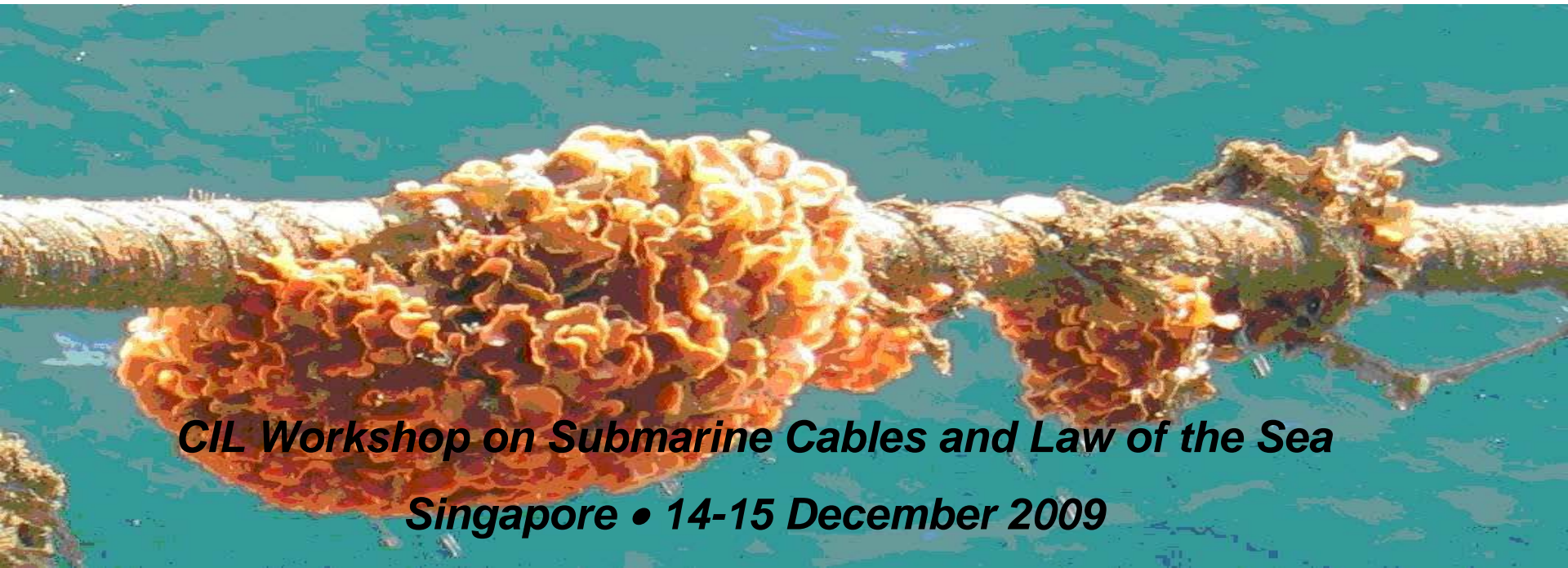


SUBMARINE CABLES, RESOURCE USE, AND ENVIRONMENTAL PROTECTION

Ambassador Satya Nandan



CIL Workshop on Submarine Cables and Law of the Sea

Singapore • 14-15 December 2009

SUBMARINE CABLE MAP 2007

TeleGeography
PACIFIC CROSSING



COMPONENTS OF A SUBMARINE CABLE SYSTEM

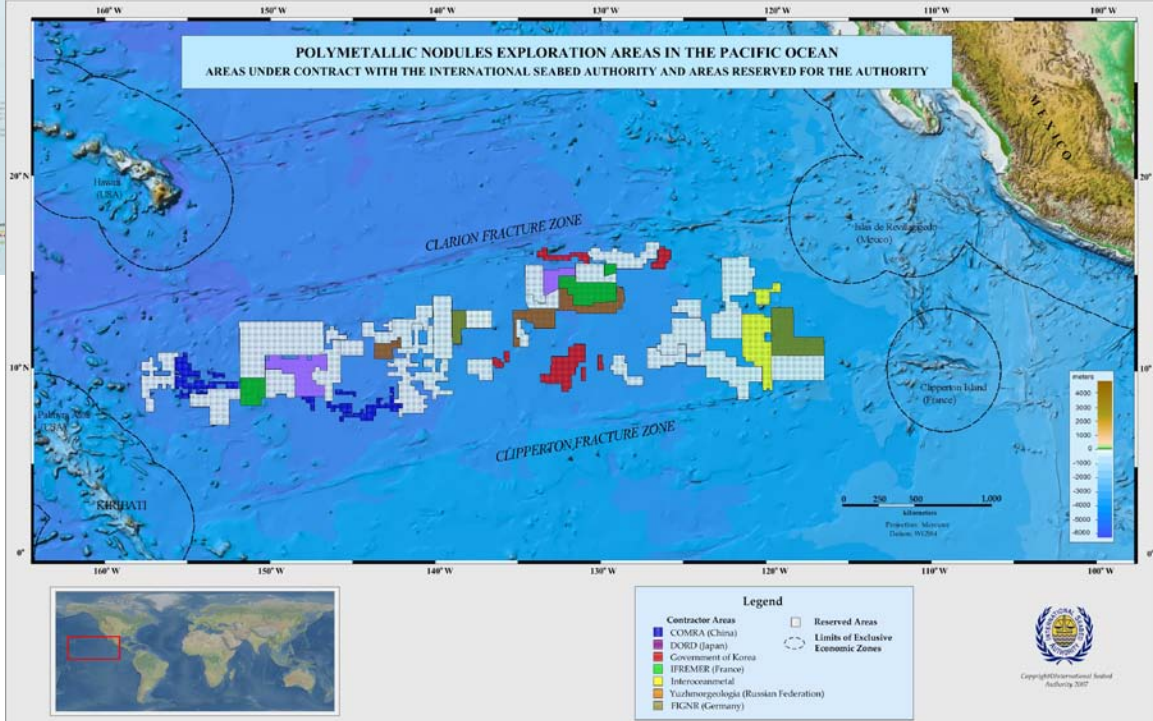
