



# **International and Regional Cooperation on the Protection of Submarine Cables and Pipelines**

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**Darren Griffiths**

**International Cable Protection Committee**

**Head of Marine Maintenance, OMS Group**

# About the ICPC



## ICPC's Mission:

***The International Cable Protection Committee is the world's leading organisation promoting submarine cable protection and resilience.***

The ICPC works with its members, governments, international organizations, other marine industries, and the scientific community to: mitigate risks of natural and human damage to cables; develop recommendations and best practices for industry and governments throughout the cable project life cycle; promote scientific research addressing how cables exist in the marine environment; and promote the rule of law for the oceans.

## ICPC's Vision

***The ICPC envisions a global network of reliable and resilient submarine cables that coexist with the marine environment.***

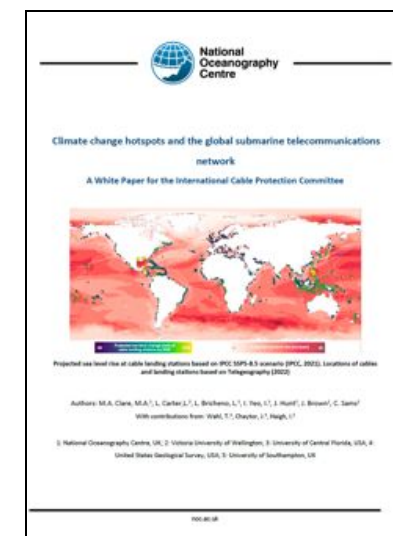
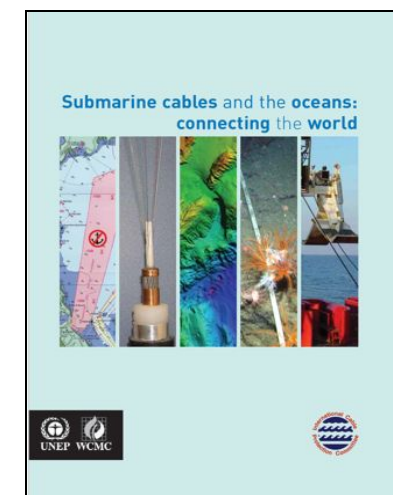
## ICPC's Slogan

***Sharing the seabed and oceans in harmony***

# About the ICPC



- ❑ Founded in 1958, ICPC is the world's pre-eminent global organisation for:
- ❑ Advancing freedoms to install and maintain submarine telecommunications and power transmission cables
- ❑ Mitigating risks of damage to those cables.
- ❑ ICPC has over **240** private-sector and government observers from over **70** countries.
- ❑ In 2021, ICPC published ['Government Best Practices for Protecting and Promoting Resilience of Submarine Telecommunications Cables'](#)
- ❑ Undertakes:
- ❑ Work with **governments, other marine industries, international organisations, Regional CPC's and NGOs** to promote cable awareness, cable protection legislation, and effective international agreements;
- ❑ Commissions peer-reviewed research on the environmental characteristics of cables; and
- ❑ Commissions Independent reports by UNEP-WCMC (**ICPC commissioned and supported**) to build upon the existing publications
- ❑ Promulgates recommendations for cable operators.
- ❑ Representation at the UN to support industry direction
- ❑ Sits on the Submarine Cable Resilience advisory body with the ITU



