COUNTRY ANALYSES AND PLANS

Honduras

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$85M of CapEx funding and $47M of annual OpEx funding will enable Honduras to connect an estimated 16,445 schools.

This investment will bring **1.8 million students and teachers** online and bring connectivity to **4.9 million community members** who live locally, potentially enabling up to 1.3 billion USD in GDP (2.3%) growth.

Source: Dalberg Analysis based on Giga mapping and modelling data, 2020

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“We should all be aware that COVID-19 is going to change people's lives a lot, we don't know how, although one thing is known, and that is that life is going to become digital and is already becoming much more digital.”

EDUARDO ALMEIDA
Representative of the Inter-American Development Bank (IDB) in Honduras

Source: @Vladimirhandal twitter
Original: “La innovación es uno de los pilares fundamentales para sacar adelante un país y su gente, estamos obligados a reducir la brecha digital, mejorar los servicios e incorporarnos a la industria 4.0, trabajaremos incansablemente por lograrlo."

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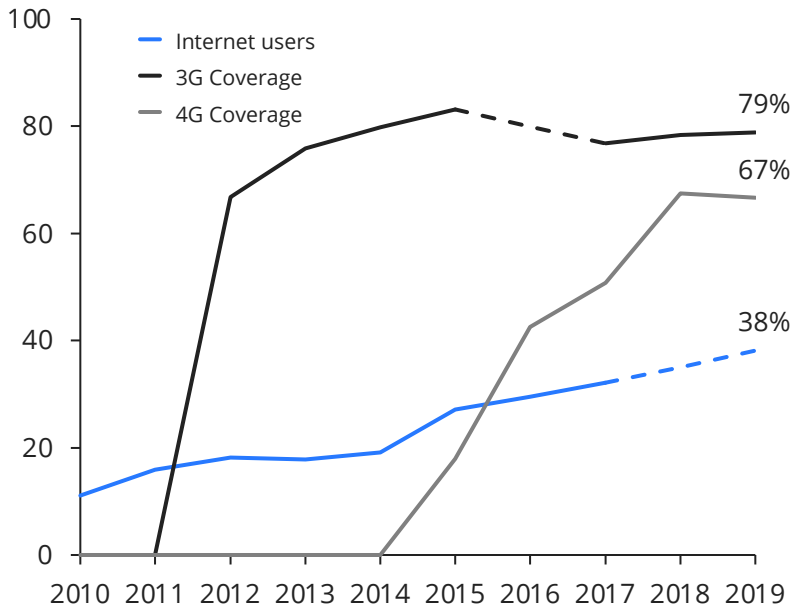
Honduras has expanded 4G coverage and use, but ambitious national broadband goals set in 2013 have not yet been met

Network coverage has expanded, but a large gap remains. Broadband uptake is low.

Broadband coverage and internet penetration, % of population (ITU, 2020)



Progress towards expanded coverage has lagged the targets set out in the National Digital Agenda 2014-2018. The GoH is redoubling efforts toward digitization in light of COVID-19

There has been some progress towards that goal, but recent education policies and initiatives around COVID-19 have emphasised the need to progress more quickly:

- National Digital Agenda 2014-2018: aims to reduce the digital divide, promote efficient government, and develop a digital economy in line with the Honduras Vision 2010-2038[1]. The strategy contains four strategic axes: (1) internet penetration through equity in access; (2) digital government initiatives; (3) ICT training and education at all levels; and (4) legislative and institutional framework for ICT development
- Strategic Plan for the Education Sector 2018-2030: aims to equip Honduran learners with equitable, quality education that allows them to effectively participate in a modern economy. It acknowledges the need to expand internet access (and electrification to support connectivity), teacher training, and ultimately student digital literacy efforts
- We want you studying at home – COVID-19 policy: aims to enable Honduran learners to study at home while classes are suspended. Utilizing virtual classes and interactive workbooks using primarily mobile devices. Additional content will be recorded and broadcast on the radio and will then be available for download on virtual portals
- Legislative Decree 60-2020: ensures use of the internet for educational purposes will be free for the current school year and during specific emergency circumstances such as COVID-19 for children, young people and other apprentices, as well as teachers from the public sector.