Repeater Station

Power

CROSS-SECTION OF A SUBMARINE CABLE

ROUTE PRICE TRENDS

www.telegeography.com



Copyright International Seabed Authority 2007

LOSC Framework on Submarine Cables and the Protection of the Marine Environment

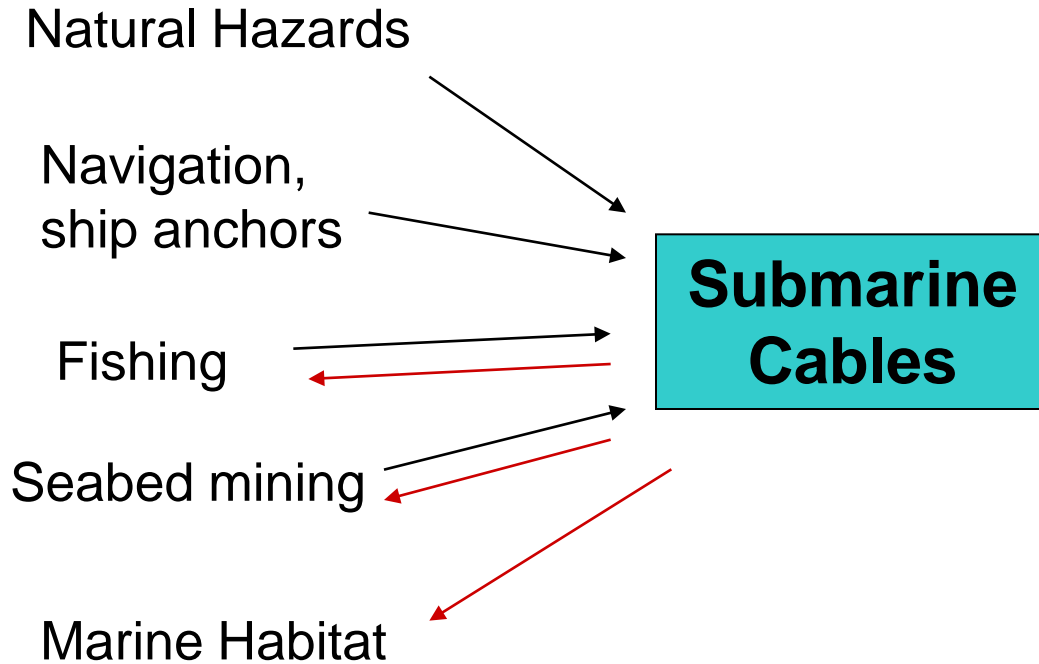
- Freedom of laying submarine cables
- Art 79(2) LOSC

