

# Operationalising Maritime Domain Awareness for Submarine Cable and Pipeline Protection

*Conference on Protection of Submarine Cables and  
Pipelines*

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# Overview

- Threats to the Submarine Cables and Pipelines
- The Concept of Maritime Domain Awareness
- Relevance to the Protection of Submarine Cables and Pipelines
- National and Regional Strategies on MDA

# Threats to the Submarine Cables and Pipelines

## Temporal Phase of Threats

- Construction, installation phase
- Operational, in-service phase

## Mens Rea

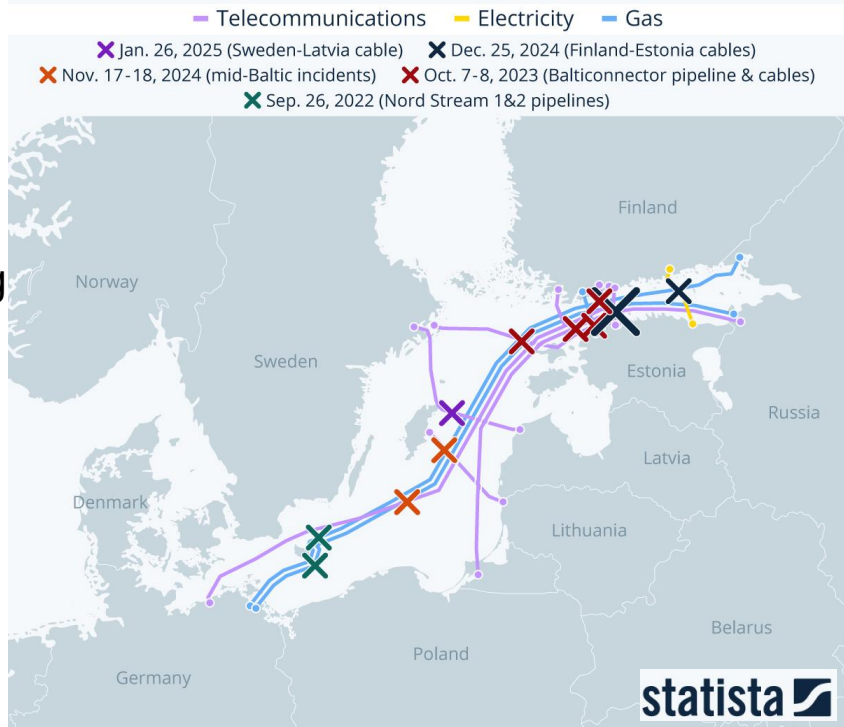
- Non-malicious: including natural events, accidental, negligent or through culpable negligence
- Malicious: wilful, undertaken with the aim of causing damage

## Legal Personality of the Perpetrators

- Private entities with private ends, such as competitive users
- State-owned, -controlled, or -authorised entities

## Baltic Sea Cable Incidents Pile Up

Incidents of damage to underwater cables and pipelines in the Baltic Sea (2022-2025)



# Monitoring and the Detection of Damages

## Relevant Stakeholders

- Cable and pipeline operators, owners, and users
- Landing States, national/flag States of operators and owners
- Transiting States
- National or flag States of the perpetrators

## Means to Collect Information

- Detection of malfunction
- Reports from operators and owners
- Detection of suspicious activities at sea by law enforcement

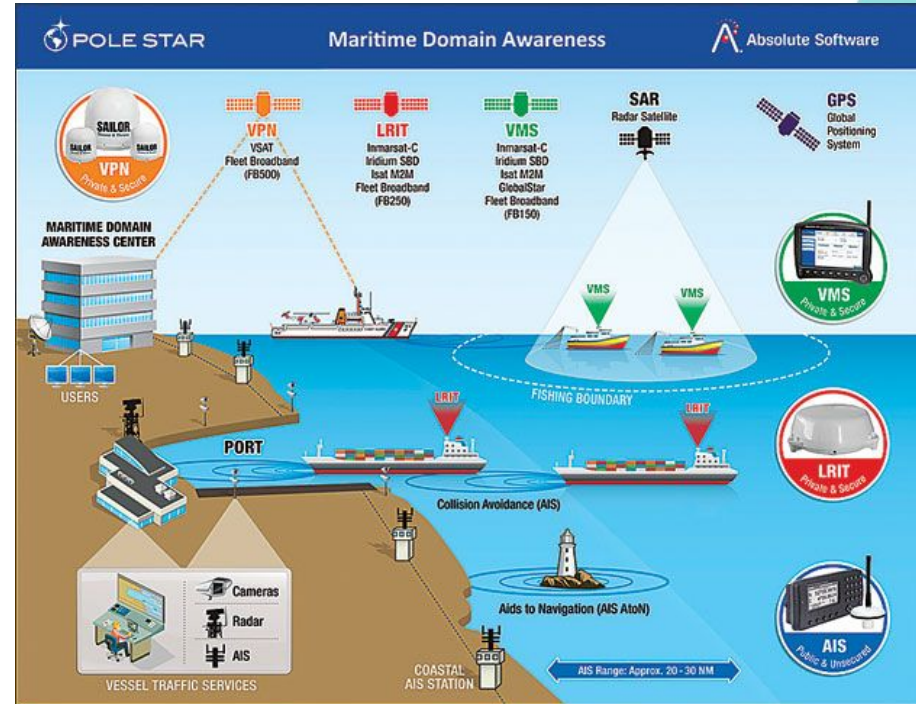
## The Legal Gap

- Jurisdictional gap for certain States, such as transiting through their EEZ/CS and in ABNJ
- Absence of explicit monitoring obligations, private and public
- Limited cooperative mechanisms among stakeholders

