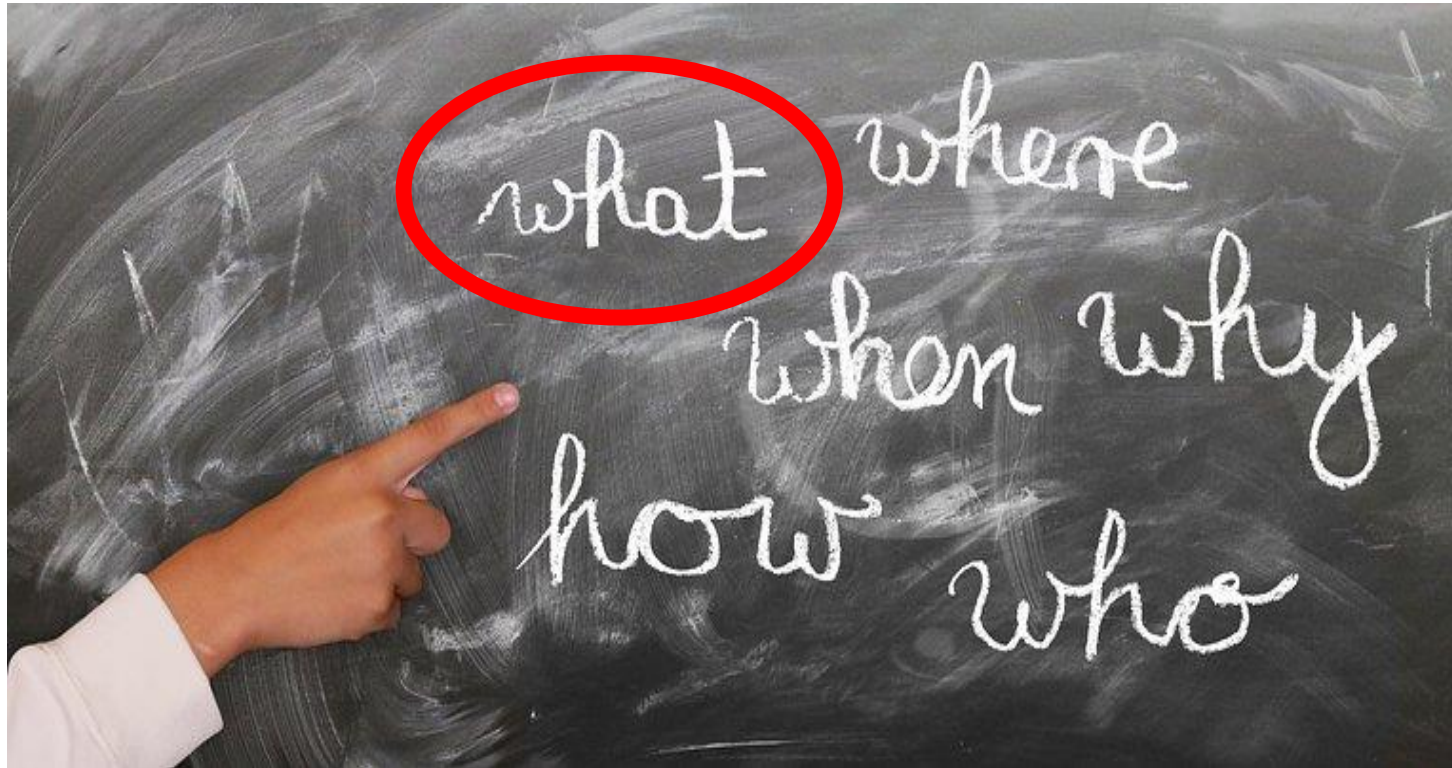


Coastal State Obligations Ensuring Maritime Security



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What is Maritime Security?



Maritime Security

4 key ways in which the term 'maritime security' is understood. These included:

1. Sea power
2. Marine safety
3. Economic development
4. Human security

Why is important to have maritime security?



Risks & Threats

- ✓ IUU: Illegal, Unreported and Unregulated fishing;
- ✓ Piracy and armed Robbery;
- ✓ Terrorism (against ships at sea/ports, cargo, crew and passengers, ports and port facilities and critical maritime and energy infrastructure, including cyber-attacks)



Risks & Threats

- ✓ Illegal discharge, dumping of wastes
- ✓ Ecological and natural disasters
- ✓ Crime (smuggling of arms & narc, Human and drug trafficking).



