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Submissions from entities in the United Nations system, international organizations and other stakeholders on their efforts in 2021 to implement the outcomes of the WSIS

Submission by

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 25th 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.

DISCLAIMER: The views presented here are the contributors' and do not necessarily reflect the views and position of the United Nations or the United Nations Conference on Trade and Development.

Reporting on the implementation of the World Summit on the Information Society, 2021

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 regional review of the World Summit on Information Society (WSIS) by the ESCAP resolution 72/10.¹ In response, the ESCAP secretariat has continued to support ESCAP member States on promoting regional cooperation through the Asia-Pacific Information Superhighway (AP-IS) initiative.² The AP-IS initiative is a region-wide intergovernmental platform that aims to bridge the digital divide and accelerate digital transformation through regionally coordinated actions, promoting digital technology, digital connectivity and the use of digital data. As a result, the AP-IS initiative continues to contribute to several WSIS action lines, including Action Lines C1 (the role of governments and all stakeholders in the promotion of ICTs for development), C6 (enabling environment) and C11 (international and regional cooperation).

The Committee on Information and Communications Technology, Science, Technology, and Innovation (CICTSTI) of ESCAP, at its third session held in August 2020, recommended that the ESCAP secretariat set up a drafting group as part of the AP-IS Steering Committee to develop an action plan for the next phase of implementation of the AP-IS (2022-2026). As a result, the ESCAP secretariat prepared the draft AP-IS Action Plan, and its matrix of actions, and organized two sessions, on 25 May and 29 September 2021, of the Drafting Group for developing the Action Plan. Attended by government officials of ESCAP member States³ in the ICT sector, the Drafting Group reviewed the draft AP-IS Action Plan and agreed on three pillars as a framework to guide implementation. These pillars are: Connectivity for All (which consolidates all the 4 pillars from the current AP-IS plan), Digital Technology and its Applications, and Digital Data.

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.

To support the implementation of the regional WSIS action-lines, ESCAP conducted analytical studies on the prioritized issues related to ICT connectivity and digital technology. ESCAP then shared its findings, and the lessons drawn from these studies, with ESCAP member States and other stakeholders through regional policy dialogues, workshops and at other international events. This section summarises the key findings and insights gained from such projects and studies on the emerging trends, challenges faced and opportunities available for enhancing ICT connectivity and digital technology in the Asia-Pacific

¹ E/ESCAP/RES/72/10

² United Nations, ICT and Disaster Risk Reduction Division, “The Asia-Pacific Information Superhighway Platform”. Available at: <https://www.unescap.org/our-work/ict-and-disaster-risk-reduction/asia-pacific-information-superhighway-ap-platform>

³ United Nations, Economic and Social Commission of Asia and the Pacific, “First Meeting of the Drafting Group for Developing the Action Plan 2022-2026 of the Asia-Pacific Information Superhighway (AP-IS)”, virtual meeting 25 May 2021. Available at: <https://www.unescap.org/sites/default/d8files/event-documents/Outcome%20document.pdf>

region.⁴

Analysis towards meaningful connectivity⁵

Through analysis of case studies of five Asia-Pacific countries, namely Bhutan, Kyrgyzstan, Indonesia, Mongolia, and Papua New Guinea, significant variation was found in the availability and affordability of digital connectivity between countries using the Alliance for Affordable Internet's Meaningful Connectivity targets.⁶ Findings, from the country case studies, revealed that conducive regulatory policies, such as the introduction of competition in the mobile market, and higher investments in education, lead to higher digital literacy and Internet adoption. In addition, favourable conditions for 'Meaningful Connectivity' were not solely tied to a country's income level or population density; some Asia-Pacific countries with lower income levels were found to significantly outperform their peers. These findings have important policy implications for Asia-Pacific countries in ensuring that quality and access to affordable broadband is achieved for sustainable development.

Integrated Infrastructure Corridor Development

An integrated infrastructure corridor is a high-tech transportation system integrated with ICT and energy infrastructures to facilitate the flow of goods, services, knowledge, and capital in a cost- and time-effective way. Co-deployment of fibre-optic cables, along other utility infrastructure, including roads, railways and energy power grids, constitutes a good model for reducing investment costs and supporting the expansion of broadband connectivity. Following recommendations from the national capacity-building workshops for policymakers, from Kazakhstan, Kyrgyzstan, and Mongolia, and from the subregional workshop for countries in East and North-East Asia, the ESCAP secretariat conducted an analytical study⁷ published in July 2021, to assess the benefits of cross-sectoral connectivity, by using a developed toolkit⁸ for building three potential interstate infrastructure corridors in Kazakhstan and Kyrgyzstan. These corridors are between Almaty (Kazakhstan) – Cholpon-Ata (Kyrgyzstan); between Semey (Kazakhstan) – Rubtsovsk (the Russian Federation); and between Urzhar (Kazakhstan) – Chuguchak (China). The results from the calculations⁹ provided useful insights; an integrated infrastructure corridor approach is an attractive and smart solution to improve regional connectivity, by linking geographical territories through ICT, transport, and energy components.

