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NOTE

From:	General Secretariat of the Council
To:	Delegations
Subject:	Presentation by the European Subsea Cables Association (ESCA): Subsea cable protection - an industry perspective

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Working Party on Civil Protection

European Subsea Cables Association (ESCA)

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4 December 2025



EUROPEAN
SUBSEA CABLES
ASSOCIATION



What is ESCA?

- A forum of companies which own, operate or service submarine cables in European and surrounding waters. Established in 1999
- Southern Europe Working group established following ESCA's Sicily Plenary 2025. Brings together owners, vessel operators, repair/maintenance providers covering congested Mediterranean, Mid-Atlantic and North Africa

Principal aims:

- **Maritime Safety**
KISORCA project - active fault prevention and engagement with fisheries
Positive project supported by fishing industry
- **Safeguarding of submarine cables**
Policy, engagement, government interaction, sharing good practices, long standing cable protection measures



Who are ESCA?

- Telecommunications/data cables
- Power cables (interconnectors, OFTOs, domestic festoon & island communities)
- Offshore Renewables – export and inter-array
- Other - oil and gas, cable suppliers, installers, maintenance, consultants, cable protection organisations, government members.
- All come together with a common aim to provide a voice for the cable industry, and engage with other sea users and seabed asset owners in an increasingly busy and crowded environment.

<https://www.escaeu.org/>

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Risks and threats to submarine cables

Specific risks and threats

- Commercial fishing
- Anchoring
- Dredging and dumping
- Energy resource development (oil, gas, renewables)
- Mining (seabed minerals, sand, gravel)
- Earthquakes, typhoons, tsunamis
- Underwater landslides, turbidity currents, and on-shore flooding
- Seafloor geology
- Weather and climate change
- Equipment theft
- Unexploded ordnance
- Intentional infrastructure damage
- Cyberattacks on network management systems
- Collateral damage from marine incidents

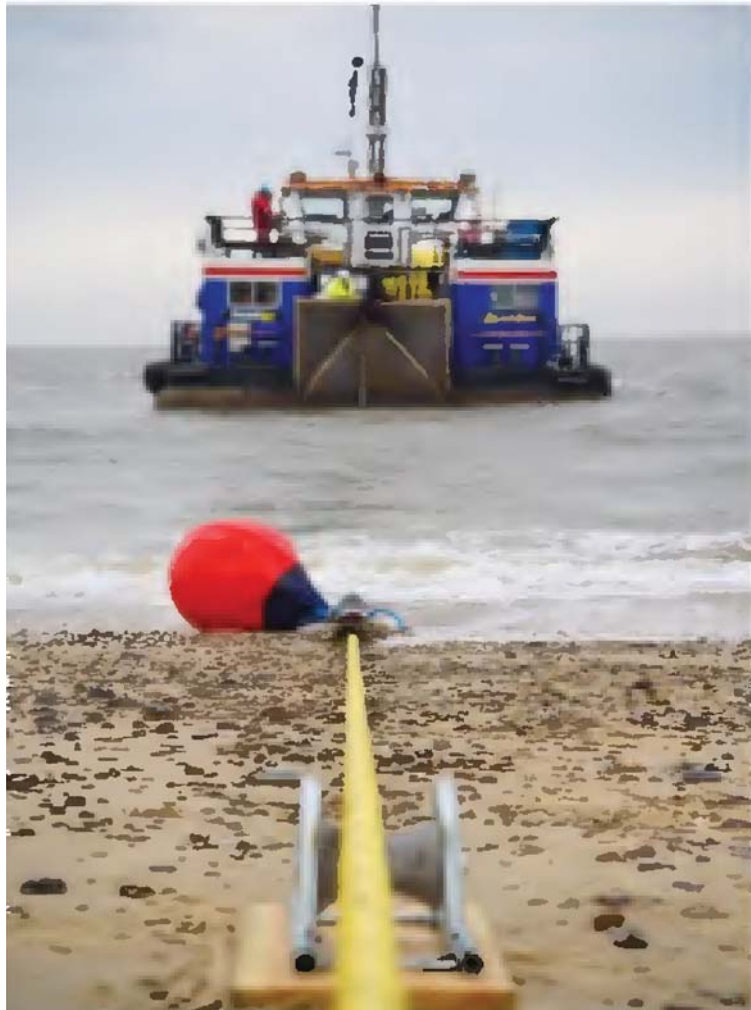
Mode of risk or threat

- Direct disturbance/damage
- Impeded access to water column and seabed for repair, which can delay repair
- Clustering and route foreclosure, which can magnify risks and threats
- Unauthorized access to electronic systems

What we aim to avoid:



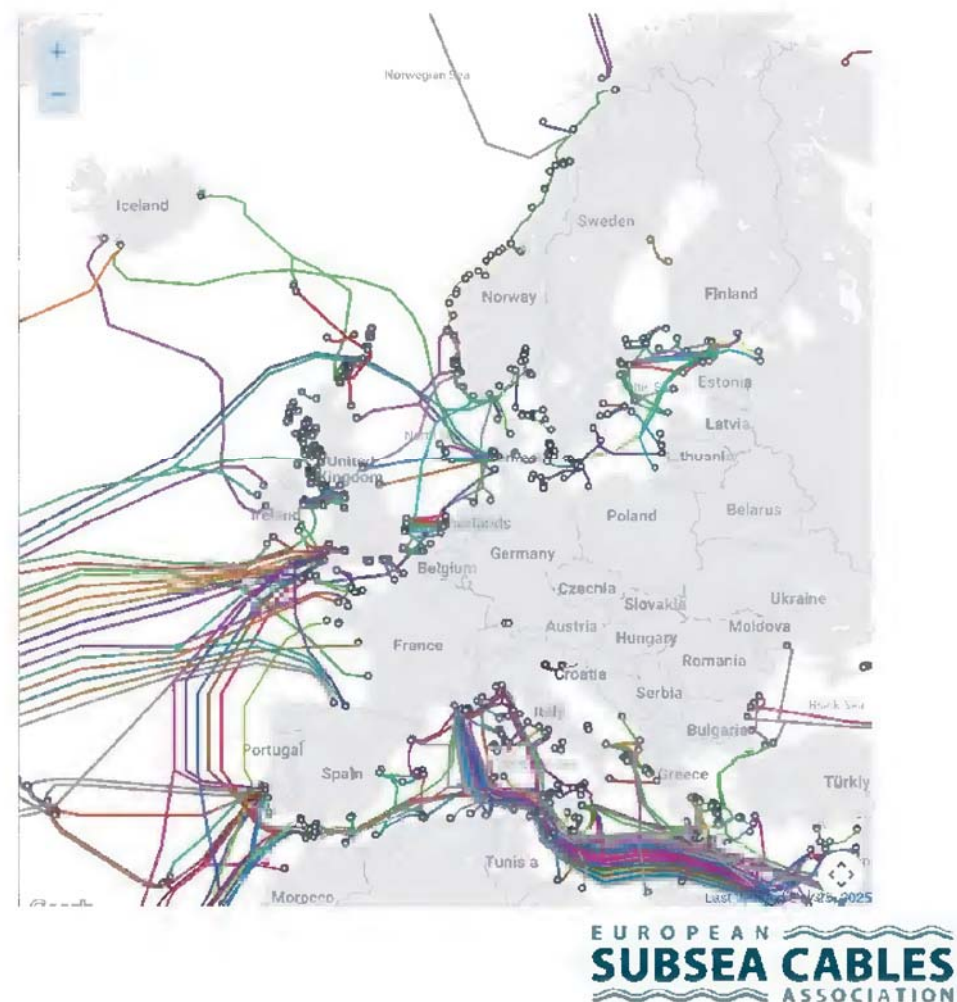
Methods of cable protection: system design



- Cable owners seek to follow the **shortest viable route** between landing points.
- Route planners seek **flat and uninteresting seabed** that avoids geographic features with steep gradients, seamounts, hydrothermal vents, or fracture zones.
- Route planners consider route adjustments to address seabed characteristics and other ocean activities.
- Route planners also seek **geographically diverse routes and landings** in order to minimize incident impact.
- Cable burial and armouring
- Operators conduct desktop studies and marine seafloor surveys and engage with other ocean stakeholders at the earliest possible stage.

Methods of cable protection: post-installation

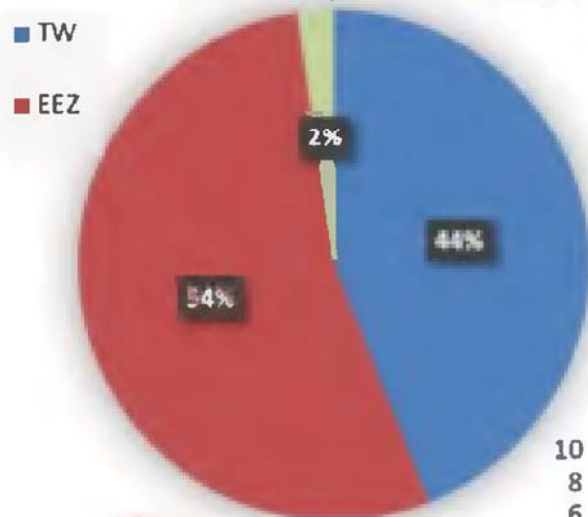
- Charting and dissemination of route information
- Stakeholder liaison and education
- Monitoring and automatic identification systems
- Separation distances
- Cable protection zones and corridors
- Marine spatial planning
- Cable-fishing committees
- Crossing agreements
- Civil and criminal liability for damage
- Private legal claims and litigation
- Robust physical and cybersecurity measures to secure infrastructure and communications



Repair Distribution

Repairs are reported by their locality in a country's Territorial Waters, Exclusive Economic Zone, or on the High Seas.

