



**Asia-Pacific  
Economic Cooperation**

# **Submarine Cable Information Sharing Project:**

## **Legislative Practices and Points of Contact**

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Telecommunications and Information Working Group

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# **1. Introduction**

This report provides the outcomes of the Asia-Pacific Economic Cooperation Telecommunications and Information Working Group (APEC TEL) Submarine Cable Information Sharing Project.

Submarine communications cables have been a vital part of the global communications network since the first cable was laid across the English Channel in 1850. Modern submarine cables are highly advanced optical fibre lines with a multi-terabit-per-second carrying capacity and are responsible for the carriage of 95% of international communications worldwide.

The growing importance of cross-border communication to the economic and social wellbeing of all economies has accordingly increased both the benefits and vulnerabilities associated with submarine cables. Recent years have seen an exponential growth in the use of the internet for commerce, finance, education and entertainment, as well as a concurrent growth in international voice and video communications. The global reliance on submarine cables to facilitate the overwhelming majority of these exchanges increases the vulnerability of widespread adverse impacts to global economies in the event of a disruption to submarine cable operations.

Submarine cables, although technologically advanced, are susceptible to damage from natural disasters and human interference. For example, the Japanese earthquake and ensuing tsunami in March 2011 resulted in damage to five cable networks, affecting several Asian economies including China, Japan, Malaysia and the Philippines. Accidental breakages are not uncommon and can occur as a result of fishing nets or ship anchors becoming entangled in cables.

Cable disruptions can result in the complete loss of network transmission or, when redundancy or back-up capacity is available, reduced or congested network access. The ubiquitous reliance of businesses across industries on internet and international communications means that subsequent cascading impacts can result in severe and widespread economic loss. Significant costs, often in the hundreds of thousands of dollars, are also incurred in the repair and recovery of damaged cables. The broad-based importance of – and reliance on – submarine cables across economies has prompted many governments to class them as critical infrastructure, and prioritise initiatives to enhance their resilience and protection against possible threats.

Submarine cables by their nature and purpose are required to traverse through – and have landing points in – multiple international jurisdictions. Any single point in the submarine cable network is only as secure as that of its extremity and cable operation depends on the viability of its entire length - a breakage at one point will impact on the cable network as a whole. A coordinated,

effective response from cable operators and government authorities is essential in minimising unnecessary delay in repairs.

## 1.1 APEC TEL

APEC TEL aims to improve telecommunications and information infrastructure in the Asia-Pacific region by developing and implementing appropriate telecommunications and information policies, including relevant human resource and development cooperation strategies.

For many APEC member economies, the majority of internet connectivity relies on a relatively small number of cables, which consequently amplifies the potential impact of cable breakages. Internet access and international connectivity are vital to all APEC member economies. In recognition of this, the Security and Prosperity Steering Group of APEC TEL has been working to increase awareness and cooperation on the issue of submarine cable resilience since 2009.

APEC ICT Ministers have also recognised the importance of both submarine cable resilience and the work of APEC TEL in this regard. At the 8<sup>th</sup> APEC Ministerial Meeting on the Telecommunications and Information Industry (TELMIN 8) held in Okinawa, Japan in October 2010, APEC ICT Ministers stated that:

*“International submarine cables are an important enabler for regional economic integration. We acknowledge TEL’s continued efforts to enhance the protection of submarine cables by raising awareness about the criticality of this infrastructure and consolidating information to help economies to expedite cable repairs.”*

## **2. Background**

### 2.1 APEC TEL Submarine Cable Information Sharing Project

A Submarine Cable Information Sharing Workshop was held at APEC TEL 39 in Singapore during April 2009. The primary aims of this workshop were to:

- Identify the broader issues and implications of submarine cable outages; and

- Share information and procedures to enhance the resilience of submarine cables.

Workshop participants identified three specific activities that would assist coordinate APEC member economy submarine cable resilience activities, and minimise the impact of submarine cable outages. These activities are:

1. *The development of an inventory of legislative instruments and regulatory requirements relevant to submarine cables that operate in each economy.*

This list should include, but not be limited to, requirements for permit and licence applications, fees in place for repair, any protection zones and penalties for damage to cables, and any interaction with United Nations Convention on the Law of the Sea requirements.

