



SUBSEA INFRASTRUCTURE SABOTAGE

THE SILENT THREAT BENEATH THE WORLD'S OCEANS



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THE INVISIBLE BACKBONE OF MODERN CIVILIZATION

95% of the World's Data Travels Beneath the Ocean — Almost Entirely Unprotected

- **1.5 million km** of submarine cables carry **95%+** of intercontinental data
- **~\$10 trillion** in financial transactions flow through these cables every day
- **~20,000 miles** of subsea pipelines move oil and gas globally
- **597** submarine cables in use or under construction (April 2025)
- CSIS describes this network as the *"soft underbelly of the world economy"*



From Ignored to Under Attack

Nord Stream Changed Everything — A Wave of Sabotage Has Not Stopped Since

Sept 2022

Nord Stream 1 & 2 pipelines sabotaged in the Baltic Sea.

Oct 2023

Baltconnector pipeline and EE-S1 cable damaged by ship Newnew Polar Bear.

Nov 2024

BCS East-West Interlink and C-Lion1 cables cut; 160 km anchor drag marks found.

Dec 2024

Estlink 2 power cable and four telecom cables cut by shadow fleet tanker.

Dec 2025

Finnish special forces board cargo ship *Fitburg* after it damages a fiber-optic cable.



A Coordinated Sino-Russian Campaign

Moscow and Beijing Are Operating Together Beneath the Waves

- EU High Representative warns of a Kremlin 'hybrid campaign' with Chinese involvement.
- Jamestown Foundation found active cooperation between Chinese and Russian-operated ships.
- Rear Admiral (Ret.) Mike Studeman warns of "inside-out" attacks via malware hidden in cable hardware.



THE LEGAL BLACK HOLE

THE PRIMARY TREATY PROTECTING
SUBSEA CABLES DATES TO 1884 — AND
HAS NO ENFORCEMENT MECHANISM

- The primary treaty (1884 Convention) was written for the telegraph age and lacks modern enforcement.
- UNCLOS leaves enforcement with the flag state of the offending vessel.
- Coastal states have no automatic right to board foreign vessels suspected of cable damage in their EEZ.
- The Yi Peng 3 case: European investigators could not compel boarding despite evidence; no prosecutions followed.

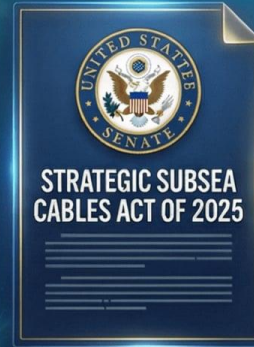


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Legislation Is Slowly Catching Up

New Laws Are Being Written — But Operational Capability Lags Far Behind

- **U.S. Senate:** Strategic Subsea Cables Act of 2025 strengthens criminal penalties and sanctions.
- **FCC:** Updated submarine cable landing licensing rules with a national security focus.
- **European Commission:** EU Action Plan on Cable Security focuses on prevention and recovery.
- **FDD Warning:** Without faster permitting and repair capacity, legislative progress outpaces operational capability.



THE ART OF HIDING IN PLAIN SIGHT

Attackers Disguise Sabotage as Routine Maritime Accidents — and It Works

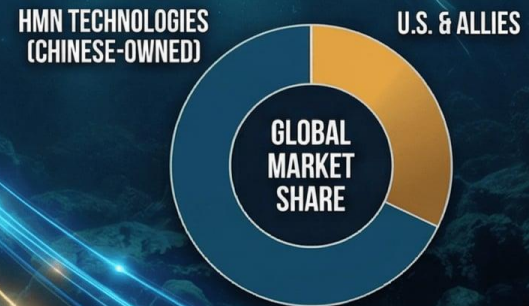
- Ships claim anchor drag was accidental, blame weather, or alter AIS tracking data.
- Behavioral red flags: slow passes over cable routes, long stops, and minor tracking shifts.
- Challenge: these behaviors require advanced AI-powered monitoring systems to detect.
- Traditional naval patrols cannot cover 1.7 million km of cables and pipelines.



THE REPAIR CRISIS NOBODY IS TALKING ABOUT

Fewer Than 100 Ships Can Repair 1.5 Million Kilometers of Cable — and China Controls the Market

- Fewer than 100 cable repair ships exist worldwide to maintain 1.5 million km of cables.
- Average repair time: ~40 days — far longer in conflict zones due to permit delays.
- HMN Technologies (Chinese-owned) controls a dominant share of the global market.
- The U.S. and allies are dependent on a Chinese company for critical repairs.
- Allied nations have only recently begun investing in their own repair programs.



NATO RESPONDS: BALTIC SENTRY AND BEYOND

NATO Launched Baltic Sentry in January 2025 — But Deterrence Remains Incomplete

- » **Jan 2025:** NATO launches Baltic Sentry to deter attacks on undersea infrastructure.
- » Joint Force Command Norfolk assigned to monitor undersea threats.
- » Maritime Centre for the Security of Critical Undersea Infrastructure established in the UK.
- » U.S., Japan, Australia, India launch Partnership for Cable Connectivity and Resilience.
- » Atlantic Council: “the question remains how coastal states and NATO would respond” to confirmed sabotage.



DETECT TO DETER: THE NEW STRATEGY

AI-Powered Surveillance May Be the Most Effective Deterrent Available Today

- Use AI-powered satellite surveillance and vessel analytics to spot suspicious behavior before attacks happen.
- Making adversary vessels' movements visible creates reputational and diplomatic costs.
- Google's civil litigation serves as a legal model for non-criminal accountability.
- Windward AI demonstrates suspicious vessel patterns can be identified in near-real-time.
- The goal: make the cost of being caught high enough to deter future operations.



WHY THIS IS THE PERFECT WEAPON FOR GREAT POWER COMPETITION

LOW COST, HIGH IMPACT, PLAUSIBLE DENIABILITY — SUBSEA SABOTAGE IS THE IDEAL HYBRID WEAPON

- **Asymmetric impact:** Cutting a cable costs almost nothing but causes billions in damage.
- **Plausible deniability:** Anchor drag is common; proving state involvement is extremely difficult.
- **Legal protection:** International law gaps actively shield perpetrators from investigation.
- **Strategic timing:** Attacks concentrate in high-tension zones like the Baltic Sea and Taiwan Strait.

“Without stronger action, these attacks are likely to grow.” — Benjamin Schmitt



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THE URGENT IMPERATIVE

The Cables Beneath the Ocean Are the Arteries of Civilization — They Must Be Defended

- Governed by outdated 19th-century laws
- **Monitored** by systems that attackers can easily evade
- **Repaired** by too few ships, many controlled by an adversary
- Protected by alliances that are still developing their response

“Fixing the legal, operational, and infrastructure gaps is not just a maritime security issue — it is essential for national and alliance defense in the digital age.”