



ICPC and Submarine Cable Resilience

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About the International Cable Protection Committee



- Founded in 1958, the ICPC is the world's leading organization promoting submarine cable protection and resilience
- As an NGO, 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 regarding cables in the marine environment
 - Promote the rule of law for the oceans.
- It represents submarine cable interests before the International Seabed Authority, in UNCLOS and BBNJ treaty processes, and many U.N. agencies
- It has more than 235 members from more than 75 nations, including cable operators, owners, manufacturers, and industry service providers, as well as government observers.



Prerequisites for submarine cable protection and resilience



- Cooperation at national, regional, and multilateral levels and across industries, as no intergovernmental organization regulates or licenses cables
- Regulatory certainty and predictability for installation, operation, and repair
- Awareness of:
 - The importance of submarine cables
 - Technical and environmental characteristics of cables
 - The high degree of cooperation within the submarine cable industry
 - Sources of risks and threats to cables
- Information sharing with other marine industries, between industry and governments, and within components of national governments
- The rule of law for the oceans, particularly the United Nations Convention on the Law of the Sea (“UNCLOS”)



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
 - Sea floor geology
 - Weather and climate change
- } **70% of faults annually**

- 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

Methods of cable protection: pre-installation



- 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.
- 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

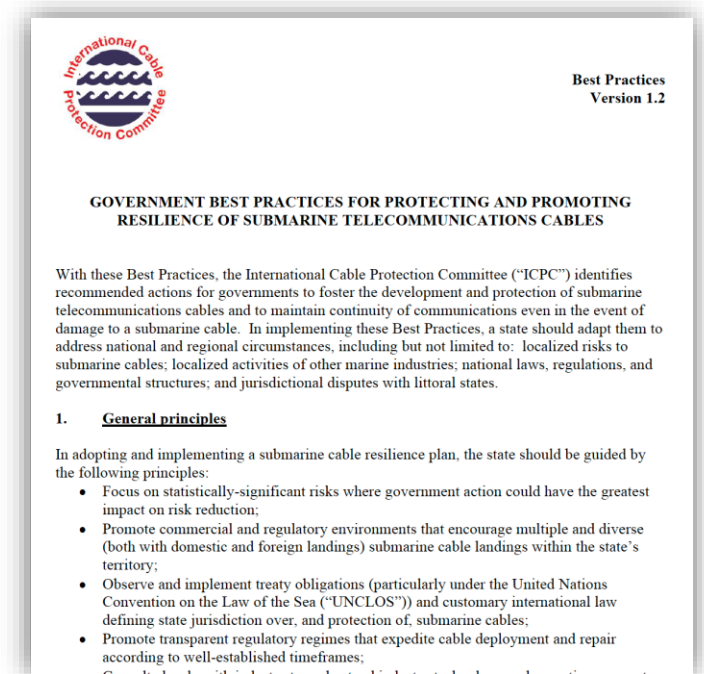


- Charting and dissemination of route information
- Stakeholder liaison and education
- Monitoring and automatic identification systems
- Separation distances
- Cable protection zones and corridors
- Marine spatial planning
- Cable-fishing committees
- Crossing agreements
- Civil and criminal liability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

ICPC *Best Practices*



- Recognizing that **government action is necessary to complement industry efforts**, in 2021, ICPC launched Government Best Practices for Cable Protection and Resilience (“*Best Practices*”)
- These are designed to assist governments in developing laws, policies, and practices to for submarine cable protection and resilience
- The Best Practices identify general principles and best practices in specific areas. General principles include:
 - Wholistic approach to risks
 - Transparent regulatory regimes that foster speedy installation and repair
 - Promotion of rule of law for the oceans
 - Consultation with industry
 - Use of best available science
 - Engagement with other states on a regional and global basis



Specific ICPC *Best Practices*



- Measures to reduce fishing and anchoring risks
- Default separation distances between cables and other marine activities
- Geographic diversity of routes and landings
- Single point of contact within national governments to enhance coordination
- Regulatory frameworks that expedite installation and repair, recognize high-seas freedoms, and apply best available science
- Charting of cables at all ocean depths
- Cable protection laws and measures
- Marine spatial planning to enhance early-stage coordination
- Minimal cabotage and crewing restrictions, customs duties, taxes, and fees
- Classification of submarine cables as critical infrastructure
- Sharing of risk and threat information between government and industry