2. *The compilation of a list of points of contact within each economy.*

As noted in the activity 1, coordination between APEC member economies, and between APEC member economies and submarine cable owners and operators, is crucial to the ability to launch an expedited, timely response to a cable disruption. The ability to engage with the relevant authorities in a timely manner is vital. As part of this project economies have been requested to identify points of contact which would be able to be approached in cases of actual or suspected piracy, terrorism or like emergency, as well as for issues relating to permits and licensing. Many economies do not have a single point of contact which has authority over all of these issues and, in these cases, economies were able to provide multiple contacts.

3. *Raising awareness at Ministerial levels of the importance of submarine cables and the impact and attendance cost to economies of outages.*

Ministerial level engagement will help ensure that appropriate efforts to minimise the impact of submarine cable outages are pursued in all economies.

Activities 1 and 2 are the subject of this report and will promote a greater understanding of the international legal framework, facilitate the flow of information between regulatory and industry stakeholders and streamline the approach to submarine cable issues. Furthermore, the working relationships between government and industry will be enhanced and may be used to determine the causes of outages and potentially allow economies to institute coordinated preventative measures.

Australia, in consultation with APEC member economies and the International Cable Protection Committee, developed and forwarded a questionnaire to gather information on legislative and

regulatory regimes in APEC member economies with respect to submarine cables, as well as key points of contact within APEC member economies for submarine cable issues.

### **Resource Kit - Inventory of Legislative Instruments and Regulatory Requirements**

The inventory of legislative instruments and regulatory requirements from APEC member economies gathered by the questionnaire and subsequent consultations is attached to this report at **Appendix A**.

### **Point of Contact List for APEC Member Economies**

The list of points of contact is attached at **Appendix B**.

### **The Questionnaire**

The questionnaire that was developed to collect data from APEC member economies is attached at **Appendix C**.

## **3. Key Findings**

The submarine cable questionnaire was distributed to APEC member economies with the aim of developing a guide to assist member economies in being able to directly respond to, and coordinate the repair of submarine cable damage, as well as seeking to prevent the initial damage. The information gathered is intended to encourage greater cooperation between member economies of the region and lead to a streamlined approach to submarine cable outage issues. Eight member economies respond to the questionnaire that was circulated:

- Australia
- Hong Kong, China
- Republic of Korea
- Malaysia
- New Zealand
- Singapore
- Chinese Taipei
- Thailand

In line with the outcomes of the Submarine Cable Information Sharing Workshop, the questionnaire was designed to gather information from four broad categories.

- *Category 1 - UNCLOS*: indicates whether each economy is a party to the United Nations Conventions on Law of the Sea (UNCLOS) and whether legislation has been implemented to give force to the relevant provisions.
- *Category 2 - Legislative framework*: gives an overview of the legislation in each individual economy governing submarine cables.
- *Category 3 - Installation and protection*: provides an assessment of rules and regulations covering the installation and protection of submarine cables, as well as any active steps economies have taken with regard to implementing active protection regimes.
- *Category 4 - Economic contribution*: outlines the economic impact and social value of submarine cables to member economies.

From the four thematic categories, the following key findings were drawn:

- Of the eight APEC member economies that responded to the questionnaire, six (Australia, Korea, Malaysia, New Zealand, Singapore and Thailand) indicated that they are a State Party to UNCLOS and that four economies (Australia, Hong Kong, China, New Zealand and Chinese Taipei) have enacted a legislative framework specifically for the management of submarine cables.
- Five economies (Australia, Hong Kong, China, Korea, New Zealand and Singapore) have established criminal penalties for submarine cable damage. Two economies (Australia and New Zealand) have established submarine cable protection zones and two more economies (Korea and Chinese Taipei) have provisions within their legislature for the creation of protection zones, although they are yet to be enacted.
- Of the eight economies that provided responses to the questionnaire, six (Australia, Korea, Malaysia, New Zealand, Singapore and Thailand) indicated that they estimate more than 90% of their international communications traffic is carried by submarine cables and emphasised the importance they play in connecting the region. Only two economies (Australia and Hong Kong, China) have formally assessed the economic value of submarine cables.