# Global Trends



## Installation:

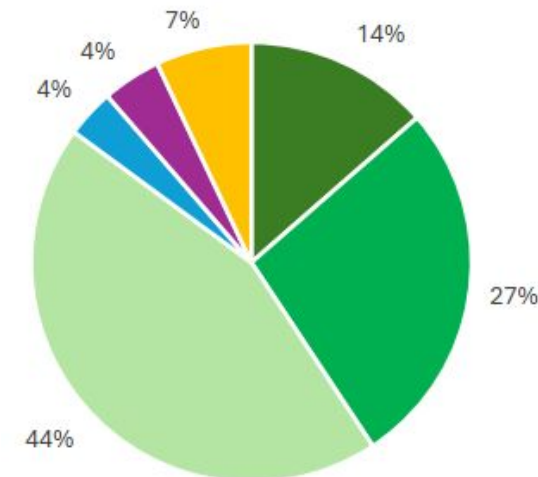
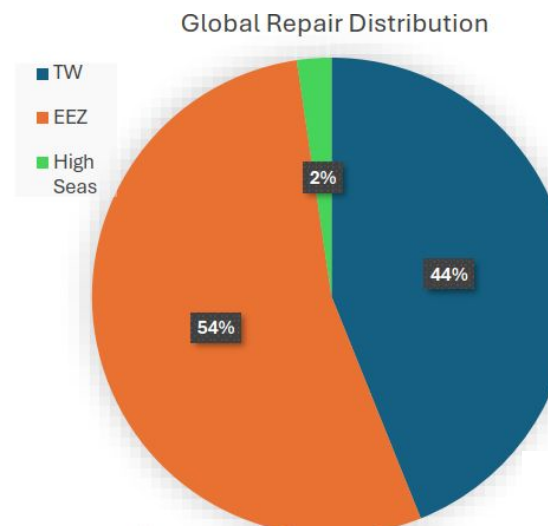
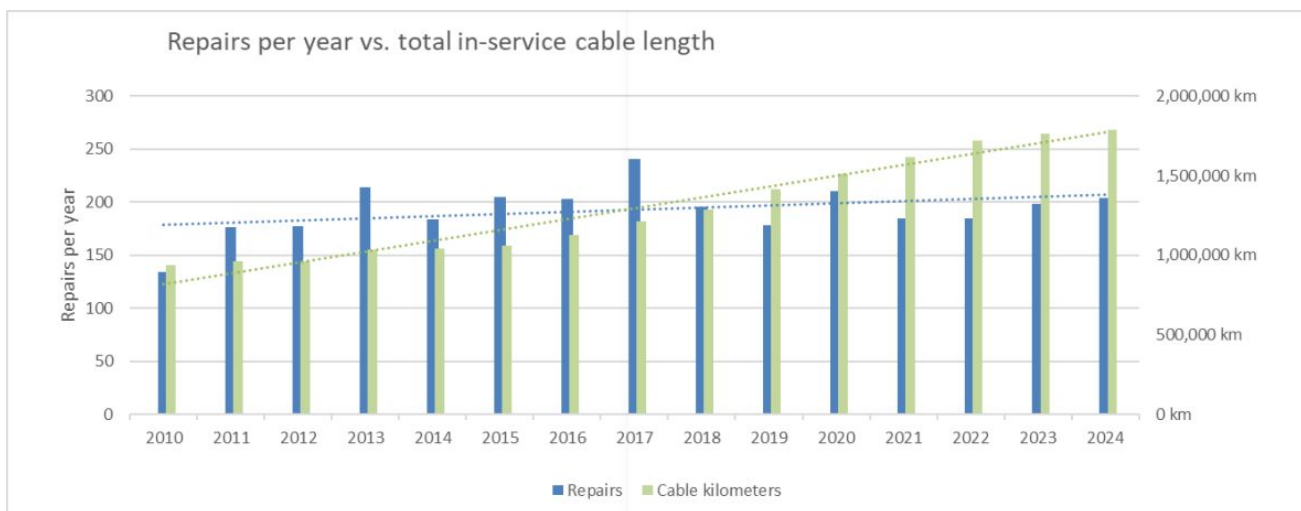
- Geopolitics           Route selection **becoming complex**
- Permitting           Timely, procedural changes mid process, complex contested waters
- External Risks       Installation challenges to **overcome risks** to the infrastructure (3m burial)
- Industry           Vessel fleets, tooling, seafarers

## Maintenance:

- Repair Frequency: **Stabilised**       Predominantly shallow waters (worldwide avg. 199/yr)
- Causes:           Man-made       **Majority - Anchor / Fishing / Illegal anchoring/ Bottle necks**  
                      Natural       **Minority - Abrasion / Subsea landslides**
- Repair times:       Mobilisation   **Increasing – Permitting / increased quantity**  
                      On Site       **Consistent**
- Industry           Vessel fleets, tooling, seafarers