* Country Vision 2010-2038: aims to improve Honduras' economy and standing in the Global Competitive Index by reducing poverty, improving the democratic process, ensuring safety, increasing employment, protecting natural resources, creative more efficient governance including through the introduction of broader digitization initiatives.
Source: National Digital Agenda 2014-2018, Strategic Plan for the Education Sector 2018-2030, We want you studying at home – COVID-19 policy; ITU (2020) World Telecommunication/ICT Indicators Database

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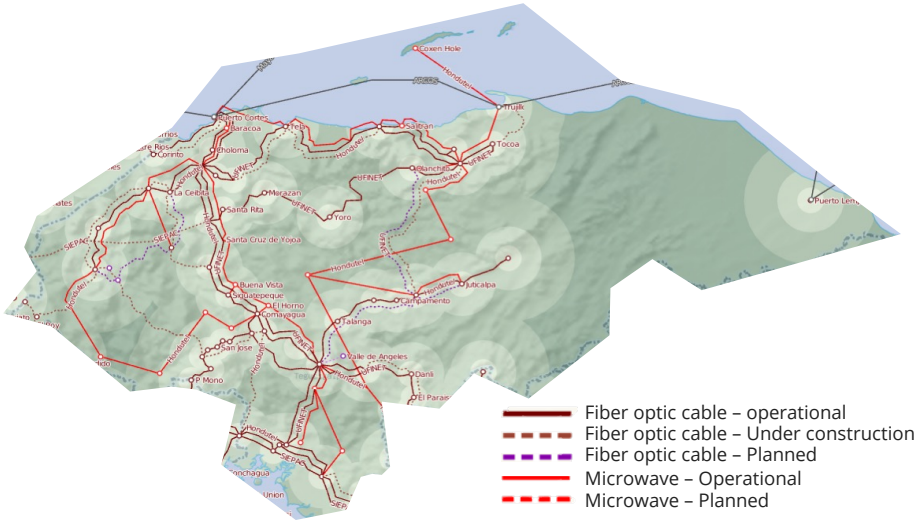
National fiber network



	Mobile	Fixed
Subscriptions per 100 inhabitants	28	4
5-year CAGR	+13%	+18%

The Goal: National Coverage and Connectivity

Honduras has added to its national fiber backbone to just over 2,000 km, with 70% of the population living within a 25km range of the network. Although many communities are now covered by 4G, a large portion of the population remains unconnected (68%). Growth in mobile and fixed subscriptions lags network expansion.

Source: Map – ITU Broadband Map; Table –ITU (2020) World Telecommunication/ICT Indicators Database, Dalberg analysis

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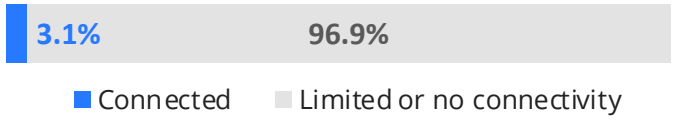
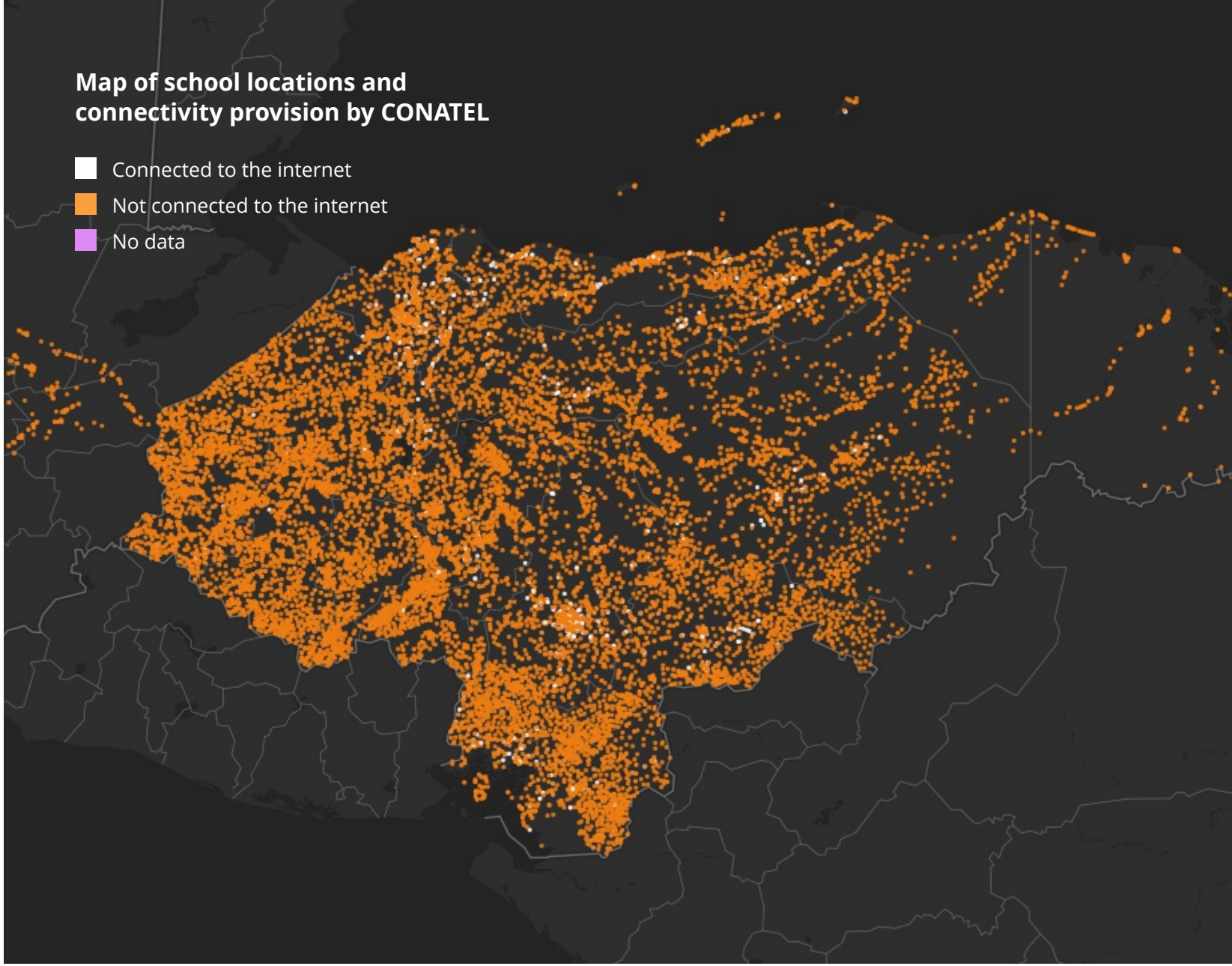
School Coverage and Connectivity