The questionnaire sought to establish a single point of contact for submarine cable owners and operators in cases of actual or suspected piracy, terrorism or like emergency. Where a single point of contact was not available, member economies were encouraged to supply details of additional contacts, especially those government agencies that have responsibility for regulatory and repair matters.

## **4. Summary**

The high quality of the responses gathered through the questionnaire serves to emphasise the scope for further work within APEC TEL and to encourage more economies to provide information on their submarine cable protection arrangements. The development of the point of contact list is a tangible outcome of the project as it will assist member economies facilitate the maintenance and repair of submarine cables, in a more streamlined and timely manner. It should be noted though that the resources developed through this project (the Resource Kit and Point of Contact List) should be maintained for currency and ongoing use.

As determined through the outcomes of the Submarine Cable Information Sharing Workshop held at APEC TEL 39, member economies should make the outcomes of the project available to industry where appropriate.



## **APEC TEL Submarine Cable Information Sharing Project**

A Resource Kit of legislative instruments and regulatory requirements of APEC member economies.

### Legislative framework

- Legislative instruments that contain provisions which govern the permits/licensing process for submarine cables, submarine cable protection regimes, relevant criminal offences and civil causes of action, or any other submarine cable matters.

### Licensing and approval

- Procedures required to lawfully install and/or operate submarine cables within the economy's territorial waters or connecting to the economy's coastline.
- Relevant government agencies and processes involved in applying for the necessary permits or licenses, and any other preliminary regulatory process (e.g. environmental sustainability checks).

### Offences for damage / Protection zones

- Criminal offences or created any civil causes of action for intentional or negligent damage to submarine cables.
- Where no submarine cable-specific offences exist, noted whether legal action can be taken under any other general tort-based or offence-based provisions (e.g. trespass).
- Cable protection zone schemes, or any other protection systems in place and their operational and enforcement frameworks.

### Mapping requirements

- Mandatory requirements for cable operators to ensure that their cables are included on maritime navigational charts, or voluntary mechanisms through which they arrange their inclusion.

### Other economic or political issues and engagement

- Other relevant economic or political issues including: anticipated or proposed legislative amendments, upcoming cable installation projects, military exercises for submarine cable protection, or assessment of the importance of submarine cable infrastructure to the economy.

**Legislative Instruments and Regulatory Framework of APEC Member Economies**

Economy	Legislative Framework	Licensing and approval	Offences for damage / protection zones	Mapping requirements	Economic/political issues/engagement
<p><b>Australia</b></p> <p>Ratified UNCLOS in 1994</p>	<ul style="list-style-type: none"> <li>➤ <i>Telecommunications Act 1997, Schedule 3A (Telecomm Act)</i></li> <li>➤ <i>Submarine Cables and Pipelines Protection Act 1963 (SCPPA)</i></li> <li>➤ <i>Environment Protection and Biodiversity Conservation Act 1999</i></li> <li>➤ Various state and territory Acts</li> </ul>	<p>The Australian Communications and Media Authority (ACMA) administers the issue of permits to install cables within Australian waters. Consultation with the Department of Sustainability, Environment, Water, Population and Communities may be necessary under some circumstances.</p> <p>No permit is required to repair or maintain a submarine cable within the territorial sea or EEZ unless the work crosses a Defence practice area.</p>	<p>Three protection zones have been declared under the Telecomm Act – two off the coast of Sydney (east coast) and one off the coast of Perth (west coast). The Telecomm Act contains a number of offences relating to damaging cables within these zones.</p> <p>The SCPPA contains offences relating to Australian vessels within the Australian EEZ or on the high seas.</p>	<p>There are no mandatory requirements for the routing/placement of submarine cables on nautical charts. However, the Australian Hydrographic Service maintains and provides charts for mariners and these charts have cable protection zones and cables marked.</p>	<p>Recent review conducted into Schedule 3A of the <i>Telecomm Act</i>; Government is considering next steps.</p> <p>Several projects concerning submarine cable resilience are currently being progressed by the Attorney-General's Department, including information gathering, resilience modelling and ongoing consultation with cable operators and other involved parties through the Trusted Information Sharing Network (TISN) for Critical Infrastructure Resilience.</p> <p>Submarine cables convey 99% of Australia's international communications.</p>

