



The defence of the offshore installations against the hybrid threats

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AGENDA

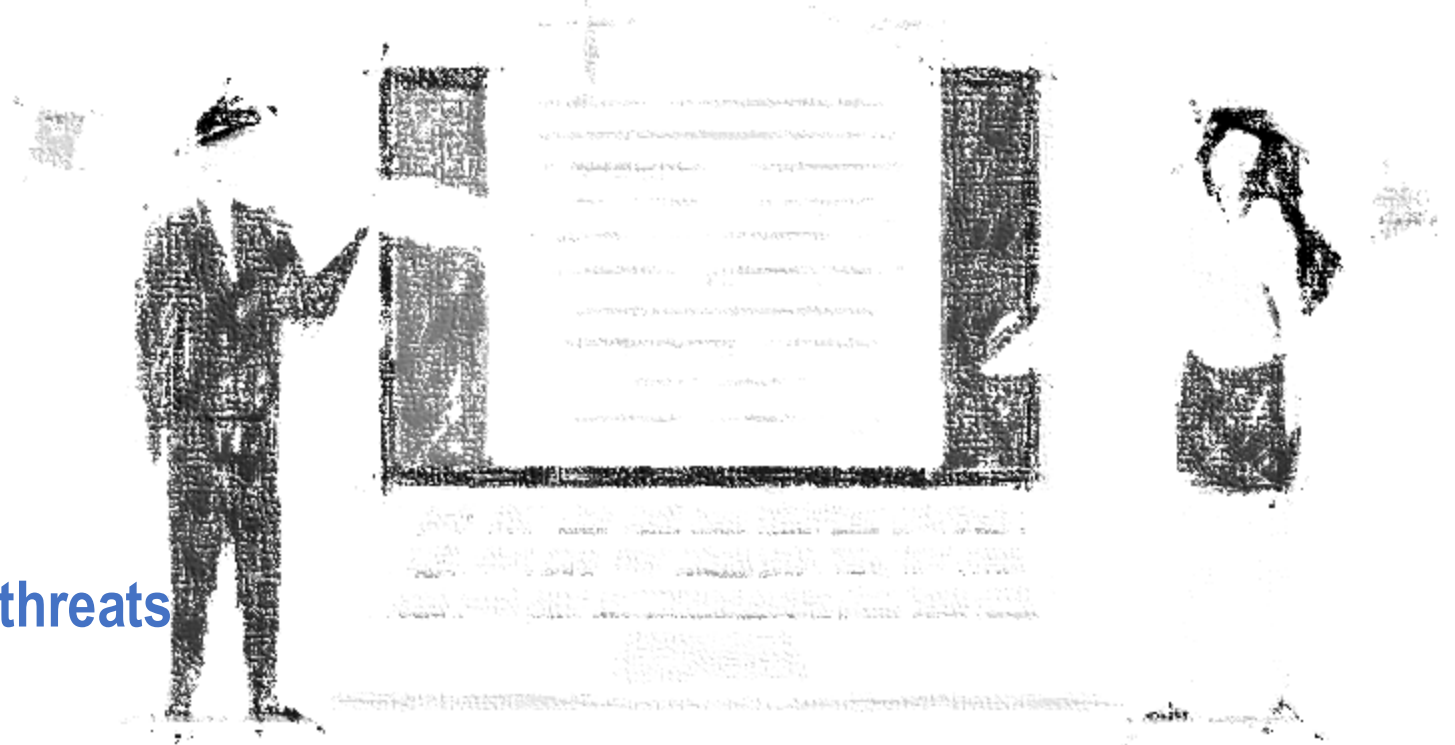
I. Introduction

II The hybrid threats

III How to defend against the hybrid threats

IV The Navy role in defending the offshore infrastructure against hybrid threats

V Conclusions



I. Introduction

Security of the offshore infrastructure has been studied mainly in the context of classical threats of non-state actors (sabotage, terrorist attacks).

Recent events show the growing trend of hybrid actions of a state actor, in a continuum from unassumed hostile actions to military actions close to war (as an escalation to war).

A perspective about the answer the Navy can have is presented in the larger frame of cooperation with industry and civilian authorities in order to combat these threats all along the escalation conducted by a state actor.



II The hybrid threats

The variety of hybrid threats at sea is a well-known factor, the maritime domain offering the possibility of attacking with multiple weapons and in different ways for an aggressor which want to wage an unassuming hybrid war. In order to understand the threat a classification of the possible actions is necessary.



