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**Submissions from entities in the United Nations system and elsewhere on their efforts in
2013 to implement the outcome 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 17th 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.

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ESCAP ACTIVITIES IN FOLLOW-UP TO WSIS

Part 1 Executive Summary:

In 2013, ESCAP carried out a regional review of the WSIS outcome in Asia Pacific. This identified progress in ICT connectivity, in particular for mobile telephony and mobile broadband penetration. However, the review and other research clearly show an uneven distribution in progress across countries and across technologies. The digital divide remains in LLDCs, SIDs and LDCs. Progress in terms of Internet Connectivity, and progress against the WSIS targets varies a lot across the region.

ESCAP is promoting a number of initiatives to close the gaps in the digital divide, which is often dictated by unaffordability in connectivity. This includes the promotion of the concept of an Asia Pacific Information Superhighway, a continent-wide meshed network of terrestrial optical fiber, which would provide redundancy to the submarine cable networks and provide a key part of the solution to reducing international bandwidth prices in the region.

ESCAP, jointly with ITU, have produced a set of terrestrial transmission infrastructure maps to allow the identification of missing links and bottlenecks in cross-border fiber optical networks. These web-based, highly interactive maps also help identify potential synergies that could be developed by better synchronizing the deployment of fiber with the building or maintenance of key continental-level transport infrastructures.

Part 2: Trends and Experiences in implementing the WSIS decisions

The ESCAP secretariat was requested by its member States in ESCAP Resolution 69/10 to “[...] *pursue the facilitation and coordination of the regional review of progress in implementation of the targets set out in the outcome documents of the World Summit on the Information Society*”¹. The ESCAP secretariat therefore carried out a regional statistical survey of progress on the WSIS target indicators, which results were shared to other members of the Partnership on Measuring ICT for Development. This survey used the questionnaire on the WSIS target indicators developed by the Partnership on Measuring CIT for Development. ESCAP, along with other regional economic commissions distributed the questionnaires to its member States and collected results. ESCAP obtained the highest response rate (37%) to this survey. among the developing regions. The results of this survey have been shared by ESCAP to ITU and other Members of the Partnership on Measuring ICT for Development, who will use it to draft the global WSIS+10 review. Meanwhile, the ESCAP secretariat is carrying out a regional level review of the WSIS outcome, based on this survey and on other available evidence.

¹ ESCAP Resolution 69/10 “*Promoting regional information and communications technology connectivity and building knowledge-networked societies in Asia and the Pacific*”.

The regional review carried out by ESCAP finds that with a few exceptions, significant progress has been made towards the WSIS objectives. Mobile telephony has made huge strides in increased penetration and is now available to most people in ESCAP. Progress is also real, though more unequal in terms of Internet penetration. Public institutions are increasingly connected to the web, even in poorer countries of the region. However, with regards to the Internet, the more developed countries of ESCAP have progressed even faster than the less connected ones, thereby increasing the digital divide. Contrary to that trend, a group of middle income and transition economies of ESCAP seems to distinguish themselves by accelerated ICT adoption through the past decade. This is symbolized, for example, by the emergence of more language diversity on the Internet with languages such as Russian and Chinese gaining ground, even though English still dominates with an estimated 55% share of the total number of websites.

Mobile broadband is responsible for most of the gains in broadband availability in developing ESCAP countries. However, mobile broadband does require fixed fiber optic infrastructure for aggregation and international Internet access. Progress in internet penetration among ESCAP members is often driven by rapid mobile broadband adoption. The question is still open as to whether mobile broadband will be able, in the coming decade, to replicate the connectivity achievements of mobile telephony in the past decade. Mobile broadband and next generation telephony services (4G, LTE) certainly open avenues for the reproduction of the mobile miracle, but again, open and competitive markets will be the driver for it to take place and governments need to ensure the appropriate regulatory and legal framework are in place. Furthermore, paradoxically, mobile broadband and next generation telephony require fixed infrastructure, notably fiber optic cable networks for traffic aggregation and for access to international Internet transit. For mobile broadband and next generations services² to become ubiquitous will therefore require a well structured fiber optic transmission network. Though these networks are often at least partially in place, they are often designed around a purely national logic. Regional and international coordination of fiber optic network roll-out would greatly increase the redundancy of international Internet transit, as well as open new alternatives to the current submarine cables-dominated transmission systems. Increased terrestrial connectivity, as currently being promoted by ESCAP concept of an Asia-Pacific Information Superhighway could therefore help open new routes and increase competition resulting in lower transit prices and more redundant internet routing, with as a final outcome a more affordable and more ubiquitous internet access.