Strengthening efficient Internet traffic management through subregional Internet exchange points (IXPs)

The key roles of Internet exchange points are to promote faster Internet speed, reduce the transit costs of Internet traffic at national and international levels, improve the quality of access of domestic users, direct connections to local and cached content, and lower the Internet traffic tromboning effect. However, establishing a subregional IXP is complex, especially when multiple countries and commercial interests are

⁴ For a list of ESCAP studies, please refer to: <https://www.unescap.org/kp>

⁵ United Nations Economic and Social Commission of Asia and the Pacific (ESCAP) and the Alliance for Affordable Internet (A4AI), "Towards Meaningful Connectivity: Insights from Asia-Pacific Case Studies". September 2021. Available at: <https://www.unescap.org/kp/2021/towards-meaningful-connectivity-insights-asia-pacific-case-studies>

⁶ Alliance for Affordable Internet (A4AI), "Meaningful Connectivity – unlocking the full power of internet access". Available at: <https://a4ai.org/meaningful-connectivity/>

⁷ Vadim Kaptur and Aida Karazhanova, "Infrastructure Corridor Development Series: Part I: In-Depth Analysis of Three Promising Infrastructure Corridors", Asia-Pacific Information Superhighway Working Paper Series, Information and Communications Technology and Disaster Risk Reduction Division, United Nations Economic and Social Commission for Asia and the Pacific, Bangkok, 2 July 2021. Available at: <https://www.unescap.org/kp/2021/infrastructure-corridor-development-series-part-i-depth-analysis-three-promising>

⁸ Vadim Kaptur and Aida Karazhanova, "Infrastructure Corridor Development Series: Part II: Toolkit for Determining the Most Promising Scenario for Infrastructure Corridor Development", Asia-Pacific Information Superhighway Working Paper Series, Information and Communications Technology and Disaster Risk Reduction Division, United Nations Economic and Social Commission for Asia and the Pacific, Bangkok, 2 July 2021. Available at: <https://www.unescap.org/kp/2021/infrastructure-corridor-development-series-part-ii-toolkit-determining-most-promising>

⁹ Vadim Kaptur and Aida Karazhanova, "Infrastructure Corridor Development Series: Part III: Calculation Results for Determining the Most Promising Scenario for Infrastructure Corridor Development", Asia-Pacific Information Superhighway Working Paper Series, Information and Communications Technology and Disaster Risk Reduction Division, United Nations Economic and Social Commission for Asia and the Pacific, Bangkok, 2 July 2021. Available at: <https://www.unescap.org/kp/2021/infrastructure-corridor-development-series-part-iii-calculation-results-determining-most>

involved. Despite the fact that many country-level IXPs are already established for non-commercial public service, linking IXPs across borders requires a diverse and dimensional collaboration of all Internet service providers in the country. In addition, a subregional agreement among key concerned stakeholders is essential to sustain long-term cooperation between key parties and governments.

Recognizing these challenges, the ESCAP secretariat and the National Information Society Agency (NIA) of the Republic of Korea conducted an analytical study on IXPs in Cambodia, the Laos People's Democratic Republic, Viet Nam, and Thailand, keeping within the framework of the AP-IS initiative.¹⁰ The study highlighted the potential benefits, among other actions, of establishing sub-regional IXPs. It was found that data transit costs and network latency will be reduced, and Internet uptake and quality of the service will be increased. The study proposed an inter-country IXP network topology and donor funding modality for the development of IXPs. A cost estimate and the establishment of best practices for an inter-country IXP was also provided.

In addition, the ESCAP secretariat and the Internet Society have facilitated multi-stakeholder consultations and cooperation in Fiji, New Zealand, and Samoa, respectively, on establishing a Pacific IXP Proposal in August 2021.¹¹ Stakeholders (government, Internet service providers, and regulators) in the target countries offered their support of the proposal, in principle, and reviewed a draft guideline and a draft memorandum of understanding for establishing the Pacific IXP. The stakeholders also requested the secretariat to continue its role in facilitation, including the organization of consultation meetings among the stakeholders of the three countries to discuss the way forward.¹²

Visualization of broadband speeds during COVID-19 pandemic

Global restrictions, as a result of the COVID-19 pandemic highlighted the critical role of digital connectivity on ensuring continued operations of critical infrastructure and services, as well facilitating work and school from home. Using new geospatial data from speed test on broadband speed, an ESCAP study,¹³ published in February 2021, converted the data of broadband download speed differences into visualization maps for Asia-Pacific countries (urban and rural areas), and between Asia-Pacific subregions. The study revealed stark differences between urban and rural broadband download speeds within many Asia-Pacific countries. Asia-Pacific landlocked countries were found to have lower broadband download speeds as compared to other Asia-Pacific subregions. These findings provided useful policy implications for Asia-Pacific countries for ensuring that quality and affordable broadband access is achieved for sustainable development. In particular, the importance of public-private partnerships (PPP) investment, the crucial role of IXPs on improving Internet quality, and the essential need of ensuring cost-effective approaches for fibre-optic deployment in Landlocked Developing Countries through the 'dig once, use many' policy.

