



# Economic and Social Council

Distr.: General  
3 August 2016  
Original: English

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## Economic and Social Commission for Asia and the Pacific

Committee on Information and Communications Technology, Science, Technology and Innovation

### Fourth session

Bangkok, 5-7 October 2016

Item 3 of the provisional agenda \*

### Asia-Pacific Information Superhighway Regional Cooperation Framework Document

## Asia-Pacific Information Superhighway Regional Cooperation Framework Document

Note by the secretariat [UNEDITED/DRAFT VERSION]

### *Summary*

As per the ESCAP resolution 71/10, the first meeting of the Asia-Pacific information superhighway (AP-IS) Working Group was organized in September 2015 in Incheon, Republic of Korea. It agreed to develop the AP-IS Master Plan as well as Regional Cooperation Framework document. Subsequently, the AP-IS Steering Group was formed to develop the documents which were designed to reinforce each other. This Regional Cooperation Framework Document aims to identify areas of cooperation between the member countries, in particular how they can cooperate and collaborate at the regional and sub-regional levels in support of the implementation of the Asia Pacific Information Superhighway (AP-IS) Master Plan. It aims to identify norms and principles in developing and implementing the AP-IS Master Plan as well as modality and processes of associated regional cooperation among the ESCAP member countries and various organizations at the regional and sub-regional levels. The Regional Cooperation Framework Document also includes various potential cooperation and financing modalities, with examples, in considering ICT infrastructure development in the Asia-Pacific region. This document was reviewed and endorsed at the second meeting of the AP-IS Working Group in Guangzhou,

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\* E/ESCAP/CICT(4)/L.1.

China, from 29 to 30 August 2016 and is presented to the Committee for endorsement.

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## **I. Introduction**

1. This Regional Cooperation Framework Document aims to identify areas of cooperation between the member countries, in particular how they can cooperate and collaborate at the regional and sub-regional levels in support of the implementation of the Asia Pacific information superhighway (AP-IS) Master Plan. This framework also includes areas of cooperation with the sub-regional organizations, international financial institutions, private sector and other UN agencies' (henceforth called 'stakeholders'). The AP-IS Master Plan does not intend to substitute the ICT initiatives and plans of the member countries, sub-regional organizations, international financial institutions, private sectors and other UN agencies but to add value in order to improve seamless ICT connectivity and increase interconnections by deploying regional broadband networks; establishing sufficient Internet Exchange Points (IXPs); enhancing ICT infrastructure resilience; and providing inclusive access to broadband Internet for all in the Asia Pacific region.
2. The AP-IS Master Plan identifies seven strategic initiatives for regional seamless ICT connectivity in the Asia-Pacific region as outlined by the four pillars of AP-IS Master Plan. Furthermore, the AP-IS Master Plan aims to capitalize on a multilateral, regional platform in the areas where bilateral cooperation may not achieve the desired result, at the same time ensuring synergies and mutual alignments between regional, sub-regional and national ICT plans, policies and initiatives.

## **II. Objectives**

3. The overall objectives of the Regional Cooperation Framework Document are to help achieve the overarching goals of AP-IS Master Plan by:

- a. Fostering partnership and collaboration between member countries, international financial institutions, UN agencies, sub-regional organizations, private sector, civil society, research institutes and academia, in order to improve regional seamless connectivity in Asia and the Pacific;
- b. Identifying areas of synergies between stakeholders' ICT initiatives and plans, by conducting in-depth analytical studies on feasibility, demand forecasts, and network resilience, as well as harmonization of policies and regulations wherever appropriate;
- c. Raising awareness on the importance of regional cooperation for regional connectivity and enhancing capacity of LLDC, LDC and SIDS economies through regional cooperation to meet emerging challenges, including the application of new technologies;
- d. Encouraging participation of the private sector in developing the cross-border broadband infrastructure, especially among LLDCs, LDCs and SIDS and areas where commercial viabilities have not been established yet;
- e. Ensuring that AP-IS contributes to the achievement of various regional international development goals and frameworks, such as the Sustainable Development Goals

(SDG), World Summit on the Information Society (WSIS), Istanbul Programme of Action, among others;

- f. Capitalizing on the ESCAP's intergovernmental platforms such as the Committee on Information and Communications Technology, Science, Technology and Innovation, and Commissions for setting norms, principles and regional consensus building, while promoting good practices and lessons learned and ensuring linkages with various socioeconomic sectors, such as sustainable development, energy, transport, trade, statistics, social and economic development.