The maritime domain allows the weapons of war to be used as hybrid means. The more utilised weapon are the mines.

Traditionally, the mines were used to interdict the maritime lines of communications, especially at chokepoints.

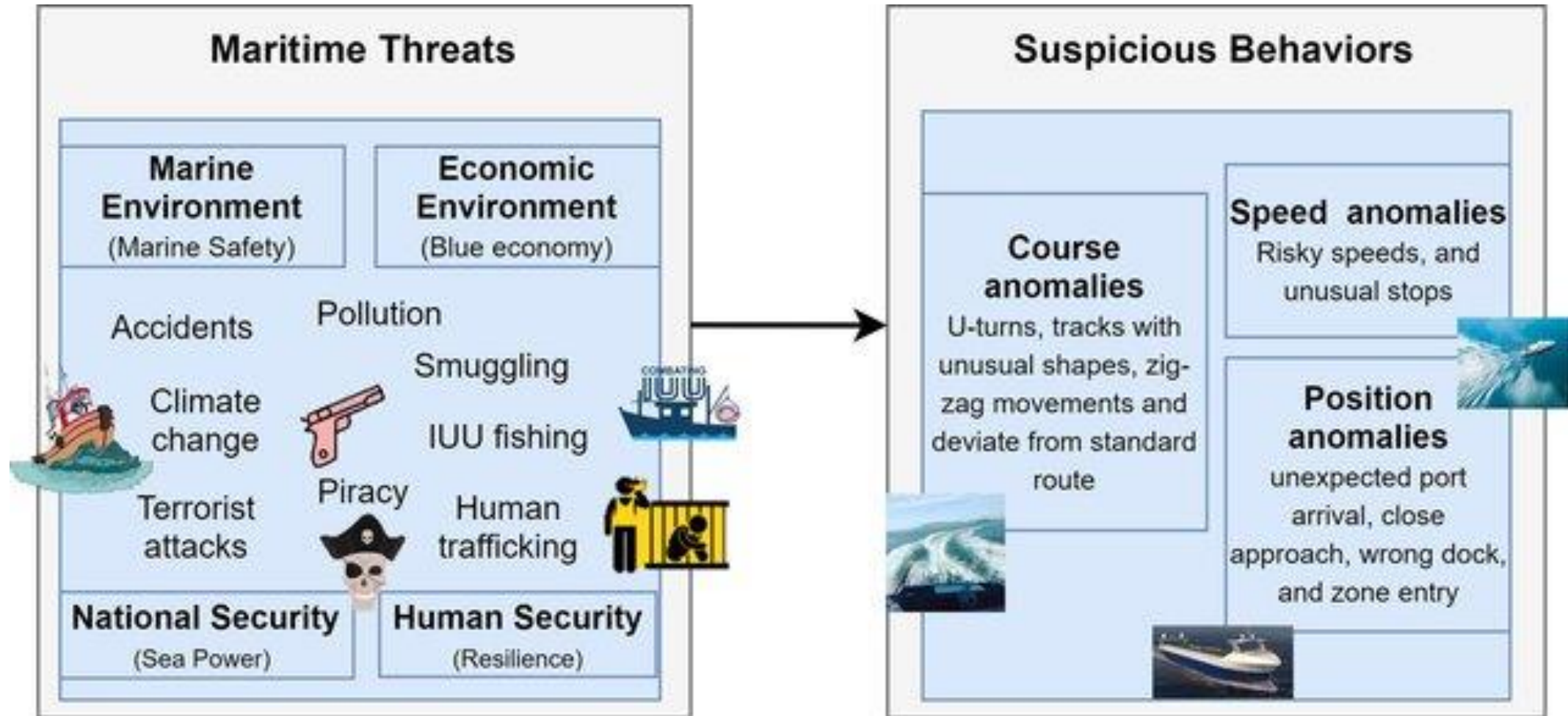


The modern threat of drones is paramount. The danger posed by drones is amplified by their long range, precise guidance, enhanced lethality and low probability of detection and interception.

Maritime drones, having a big warhead and an extended autonomy are capable of damaging, even destroying the offshore infrastructure like oil and gas rigs.



The main question is how is the hybrid war waged by a state actor in the maritime domain using these weapons?



A coherent answer has to be given



The concept is to unify the defence of offshore infrastructure, organisationally and functionally.

A complete set of measures has to be implemented in order to ensure the defence of the offshore infrastructure on the entire spectrum, from simple hybrid incidents to unassumed acts of war.