ESCAP WSIS target review furthermore underlines that in light of the rapid technological evolution and of the constant emergence of new ICT applications for development, a post 2015 WSIS framework will need to establish targets that are more flexible, and able to absorb rapid technological changes. Likewise, the region will need to review more frequently its ICT related development objectives, including the underlying statistical framework for measuring success. Some of the WSIS targets have in retrospect been too shy of ambition or have become somewhat outdated, while new important issues have been left unmeasured. The post WSIS framework will therefore need to introduce

² Deloitte predicts that by 2014, more than 200 telecom operators will provide 4G services in over 75 countries. It also predicts that 4G subscribers numbers will triple compared to 2012 levels, reaching 200 million subscribers in 2014 (Capacity magazine, 26 Nov 2013).

more flexibility and reactivity in measuring the internationally agreed goals on ICT measurement.

Part 3 Future actions and initiatives at the regional level:

The Asia-Pacific Information Superhighway, a continent-wide meshed network of terrestrial optical fiber, would provide redundancy to the submarine cable networks in the region and provide a key part of the solution to reducing international bandwidth prices in the region. A meshed network would not only bridge Asia's vast landmass with competitive points of Internet access in Europe, it would also provide redundancy to effectively eliminate the risks of outage from undersea cable accidents and natural disasters, and drastically reduce the need for tromboning of Internet traffic, as well as open up opportunities for multi-sectoral value-added services. As national highways are the preferred right-of-way to deploy optical fiber transmission backbone, one practical solution would be to build the missing links of the Asian-Pacific Information Superhighway alongside the ESCAP-administered Asian Highway and Trans-Asian Railway.

In 2013, ESCAP and ITU have jointly produced a groundbreaking new interactive map of the Global Information Superhighway, which will help bridge the digital divide in Asia-Pacific. The ESCAP/ITU Asia-Pacific Information Superhighway Maps are the first ever to show policy makers and investors where the missing links in terrestrial transmission are across the region, assisting ESCAP in its efforts to bring affordable Information Community Technology (ICT) and broadband connectivity for all. Only 7% of people in the Asia Pacific region have fixed broadband access and it is the most digitally divided region in the world, with Republic of Korea at 37.56% fixed broadband penetration, compared to Myanmar with only 0.01%. By mapping regional terrestrial routes, policy makers and investors will be provided with information on missing links and investment opportunities that will contribute ultimately to the development of a coherent Asia-Pacific Information Superhighway. The maps also feature the region's main transport networks, the Asian Highway and the Trans-Asian Railways as it is critical that fiber-optic cables can be laid in coordination with the construction of railways and roads to ensure appropriate cost savings. The maps are now available to the public at: <http://www.unescap.org/idd/maps/asia-pacific-superhighway/>. The maps will be further completed in 2014.

New realms of applications with potentially huge transformative impacts emerge constantly. It has been estimated³ that among the twelve most disruptive technological innovations in the coming decade, four will be related to Information and Communications Technologies: mobile Internet, automation of knowledge networks, the Internet of Things and cloud technology; while four others will be highly dependent on the new frontiers that ICT progress will open up in their functioning. The remaining four technologies also depend on ICT advances in their elaboration and implementation. In addition to these, other ICT applications and technology are bound to arise and trigger presently unimaginable evolutions. As with today's innovations, evolutions in ICT are likely to have commercial, societal and even ethical implications that will require interventions from policymakers and regulators. This is a particularly challenging task for developing countries which often lack the appropriate cadre of technical expertise to fully

³ http://www.mckinsey.com/insights/business_technology/disruptive_technologies, May 2013.

comprehend and react to the new challenges from ever more complex technologies. ESCAP, in collaboration with relevant regional institutions can provide assistance in this respect, by creating and nurturing a regional network of specialized think tanks and researchers on ICT and development issues.