Response to threats



Definition

- **Maritime Domain Awareness (MDA)** is the effective understanding of anything associated with the maritime domain that could impact the security, safety, economy, or environment of a nation or region.
- Maritime Domain awareness becomes an increasingly prominent component of maritime security.

(MDA definition drawn from the US National Plan to Achieve Maritime Domain Awareness, 2005)

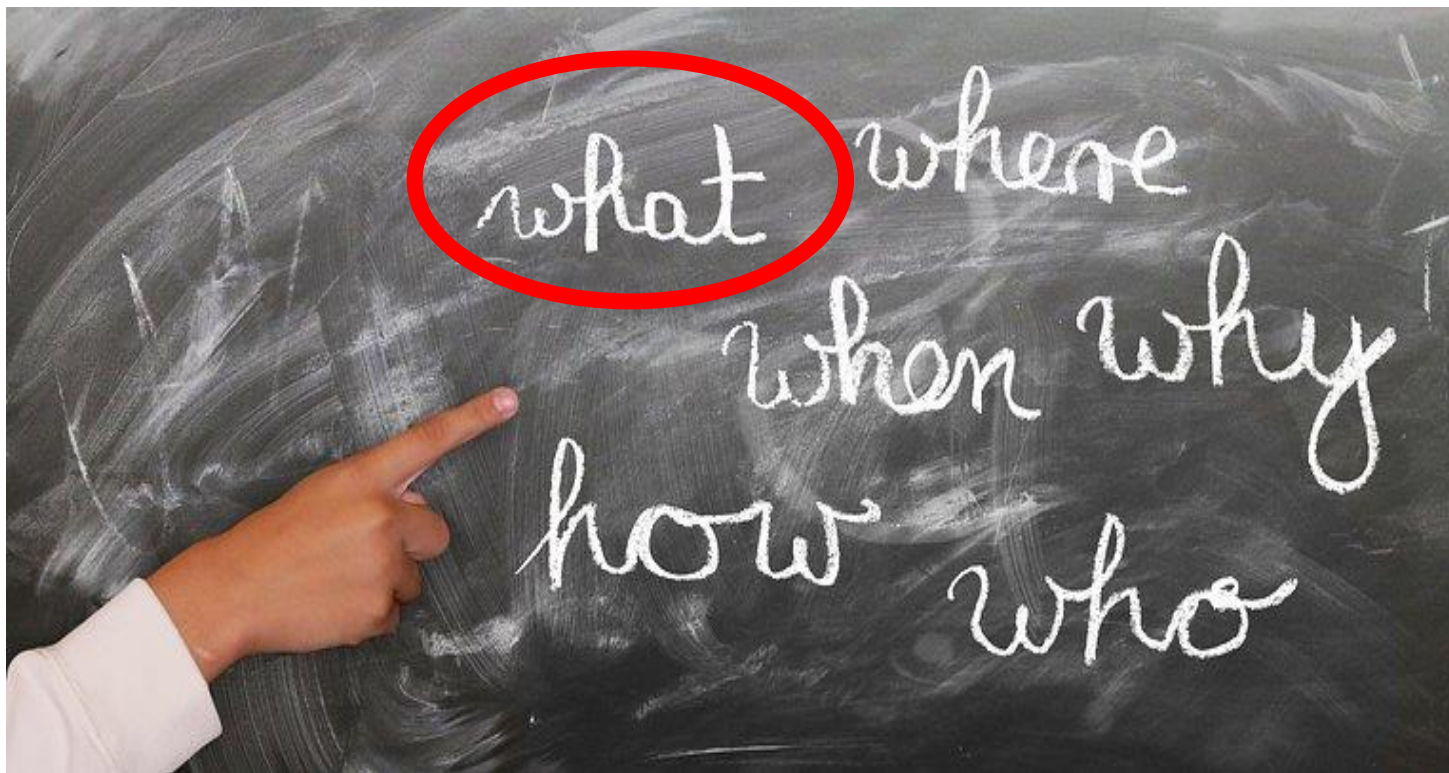
Why MDA?