Total schools: 17,000



45% of Honduran schools lack access to electricity

Only 3% of all Honduran schools (545) are currently by CONATEL. While a few additional primary and secondary schools are connected to the internet through private support, all remaining 16,445 schools are in need of connectivity supported by the government.



Source: Dalberg analysis; UNESCO UIS data; ITU (2020) World Telecommunication/ICT Indicators Database; SEDUC, Proyecto Plan Maestro de Infraestructura

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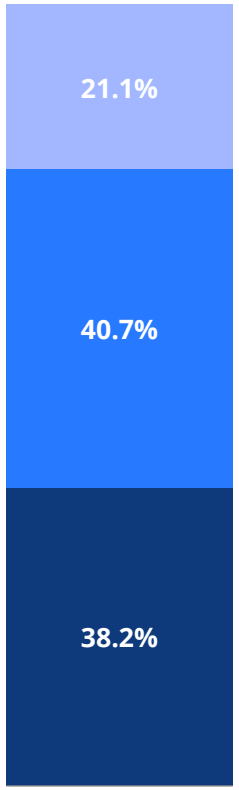
21.1% of Hondurans lack coverage and 40.7% face affordability, electrification and other challenges

THE MOBILE INTERNET COVERAGE AND USAGE GAP



CONNECTIVITY ACCESS		NEEDS	GOALS
21.1%	COVERAGE GAP **No mobile internet**	Increase coverage	+2.1M Hondurans not covered by mobile broadband
40.7%	USAGE GAP **Covered by 3G/4G but not connected**	Increase affordability Increase digital literacy Increase electrification	Reduce data cost by 7.27 USD/GB (-65%) Increase digital literacy through academic and vocational education 2m Hondurans to gain access to power
38.2%	CONNECTED **Active mobile internet use**	Close the digital divide	Increase formal employment and associated incomes

Notes: Prices based on ITU Data-only mobile broadband basket 1.5GB, pro-rated down to 1GB for comparison against the Broadband Commissions 2% target
Sources: Dalberg analysis; ITU (2020) World Telecommunication/ICT Indicators Database; Broadband Commission; World Bank, Jobs Diagnostic Honduras; IDB; Encuesta Productividad y Formación de Recursos Humanos en Establecimientos (EPFRH, BID).