Economy	Legislative Framework	Licensing and approval	Offences for damage / protection zones	Mapping requirements	Economic/political issues/engagement
<b>Hong Kong – China</b>	➤ <i>Submarine Telegraph Ordinance (Chapter 497 of the Laws of Hong Kong China)</i>	There is a defined mandatory process for the installation and repair of submarine cables within its territorial waters. It is the responsibility of cable owners to assess potential risks to submarine cables. The point of contact is the Office of the Telecommunications Authority.	Existing regulations allow vessels to only anchor in areas that do not contain submarine cables.	All known submarine cables are mapped onto Hong Kong, China’s navigational charts.	The Marine Police regularly participate in counter-terrorism exercises linked to attacks on critical infrastructure, including submarine cables.  In 2009 the Government of Hong Kong, China commissioned a report on the economic contribution of submarine cables to the economy, find that such cables make a significant contribution to key industries in the economy such as financial services, trading, logistics and tourism, and carry over 99% of international telecommunications traffic.
<b>Republic of Korea</b>  Ratified UNCLOS in 1996	➤ <i>Telecommunications Business Act 2007 (the Act)</i>	Before the installation of cables, a survey must be carried out by the Ministry of Land, Transport and Maritime Affairs (priced on a cost recovery basis) and an official application must	Articles 59 and 60 of the Act stipulate imprisonment of up to five years or a fine of KRW 200 million for negligent or wilful damage to submarine cables.	No mandatory mapping requirements although major telecommunications operators often voluntarily mark the location of cables on nautical charts.	Korean authorities conduct an annual military exercise (Eulji Focus Lens) relating to the protection of submarine cables.

Economy	Legislative Framework	Licensing and approval	Offences for damage / protection zones	Mapping requirements	Economic/political issues/engagement
		<p>be submitted to the Ministry.</p> <p>Repair of cables within the territorial sea and EEZ requires authorisation from the maritime policy and the Ministry of National Defence.</p>			
<p><b>Malaysia</b></p> <p>Ratified UNCLOS in 1996</p>	<p>➤ <i>Exclusive Economic Zone Act 1984</i> (EEZ Act)</p>	<p>Installation and maintenance in Malaysian waters and the EEZ requires government permission under the EEZ Act. This Act is administered by the National Security Council. The relevant point of contact within the Council is the Maritime and Sovereignty Division.</p> <p>Automatic Identification System or Vessel Monitoring Systems are a requirement and are provided by the Marine Department.</p>	<p>– Unknown –</p>	<p>Cable operators must register the location of submarine cables on the charts of the Malaysia Hydrograph Department and the United Kingdom's Admiralty Charts.</p>	<p>Malaysian authorities have identified a need to liaise with relevant agencies to better protect submarine cables.</p> <p>Options to be considered include protection zones, increasing awareness within the shipping community and improving monitoring and enforcement more generally.</p>