As coastal states have expanded their reliance on the complex maritime domain **to meet** evolving economic, social and **security concerns**.

There is an increasing need to be able to understand what is happening to be able to **predict** and potentially **mitigate emerging risks**.



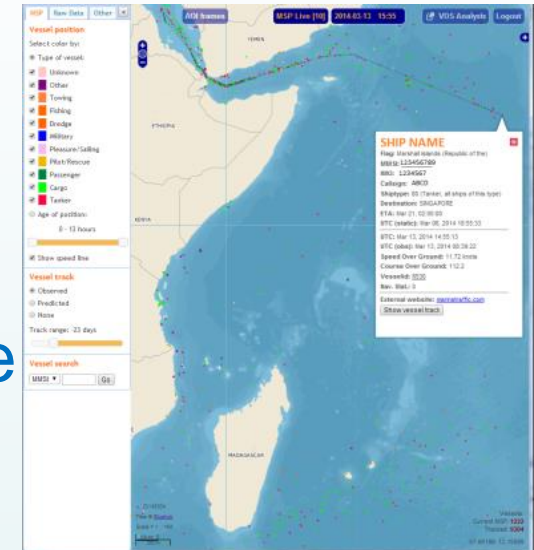
Components of MDA



Components of MDA

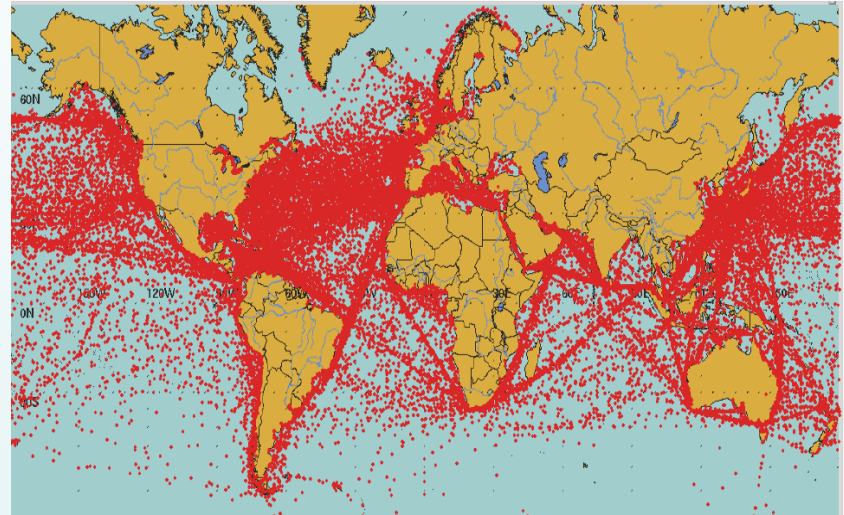
As a function, MDA rests on three separate components, namely:

- Maritime Situational Awareness (MSA)
- Maritime Threat Awareness (MTA)
- Maritime Response Awareness (MRA)

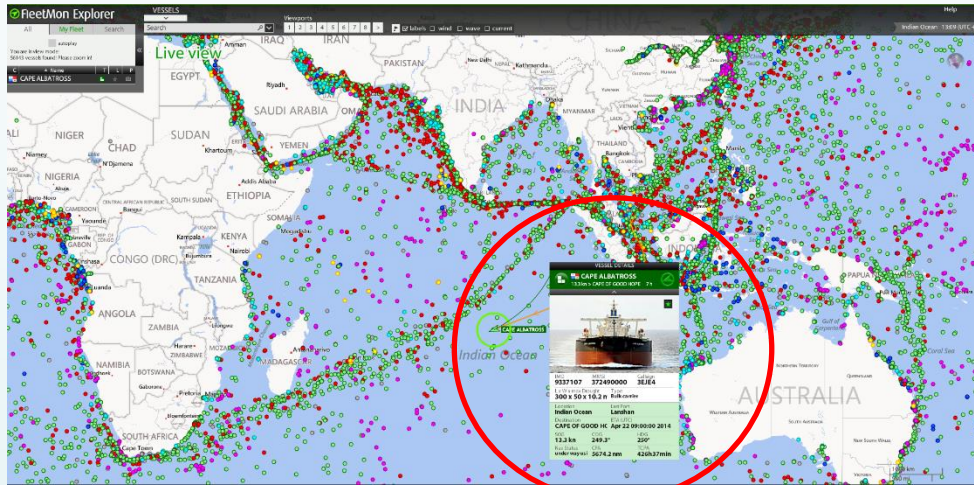


Maritime Situational Awareness

- MSA is based on the gathering of static and dynamic data to generate a picture of the current situation within the maritime domain.
- This picture forms the basis on which MDA is built.