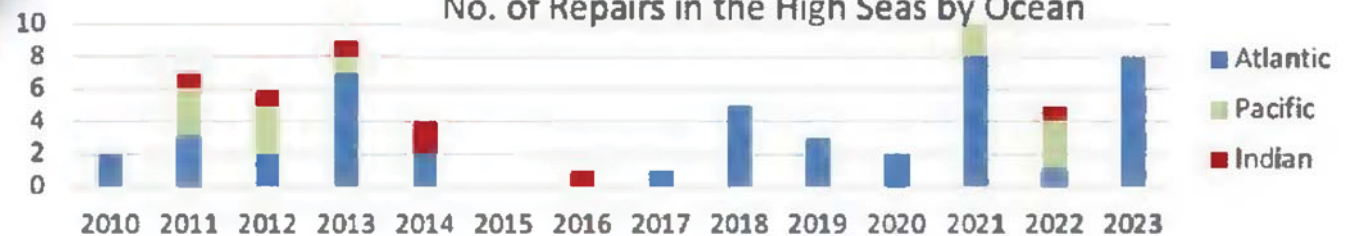
Global Repair Distribution



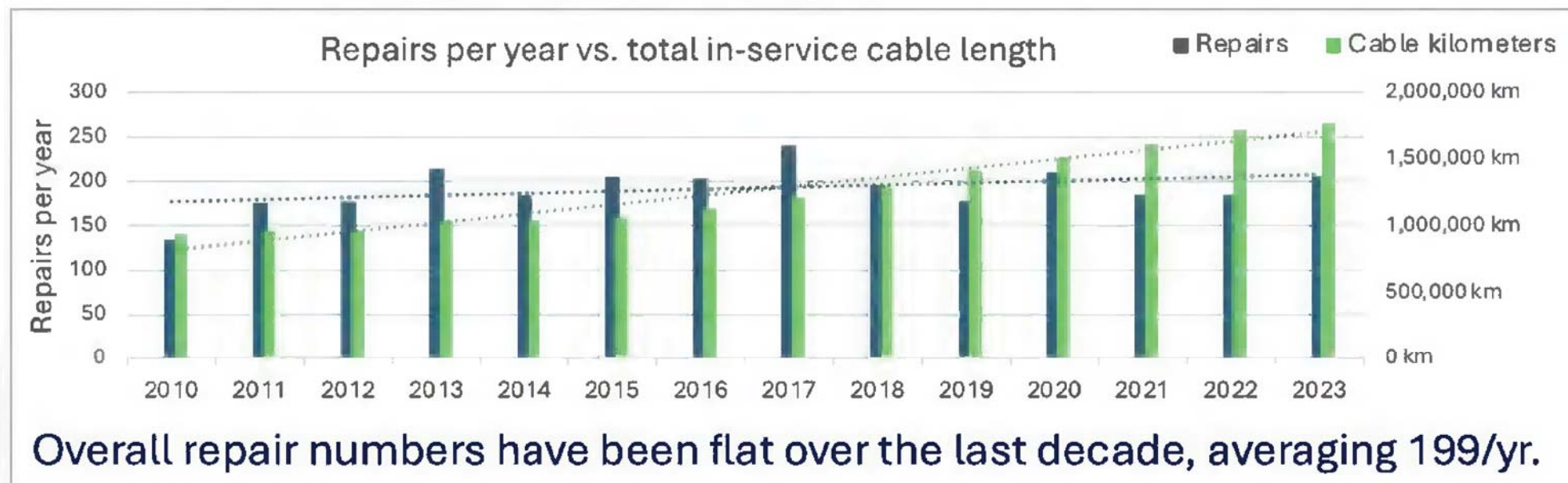
Repairs/km decreased as more systems have been built than decommissioned



No. of Repairs in the High Seas by Ocean



Cable damage and repair



- Good news! Kilometres of cable increase – but flat number of repairs
- Bad news... Time to commence repairs is increasing