### **III. Norms and Principles**

4. This Regional Cooperation Framework is guided by the following norms and principles:
  - a. The AP-IS strategic initiatives promote open and non-discriminatory access to network infrastructure at fair and reasonable wholesale prices and service terms and conditions, in particular, passive infrastructure<sup>1</sup> and promote competitions with a view to enhancing affordability and encouraging innovations;

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<sup>1</sup> Passive infrastructure - fibres, submarine cable landing stations, cross-border terrestrial fibre optic system facility, towers, poles, ducts, co-location of terminal equipment

- b. The Regional Cooperation Framework recognizes the importance in creating synergies of national, sub-regional and regional ICT initiatives;
- c. The Regional Cooperation Framework promotes cross-sectoral collaboration, such as co-deployment of optical fibre cables along the Asian Highways and Railways and adds value to the existing mechanisms and partnerships in the area of ICT for Development in general and ICT connectivity in particular.

#### **IV. Areas of Cooperation**

5. The AP-IS Master Plan provides guidance towards strategic initiatives focusing on the four pillars: connectivity, traffic and network management, e-resilience and broadband for all. The implementation, coordination and monitoring of the AP-IS initiatives will be guided by an Advisory Group<sup>2</sup>. Supported by the ESCAP Secretariat and respective Network corridors' focal points, the Advisory Group will oversee the implementation of activities, provide overall guidance and decide on the priorities and directions, while advising on partnerships, potential funding opportunities and emerging technologies. The Terms of Reference of the AP-IS Advisory Group is attached as Annex 1.
6. The AP-IS Advisory Group reports the progress and challenges on ICT connectivity in respective Network Corridors to ESCAP's intergovernmental Committee on Information Communications, Technology, Science, Technology and Innovations (CICTSTI) through the ESCAP secretariat. The CICTSTI report, including recommendations, will be submitted to the subsequent ESCAP's Commission Session.
7. In this regard, stakeholders, including member countries, partners and ESCAP secretariat, will collaborate in the following areas:

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<sup>2</sup> Based on the work completed by the AP-IS Working Group and its report to the 73<sup>rd</sup> session of the ESCAP Commission in 2017, this Board is proposed to assume the responsibilities listed in the ToR once the Master Plan and the Regional Cooperation Framework Document are endorsed by the Committee on Information Communications and Technology, Science, Technology and Innovations (CICTSTI) in October 2016.



**(i) Cross-border fibre optic deployment and integration of the regional backbone network including passive infrastructure**

8. Taking into considerations the ICT initiatives and plans of sub-regional organizations<sup>3</sup>, UN agencies, private sector and international financial institutions<sup>4</sup>, through the AP-IS Master Plan, identify (a) direct fibre optic link (missing links), (b) possible deployment of hybrid mesh and ring structure of resilient regional backbone networks and (c) need for relevant studies as outlined in AP-IS Master Plan under Initiative 1.

**(ii) Establishment of IXPs at national and sub-regional levels**

9. Guided by the AP-IS Master Plan, identify areas of cooperation to (a) establish regional, sub-regional, and national IXPs, (b) conduct studies as outlined in AP-IS Master Plan under Initiative 2.

**(iii) Regional Economic and Social Studies**

10. Conduct sub-regional and regional studies on economic and social impacts of ICT and future ICT trends as outlined under the Initiative 3 of the AP-IS Master Plan, including research and analysis on how to improve broadband affordability and inclusive broadband access and narrow the digital divide.

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<sup>3</sup> For example, e-ASEAN economic community framework agreement (2000); memorandum of understanding between member countries for Greater Mekong Sub-region Information Superhighway (2004); recognizing the importance of ICT by SAARC member countries through creation of Working Group for telecommunications and ICT (2004), South Asia Sub-regional Economic Cooperation's (SASEC) Information superhighway project agreement (2007); charter of the organization of the Black Sea Economic Cooperation (1999), declaration of the ministers of information and communication technologies of the Black Sea Economic Cooperation (BSEC) member states (2009), Pacific digital Strategy (2005); Trans-Eurasian Information Super Highway (TASIM); Trans-Asian-Europe (TAE), Transit-Europe-Asia (TEA); Pacific plan for strengthening regional cooperation and integration (revised version 2007).