III How to defend against the hybrid threats

The starting point is the current situation. There is a degree of defence of the offshore infrastructure with some measures in place focused on “classical threats”. Some of them could be extended to face the hybrid threats. But a new approach is needed. The rigs have to be seen as naval platforms with extended facilities. First and foremost, the oil and gas rig can harbour ships, helicopters and drones. Also, simple sensors (radars) and communications system are installed on rigs. They have to be improved to the level of assuring the defence of the rig against hybrid threats.



First phase

In the first phase, the current systems and installations have to be extended, from heliport pad to breathing and docking facilities.



Second phase

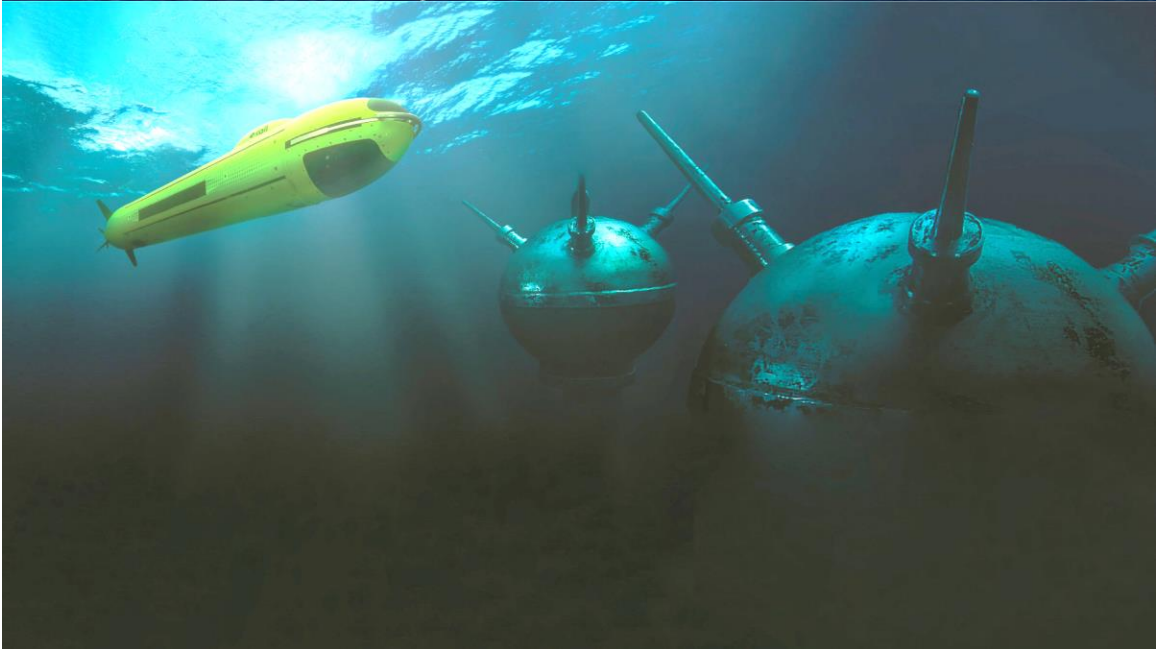
In the second phase, dedicated systems have to be put in place. The rig has to be seen as a naval platform having to defend itself against hybrid threats, so air defence, surface defence, mine defence and underwater defence has to be done with proper sensors, command and control system and weapons.





