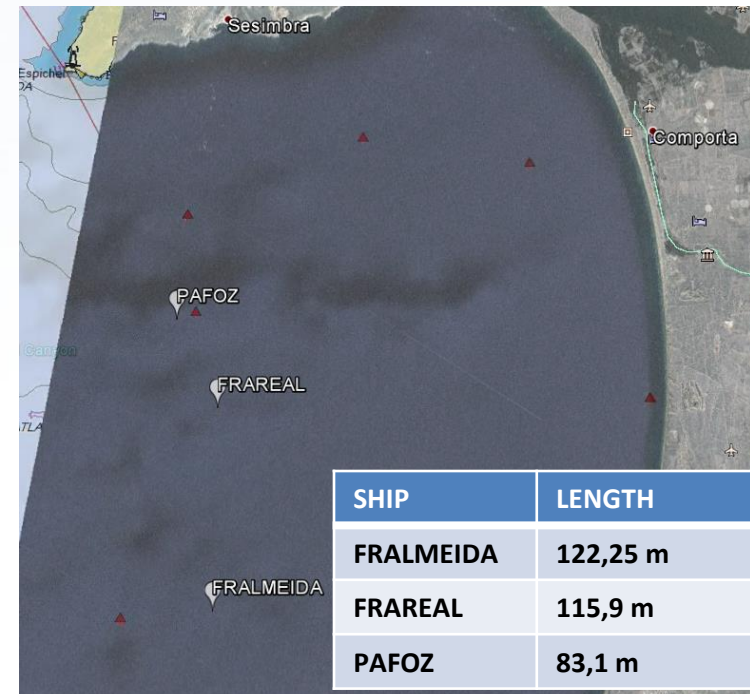
- Control of fishing vessels
- Detection of pollution at sea

EVENTS:

- En route to task in the corridor the Liaison officer requested imagery of a small vessel conducting feeding activity near the fishing pods. Nothing special to report.
- **MMSI: 538005373 GOLAR GLACIER** Liaison officer requested investigation of vessel with possible pollution. No suspect behaviour / No marine pollution visible. Nothing Special To Report.
- Liaison Officer requested investigation of a transshipment area Centre: 36.801667-8.427500 / No transshipment detected. PEROLA DO GUADIANA (PT) MMSI:263406570 in action of fishing Nothing Special To Report.



- Discrepancy between the actual position of the vessels and the position shown in the captured image
- The length of vessels per standard does not match the actual length of vessels even with a high degree of confidence
- The timeliness of product delivery
- The procedure for placing requests



- Use of Sat imagery support decision making (MSA)
- RPAS added value to the system
- Maximize efficiency of naval asset intervention at sea