Maritime Situational Awareness



- Dynamic data consists predominantly of ship tracks and their associated information.
- This data includes:
 - Identity
 - Position, course and speed
 - Flag
 - Cargo



Maritime Situational Awareness

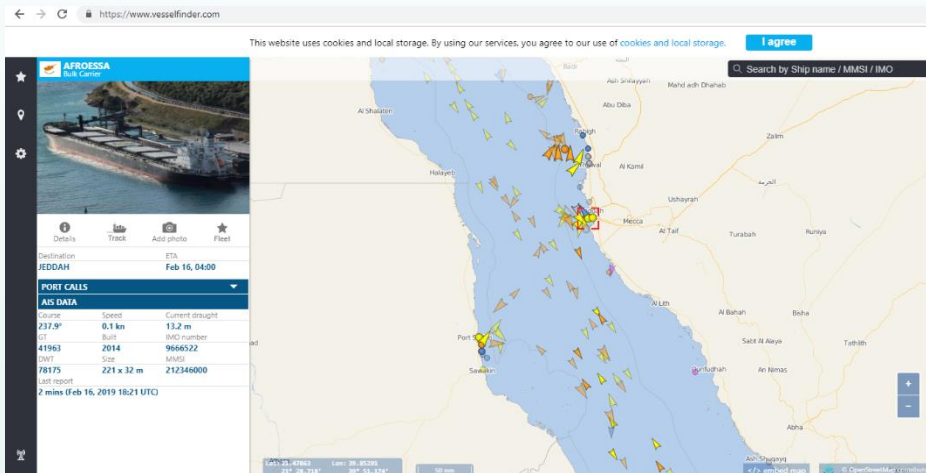
- Dynamic data can be gathered from a wide variety of sources.
- Perhaps the most obvious are the national surveillance systems that may be available including coastal radar and VTMIS, AIS networks, LRIT, patrol assets and port arrival/departure data.



	Vessel Name	Berth	Agent	Remarks
019	HISTRIA AGATA	OUTSIDE GRAND HARBOUR	WILHELMSEN SHIPS SERVICE MALTA LTD	
019	ELAURA	ANCHORAGE AREA 1	WALMAR MARINE LTD.	Anchored
019	LEYONA	ANCHORAGE AREA 1	WALMAR MARINE LTD.	Anchored
019	MAERSK SEMBAWANG	FREPORT TERMINAL	TS CONTAINER AGENCIES LTD	Anchored
019	APL GWANGYANG	FREPORT TERMINAL	CMA CGM Malta Agency LTD	Anchored
019	MSC MELINE	FREPORT TERMINAL 2 NORTH	John Ripard & Son (Shipping) Ltd	Anchored
019	JEAN DE LA VALETTE	DEEP WATER QUAY	VIRTU FERRIES	Anchored
15/02/2019 23:00:00	CMA CGM ARISTOTELE	FREPORT TERMINAL	CMA CGM Malta Agency LTD	Anchored
16/02/2019 00:45:00	JSP SLEIPNER	FREPORT TERMINAL	TS CONTAINER AGENCIES LTD	
16/02/2019 01:00:00	NS HELSE	FUEL WHARF	TROY SHIPPING AGENCY	Anchored
16/02/2019 04:30:00	FENG LI HAI	ANCHORAGE AREA 3 WEST	SULLIVAN SHIPPING AGENCY Ltd	Anchored
16/02/2019 04:30:00	GIUSEPPE LUCCHESI	DEEP WATER QUAY S.M.S.		Anchored
16/02/2019 05:00:00	CHALLENGER 1	LAB WHARF SOUTH	Focal Maritime Services Ltd	Anchored
16/02/2019 05:00:00	EUROCARGO GENOVA	LAB WHARF	SULLIVAN MARITIME Ltd	Anchored
16/02/2019 07:00:00	COSMO	OIL TANKING	SEATRANSHIPPING Ltd	
16/02/2019 08:00:00	ATLANTIC PIONEER	FREPORT TERMINAL	Focal Maritime Services Ltd	
16/02/2019 08:00:00	SEA TRADER	ANCHORAGE AREA 4	RONASONS SHIPPING AGENCY	Anchored
16/02/2019 08:29:00	HAYA	ANCHORAGE AREA 4	SEATRANSHIPPING Ltd	Anchored
16/02/2019 09:00:00	ADVANTAGE PARK	ANCHORAGE AREA 3 EAST	PALM SHIPPING AGENCY LTD	



