

UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

Asia-Pacific Information Superhighway (AP-IS) Private Sector Consultative Meeting

1 April 2016

Bangkok

Concept Note

The Asia-Pacific Information Superhighway (AP-IS) is an on-going initiative, supported by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) secretariat to improve regional broadband connectivity, through a dense web of open access cross-border infrastructure. The primary focus of the Information Superhighway is the development of international and regional backbones, but as they traverse many countries, they may open up secondary markets for shorter national or subregional backbone routes.

The Information Superhighway aims to promote the principle of open access and transparency of pricing for the ultimate purpose of increasing coverage, availability, reliability and affordability of broadband access for all across the region. The Information Superhighway will utilize the ‘Asian Highway’, wherever appropriate, to provide both intra-regional and intercontinental connectivity via a seamless regional network of optic fibre cables. This will help drive international bandwidth prices down, increasing resilience by offering redundancy, decreasing latency across the region and improving affordability. It will create conducive environment to reform the cross-border connectivity and bandwidth trading policies. As a result, the regional and international carriers will gain unfettered access to the Asian markets

The AP-IS Working Group was established by ESCAP resolution 70/10 and the first meeting of the Working Group was held in September 2015 in Incheon, Republic of Korea. In support of the AP-IS in general and Working Group in particular, ESCAP has conducted a number of analyses and feasibility studies with respect to the existing and missing links, estimating demand for broadband services, internet traffic management in South and West Asia, Central Asia and ASEAN countries, in collaboration with other agencies such as ADB and the Internet Society (ISOC). In collaboration with ITU, ESCAP also updates the map of the AP-IS networks in the region. In addition, a Steering Group is being established to develop the AP-IS Master Plan which details the principles, deliverables and regional cooperation framework. The outcome of the Working Group meeting and the Master Plan will be presented to the Committee on ICT and Science, Technology and Innovation, to be held from 5-7 October 2016 in Bangkok.

The highlights of the studies and analysis done by ESCAP in the three (3) regions - South and West Asia, Central Asia and ASEAN are summarized as follows:

a. Central Asia+5 countries

Central Asia+5 countries have done relatively well in the telecommunications sector, notably in mobile communication through improved coverage and availability of affordable devices. The high mobile penetration rates indicate the mobile is naturally becoming the driver of Internet adoption. However, within the sub-region there is a significant variation in Internet adoption. The slow adoption of Internet and fixed broadband, in particular, has been mainly caused by the high prices of the services. Most of these countries heavily depend on their neighbors for access to international bandwidth, with the exception of Pakistan and Georgia. Pakistan, along with Iran, has the potential to provide access to international submarine cables and offer greater bandwidth to the sub-region. The sub-region has interconnected terrestrial cable networks running through them and examples include the Trans Asia Europe (TAE) line, the Europe-Persian Express Gateway (EPEG), and the Trans-Eurasian Information Superhighway (TASIM). These terrestrial cable systems are

important developments for the sub-region in terms of alternative routes to existing ‘Choke points’ in the current undersea cable system and give rise to the possibility of creating high-capacity pan-subregional networks.

b. ASEAN countries

ASEAN countries have made extensive investments in fibre and other broadband infrastructure (domestic as well as international). However, a wide gap in the level of access and services exists among the ASEAN countries. The initiative of ASEAN ICT Master plan 2015 has a number of projects carried out to address these problems. One observation is that the average Internet speed in ASEAN as a whole falls below the world average except Singapore and Thailand. Countries such as Cambodia, Indonesia, Myanmar, Viet Nam and Lao PDR may require additional investments to expand domestic networks. The study further recommends the establishment of regional Internet traffic exchange connectivity to contain local traffics within the region and keep the cost of traffic flow lower through at least three proposed Neutral Regional IXPs connected to each other by dual ring. The study also proposes interconnection with countries in/out of the region as well as other continents and multiple POPs associated with Neutral Regional IXPs establishment.

The submarine cable network in the ASEAN region is significantly expanded and submarine capacity within the region is expected to be adequate to meet the emerging demand. However, the study identified possible missing trans-border terrestrial links, such as

- Indonesia-Malaysia and Malaysia-Indonesia link, direct terrestrial connectivity between the two countries is yet to be established.
- Link between Lao PDR to Yunnan Province, China, would improve Lao PDR’s weak international connectivity by having access to China’s international fiber optic infrastructure.
- There is existing fibre infrastructure between VietNam and China, but it does not pass through Yunnan Province. Linking Yunnan Province will provide a much shorter route to access China’s international fiber than the existing one.

c. South and West Asia

A detailed analysis of telecommunications, Internet markets and broadband infrastructure in nine countries (Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan, Sri Lanka and Turkey) reveals a sharp disparity among these countries; some countries have sufficiently developed market and infrastructure, while the others don’t. The bandwidth inequality in the sub-region is attributed to inequalities in the penetration, quality and affordability of consumer telecommunications and broadband services, the availability of new technology, and the overall development of telecommunications and Internet markets. Such disparity in bandwidth in the sub-region is detrimental to economic growth, social development and social integration. Both fixed and mobile broadband infrastructures are limited in South Asia, in general.