# Global Trends - Repairs



The fault rate per 100,000 km has decreased from 14.3 in 2010 to 11.4 in 2024

Regional trends show in the West a decrease, whilst in the East an increase

Primarily repairing in TW and EEZ where adherence to local policies are required

**Anchoring and Fishing remain a continued and consistent risk**

\*Stats are based on ICP's Global Cable Repair Data Analysis 2024 figures (2025 collation underway)




# Recommendations



Continued industrial peer review and promotion to use:

- 1.ICPC – Industry Recommendations
- 2.ICPC – Government Best Practices
- 3.ICPC – FAD Annex
- 4.ASEAN's – Best practices for the application of permits for repair of submarine cables



**Best Practices**  
Version 1.2

**GOVERNMENT BEST PRACTICES FOR PROTECTING AND PROMOTING RESILIENCE OF SUBMARINE TELECOMMUNICATIONS CABLES**

With these Best Practices, the International Cable Protection Committee ("ICPC") identifies recommended actions for governments to foster the development and protection of submarine telecommunications cables and to maintain continuity of communications even in the event of damage to a submarine cable. In implementing these Best Practices, a state should adapt them to address national and regional circumstances, including but not limited to: localized risks to submarine cables; localized activities of other marine industries; national laws, regulations, and governmental structures; and jurisdictional disputes with littoral states.

**1. General principles**

In adopting and implementing a submarine cable resilience plan, the state should be guided by the following principles:

- Focus on statistically-significant risks where government action could have the greatest impact on risk reduction;
- Promote commercial and regulatory environments that encourage multiple and diverse (both with domestic and foreign landings) submarine cable landings within the state's territory;
- Observe and implement treaty obligations (particularly under the United Nations Convention on the Law of the Sea ("UNCLOS")) and customary international law defining state jurisdiction over, and protection of, submarine cables;
- Promote transparent regulatory regimes that expedite cable deployment and repair according to well-established timeframes;
- Consult closely with industry to understand industry technology and operating parameters and to share data regarding risks;
- Complement existing industry best practices;
- Recognize that laws and government policies themselves can sometimes exacerbate risks of damage and reduce resilience; and
- Engage with other states on a global and regional basis, as other states' actions can greatly affect an individual state's own connectivity.

**2. Fishing and anchoring risks**

ICPC statistics indicate that each year, fishing and anchoring account for approximately 70 percent of global damage to submarine cables—far more than other human or natural causes. Commercial fishing-related damage is most often caused by bottom-tending fishing gear such as trawl nets and dredges, but it is also caused by long lines and fish aggregation devices anchored to the seabed and pot and trap fisheries using grapnels for gear retrieval. Anchor-related damage

**ANNEX A**

**BEST PRACTICES FOR THE APPLICATION OF PERMITS FOR REPAIR OF SUBMARINE CABLES**

**A. Information Requirements for Application of Permits**

Permit applications should not contain unnecessary information requirements, and should only request relevant information such as:

- (i) Introduction of the applicant and the cable system to be repaired;
- (ii) General description of the project;
- (iii) Operations overview, including the intended operation as well as the position and coordinates of the operation area marked on a navigational chart;
- (iv) The extent of dredging along the submarine pipelines and/or cable routes on either side of the trench, based on the subsoil investigation;
- (v) Particulars of the repair/cable vessels engaged for the works and other craft (if any), including the respective equipment and crew lists;
- (vi) Communication plan and reporting procedures;
- (vii) Work schedule date and operation time in chronological order;
- (viii) Operations and work methodology, e.g. operations involving remote operating vehicle (ROV) survey, grappling, splicing, laying, and burial, etc.;
- (ix) Execution of work methodology and the safety of navigation with respect to traffic flow in the Traffic Separation Schemes (TSS). The plan and sequencing of the operation should be in compliance with the International Maritime Organization (IMO) conventions, in particular the International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 (MARPOL 73/78) and the International Regulations for Preventing Collisions at Sea (COLREGs) (as amended);
- (x) Contingency plans for the craft involved in the operation, including emergency procedures and demobilisation plan from the work site;
- (xi) Activity after the completion of the repair work (if any);
- (xii) Contact details of the personnel responsible for the operation and craft(s) on site;
- (xiii) A daily progress report including the status and position of the operations and repair vessel(s) which may be submitted to the relevant government authorities and/or other relevant parties of submarine infrastructure, in accordance with the regulations and policies of the related ASEAN Member State.