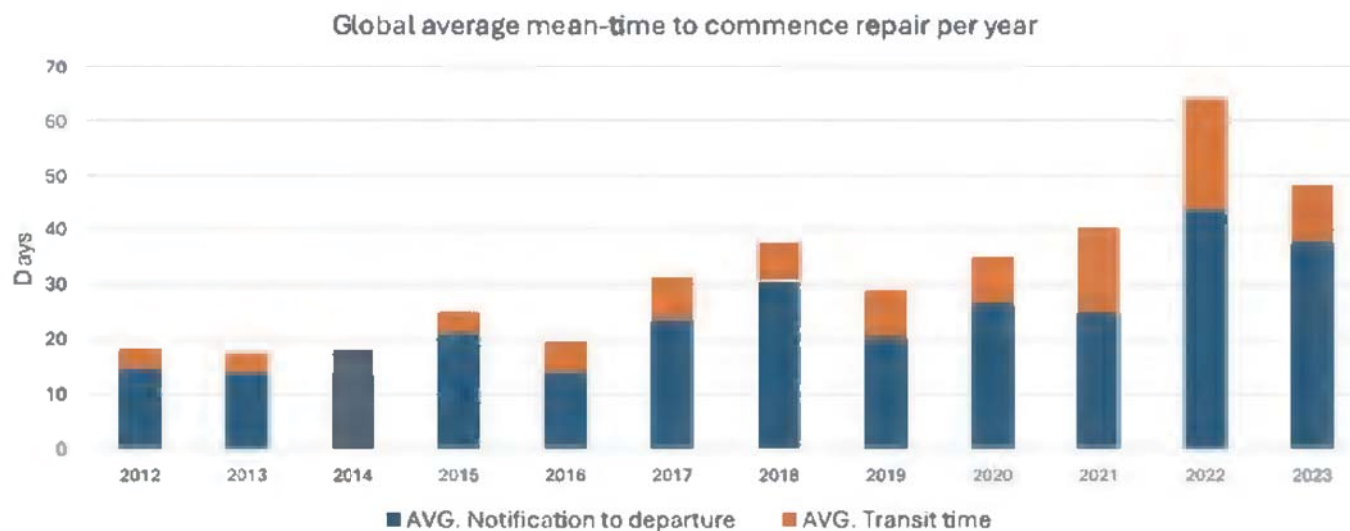


Refer to ICPC 'Government Best Practices for Protecting and Promoting Resilience of Submarine Telecommunications Cables'. Downloadable from <https://www.iscpc.org/documents/?id=3733>



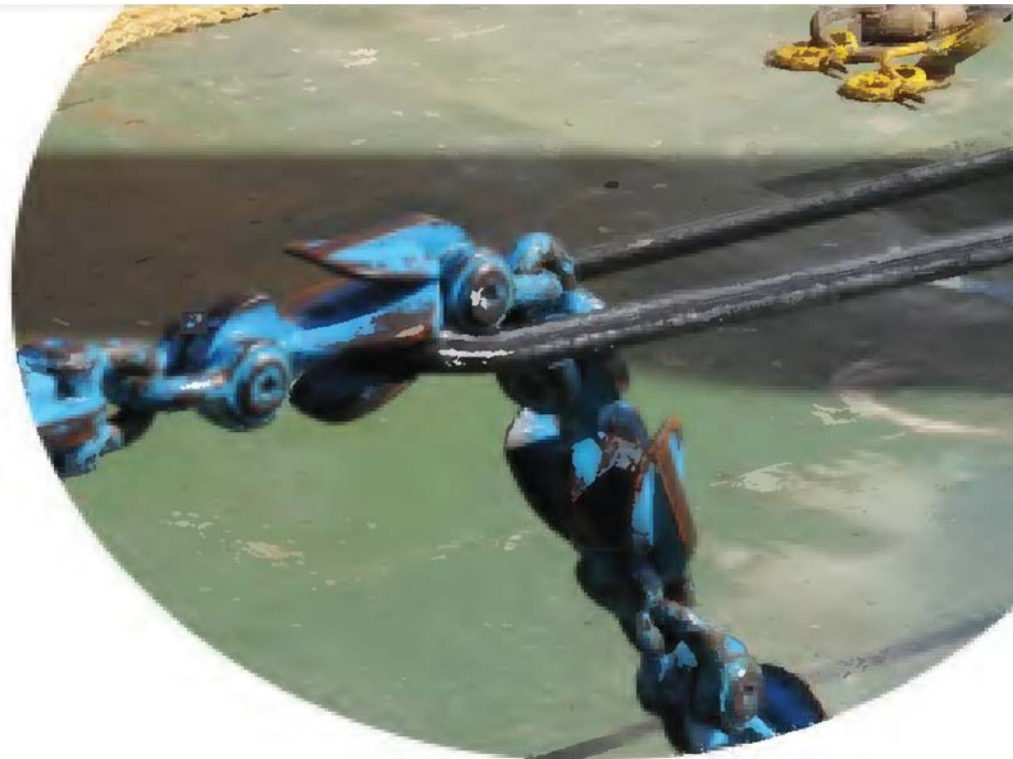
Repair Response Time – Why the Increase?

