Implementation of the Vienna Programme of Action for Landlocked Developing Countries for the Decade 2014 -2024

Report of the Secretary-General

I. Introduction

(This section will briefly introduce the report, highlighting the legislative mandate for the report and its scope.)

In its resolution 74/233, the General Assembly requested the Secretary-General to submit to its 75th session a progress report on the implementation of the Vienna Programme of Action (VPoA) for Landlocked Developing Countries for the Decade 2014–2024.

This report provides comprehensive information and analysis on recent progress in the implementation of the Vienna Programme of Action covering all six priority areas for action and the performance of the LLDCs on the Sustainable Development Goals (SDGs) and recent socio-economic development.

II. An overview of recent socio-economic development in landlocked developing countries and progress on the SDGs

2020 saw significant changes in the use and importance of ICT connectivity, particularly broadband internet access. The Covid-19 pandemic has caused a marked increase in the demand for and use of internet access, as populations globally turned to the internet for their day to day social and economic activities.

The ITU UN-OHRLLS joint report on "Economic impact of broadband in the least developed countries (LDCs), landlocked developing countries (LLDCs) and small island developing states (SIDS)" which confirmed the positive economic impact in the most vulnerable countries remains relevant.

LDCs, LLDCs and SIDS constitute 91 of the world's most vulnerable nations (32 of them being LLDCs). The report notes that some of these countries lag significantly behind in terms of achieving the Sustainable Development Goals (SDGs). As part of the ongoing global efforts to help countries implement the 2030 Agenda for Sustainable Development, it is necessary to pay particular attention to these three groups of countries.

More than ever since the impact of Covid-19 broadband connectivity, or, more broadly, access to fast Internet, are an absolute necessity if countries are to participate effectively in the global economy. As an enabling technology, broadband supports existing and new applications in many different sectors,

including education, government, financial services, health, disaster management and e-commerce. Yet broardband Internet access in the majority of the LDCs, LLDCs and SIDS remains below the global average.

ITU *Measuring digital development: Facts and figures 2020*[1] estimates that 51 per cent of the world population, or 4 billion people, were online in 2019. This means that 3.7 billion people were not connected to the Internet and were therefore not able to take advantage of the transformative power of information and communication technologies (ICTs). The 2020 edition featured for the first time disaggregated data for LLDCs and several other country groups. It shows that the connectivity challenge is significant in LLDCs. Access to 4G mobile broadband connectivity in LLDCs lags significantly (43% compared to 85% globally) particularly due to very low access in rural areas. Only 27% of households in LLDCs have Internet access at home, compared with 57% globally. Similar trends are observed for affordability and enabling environments within LLDCs, highlighting the need for concerted and coordination action to promote broadband access in LLDCs.

III. Status of implementation of the priorities of the Vienna Programme of Action

Infrastructure development and maintenance

To that end ITU has mainstreamed the needs of LLDCs in its activities, programmes and projects to achieve its commitments under the Vienna Programme of Action. Since the last report, ITU has continued its work as the examples below serve to highlight.

Africa
- Burundi was assisted in developing a new ICT bill and in capacity development and training opportunities for the country's experts in emerging broadband technologies.
- ITU supported the Central African Republic in reforming the ICT regulatory body and in the elaboration of new ICT laws. In the context of the ITU-AU-EU joint Policy and Regulation Initiative for Digital Africa (PRIDA) project, direct technical assistance was provided to the Central African Republic focusing on activities related to migration to digital television.
- A wireless broadband network was installed in Rwanda to connect hospitals and schools to Internet facilities and data/reference centres for the roll-out of e-health and e-learning applications.
- In Niger, a smart villages project was piloted in two villages in partnership with ITU to improve accessibility to ICT and deliver digitally enabled services across the sectors of health, agriculture and education. In addition, a computer incident response team (CIRT) readiness assessment was carried out for Niger.
- Botswana is currently receiving assistance to establish a computer emergency response team (CERT).
- Lesotho was supported in developing a national broadband policy. ITU further provided 300 computers as contribution to Lesotho's efforts in e-education and its rural connectivity initiative.