Economy	Legislative Framework	Licensing and approval	Offences for damage / protection zones	Mapping requirements	Economic/political issues/engagement
<p><b>New Zealand</b></p> <p>Ratified UNCLOS in 1996</p>	<p>➤ <i>Submarine Cables and Pipelines Act 1996</i> (administered by the Ministry for Transport)</p>	<p>There is no defined mandatory process for obtaining permission for cable installation/repair within territorial waters.</p> <p>No permission required to undertake installations/repairs outside territorial waters.</p>	<p>Criminal penalties for damage to submarine cables caused by people or ships.</p> <p>Coastal police are responsible for patrolling the area and charging offenders. Prosecutions are overseen by the Ministry of Transport.</p>	<p>Mandatory requirements for the routing of all submarine cables to be mapped onto New Zealand's navigational charts</p>	<p>The Ministry of Economic Development works on submarine cable-related policy.</p>
<p><b>Singapore</b></p> <p>Ratified UNCLOS in 1994</p>	<p>➤ <i>Maritime and Port Authority of Singapore Act</i></p> <p>➤ <i>Telecommunications Act</i></p>	<p>The Infocomm Development Authority (IDA) of Singapore is the single point of contact for submarine cable operators.</p> <p>Applications for permission to install cables within territorial waters are submitted to the Maritime and Port Authority of Singapore (MPA). MPA must confirm receipt of applications within 3 days.</p> <p>MPA permission is required before the repair of any cables take place within Singaporean waters.</p>	<p>There are no-anchorage zones under the Traffic Separation Scheme in the Straits of Malacca and Singapore.</p>	<p>Details of all complete submarine cables must be provided to the Maritime and Port Authority of Singapore so that nautical charts may be updated.</p> <p>Information from Automatic Identification/Vessel Monitoring Systems regarding positioning or identification of ships can be provided on request.</p>	<p>More than 95% of Singapore's international communications are carried by submarine cables.</p> <p>Regular exercises aimed at countering terrorism, piracy and illegal anchoring are conducted – these have the scope to also protect submarine cables.</p>

Economy	Legislative Framework	Licensing and approval	Offences for damage / protection zones	Mapping requirements	Economic/political issues/engagement
<b>Chinese Taipei</b>	<p>➤ <i>The Law on the Exclusive Economic Zone and the Continental Shelf of Chinese Taipei and the Regulations of Permission on Delineation of Course for Laying, Maintaining or Modifying Submarine Cables or Pipelines on the Continental Shelf of Chinese Taipei</i> (Submarine Cables or Pipelines Law)</p>	<p>Owners of submarine cables must assess risks posed to the cables by human activity and submit an analysis report to the Ministry of the Interior for examination.</p>	<p>The Submarine Cables or Pipelines Law has established areas around landing points of submarine cables as “no anchoring zones”.</p>	<p>No mandatory mapping requirements.</p>	<p>There are intentions to review and amend the Submarine Cables or Pipelines Law to establish criminal penalties for injury/damage to submarine cables caused by wilful misconduct or culpable negligence of ships and persons subject to its jurisdiction.</p>
<p><b>Thailand</b> Ratified UNCLOS in 2011</p>	<p>➤ <i>Telecommunications Business Act 2006</i></p>	<p>A licence to land a submarine cable in Thailand must be granted by the National Telecommunications Commission.</p> <p>Further, permits to install/repair submarine cables within the territorial sea must be obtained from the Department of Fisheries, the Marine Department and the relevant Local Governor. The Navy and</p>	<p>No protected zones or criminal offences for damaging submarine cables.</p>	<p>It is the responsibility of submarine cable operators to inform the Naval Hydrographic Department of the routing and placement of cables so that they may be mapped onto Thailand’s navigational charts.</p>	<p>Around 90% of international communications from Thailand are carried on submarine cables. Thai authorities use Economic Rate of Return to evaluate the economic and social value of submarine cables on the Thai economy,</p>

Economy	Legislative Framework	Licensing and approval	Offences for damage / protection zones	Mapping requirements	Economic/political issues/engagement
		<p>Department and Mineral Fuels must also be informed.</p> <p>An Environmental Impact Assessment must also be provided to the Office of Natural Resources and Environmental Policy.</p> <p>There is no official regulation regarding permission to install/repair cables outside Thailand's territorial waters.</p>			

## Points of Contact for Submarine Cable Owners and Operators

### APEC Member Economies

The following template has been developed for use by APEC member economies to provide details of a single point of contact within their economy for submarine cable owners and operators to contact in cases of actual or suspected piracy, terrorism or like emergency. Where an APEC member economy does not have a single point of contact for these matters, additional contacts may be provided. APEC member economies may also wish to provide point/s of contact for repair or regulatory matters.

