COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)

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Submissions from entities in the United Nations system, international organizations and other stakeholders on their efforts in 2019 to implement the outcomes of the WSIS

Submission by

United Nations Economic and Social Commission for Asia and the Pacific

This submission was prepared as an input to the report of the UN Secretary-General on "Progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels" (to the 23rd session of the CSTD), in response to the request by the Economic and Social Council, in its resolution 2006/46, to the UN Secretary-General to inform the Commission on Science and Technology for Development on the implementation of the outcomes of the WSIS as part of his annual reporting to the Commission.

United Nations Economic and Social Commission for Asia and the Pacific
Reporting on Implementation of the World Summit on the Information Society, 2019.

Your input should be brief (2–4 pages single-spaced), and focus specifically on the status of implementation in the action line(s) and/or main theme(s) of WSIS outcomes that your organization is facilitating, implementing or coordinating. It should contain the following three parts:

Part One: An executive summary (half a page) of activities undertaken by all stakeholders, progress made, and any obstacles encountered.

The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) is mandated to coordinate the World Summit on Information Society (WSIS) regional review by ESCAP resolution 72/10 [1]. As a result, ESCAP held a regional review of the implementation of the Summit action lines during the third session of the Asia-Pacific Information Superhighway Steering Committee and WSIS regional review, (26-29 August 2019, Bangkok).[2] Attended by over 150 participants including government representatives from 30 ESCAP member countries, UN agencies, regional and international partners, the meeting strengthened the alignment between the strategic initiatives of the Asia-Pacific Information Superhighway (AP-IS) and WSIS action lines by creating programmatic and operational synergies among governments and partners.

It was noted with concern that the digital divide continued to widen with high-income countries achieving significant growth (>15 percentage points) in access to fixed-broadband connectivity since 2000, while low-income countries have not improved (less than 2 percentage point increase since 2000). East Asia continued to account for around 75% of Asia-Pacific's Internet subscribers while in 18 countries fixed-broadband penetration remained at less than 2%, with virtually no progress over the past decade. However, it was also noted that much progress had been made, particularly in middle income countries. North and Central Asia in particular experienced significant improvement on access to mobile broadband with 61 per cent (weighted average) penetration in the period 2012-2018, compared to 17 per cent in 2005 to 2011.The regional review meeting was informed of how in these countries the innovative application of digital technologies by WSIS winners from Asia and the Pacific was bringing universal and affordable access to the internet. The meeting further recognized the important role of building cross-border operational models that would more effectively utilize terrestrial fiber-optic cables; more efficient Internet traffic management; and impactful researches and insights from academic networks for informed policy dialogue.

[1] http://www.unescap.org/sites/default/files/E72_RES10E.pdf
[2] https://www.unescap.org/events/third-session-asia-pacific-information-superhighway-ap-steering-committee-and-wsis-regional

Part Two: A brief (1–2 pages) analytical overview of trends and experiences in implementation at the national, regional and international levels and by all stakeholders, highlighting achievements and obstacles since WSIS and taking into account the follow-up and review of the 2030 Agenda for Sustainable Development. This could include information on the facilitation process of implementation, monitoring and cooperation among stakeholders.

In support of the regional WSIS action-lines implementation, ESCAP conducted analytical studies[3] on specific issues related to ICT connectivity and digital technology. This section briefly summarizes the key findings.

ICT co-deployment along passive infrastructures

The development of cost-efficient ICT infrastructure, particularly fibre-optic cables (FOCs) is a perennial challenge for policymakers. The high cost associated with the deployment and maintenance of FOCs are often borne by users, which has led to unaffordable Internet and broadband services in many developing countries. Technical entry barriers and other regulatory challenges, especially when it comes to cross-border connectivity, complicate the process.

One potential solution to facilitating the timely and affordable development of the ICT infra-structure across borders is to leverage synergies between the concomitant deployment (or co-deployment) of fibre-optic cables (FOCs) with the construction or maintenance of passive infrastructure, including ESCAP's High-way Network and Trans-Asian Railway Network. ICT co-deployment experiences of India, Bangladesh and Myanmar are discussed below.

The National Optical Fibre Network project, now called *BharatNet*, committed to the deployment of high-speed FOC-based telecommunications networks along the country's robust road and railway networks. In some hilly terrains, FOCs are installed overhead using power transmission poles. In the case of Bangladesh, FOCs deployment along national highways were undertaken through public private partnership during and after the construction of roads and railways. In addition, the Bangladesh Railway had first launched a FOC-based integrated telecommunications system back in 1992 with a Norwegian grant under which over 1,600km of FOCs had been installed. Subsequently, Bangladesh Railway, in association with Grameenphone, deployed another 439km of FOCs that the private cell phone operator is now operating commercially. In the case of Myanmar, FOCs network has been deployed along the Asian Highways AH1, AH2, AH3, AH14 and Trans-Asian Railway routes. An ESCAP study[4] of FOC co-deployment in Myanmar (FOC compared with separated deployments) estimated to save at least US$7,379 per kilometer. Most of the cost-saving in co-deployment is derived from eliminating overlapping civil works such as excavation, backfilling and reinstatement during highway construction.