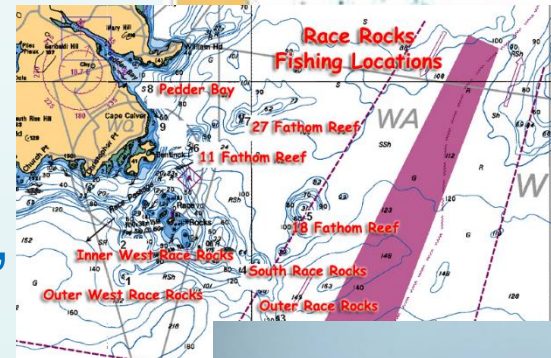
Maritime Situational Awareness



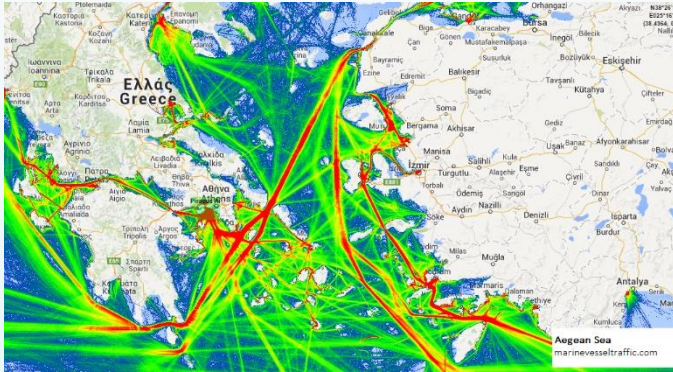
- In addition, there are a number of regional and global systems that permit coastal states to track ships over a wider area.
- These include open source web applications and structured state-level data-exchange platforms.

Maritime Situational Awareness

- Static data relates to the maritime environment.
- It includes information regarding ports, dredged channels, fishing grounds, exclusions zones, anchorages and roadsteads, waiting areas, etc.
- Static data comes from chart information, hydrographic offices and local knowledge.



Maritime Situational Awareness

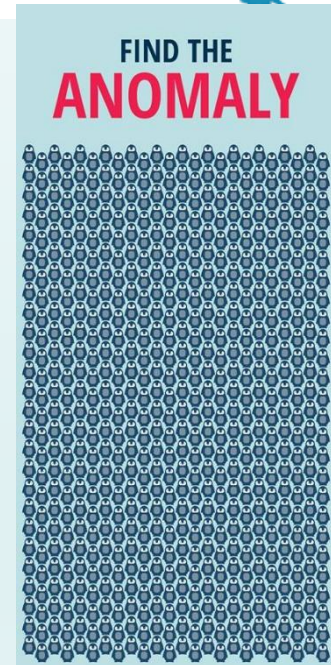


- Over time, the dynamic and static data combined present what is known as a **pattern of life (PoL)**.
- PoL is defined as ‘the specific set of behaviours and movements associated with a particular entity over a given period of time.’
- In simple terms a pattern of life is what the observer expects to see, the normal background noise.



Maritime Situational Awareness

- The value of establishing a PoL lies in being able to quickly identify activities that do not conform with that pattern.
- Why is a fishing vessel proceeding to an area that is not a traditional fishing ground?
- Why is a container ship not running along the usual sea-lanes that are the shortest route between A & B?
- Why is a pleasure craft drifting in an offshore area far from any recreational port?



Maritime Threat Awareness



- The second component of MDA is Maritime Threat Awareness (MTA).
- This requires the identification of the potential threat vectors that could be active within the area of interest.
- Threats are divided into two broad groups, namely internal and external.