“Subject to its right to take **reasonable measures** for the exploration of the continental shelf, the exploitation of its natural resources and the prevention, reduction and control of pollution from pipelines, the coastal State may not impede the laying or maintenance of such cables and pipelines.”
- Other applicable provisions

Environmental Impacts of Submarine Cables

- Unlike pipelines, the laying of submarine cables is normally a benign use of the seabed
- However, there are potential and perceived environmental impacts of submarine cables
 - Temporary disturbance of habitats during the laying and repair of cables
 - Cooling water discharge of electricity cables
 - Conflict with other users of the sea

Identified Impacts



The closer the cable gets to the shore, the more competing activities occur



Cable damaged by a trawler (Tyco Telecommunications 2009)



Cable damaged by an anchor (Tyco Telecommunications 2009)

Aftermath of a whale entangled in a submarine cable in Vancouver Island (Johnson and Heezen, 1969)



Legal Issues

- What constitutes “reasonable measures” under LOSC Art 79(2)?
- What coastal State rights can be exercised to regulate the impact (potential and perceived) of survey, laying, maintenance, and repair of cables?
 - Areas under sovereignty
 - Areas under sovereign rights
- How do States prioritise ocean uses (cables vs fishing, seabed mining, navigation, habitat protection)?
- What precautionary measures can be applied?
- Can environmental impact assessment be applied?
- Can cable protection zones be established?

To ensure effective management of submarine cables, minimise interference with competing activities, and protect the environment, coastal States need to:

- Address identified threats to the laying, repair, and maintenance of cables
- Address impacts of laying, repair, and maintenance of cables
- Address legal issues and establish clear regulations
- Involve all relevant authorities (i.e. geological survey dept, environmental dept, natural resource depart, port authorities, local governments)
- Cooperate with the industry

Potential Application of Best Practices for Laying and Maintenance of Pipelines

- Pipeline management is more developed and may be used as a model for adopting a framework to address risks posed by cable survey, laying, and repair to the marine environment and minimise interference with competing activities
- Regulation of submarine cables should be established for different stages:
 - Survey of routes
 - Construction or laying
 - Operation, maintenance and repair
 - Disposal (most of the time submarine cables are not removed)

- Site selection and route determination
 - Choose routes that are safe and will have the least negative effect on habitats
 - Consider marine parks, archaeological sites
 - Avoid areas known to have geological faults
 - Consider sedimentation of areas
- Impose environmental impact assessment if necessary
 - EIA for submarine cables should have separate guidelines and different triggers than those of pipelines (e.g. if a cable runs across a marine park, EIA may be required)
- Ensure sufficient depths in burying cables
- Increase awareness of other ocean and coastal users

EIA Process

- Information on the project
- Description of the physical environment, biological environment, socio-economic impact
- Anticipated environmental impacts
- Risk assessment
- Mitigation measures
- Methods and equipment in laying cables
- Measures for repair or retrieval/removal of submarine cables

Conclusion



- The LOSC does not provide specific guidance on the regulation of submarine cables with respect to resource use and the environment, creating diverse State practice
- In accordance with coastal State rights, best practices in managing underwater pipelines may be used to adopt a framework for managing cables
- EIA may be applied by coastal States BUT with different guidelines and triggers than those set for managing pipelines