No/Issue/Title	
1-14A	Recovery of Out of Service Cables
2-12C	Recommended Routing and Coordinating Criteria for Submarine Telecommunications Cables in Proximity to Other Such Cables
3-10C	Telecommunications Cable and Oil Pipeline / Power Cables Crossing Criteria
4-8C	Co-ordination Procedures for Repair Operations Near In Service Cable Systems
5-9A	Recommendation for Common Format for Cable Awareness Charts
6-10A	Recommended Actions for Effective Cable Protection (Post Installation)
7-6D	Offshore Civil Engineering Work in the Vicinity of Active Submarine Cable Systems
8-9A	Procedure To Be Followed Whilst Offshore Seismic Survey Work Is Undertaken In The Vicinity Of Active Submarine Cable Systems
9-5B	Minimum Technical Requirements for a Desktop Study
10-4A	The Minimum Requirements for Load and Lay Reporting and Charting
11-4E	Recommended Common Format for Electronic Formatting of Route Position Lists
12-2F	Mechanical Testing of Submarine Telecommunications Cables
13-2C	The Proximity of Offshore Renewable Wind Energy Installations and Submarine Cable Infrastructure in National Waters
14-3B	Basic Power Safety Procedures that are to be followed by Marine Repair Operators and Terminal Station Personnel during Subsea Cable Repair Activities
15-2	Procedure to be Followed Whilst Marine Aggregate Extraction, Dredging or Mining is Undertaken in the Vicinity of Active Submarine Cable Systems
16-1A	Considerations for Marking Submarine Cables Withdrawn
17-1A	Submarine Cable Operations in Deep Seabed Mining Concessions Designated by the International Seabed Authority Access removed pending revision
18-1A	Minimum Technical Requirements for the Acquisition and Reporting of Submarine Cable Route Surveys
19-1	Preparatory Actions for Civil Claims Development for Cable Damage

# Obstacles



## 1. MITIGATION

- A. **Spatial planning** – quality corridors and understanding of risks (redundancy)
- B. **Clear and enforceable policies** – high risk fishing areas / illegal anchoring
- C. **Policing and enforcement of policies** - increased routing through higher risk areas
- D. **Recognition of critical infrastructure** – not all offices / departments appreciate the impact
- E. **Collaborative workshops** – cable and fishing industries / port authorities
- F. **Chartings** – Implementation of ENC's and visibility of Submarine Cables
- G. **Changing climate** – assessment for future risks (movement of fishing zones / FAD's)

## 2. PREPARATION

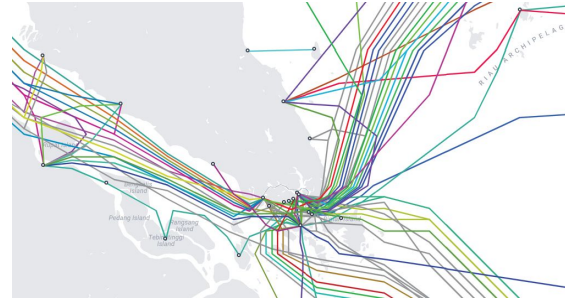
- A. **Spatial planning** – Can lead to multiple repairs in the same working area
- B. **Permitting** – **lack of pre-permitting / increased permits or approvals due to geopolitics**
- C. **Permitting** – change of officers / change of procedure and complexities
- D. **Permitting** – documentation standardisation requirements across the region (**Witnessed improvements**)
  - 1. **Visas** – Acknowledge critical crew and needs onboard to optimise mobilisation and costs
  - 2. **Port Call** – Requirement for physical clearance instead of remote clearance
  - 3. **Customs** – Remove the need for Temporary Importation / Duties on such activities