[3] For a list of ESCAP studies, please refer to: http://www.unescap.org/our-work/ict-disaster-risk-reduction/asia-pacific-information-superhighway/resources

[4] A Study on Cost-Benefit Analysis of Fibre-Optic Co-Deployment with the Asian Highway Connectivity, www.unescap.org/sites/default/files/Cost-benefit%20analysis%20of%20fOC%20with%20Asian%20Highway.pdf

***E-resilience*:**

The Asia-Pacific region is the most disaster-impacted region of the world. ESCAP's 2019 edition of its flagship "Asia-Pacific Disaster Report"[5] highlights that almost half of the 281 natural disasters in 2018 events worldwide occurred in the region. In addition, natural disasters killed two million people in the region (59 per cent of global death toll) with an estimated economic loss of US$1.5 trillion between 1970 and 2018.

China, Japan and the Republic of Korea are among the countries in the region experiencing the highest average annual losses from multi-hazards. In response, ESCAP conducted a review[6] of the policy measures and initiatives implemented by these countries to not only strengthen e-resilience to natural disasters but also share best practices of these countries with the other Asia-Pacific countries.

China adopted a Communication Network Security Protection Measures on 1st March 2010 to strengthen the management of communication network security and improve the ability of communication network security protection. In addition, telecom operators have improved fibre-optic cable routing using innovative technologies.

In the case of Japan, the country established the Disaster Resistant ICT Research in 2014 under the National Institute of ICT (NICT) to provide a basis for advanced research and development for resilient information and communications networks undertaken in close partnership with government, academia and private sector. As a result, a movable and deployable ICT unit (MDRU) for communication in times of disasters was developed. Other technologies, including an 'Optical Packet and Path Integrated (OPCI)', as well as resilient wireless network systems, were developed in areas affected by natural disasters.

In the Republic of Korea's case, the *Safe-Net* is a specialised nationwide network that is utilized for public safety activities that includes not only the usual duties and prevention services but also integrated command, control and assistance among all agencies during disasters. Through the technology of Public Safety (PS-LTE), multimedia and GIS data can be transmitted in real-time to be used for relief operations.

[5] ESCAP, Asia-Pacific Disaster Report 2019, 2019, available from: https://www.unescap.org/publications/asia-pacific-disaster-report-2019

[6] ESCAP, e-Resilience: A Review of National Broadband Policies, Regulations, Strategies and Initiatives of China, Japan and the Republic of Korea, 2018, available from: https://www.unescap.org/resources/e-resilience-review-national-broadband-policies-regulations-strategies-and-initiatives

Part Three: A brief description (1–2 pages) of:

(a) Innovative policies, programmes and projects which have been undertaken by all stakeholders to implement the outcomes. Where specific targets or strategies have been set, progress in achieving those targets and strategies should be reported.

The ESCAP secretariat continues to support the Asia-Pacific countries on the WSIS action line implementation through the regional coordination platform of the AP-IS initiative. Through resolution 75/7 on 'Advancing the implementation of the Asia-Pacific Information Superhighway initiative through regional cooperation', adopted at the seventy-fifth session of the Commission in May 2019. Members and associate members were invited to develop subregional implementation plans for the Asia-Pacific Information Superhighway initiative, as appropriate and on a voluntary basis, taking into account the specificities of each subregion and the national legislation of the countries concerned, including, but not limited to, infrastructure sharing and co-deployment of fibre-optic cables along passive infrastructure. An amendment to the Asian Highway agreement that encourages signatories to the Agreement to consider the co-deployment of fibre-optic cable along the Asian Highway has also been proposed.

Furthermore, at its second session, the AP-IS Steering Committee adopted an updated Master Plan for 2019 until 2022 and it was subsequently endorsed by the second session of the Committee on ICT and STI in August 2018. The AP-IS Master Plan 2019-2022 details the targets derived from the WSIS and SDG for the implementation by governments, regional and international partners and ESCAP secretariat.

(b) Future actions or initiatives to be taken, regionally and/or internationally, and by all stakeholders, to improve the facilitation and ensure full implementation in each of the action lines and themes, especially with regard to overcoming those obstacles identified in Part Two above. You are encouraged to indicate any new commitments made to further implement the outcomes.

The outcome of the third session of the AP-IS Steering Committee and WSIS Review held in August 2019 provided useful guidance on the priority focus areas of work for the next 12 months. In particular, this entails improving the management and utilization of cross-border terrestrial fibre optic cables, through multi-country operationalization of interconnection that will not only increase transmission capacity, but also reduce transit costs. A second focus area pertains to more efficient Internet traffic management through the setting up of carrier-neutral IXPs shared especially among those countries with a small consumer base. Third, the need for academic networks to conduct ICT research analyses, in support of subregional implementation of the AP-IS initiative has also been identified. Fourthly, the United Nations Asian and Pacific Training Centre for Information and Communication Technology for Development (APCICT) will continue to enhance its training curricula for civil servants on utilizing ICT for sustainable development and will further expand delivery of its capacity building activities in the region.