- No. of repairs per year has only increased slightly
- Number of cable repair ships has not changed significantly
- Why has repair response time more than doubled?



2024 Plenary • Singapore

ESCA Response: Cable Security Action Plan



A Welcome Initiative

1. ESCA and its members welcome the EU Cable Security Action Plan and support its overall direction
2. The EU Action Plan will be most effective if it builds on existing industry systems rather than creating parallel or conflicting processes

Existing cable ecosystem is mature, market driven and globally interconnected

Recommendations for Action | Prevention

1. Integrate existing industry data and **avoid duplicating NIS2, CERD processes** or ICPC/ESCA industry structures.
2. Recognise the strategic importance of subsea cables in national planning systems.
3. **Avoid EEZ-level licensing** that undermines UNCLOS freedoms and route flexibility.
4. **Recognise the international nature of cables** - damage in the Red Sea or Atlantic has direct ramifications for Europe. EU policy needs to be "outward facing"
5. **Appoint a single 'policy champion'** department within national governments to streamline coordination



Recommendations for Action | Response & Recovery

1. **Implement notification-based repair processes as the optimal resilience model.** Simple, rapid repair regimes already exist in parts of Europe and prove the model's effectiveness
2. ESCA supports EU initiatives on cable stress testing, coordinated response frameworks and cross-border emergency procedures
3. **Coordinated, cross-border emergency emergency procedures are essential to avoid multi-agency delays,** especially during complex multi-fault or winter-weather scenarios

Recommendations for Action | Repair Capacity

1. **Targeted support for the existing repair ecosystem provides more benefit** than creating parallel, state-owned systems
2. Strengthen the proven market-based repair ecosystem:
 - a. **Support long-term maintenance zones**, providing vessel operators with the investment certainty needed to maintain the fleet
 - b. **Support skills training and civil-military workforce pathways** to ensure a pipeline of specialist personnel

Recommendations for Action | International Co-operation

1. **Champion stronger enforcement of UNCLOS and international law** and deepen cooperation with key international partners
2. **Engage with the International Maritime Organization on best practices for anchoring and fishing gear management**
3. **Cooperate closely with key partners such as the UK, Norway, and other global cable-relevant states**
4. **Support capacity building in countries with burdensome authorisation regimes** to improve global repair times for all

Recommendations for Action | Preparedness & Planning

1. Incorporate cable disruption into national risk assessments:
 - a. Reflect plausible, simultaneous, multi-fault events
 - b. A single subsea landslide or natural hazard event can cause multiple disruptions, impacting both energy and communications infrastructure simultaneously
 - c. **Clear, pre-established communication pathways between maritime authorities, CER/NIS authorities, government and operators are essential** for effective response.

Recommendations for Action | Exercises & Stress Testing

1. **Exercises must be designed with and include operators to be meaningful.** Realistic scenarios to test:
 - a. Anchor drags or fishing gear faults (the most common cause)
 - b. Subsea landslide/natural hazard mult-fault events
 - c. Incidents within dense offshore wind or marine infrastructure clusters
 - d. Cross-border impacts affecting multiple Member States
2. **Preparing for these scenarios inherently improves preparedness for security situations**

Recommendations for Action | Funding & CPEIs

1. **Designation for Projects of Common European Interest should remain ownership-neutral** to avoid creating unintended barriers to private investment
2. **Priority investment areas:**
 - a. Route diversity and geographic redundancy
 - b. Resilient landing station infrastructure
 - c. Support for the maintenance and repair ecosystem (eg ensuring availability of system spares for new funded projects)

Key Messages for Policymakers

1. **The Greatest Risk is Delay:** Over-securitisation and bureaucracy that slow down deployment and repair are the primary threats to resilience
2. **Reinforce What Works:** Supporting the existing, market-led repair ecosystem is the most effective and efficient strategy
3. **Think Globally:** International alignment is essential for a system that is, by its nature, global
4. **Power is different:** Power cables require different focus due to engineering, limited redundancy and offshore wind expansion
5. **Engage the Experts:** Consistent engagement with industry via ESCA and ICPC should be built into the implementation process

QUESTIONS?

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