# Obstacles – Spatial Planning



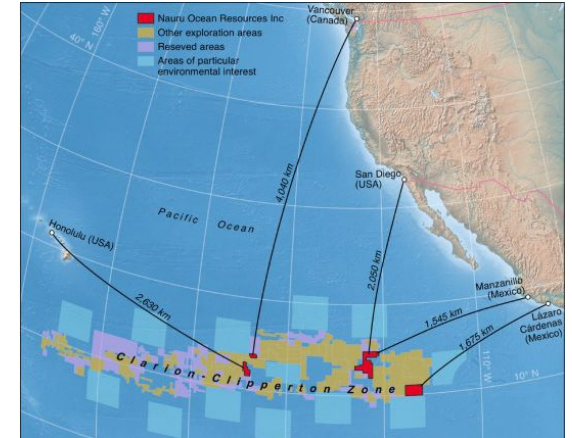
## Why do we need spatial planning?

- Organised and controlled
- Multiple stakeholder needs
- Optimise growth and economics for the country



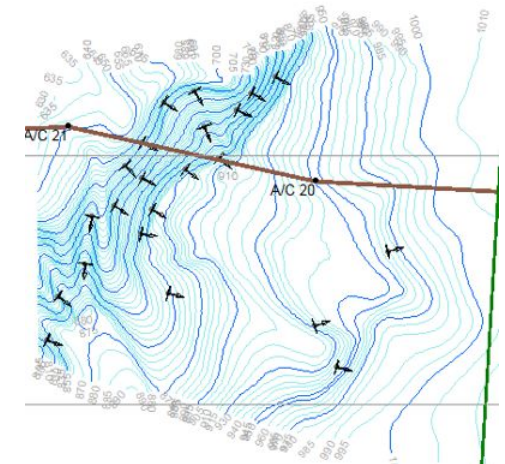
## What are the benefits?

- Organised seabed – defined rule and policies – clear for all stakeholders
- Management on old and future uses, forecast on development
- Controlled and secure areas for stakeholder use
- Known processes and agreements when working through different areas



## What are the risks?

- Who defines the importance of the seabed use and allocation / when it changes with time?
- Are the areas allocated appropriate for use – considering expert feedback
- Cause of bottlenecks for cables – risk one incident causing blackout domestically / international issues for transiting cables
- Difficulties on policing and implementation the safety of such corridor(s)





# Obstacles – Customs & Permitting



## Permitting:

- Application documentation requirements vary heavily
- Authorities' interpretation of rules and requirements vary between officers / ports / jurisdictions
- Lack of understanding of the criticality of the infrastructure as to the speed of issuance
- Time for review and processing
- Contested waters – additional permits to apply – Increase in time and money
- Restriction on working areas for the permit – can be an issue for certain fault types
- Public holidays can lead to elongation of permit delivery timeframe

## What is needed:

- Clear and streamlined process for the industry – installation & maintenance (incl. one department control)
- Set timeline and targets to achieve the response and delivery
- Education to authorities on the criticality and such operations treated as such for the country
- Inter country co-ordination to manage permits for contested waters and oversight
- Pre-permitting clearance – Annual permit for the vessel and crews, which can be activated in one to two days



## Customs :

- Complex process which can be applied onto cable spares and / or the cable ships
- Complexity can cause long delays to restore systems – time to import / export and the process to depart from a countries waters
- Increased operational cost to cable ship owners when duties applied in a port base – assumed undertaking domestic work continuously
- Causing Ship Owners to re-think about the positioning of vessels from suitable locations to other areas
- Large bonds or costs on customers to process and manage for urgent repairs

## What is needed:

- Refrain from imposing customs duties, taxes, and fees on installation activities beyond the limits of the territorial sea, and on cable ships merely transiting an EEZ;
- Reduce or eliminate customs duties on submarine cable equipment imported into a state's territory, to foster submarine cable deployment and facilitate quick access to spare plant for repair; and
- Refrain from imposing importation requirements and customs duties on cable ships conducting installation or repairs.



**Thank You**