Policy experimentation and regulatory sandboxes on frontier technologies for sustainable development

Frontier technologies, including innovative digital technologies, are regarded as powerful tools to fast track the Sustainable Development Goals (SDGs) in support of innovative, forwarding-looking policies

¹⁰ Yeong Ro Lee and Chang Yong Son, "An In-Depth Study on the Design and Implementation Plan of Internet Exchange Points in CLMV Countries", ESCAP Working Paper Series, No. 04/2021, Information and Communications Technology and Disaster Risk Reduction Division, United Nations Economic and Social Commission for Asia and the Pacific, Bangkok, January 2021. Available at: <https://www.unescap.org/kp/2021/depth-study-design-and-implementation-plan-internet-exchange-points-clmv-countries>

¹¹ United Nations Economic and Social Commission for Asia and the Pacific, "Multistakeholder consultations in Pacific island countries on the Pacific Internet Exchange Point (IXP) Proposal", virtual meetings, Bangkok, 24-26 August 2021. Available at: <https://www.unescap.org/events/2021/multistakeholder-consultations-pacific-island-countries-pacific-internet-exchange-point>

¹² United Nations Economic and Social Commission for Asia and the Pacific, "Multistakeholder consultations in Pacific island countries on the Pacific Internet Exchange Point (IXP) Proposal: Key Outcomes", virtual meetings, Bangkok, 24-26 August 2021. Available at: <https://www.unescap.org/sites/default/d8files/event-documents/Outcome%20report.pdf>

¹³ Siopie Vakataki "Ofa and Cristina Bernal Aparicio, "Visualizing Broadband Speeds in Asia and the Pacific", Asia-Pacific Information Superhighway Working Paper No. 02/2021, Information and Communications Technology and Disaster Risk Reduction Division, United Nations Economic and Social Commission for Asia and the Pacific, Bangkok, May 2021. Available at: <https://www.unescap.org/kp/2021/visualizing-broadband-speeds-asia-and-pacific-0>

and solutions. There are, however, numerous risks and complexities of frontier technologies that come along with such opportunities, such as the widening of digital divides, and policy and regulatory challenges. In recent years, relatively new approaches of policy experimentation and regulatory sandboxes have emerged that have proven to be effective in creating a more conducive space where governments and business sectors can conduct controlled regulatory experiment on innovative digital technologies.

As a result, the ESCAP secretariat and UN DESA are jointly implementing a project to support Bangladesh, Kazakhstan, and the Maldives to enhance the institutional capacity of government officials to understand and develop policy experimentation and regulatory sandboxes to accelerate the adoption of frontier technologies in various sectors. Through a series of consultations with the three target countries, a digital acceleration hub and broadband equity for Bangladesh; autonomous vehicles and decentralization, digitalization, and decarbonations in the energy sector for Kazakhstan; and digital currency and mobile wallet for Maldives,¹⁴ were identified as key focus themes of the project.¹⁵

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

(a) Innovative policies, programs 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.

At its third session held in August 2020, the CICTSTI recommended that the ESCAP secretariat sets up a drafting group as part of the AP-IS Steering Committee to develop an action plan for the next phase of implementation of the AP-IS initiative (2022-2026). The Drafting Group recognized the importance of taking a multi-stakeholder approach and build partnerships through the engagement of various international/regional organizations for implementing the proposed actions, as well as monitoring and evaluating its implementation. The Drafting Group also noted the importance of continuing support for developing countries and, in particular, the Pacific Small Islands Developing States for the implementation of actions. The finalized draft of the Action Plan will be submitted for review and endorsement at the Fifth Session of the AP-IS Steering Committee, to be held tentatively on 25 November 2021. The AP-IS Action Plan will act as a regional blueprint for regional cooperative actions among Asia-Pacific countries and as an effective multi-stakeholder platform for the coordination of digital connectivity and digital transformation towards building a more inclusive digital economy.

(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 AP-IS Steering Committee will submit the endorsed AP-IS Action Plan to the fourth session of CICTSTI, to be held in August 2022, for further guidance. In addition, the ESCAP secretariat and the Republic of Korea is cooperating to co-host a UN Asia-Pacific Ministerial Conference on ‘Digital Cooperation: Shaping Our Digital Future’ tentatively scheduled for October 2022. This high-level event will elevate the political commitments of senior government officials of member States toward implementing the adopted actions of the AP-IS Action Plan for 2022-2026, as regional cooperative actions toward building an inclusive digital economy and society.

¹⁴ United Nations Economic and Social Commission for Asia and the Pacific, “National Consultations on ‘Frontier Technology Policy Experimentation and Regulatory Sandboxes for Sustainable Development’ for the Maldives”, virtual meetings, Bangkok, 7 September 2021/ Available at: <https://www.unescap.org/events/2021/national-consultation-frontier-technology-policy-experimentation-and-regulatory>

¹⁵ United Nations Economic and Social Commission for Asia and the Pacific, “Sensitization Workshop on ‘Frontier Technology Policy Experimentation and Regulatory Sandboxes for Sustainable Development Technology’”, virtual meetings, Bangkok, 3 June 2021. Available at: <https://www.unescap.org/events/2021/sensitization-workshop-frontier-technology-policy-experimentation-and-regulatory>