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[1] https://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx

- Eswatini was assisted by ITU to develop its national cybersecurity strategy and in other related activities, including capacity building in cybersecurity. Assistance is ongoing in the unbundling of the Eswatini Posts and Telecommunication Corporation into three entities in regulatory and business case-related activities.
- Malawi was supported in assessing and designing a national computer emergency response team (CERT) and was also assisted in establishing a conformity and interoperability framework and continues its assistance in implementing a conformity and interoperability testing laboratory. ITU's work continues on e-waste, focusing on strengthening capacity on e-waste statistics and on e-waste policy development.
- Zambia was assisted in the deployment of an early warning system in flood prone areas. A braille printing machine was provided to the School for the Blind and installed. Spectrum auctioning training was delivered to ZICTA (Zambia Information and Communication Technologies Authority) staff, enhancing their capacity. ITU is currently assisting ZICTA in job evaluation-related activities, which include organization strategy and change management, job redefinition, salary and human resources management.
- Zimbabwe was assisted in a train-the-trainers programme in ICT skills for managers managing the CIC (Community Information Centres), including train-the-trainers in telemedicine for medical professionals working with portable, mobile, transportable telemedicine kits. A pilot telemedicine facility to connect rural clinics to hospitals for consultancy has been deployed. A website was developed to assist women farmers reach wider national, regional and global markets.
- An assessment for CIRT readiness was conducted for both Mali and Chad.
  In South Sudan, ITU provided assistance in policy and regulation to help transform and modernize the telecommunication/ICT sector.
- Assistance was provided to Burkina Faso to develop cyberschools and cyberclasses. The project helped equip 14 schools (seven primary schools and seven teacher-training schools) with computer networks, equipment and an Internet connection to allow the introduction of e-education in the education system in Burkina Faso. In the medium and long term, e-education would help solve the problem of overcrowding of classes since pupils would be able to access their education materials remotely, regardless of their geographic location.

Americas
- In Paraguay, assistance was provided to design the national telecommunications plan and to establish a national Internet exchange point (IXP). In addition, policy and regulatory support was provided in "Market Analysis and Regulatory Accounting", "General Regulation for Tariffs" and in the definition of a cost model for interconnection charges. Training on satellite communications was delivered, following a request from the Administration. An extensive report on "The digital ecosystem and the massification of ICT in Paraguay" was prepared for political and regulatory authorities.

- In Bolivia, a master plan on spectrum management was presented to support the government. An extensive report on "The digital ecosystem and the massification of ICT in Bolivia" was prepared for political and regulatory authorities. The establishment of a national IXP was achieved with the support of the Internet Society.
- Jamaica received special assistance for a review of its spectrum fee framework in comparison with international leading best practices and development of its national spectrum licence framework.
- Bahamas received support through deployment of emergency telecommunication equipment after the severe devastation caused by Category 5 Hurricane Dorian.
- Seven countries in the Caribbean signed a collaborative agreement with ITU to deliver an emergency tool kit that will allow their integration with an alternate regional emergency telecommunication network.
- St. Kitts and Nevis received collaborative assistance in its development of a national broadband plan with a broadband strategy component in order to take full advantage of the digital economy.
- In Trinidad and Tobago, ITU worked with the government and proposed revisions to reform the Data protection and Electronic Transitions Act of Trinidad and Tobago.
- In Dominica, ITU procured assistive equipment for visually impaired persons to increase the opportunity of digital inclusion for persons with disabilities.

Asia and the Pacific
- Afghanistan received assistance for its ICT sector, covering cybersecurity training; establishment of Internet exchange points, mobile apps and licensing framework training and books for the Information and Communication Technology Institute (ICTI), policy on ICT for persons with disabilities; migration from analogue to digital broadcasting – roadmap for digital terrestrial television broadcasting (DTTB), quality of service regulation and establishment of Afghanistan Computer Emergency Response Team (AfCERT).
- With the support of the First Lady, Afghanistan organized high-level events in 2021 to prepare for the launching of the EQUALS Afghanistan programme to address the gender digital divide and promote digital inclusion.
- ITU has been currently assisting the Office of the Prime Minister of Bhutan to develop a decision-making dashboard in response to emergencies. The country was also assisted in the areas of IPv6 and IPv6 infrastructure security (with APNIC), national cybersecurity strategy, consumer protection, mobile apps framework; compliance testing of mobile base stations and broadcast stations, wireless broadband master plan, report on efficient national spectrum management and competition regulation.
- Lao P.D.R benefited from ITU work in the areas of cybersecurity, regulatory framework for over-the-top (OTT) services, Spectrum Management System for Developing Countries (SMS4DC), Lao language-based software platforms and related capacity-building programmes, and localization of ICT applications and tools.