<b>Economy</b>	<b>Agency</b>	<b>Contact</b>	<b>Role of agency</b>
Australia	The Australian Customs Service Hotline, Customs and Border Protection Service	<u>Telephone:</u> +61 3 9244 8973 (outside Australia) or 1800 06 1800 (within Australia)  <u>E-Mail:</u> <a href="mailto:nmc@customs.gov.au">nmc@customs.gov.au</a>	Protects Australia's border and maritime security – emergency point of contact in case of submarine cable damage or sabotage.
	Australian Communications and Media Authority (ACMA)	<u>Telephone:</u> +61 3 9963 6800 (outside Australia) or 1300 856 337 (within Australia)  <u>E-Mail:</u> <a href="mailto:subcablesenquires@acma.gov.au">subcablesenquires@acma.gov.au</a>	Administers submarine cable and telecommunications licensing and permits.
Hong Kong, China	Office of the Telecommunications Authority (OFTA)	<u>Telephone:</u> +852 2961 6683  <u>E-Mail :</u> <a href="mailto:submarine_cable@ofta.gov.hk">submarine_cable@ofta.gov.hk</a>	Assist parties who are interested in obtaining statutory approvals for laying submarine cables and landing them at an existing cable landing station (CLS), or to build a new CLS.



**Attachment B**

<b>Economy</b>	<b>Agency</b>	<b>Contact</b>	<b>Role of agency</b>
	Office of the Telecommunications Authority (OFTA)	<p><u>Telephone:</u> +852-2961 6218, +852-2961 6217 (fixed) +852-6392 9536, +852-6392 9157 (mobile)</p> <p><u>E-Mail :</u> <a href="mailto:outage@ofta.gov.hk">outage@ofta.gov.hk</a></p>	Emergency point of contact for outage reporting of telecommunications networks and services including submarine cable systems.
Japan	Ministry of Internal Affairs and Communications	<p><u>Telephone:</u> +81-3-5253-5929</p>	<u>Telephone:</u> +81-3-5253-5929
Republic of Korea	The Ministry of Information and Communication: the Telecommunications Infrastructure Policy Division, Bureau of the Korea Communications Commission.	<p><u>Telephone:</u> +82 2 750 1114</p> <p><u>E-Mail:</u> <a href="mailto:webmaster@kcc.go.kr">webmaster@kcc.go.kr</a></p>	Legislative and regulatory body.
Malaysia	The National Security Council, The Maritime and Sovereignty Division.	<p><u>Telephone:</u> +60 3 88726817</p> <p><u>E-Mail:</u> <a href="mailto:webmaster@mkn.gov.my">webmaster@mkn.gov.my</a></p>	National security and Legislative body.
	The Prime Minister's Department, The Malaysian Maritime Enforcement Agency	<p><u>Telephone:</u> +60 3 8995 7000</p> <p><u>Hotline Telephone:</u> +60 3 8943 4001</p>	Enforcement of law and order in the Malaysian Maritime Zone
New Zealand	The Ministry of Transport	<p><u>Telephone:</u> +64 4 439 9000</p> <p><u>E-Mail:</u></p>	Administers the <i>Submarine Cables and Pipelines Act 1996</i> .

**Attachment B**

Economy	Agency	Contact	Role of agency
		<a href="mailto:info@transport.govt.nz">info@transport.govt.nz</a>	
	The Ministry of Economic Development	<u>Telephone:</u> +64 4 472 0030  <u>E-mail:</u> <a href="mailto:Firstname.lastname@med.govt.nz">Firstname.lastname@med.govt.nz</a>	Policy issues related to submarine cables
Singapore	The Infocomm Development Authority (IDA)	<u>Telephone:</u> +886 2-2356-5000  <u>E-mail:</u> <a href="mailto:info@ida.gov.sg">info@ida.gov.sg</a>	The IDA is a policy and regulation body.
Chinese Taipei	The Point of Contact (PoC) falls under the Ministry of the Interior. The PoC is the Territorial Administration Section, Department of Land Administration.	<u>Telephone:</u> +886 2-2356-5000  <u>E-mail:</u> <a href="mailto:service@minister.moi.gov.tw">service@minister.moi.gov.tw</a>	The regulating authority for land administration on behalf of the central government.
Thailand	The National Telecommunications Commission	<u>Telephone:</u> +66 2271 0151  <u>E-mail:</u> <a href="mailto:1200@ntc.or.th">1200@ntc.or.th</a>	Legislative and regulatory body.
	The Royal Thai Navy.	<u>Telephone:</u> +66 2 475-5149  <u>E-mail:</u> <a href="mailto:webservice@navy.mi.th">webservice@navy.mi.th</a>	For emergency matters.