# The Concept of MDA

Originating from the US Coast Guard in the late 1990s, MDA has been redefined after 9/11 and is implemented through the National Maritime Domain Awareness Plan

- **MDA** is the effective understanding of anything associated with the maritime domain that could impact the security, safety, economy, or environment of the United States.
- The **Maritime Domain** is all areas and things of, on, under, relating to, adjacent to, or bordering on a sea, ocean, or other navigable waterway, including all maritime-related activities, **infrastructure**, people, cargo, vessels, and other conveyances.



Maritime Domain Awareness and Security Imperatives  
<https://www.spsnavalforces.com/story/?id=336>

# Key Components to Achieving MDA

## **Maritime Situational Awareness**

Use multiple means and channels to gather static and dynamic data to generate a picture of the current situation within the maritime domain



## **Maritime Threat Awareness**

Analyse data to identify the potential threat vectors that could be active within the area of interest



## **Maritime Response Awareness**

Track and rapid deployment of response resources to counter threats



# The Legal Aspect of MDA

- The scope of maritime domain should be based on the maritime zones established under UNCLOS
- The coastal State can only establish jurisdiction based on international law
  - As flag State
  - As coastal State over areas under its jurisdiction (measures established through the IMO)
  - *Could a landing/national State claim jurisdiction over the entire length of the cable/pipeline, including in ABNJ, based on protective jurisdiction?*
  - Through regional or bilateral agreements
- The flag State should comply with reporting measures that have been duly established by the coastal State

## Relevance to Submarine Cables and Pipelines

- There is an emerging consensus that submarine cables and pipelines are critical infrastructure that are crucial to national security
- International law provide limited authorities for States to monitor and detect threats to cables and pipelines
- Incorporate threats to submarine cables and pipelines under the threats to maritime security
- MDA includes the ability to monitor activities in such a way that trends and anomalies can be identified early to facilitate decision-makers' responses
- Relevant stakeholders could use existing MDA information sharing and response mechanisms to protect submarine cables and pipelines



# National Implementation of MDA – USA

The National MDA Plan is one of seven plans developed in support of the National Strategy for Maritime Security (NSMS), which was first outlined in 2005

- **Maritime Security Interests:** Telecommunication cables and energy transporting pipelines are classified as critical infrastructures under the 2003 National Strategy for the Physical Protection of Critical Infrastructures and Key Assets; NSMS listed 'Protect Maritime-Related Population Centers and **Critical Infrastructure**' as a strategic objective
- **Stakeholders:** Federal, states, local, private sector, and international maritime stakeholders
- **Cooperation Mechanisms:**
  - Within the USA: The Maritime Operational Threat Response Plan (coordinates US government response), The Domestic Outreach Plan (seeks non-Federal input)
  - At the international level: The International Outreach and Coordination Strategy (provides a framework to coordinate all maritime security initiatives undertaken with foreign governments and international organizations and to solicit international support)

# Regional Implementation of MDA – EU

In 2014, the European Council adopted the first EU Maritime Security Strategy (EUMSS) and an Action Plan, with achieving/enhancing MDA as an objective

- **Application Scope:** “The EU maritime domain encompasses the EU Member States' Territorial waters, EEZ and Continental Shelf as defined by UNCLOS as well as all legal uses of the Ocean and the seas provided therein”
- **Maritime Security Interests:** “Ensuring the resilience and protection of critical maritime infrastructure, ... including **undersea cables and pipelines**, logistical hubs, offshore renewable energy installations, offshore oil and gas oil platforms, etc.”
- **Stakeholders:** the EU, its Member States and likeminded countries and organisations
- **Cooperation Mechanisms:**
  - Within EU: Common Information Sharing Environment (CISE); on defence, the maritime surveillance project (MARSUR) supported by the European Defence Agency (EDA)
  - At the international level: promote information sharing and capacity building, especially in the gulf of Guinea and in the Indo-Pacific (in 2022, the EU deployed its first liaison officer to the IFC in Singapore)

## Concluding Remarks

- The protection of submarine cables and pipelines fall under the realm of the objective to achieve MDA
- MDA could be an effective tool for the coastal State to enhance awareness of potential threats to submarine cables and pipelines located within its maritime domain
- On the domestic level, implementing an MDA strategy could mobilise relevant agencies and stakeholders to draw upon their cumulative authorities and capabilities
- A regional MDA framework could enhance partnerships with likeminded States, promote information sharing, and reinforce surveillance capacities