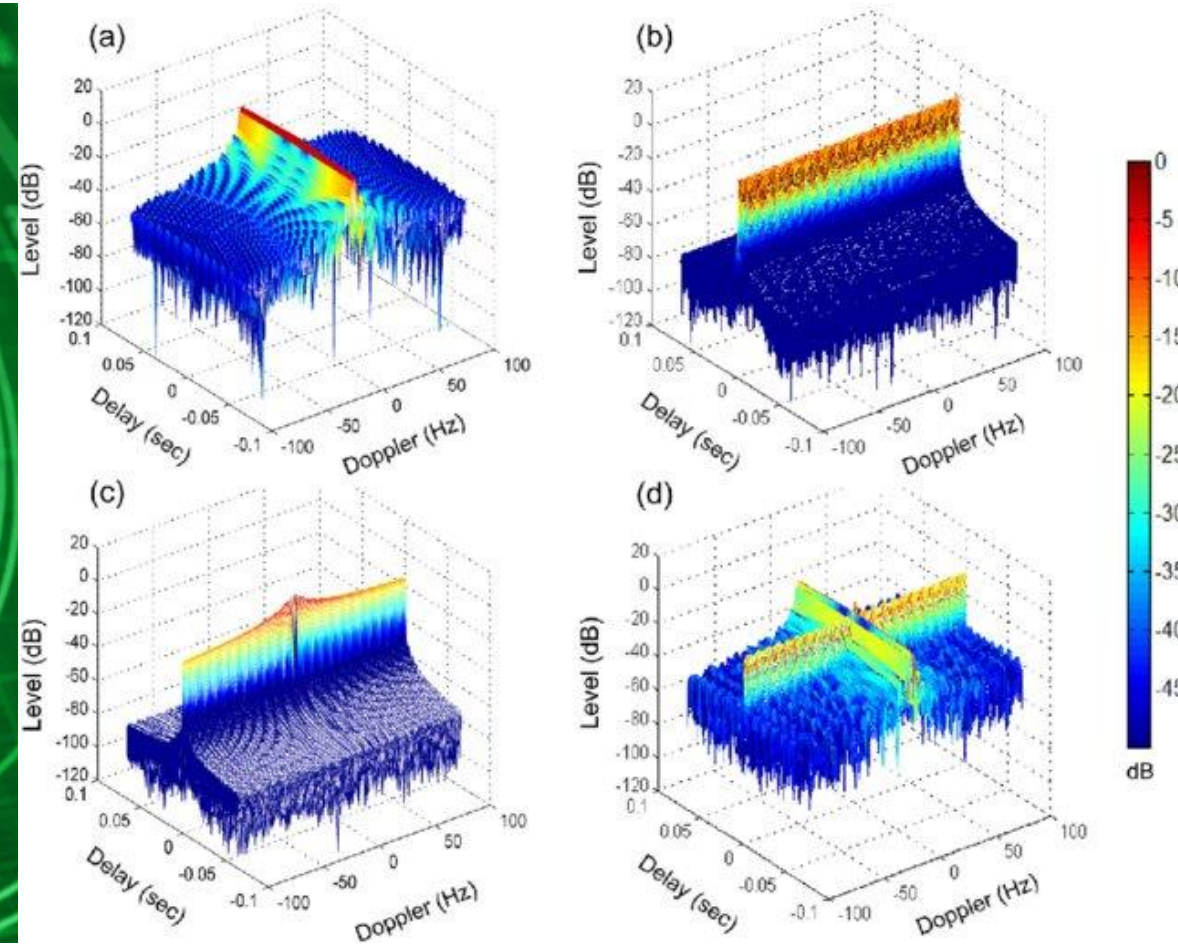
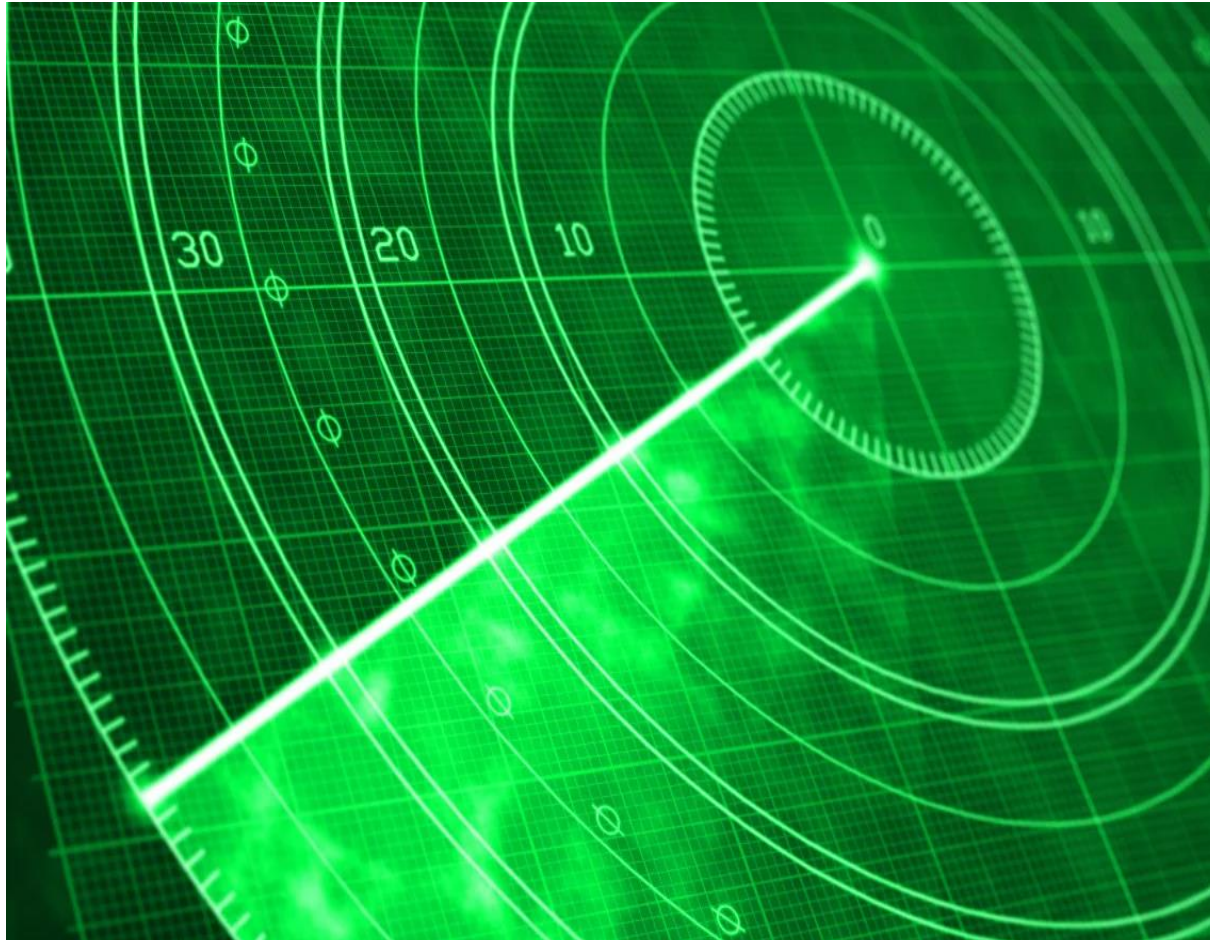
Passive defence