## SECURITY AND PROSPERITY STEERING GROUP

### SUBMARINE CABLE INFORMATION SHARING: BACKGROUND AND QUESTIONNAIRE

#### Context

Submarine cables have been important in communications transmission since the late 19<sup>th</sup> century. All economies are becoming increasingly reliant on submarine communications cables to enable and support economic, financial, trade and social activity. Consequently, the role of submarine communication cables and the impact of outages need to be better understood by economies and industry alike. Submarine communications cable outages represent a key point of critical vulnerability for each economy.

At APEC-TEL 38 (Lima, Peru), Australia put forward a proposal to run an Australian sponsored workshop and information sharing session on the protection of submarine communication cables.

Subsequently, The Submarine Cable Information Sharing Workshop was held on Monday, 13 April 2009 in Singapore at APEC TEL 39. The primary aims of the workshop were to:

- share information and procedures for the protection of submarine communication cables; and
- identify the broader issues and implications of submarine cable outages.

The workshop agreed on three areas in which the TEL could contribute to expedite cable repairs and the subsequent SPSG meeting agreed to form a virtual working group of representatives from APEC economies.

#### APEC TEL 39 Workshop Conclusions

Attendees at the information sharing workshop came to a consensus view that the following activities would assist to minimise the impact of submarine communications cable outages.

1. The development of an information resource containing important information of each economy's submarine communications cables. This would be achieved through surveying APEC TEL economies to request the nomination of a designated point of contact within each economy to coordinate/facilitate the stakeholder community in each economy.

The designated point of contact would be the contact for submarine communication cable operators in cases of actual or suspected piracy, terrorism or like emergency. The point of contact could be alerted where the impact of the submarine cable outage is likely to affect a significant proportion of communications or where restoration is of a time critical nature.

This would be complemented by a designated position within each submarine cable owner and operator organisation, which would similarly facilitate the flow of information relating to cable outages to other industry stakeholders.

2. The development of an inventory of legislative instruments and regulatory requirements relevant to submarine communication cables that operate in each economy for inclusion in the information resource described in 1. above. The document would list the permits, licenses, fees in place for repair, penalties and details of the inspection regime in each economy. For example:

- What domestic legislation is in place relating to submarine cables? What are the penalty provisions?
  - What permits, licenses, fees or other requirements are in place for repair of submarine communication cables, within and outside territorial waters?
  - What are the periodic inspection requirements for cable repair ships?
  - What inspections are required each time a repair ship enters territorial waters?
3. Raising awareness at Ministerial levels of the importance of submarine communications cables and the impact and attendant cost to economies of outages. Ministerial level engagement will help ensure that appropriate efforts to minimise the impact of submarine communications cables outages are pursued in all economies.

Closer working relationships, both between economies and between economies and industry, may also assist with determining the cause of outages and to address them in a timely fashion.

The SPSG approved these follow-up activities, noting that economies need to advance this work together.

The SPSG also noted possible synergies with other APEC working groups. Further synergies within APEC more broadly may be identified to assist other working groups to raise awareness and address issues associated with submarine communications cables.

These outcomes were accepted at the plenary session.

## **Progress**

1. A call for nominations for APEC economies' point of contact.
2. Submarine cable operators have provided input to the questionnaire.
3. A secure wiki style virtual community on the web has been established to enhance industry collaboration and to coordinate group activities such as developing template to gather information from APEC economies.

### ***Sub Cable information sharing Wiki Community***

Community Name: APEC TEL Virtual Working Group on Submarine Cable Information Sharing (ATVWGSCIS).

Community URL: <https://www.govdex.gov.au/confluence/display/ATVWGSCIS/>

Community access is controlled by group membership.