Maritime Threat Awareness

- Internal threats are those that originate from within the coastal state.
- They include IUU fishing, armed robbery, cargo theft and domestic terrorism.
- Internal threats also include all the threats to port facilities addressed by the ISPS code.



Maritime Threat Awareness



- External threats are those threats that originate from outside the coastal state.
- Examples include piracy, transnational crimes such as people smuggling and drug trafficking and global terror organisations.
- By nature, external threats tend to be more complex than internal threats.

Maritime Threat Awareness

- To fully understand these threats and evaluate their potential impacts, MTA needs to take into account possible targets.
- **Mapping the potential vulnerabilities** such as ports, power facilities, military installations, valuable fish stocks and vulnerable shipping areas allows each threat to be matched with potential targets



Maritime Threat Awareness



- This matching of threats to potential targets is an important step in prioritising resources to protect against attacks.
- Such prioritisation is dealt with in the third component of MDA, namely Maritime Response Awareness (MRA).



Maritime Response Awareness

- MRA covers the mapping and real-time tracking of available response resources to ensure that they can rapidly be deployed to counter threats.
- The most basic requirement is understanding what resources are actually available and who they belong to.



Maritime Response Awareness



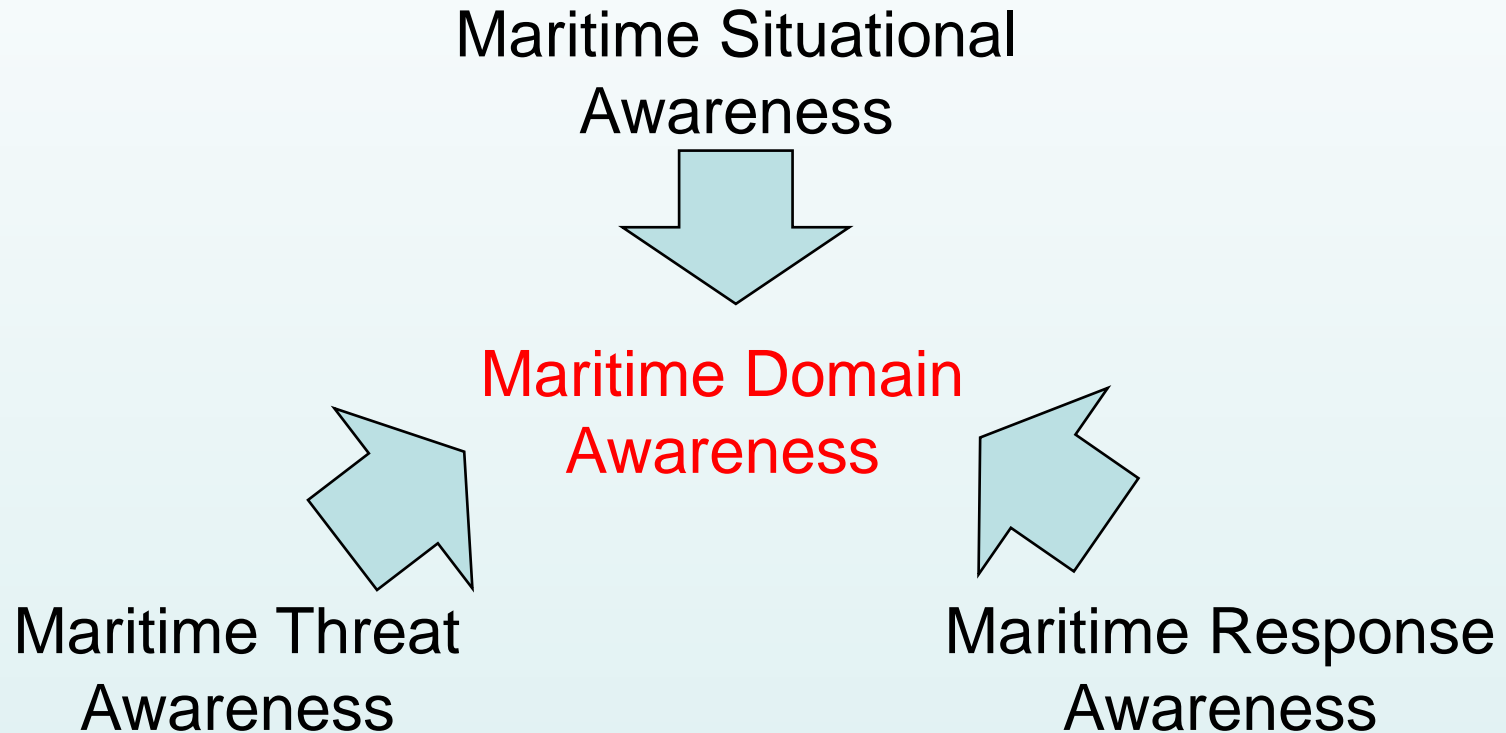
- Equally important is understanding how Command & Control (C2) functions before a security event.
- Who do you need to talk to?
- Who has authority over resources?
- How do I communicate?
- What capabilities does an asset bring?
- What are the limitations on availability and use?