India and Iran enjoys excellent international connectivity with India having 11 major interregional submarine systems. Two landlocked countries, Bhutan and Nepal, are entirely dependent on India for international submarine connectivity. While Bangladesh exports bandwidth to India through terrestrial fiber optic link to serve the Indian northeastern states, it has limited international connectivity. Bangladesh also imports bandwidth India to backup its international connectivity. These cross-border terrestrial links have added resilience to both the countries international connectivity. Maldives is served by only two international links. Although Pakistan is connected to three major intercontinental submarine cable systems and a fourth regional submarine system, its terrestrial connectivity to neighbours is still under development. Sri Lanka has given the country efficient access to intercontinental connectivity.

d. Pacific

Reforms in the telecommunications sector in the Pacific islands have resulted in a major expansion of connectivity. The impact of mobile phones and internet access has been widespread among Pacific populations with benefits including better access to health, education, market information, financial services and information at times of natural disasters. Until a decade ago, ICT (telecommunications) services—fixed & mobile telephones and internet access—in the Pacific Islands were typically provided through government-owned telecom monopolies. Services were generally expensive and only a few—mostly in the urban centres—had access. However, in the early 2000s, several Pacific island governments (Fiji, Papua New Guinea, Samoa, Tonga and Vanuatu followed by others) opened up their telecommunications markets resulting in a major expansion in ICT connectivity.

The impact has been predominantly positive and shows the potential of ICT to overcome the tyranny of distance and isolation that frustrates the pursuit of inclusive sustainable development in the small and geographically scattered Pacific islands. Despite the good progress, Pacific islands need to catch up with other ESCAP sub-regions in terms of meaningful access to internet connectivity (fixed-broadband). The Pacific islands (excluding Australia and New Zealand) are behind most ESCAP sub-regions with the exception of South and South-West Asia. The key to continuing success is private sector investment and a credible pro-competitive regulatory regime. Recent development in the expansion of the Southern Cross Cable fibre optic network to Tonga in 2013 has provided new business opportunities. Other Pacific island countries are in the process of connecting as well although it is still early days to realize any significant benefits.

Consultative Meeting Objectives

- a. Inform the participants of the ESCAP's Asia-Pacific Information Superhighway (AP-IS) and ESCAP's research findings in the Asia-Pacific region;
- b. Discuss the missing infrastructure links, network and Internet traffic management and e-resilience to increase availability, reliability and affordability of broadband access and services;
- c. Identify countries (especially land-locked countries) and sub-regions that could benefit from the opportunities that maybe availed by private sector through investment in the infrastructure development; and
- d. Discuss policy and regulatory constraints and opportunities among respective countries and sub-regions, which could be addressed through the AP-IS and regional cooperation platforms.

Expected Participants

Private sector companies which are specialized in developing and managing terrestrial and submarine cable networks. The list of expected participants is attached in *Annexure-1*.

Date and venue: 1 April 2016, Room G, UNCC, Bangkok

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Tentative Programme

Friday 1 April 2016	
9:15 – 9:45	<p>Session 1: Introduction to Asia-Pacific Information Superhighway</p> <p><i>Objective: Introductory information on Asia-Pacific Information Superhighway.</i></p> <p><i>Opening Speech:</i> Ms. Shamika Sirimanne, Director, ICT and Disaster Reduction Division, ESCAP</p> <p><i>Presentation on the Asia-Pacific Information Superhighway,</i> Ms. Atsuko Okuda, Chief, IDS/IDD</p>
9:50 – 11:05	<p>Session 2: Findings on the ICT connectivity in the ESCAP region.</p> <p><i>Presentations:</i></p> <ol style="list-style-type: none">1. Presentation on the findings of ESCAP report, Mr. Michael Ruddy, Terabit Consulting (10 – 15 minutes)2. Presentation on the findings of ESCAP report, Mr. Benoit Felten, Consultant (10 – 15 minutes)3. Pre-feasibility study on Asia-Pacific Information Superhighway in the ASEAN region, Mr. Young Ro Lee, National Information Society Agency, Republic of Korea (20 minutes)4. Presentation on possible financing for AP-IS missing link cross-border terrestrial fiber optic, Mr. Darlington, IFC, World Bank (10 minutes)5. Q & A <p>Facilitator: Mr. Abu Saeed Khan</p>
11:05 – 11:20	COFFEE BREAK
11:15-12:00	<p>Session 3: Private Sector Views on Missing Links and ICT Infrastructure Development</p> <p><i>Objective:</i></p> <ol style="list-style-type: none">a. <i>Participants' plans on the construction of the missing link and backbone networks.</i>

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/云报告?reportId=5_3434