Passive defence is paramount. Against the mines and maritime drones, booms and others flexible and rigid floating structure has to be installed (deconflicting with the breathing capacities).



Active self-defence

Active self-defence. Next step is increasing the defence with active measures. This means a transition to “visible” actions and emission in the electromagnetic and audio spectrum.



Weaponization of the rig

Bringing weapons onboard the rig could pose legal questions and could trigger an immediate answer from the hybrid aggressor.



From “point defence” to “area defence”

The entire offshore infrastructure, all the rigs, pipes, ships, helicopters and other platforms and systems belonging to offshore infrastructure of a given national area has to be integrated.



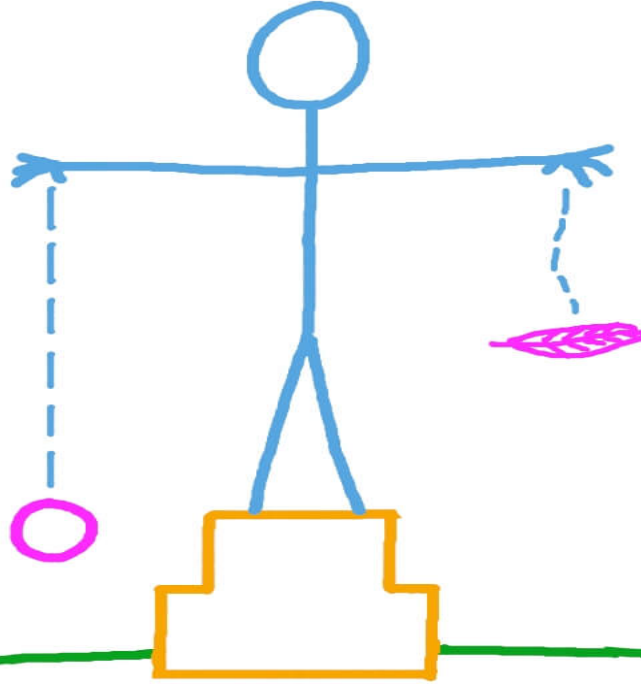
IV The Navy role in defending the offshore infrastructure against hybrid threats

Traditionally, in peacetime, the Navy has the mission of assuring the freedom of navigation and also of protecting the offshore infrastructure.

In time of war, this remains one of the main missions close to, but distinct of protection of maritime lines of communication.



DRAWING CONCLUSIONS



V Conclusions

The hybrid threats against offshore infrastructure are here to stay. A first step is deployment of sensors (and even weapons) on board the rigs and their integration in a C4ISR, drones and maritime drones fulfilling the main missions. In the end, the industry and Navy have to find a common answer, developing and integrating their capabilities.

