

# **ASEAN Submarine Cable International Connectivity**

**(Protection and Risk Mitigation)**

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# Outline

- International Connectivity
- Submarine Cable Connectivity Risks and Assessments
- Submarine Cable Protection Regime
  - Regulations
  - Best Practices
  - Capacity Building



# ASEAN International Connectivity



In 2012, ASEAN is served by 24 key submarine cable systems with a Total Lit Capacity of 4.08 Tbps and Potential Capacity of 41.24 Tbps



# AP SUBMARINE CABLE SYSTEMS

- APCN2 (Cable length – 19,000km)
- APG (Cable length – 10,400km)
- AAG (Cable length – 20,000km)
- ASE (Cable length – 7,500km)
- FEA (Cable length – 28,000km)
- SEAJC (Cable length – 8,300km)
- SEAMEWE3 (Cable length – 39,000km)
- SEAMEWE4 (Cable length – 20,000km)



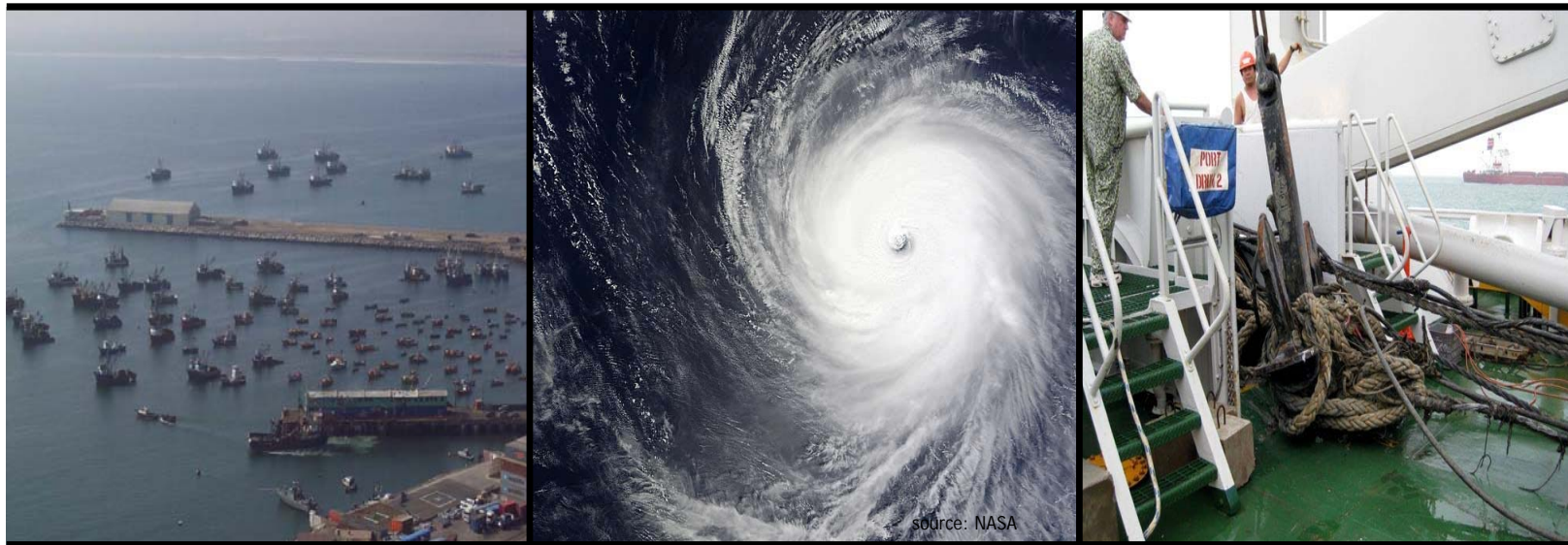


# Primary Causes of Cable Faults

**Fishing gear types that contacts the sea bed are a primary cause of cable faults**

**Recent developments in AIS and vessel tracking have shown that ship anchors are a more significant cause of cable faults than previously thought**

**Dredging operations; seismic activity; catastrophic weather; theft; abrasion from cable movement due to hard sea bed and strong undersea currents**



# New Resilience

STRATEGIC,  
MULTI-LEVER,  
ADAPTIVE  
APPROACH

Preventive - concentrate on what causes the majority of problems

Regulatory approach

Generate awareness or problems

Resilient networks (system view & response)

Collaborative industry & Govt and university

Strategic maintenance approach



# Risk Assessment Factor



# Risk Scale

h	Substantial efforts should be made to reduce the risk. Risk reduction measures should be implemented urgently within a define time period.
erate	Consideration should be as to whether the risks can be lowered to a tolerable level and preferably to an acceptable level but the costs of additional risk reduction measures should be taken into account.
w	No additional controls are required. Actions for further reduce these risks are assigned very low.



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