United Nations Roundtable: Maritime Sector Strategies to Augment Tsunami Monitoring

Session 5: Strategies to augment tsunami monitoring: Undersea Cables
Panel Members

Bruce Howe, Professor and Chair of Ocean and Resources Engineering, University of Hawaii at Manoa

Kent Bressie, ICPC International Law Advisor and Partner Harris, Wiltshire & Grannis LLP

Simon Webster, NEC Corporation

Yue Meng Fai, Singapore Telecommunications Limited

Laurie Doyle, Facebook

Moderator – Graham Evans, ICPC Vice Chairman and Managing Director Global Subsea Cable Business EGS Survey Group
International Cable Protection Committee

Introduction & Context

Graham Evans ICPC Vice Chairman
Managing Director Global Subsea Cable Business
EGS Survey Group
gevans@egssurvey.com
The world is connected by more than

400

SUBMARINE CABLE SYSTEMS

Global extent of submarine cables

>1.3 million kilometers of cable installed

enough cable to circle the Earth >27 times
Global importance of submarine cables

>99% of international Internet, voice, and data traffic travels via submarine fiber optic cables.

Submarine cables are the BACKBONE OF THE INTERNET, garden hose-sized cables carrying vast amounts of traffic over glass fibers.

AND A GROWING GREEN POWER NETWORK through international power cables

- Submarine telecom cables ensure access to Facebook, Instagram photos, YouTube videos, Google search results, and Office365 documents and email, whether from a laptop computer, tablet or mobile phone.
- Submarine telecom cables backhaul most of the world’s international mobile network traffic.
- Submarine power cables are increasingly internationally transmitting GREEN POWER.
Submarine cables are critical infrastructure

- Governments designate submarine cables as critical infrastructure.
- Governments use critical infrastructure designations to highlight asset criticality and identify and mitigate vulnerabilities and threats.
- Critical infrastructure is frequently defined as:
  - Assets that are **essential for the functioning of society and the economy**, and
  - Damage or destruction of which would harm national and economic security, public health, and public safety.
Submarine cables are critical infrastructure

- Submarine cables carry >5.4 petabytes ($10^{15}$) of data per minute including >4 million YouTube views; >400 minutes of video and 4 million Facebook posts – we all use submarine cables every minute of every day

- Each day the Society for Worldwide Interbank Financial Telecommunications (SWIFT) transmits ≈ 15 million messages to more than 8300 banking organizations, securities intuitions, and corporate customers in 208 countries

- The United States Clearing House for Interbank Payment System (CHIPS) process over US$ 1 Trillion per day to more than 22 countries for all manner of commodity exchanges, investments, and securities

- World Bank study indicated a 10% increase in broadband penetration results in a 1.38% increase in GDP growth in low and middle income countries
About the ICPC

- Founded in 1958, ICPC is the world’s preeminent global organization for:
  - Advancing freedoms to install and maintain submarine cables, and
  - Mitigating risks of damage to those cables.

- ICPC has more than 180 private-sector and government members from more than 60 countries and:
  - Works with governments, other marine industries, international organizations, and NGOs to promote cable awareness, cable protection legislation, and effective international agreements;
  - Commissions peer-reviewed research on the environmental characteristics of cables; and
  - Promulgates recommendations for cable operators.

- ICPC accorded NGO Special Consultative status by ECOSOC

- Liaises with UN Bodies including UNEP, ISA, ITU and IMO and regional Cable Protection Committees (CPCs)

- Actively participating at UN IGC sessions related to BBNJ
ICPC Membership Coverage

ICPC represents 98% of installed International Cable Kilometres
The ICPC and Dual Use (SMART) Cables

- The ICPC sees potential commercial opportunities and societal benefits
- The ICPC sees legal and policy risks with the deployment of scientific sensing capabilities on commercial submarine telecommunications cables and therefore remains neutral with respect to such “dual-use” cables
- The ICPC opposes proposals to mandate the use of such sensing capabilities
- There is a diversity of views among ICPC members regarding the desirability and utility of deploying scientific sensing capabilities on submarine cables for disaster warning and climate change monitoring
- Some governments remain concerned about marine sensing capabilities as infringing sovereignty, threatening national security, or improperly gathering data about marine resources
- “Marine scientific research” remains highly regulated under UNCLOS, yet the meaning of this term remains hotly disputed
- The Joint Scientific Monitoring And Reliable Telecommunications (SMART) Cable Task Force (JTF) include a number of ICPC members and an EC representative who monitors the Task Force