International Advisory Body on Submarine Cable Resilience



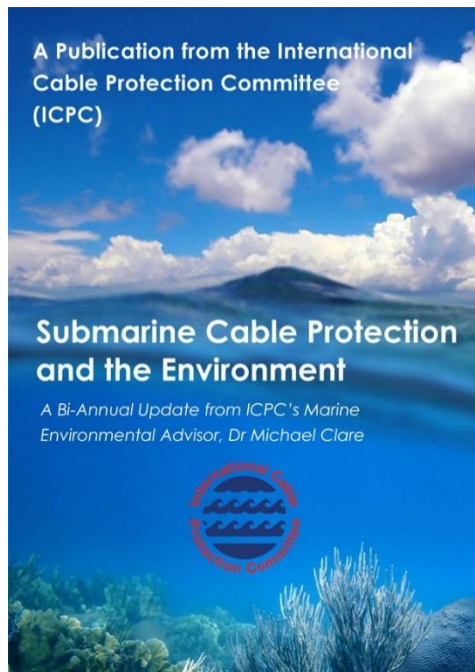
- In partnership with the International Telecommunication Union (“ITU”), the ICPC has launched an International Advisory Body for Submarine Cable Resilience (the “Advisory Body”).
- The Advisory Body is a multistakeholder organization with government, industry, and academic members.
- It seeks to identify, develop, and promote government and industry best practices for submarine cable resilience, focusing on:
 - Timely licensing, deployment and repair of submarine cables
 - Mitigation of the risks of physical damage to submarine cables
 - Enhancement of submarine cable resilience and the continuity of communications over such cables, and
 - International cooperation in the aforementioned areas.
- The initiative seeks to amplify ICPC’s Best Practices using ITU resources and connections and is not intended to create new regulatory mandates.
- The Advisory Body held its first virtual meeting in December 2024 and will hold its first in-person summit in Abuja, Nigeria in February 2025.



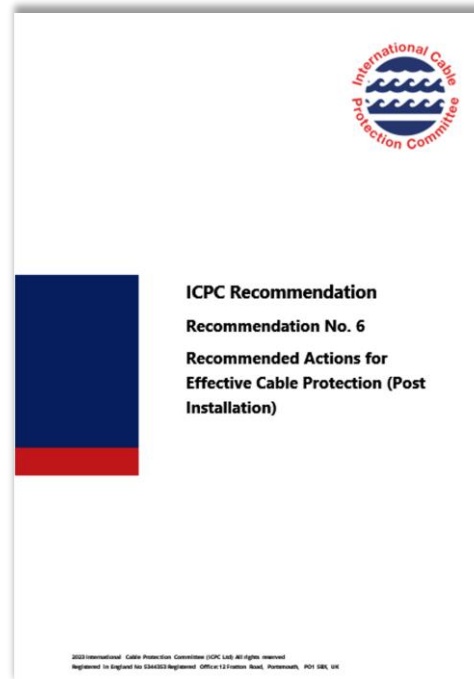
Additional resources and references



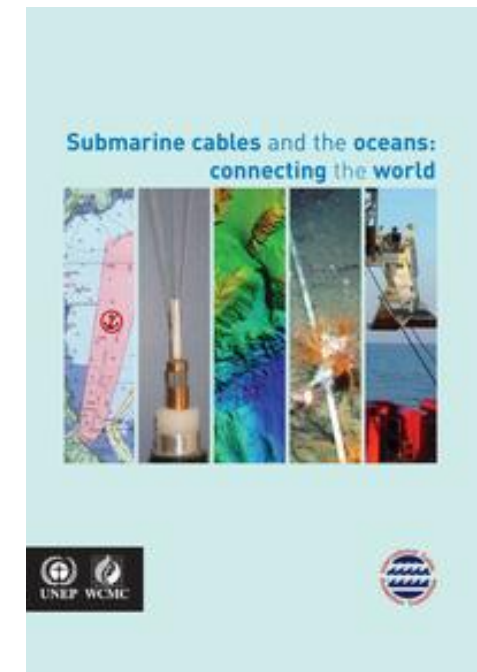
Submarine Cable Protection and the Marine Environment, an ICPC periodic update for all seabed users, the science community, and the general public



ICPC recommendations: technical guidance directed to the submarine cable industry on a range of installation, operation, repair, and pre- and post-installation cable protection issues



Submarine Cables and the Oceans: Connecting the World (2009), a joint report of the ICPC and UNEP-WCMC, provides a wealth of background information; will be supplemented by a new report in 2025



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