<sup>4</sup> Asian Development Bank and World Bank initiatives

**(iv) Enhance ICT infrastructure resilience in the Asia-Pacific region**

11. Recognizing the importance of resilient ICT infrastructure to sustainable development and disaster risk reduction in the region which is most prone to natural disasters, explore pathways towards enhancing e-resilience, including redundancy and diversification of routes, as outlined in Initiative 4 of the AP-IS Master Plan.
12. Integrate disaster management and emergency telecommunication components in ICT infrastructure design to enhance network diversity and resilience, as outlined in Initiative 4 of the AP-IS Master Plan.

**(v) ICT-related regulations and policy frameworks**

13. Encourage updating, harmonization and/or development of new ICT regulations and policy frameworks to create an enabling Internet ecosystem and foster a competitive market at national, sub-regional and regional levels, as outlined in Initiative 5 of the AP-IS Master Plan.

**(vi) Capacity Building**

14. Enhance individual and institutional capacity of member countries in areas of common interest such as (a) planning and management of IXP; (b) network management and maintenance; (c) network traffic management; and (d) sharing of best practices in network development and traffic management, as outlined in Initiative 6 of the AP-IS Master Plan.

**(vii) Funding**

15. Explore regional funding mechanisms for AP-IS infrastructure deployment, as outlined in Initiative 7 of the AP-IS Master Plan.

## **V. Other Areas of Cooperation**

### **(viii) Development of ICT applications for the Digital Economy and Digital Society**

16. Encourage development of ICT applications, services and contents for the achievement of the sustainable development goals (SDGs) and more inclusive broadband access in collaboration with governments, various UN agencies, international financial institutions, private sector, think tanks, civil society organizations and academia.

## **VI. Financing Mechanism**

17. ICT infrastructure in the Asia-Pacific region has been developed and financed by government or private sector as well as through various forms of public-private partnership (PPP) cooperation model. As financing is a persistent challenge in developing ICT infrastructure in the region, various potential financing mechanisms for the AP-IS Master Plan and Regional Cooperation Framework could be considered under the following modalities (not exhaustive) depending on the funds availability and preferred modes of collaboration among the participating countries:

### **Project Financing or Special Purpose Vehicle (SPV) Model**

18. Private entities (potentially in collaboration with other types of stakeholders) can use Special Purpose Vehicles (SPVs) to finance large infrastructure projects. SPVs' operations are limited to the acquisition and financing of specific assets, and are usually set up as subsidiary companies with asset/liability structures and legal statuses that make their obligations secure even if one of the parent companies goes bankrupt. Given the evidence that there is an appetite for using

SPV's for financing infrastructure development project, it should be noted that the parameters of their use must be correctly examined.

### **Consortium Model**

19. This model is probably the most commonly used in submarine cable ventures and could be used as a model for regional terrestrial connectivity. Private operators and groups team up into consortiums, with the view of either owning international broadband access for their own operations, or being able to offer competitive wholesale solutions. Capital costs are entirely borne by the consortium members, in accordance with their ownership agreement, usually referenced to Construction and Maintenance Agreement (C&MA). Each member is allocated units of capacity in Minimum Investment Units (MIUs) or Minimum Assignable Unit (MAUs). Finally, a consortium rarely has a legal structure as it only represents a cost sharing agreement where each member owns part of a major asset.

### **Management Contract or Build, Operate and Transfer (BOT) type of agreement**

20. Where the public sector gives a private player the responsibility for deploying and operating the network on its behalf against annual fees or following a revenue sharing agreement.

### **Donor Financing**

21. Projects in developing countries often find support of development financial institutions, and provide guarantees to loans as well as direct financing or even, in some cases, equity contribution to a project proven to benefit the development of underserved countries or region.

### **Vendor Financing**

22. Financing from the equipment vendors for ICT infrastructure, in terms of providing credit for major equipment and supplies before the projects start generating revenues, can be a financing option worth considering in areas such as submarine cables and large mobile deployments, since such infrastructure investment is capital intensive and related cash inflows only starts after the completion of the project. In cases where there is sufficient potential for profitable investments, such delaying upfront capital commitments has the potential to expedite projects and supplement traditional funding mechanisms.