- In Mongolia, ITU has been supporting the development of e-Mongolia programme in the areas of digital ID, cybersecurity and Internet traffic management. ITU also provided assistance with the development of a regulatory framework for digital applications; spectrum management master plan; IPv6 roadmap development (with APNIC); network costing training; developing new methodology and formulas for national radio-frequency fee charging. The new recommended formulas consider the effects of annual inflation and factors encouraging more innovative use of national radio-frequency resource.
- Nepal (Republic of) was assisted in spectrum management, cybercrime legislation, training jointly provided by ITU-INTERPOL-UNODC to Nepal Police and Law enforcement agencies, national cybersecurity policy and child online protection, telecommunication regulatory frameworks, quality of service for mobile, fixed and Internet ICT framework for persons with disabilities and in developing a wireless broadband master plan and national broadband policy.

Commonwealth of Independent States
- Eight of the nine CIS countries are landlocked, which leaves them dependent on neighbouring and coastal countries for access to undersea cables and international Internet bandwidth. While total international bandwidth in the CIS region has increased over the last three years from 11 Tbit/s in 2017 to, 19 Tbit/s in 2020, at the individual user level, the region lags behind. Bandwidth in the CIS region amounted to 71.6 kbit/s in 2019, compared to 131.3 kbit/s globally. This shows that despite a higher than global average Internet penetration, Internet speeds across the region are much lower than globally. This is likely due in part to the fact that most countries are landlocked.
- In Azerbaijan, ITU is exploring the opportunities of deploying intelligent transport systems – this will be followed by technical assistance in developing framework documents and further deployment.
- In Uzbekistan, ITU is working to establish a digital skills centre for women and youth, aimed at improving the level of digital skills among women and youth in the country in order to increase the use of ICT services, bridge the gender gap and enable digital entrepreneurship and industry transformation. ITU is working closely with local and regional experts to assist Uzbekistan in building a start-up ecosystem, viewed as a key factor of digital economy growth.
- In Kyrgyzstan, ITU continues to provide assistance (since 2012) for training, in informatics, of schoolteachers from rural areas.

Europe
- In 2020, Moldova was provided technical assistance on elaboration of the national program of the radio frequency spectrum management for the years 2021-2025 ensuring its compliance with European Electronic Communications Code (Directive (EU) 2018/1972) as well as the Radio Regulations (RR) of the International Telecommunication Union (ITU). Program was adopted by the Government and Parliament. In addition, in 2021, Moldova was provided technical assistance on strategic review of the national assessment on the child online protection ensuring

that applied approach follows international standards and practices, including ITU Child Online Protection Guidelines.

Follow-up and review including activities of the United Nations system and other international organizations relating to implementation of the priorities of the VPoA

The ITU regional initiatives in Asia and the Pacific are formulated to assist the implementation of various international and regional development frameworks, such as the 2030 Agenda for Sustainable Development and the Sendai Framework for Disaster Risk Reduction.

Challenges

One of the main challenges of LLDCs is linked to ICT connectivity. In this regard, the ITU *Connecting Humanity* report published in 2020, estimates that the cost of connecting approximately 3.7 billion unconnected people globally by 2030, will cost USD 428 billion. This includes a significant proportion of people living in LLDCs.

The relatively low interest in investment in the ICT sector in LLDCs continues to pose a significant challenge to improving ICT connectivity in these countries. Studies point to the lack of infrastructure, lack of affordability, the high cost of Internet and lack of digital literacy and content as some of the reasons why people are not connected.
Other challenges LLDCs face include broadband costs as a share of gross national income. These costs are much higher in LLDCs than in coastal countries close to undersea cables. Satellite is an option for LLDCs as it is not restricted to the sea. However, the costs of satellite communications are high, and consequently, most of the LLDCs cannot afford this available option. Moreover, high vulnerability to external shocks and lack of effective implementation of ICT plans and policies on the ground remain a challenge.

Recommendations

- Make connectivity an integral part of national sustainable development strategies, by incorporating national broadband plans into national development policies and frameworks in LLDCs.

- Improve reporting, statistics, and infrastructure gap analysis to inform governments and investors better.

- Increase access to ICTs, facilitated by appropriate policies, legal and regulatory frameworks that favour emerging new technologies that are appropriate, cost-effective and more affordable.

- Establish ICT public-private partnerships for viable business models, including long-term institutional investors, and encourage those partnerships to allocate a higher percentage of infrastructure in LLDCs.

- Improve partnerships between transit countries and landlocked countries.

- Promote universal service funds.

- Make ICTs/ broadband more affordable.

- Encourage infrastructure sharing.

- Create tax incentives.

- Promote trade, e-commerce and small- medium-sized enterprises.

- Encourage increased official development assistance (ODA).

IV. Conclusions and recommendations
(This section will provide key recommendations to accelerate the implementation of the Vienna Programme of Action based on the analysis provided in the report.)

Statistical Annex
(The statistical annex will provide, in a tabular form, referenced, national-level data on selected VPoA indicators discussed in the report.)