4. In the Okinawa Declaration released at TELMIN 8, Ministers recognised the importance of submarine cable infrastructure and encouraged APEC TEL to raise awareness about the criticality of this infrastructure and consolidate information to help economies to expedite cable repairs.

## **Timeline:**

The information resource will finalised by the APEC TEL 43 meeting.

## **Next Steps**

1. **The questionnaire**

To prepare for the workshop and assist in identifying key issues for the proposed Strategic Plan, Australia requests that each APEC economy complete the attached questionnaire on approaches to submarine cable issues. The questionnaire seeks information on existing legislation and regulations, industry codes and standards, and government/industry initiatives that can be used as input for the development of the Strategic Plan.

The questionnaire is at **Attachment A** below.

It is intended that the information resource to be produced with the questionnaire results will be presented at APEC TEL 43. This will provide the APEC TEL with an opportunity to:

- discuss the questionnaire results;
- examine existing best practices and arrangements to continue to share such information;
- tentatively agree on a continuation of submarine cable information sharing activity; and
- ascertain whether there is interest for a work stream to continue on this activity.

## **2. The outcome**

Input gathered from both the questionnaire and the workshop will be used to develop a repository of submarine cable information and point of contacts for each economy.

The outcome of this activity will be in the form of APEC TEL paper, presentation and information stored in secure online wiki for ease of access.

## The Submarine Communication Cables Questionnaire

1. Is the Economy a State Party to UNCLOS and if so, has the Economy introduced Legislation that implements the provisions of UNCLOS regarding submarine cables (eg. Articles 58. 78. 79. 112-115)? If so, please provide a copy of its current laws and regulations.
2. If that legislation is more than 5 years old, is there an intention to update those laws within the near future? If so, please advise the nature and scope of the proposed update.
3. Does the Economy have laws and regulations that establish criminal penalties for injury/damage to submarine cables caused by wilful conduct or culpable negligence of ships and persons subject to its jurisdiction? If so, please provide a copy of those laws and regulations, including advice on the range of jail sentences and fines that can be imposed in each case.
4. Have protection zones to protect submarine cables been established within the Economy's Territorial Sea? If so, please provide details of activities prohibited, restricted or allowed within these zones, and the methods of enforcing/encouraging compliance.
5. What detailed measures and resources does the Economy maintain and apply for the enforcement of its laws and regulations for the protection of submarine cables?
6. Is there a mandatory requirement for the routing/placement of all submarine cables to be mapped onto the Economy's navigational charts?
7. Is there a defined process for the issuing of permits to survey and install a submarine cable within the Territorial Sea? If so, please provide a flow chart of the permitting process, together with indicative and prescribed maximum times each step should take, and estimated fees or costs.
8. Is the Economy's permission required to install submarine cables beyond its Territorial Sea? If so, please advise the legal basis for this.
9. Is the Economy's permission required for the repair of operational submarine cables within its Territorial Sea? If so, please advise details of the process, including estimated and prescribed maximum times for providing permission and any fees, notification contacts, notification requirements and advise any other conditions that may be applied to the repair vessel during the repair activity. Please also provide a copy of current laws and regulations that relate to this process.
10. Is the Economy's permission required for the repair of operational submarine cables outside of its Territorial Sea and within the EEZ? If so, please advise the legal basis for this.

11. Does the Economy assess the economic and social value of the international submarine cables to its economy? If yes, please advise how these values were determined?
12. What is the estimated percentage of the Economy's international communications and /or electricity that are carried by submarine cables?
13. Has the Economy assessed the risk posed to international submarine cables by human activities (e.g. ships' anchoring, fishing, dredging) and natural hazards (e.g., earthquakes, river floods, storms)?
14. Does the Economy have a designated single point of contact for submarine communications cables in cases of actual or suspected piracy, terrorism or like emergency (If yes please provide details of this contact).
15. Does the Economy ensure that ship position and identification information from AIS or VMS is made available to cable operators to assist with the protection of submarine cables from anchor damage?
16. Has the Economy participated in military and/or policing exercises to protect cables from hostile actions being carried out by pirates or terrorists? If so, please indicate whether those exercises have been on a domestic and/or multilateral international basis, with an indication of their frequency.