## **VII. Validity and update of this Regional Cooperation Framework Document**

23. This Regional Cooperation Framework Document aims to support the implementation of the AP-IS Master Plan. Therefore, when the Master Plan is revised and updated, this document needs to be reviewed accordingly. The review will be initiated by the above mentioned Advisory Board at the Advisory Board meeting during the last year of the AP-IS Master Plan implementation, and any revision will be presented to the attention of the ESCAP Committee on Information and Communications Technology, Science, Technology and Innovation for its endorsement.
24. The revision and review will take into account an evaluation on the effectiveness of this Regional Cooperation Framework, including the function of the Advisory Board, as well as technological advancement, requirements, emerging partnerships and financing opportunities for the future AP-IS implementation.

## **Annex 1: Proposed Terms of Reference of the AP-IS Advisory Board**

### ***Background***

1. The ESCAP Commission, at its 71st session, adopted a resolution 71/10 which established the Asia-Pacific information superhighway (AP-IS) open-ended Working Group. The first meeting of the Working Group took place in September 2015 in Incheon, Republic of Korea.

2. It is proposed that the AP-IS Advisory Group be established after the AP-IS Working Group reports its activities to the 73<sup>rd</sup> session of the ESCAP Commission and fulfils its mandate.

### ***1. Membership Criteria***

3. Due to the nature of the assigned activities, the Advisory Board will be established with the membership of non-profit organizations, research institutes, UN, other international organizations, and experts from the member country governments (representing in their personal capacity) as multi-stakeholder representatives with policy and technical expertise.

4. The Advisory Board should have geographical representation, at least one representative from 1) the Pacific, 2) East and North-East Asia, 3) South-East Asia, 4) South and West Asia and 5) Central Asia, while countries representing LDCs, LLDCs and SIDS are taking into consideration.

5. Nomination will be solicited from all the ESCAP member countries.

6. Memberships will be determined by the ESCAP Secretariat in consultation with the Working Group (and subsequent Advisory Board) Chairs, based on the contributions to and level of activities for the AP-IS implementation and will be presented to the session of the Committee on Information and Communications Technology, Science, Technology and Innovation for its endorsement.

7. Non-governmental organization and research institute members will be selected from renown organizations, represented at various UN and international platforms on the topic of ICT for Development, such as the World Summit on the Information Society (WSIS) Forum.

8. Gender balance will be taken into account in the selection of the members.

## ***2. Steering Group Size***

9. In order for the group to be manageable, the Advisory Board members would not exceed 25, including the Bureau members.

10. According to the above clause, at least 8 members will be government experts, 4 from UN and international organizations, 4 from international financial institutions, 4 from non-profit organizations and research institutes.

## ***3. Objectives***

11. The primary objective of the Advisory Board is to oversee the implementation of the Asia-Pacific Information Superhighway

(AP-IS) Master Plan and adherence to the Regional Cooperation Framework Document.

12. The Board will also provide guidance on emerging technologies, policy issues, challenges and opportunities in regional cooperation, partnerships and financing opportunities.

13. The Board members will be supported in its function by the ESCAP Secretariat.

14. The ESCAP Secretariat will provide an online platform which will be used as repository of information, documents and materials, as well as the space for exchange of views and communications.

15. The Advisory Board will initiate the process of review, revision and update of the AP-IS Master Plan and Regional Cooperation Framework Document during the last year of the implementation.

16. The Board will meet every year, and will report its activities, decisions and recommendations to the following Committee session.



## **Annex 2: Regional financing mechanism model examples**

### ***A. Greater Mekong Sub-region (GMS) Information Superhighway (GMS-IS)***

Every member of GMS is responsible for the investment and construction of the part in their own country with the guidance and coordination of the Implementation Group. The part of the fibre optic line/cable project within Cambodia and Laos PDR, which ultimately connects to the main GMS-IN backbone network was funded by a soft loan from China Eximbank. This particular project was managed by the fixed line operators- Telecom Cambodia and Enterprise Telecom Laos PDR. ADB extends loans and funds technical assistance for the GMS countries to implement priority cross-border projects. ADB direct financial support for the project ended in 2010, and the GMS member countries have been asked to set up the GMS ICT office with funding from members.

### ***B. ASEAN***

The ASEAN ICT infrastructure was built through some form of Public-Private Partnership (PPP) cooperation model with financing through ASEAN ICT Fund (AICTF), self-funded by individual countries, or funded by ASEAN dialogue partners. Some projects were government and private sector joint investment based on build-transfer-operate (BTO) model of PPP. The formats of the PPP model that best fits each nation differ from country to country. The PPP model offers a win-win solution for both the public and private sectors. Clarity of services

to be provided, good planning and accountability are the keys to the viability and effectiveness of the PPP partnership.