Maritime Response Awareness

- Understanding where resources are located, who they belong to and how to activate them allows awareness of available response options.
- In turn, this ensures that any response matches the appropriate resources to a given threat.

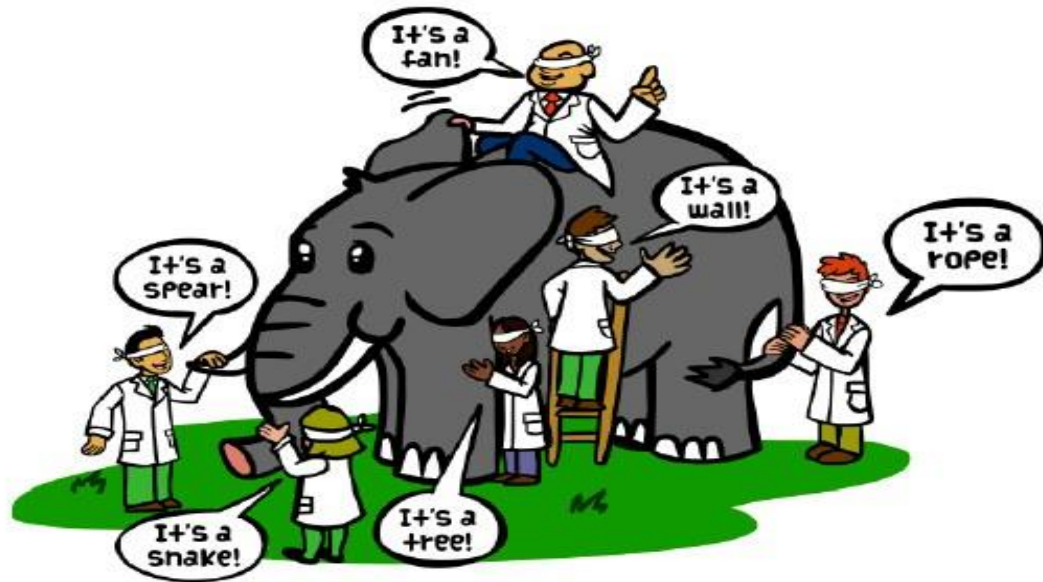


Maritime Domain Awareness



Information Sharing and Situational Awareness

- Need to build and maintain a comprehensive maritime situation picture through information-sharing networks.



Development of a

National Maritime Security Framework/Strategy



Establishment of a

National Maritime Security Committee



National Maritime Security Framework/Strategy

- Framework or strategy could cover the following:
 - perception of current maritime threats;
 - extent and significance of the country's maritime industries and infrastructure;
 - roles and responses of Government organizations;
 - national security policies applying to ports and ships;
 - security responsibilities of the port and shipping industries;
 - coordination of Government and industry responses;

National Maritime Security Committee

- Serves to foster and maintain effective linkages between Government and industry.
- Provide cooperation and integration in the effective application of the Maritime Security Measures across Government through:
 - sense-making and threat assessment,
 - doctrine and operations planning,
 - conduct and monitoring of current and future operations,
 - capability development, and
 - conduct of training and exercises.



National Maritime Security Committee

- Core membership could consist of:
 - Departments/Ministries responsible for ports and shipping;
 - Customs and Immigration Authorities
 - Intelligence and security forces authorities.
 - Police and Law enforcement authorities
 - Coast guard and Military (Naval) forces



National Maritime Security Framework/Strategy

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Any Question