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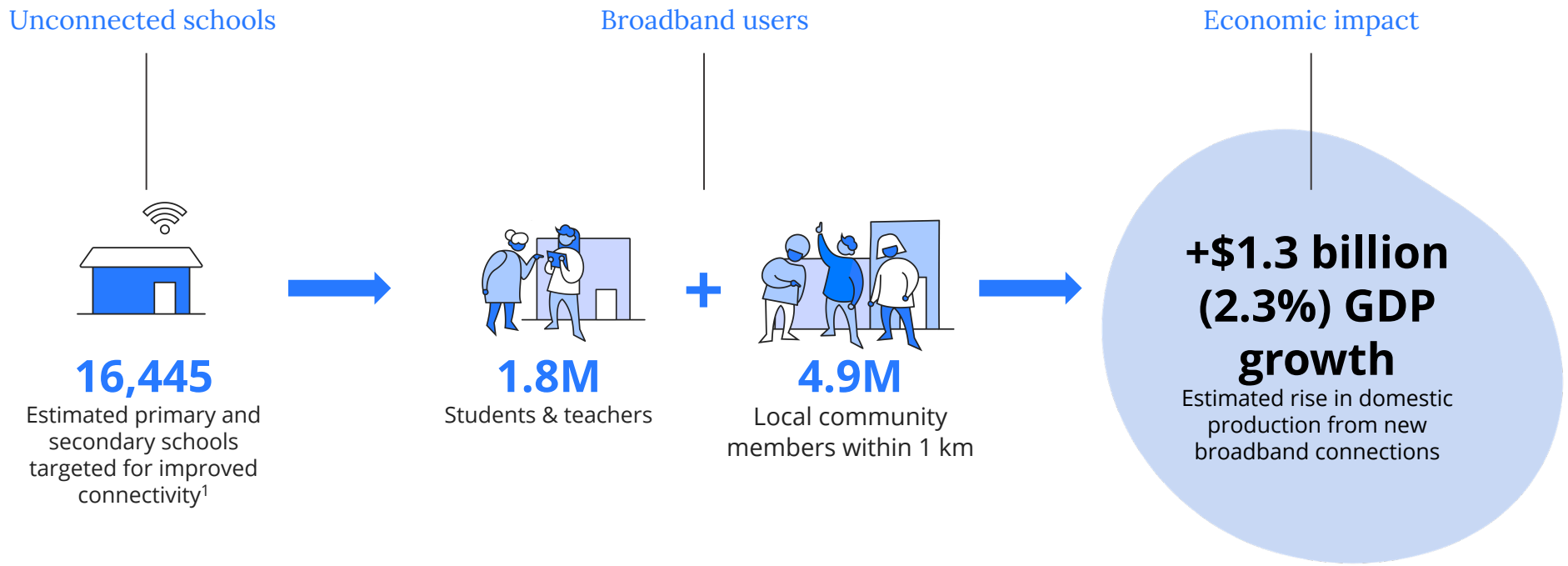
Targeted financing for connecting 16,445 schools can create GDP growth of over $1.3 billion

Universal expansion to all schools provides a gateway to community connectivity



Notes: (1) Estimation uses national mobile penetration rates as a proxy for secondary school connectivity. Accurate numbers will be added pending Giga mapping. Note: Economic impact calculation assumes that school connectivity is comparable to gaining access to a fixed line connection in a middle/lower income country in terms of reliability, bandwidth, use etc. Assumes middle income fixed broadband which is a conservative assumption when compared to low income mobile broadband . This estimate does not take into account the unique circumstances of COVID-19, and is based on stable economic growth in middle/lower income countries.

Source: Dalberg Analysis;ITU (2020) World Telecommunication/ICT Indicators database; UNESCO UIS.Stat, 2018; World Bank (2020) World Development Indicators (WDI); ITU (2018) The Economic Contribution of Broadband

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School connectivity will require an estimated $85M of upfront capital expenditure and up to $47M of ongoing annual funding

Giga will help to mobilize investment and financing to bridge initial infrastructure gaps and provide mechanisms to supply longer-term financing to boost geographic reach and affordability through smart subsidies

(Schools to be connected: 16,445)

UPFRONT LAST-MILE INFRASTRUCTURE CAPITAL

Based on an initial technology assessment: 39% Fiber, 29% WISP, and 32% 4G

$85M Estimated total investment needed to reach 16,445 schools*

*This does not factor in potential volume discounts or other sources of funding

ONGOING ANNUAL FUNDING FOR REGULAR SERVICE FEES

Estimates based on an all-in service, maintenance and technical support fee:

$47M[a] Potential service fees for 16,445 schools (Giga estimate)*

*This does not factor in potential volume discounts or other sources of funding

Of the Inter-American Development Bank's allocation to the improvement of the education sector in Honduras, $11M have been committed to connect 750 schools.[b]

These high level estimates can be further refined as the workflow progresses and more mapping and specific cost data is established
A) Pre-feasibility preliminary estimates based on Giga's ACTUAL model school bandwidth requirements and annual service fee estimates in Kenya, adjusting for country costs based on 'Fixed-broadband Internet 5GB' values and 'Data-only mobile broadband 1.5 GB' reported by each country in ITU's World Telecommunication/ICT Indicators database (2020)
B) Based on existing Inter-American Development Bank funding allocation to connect 750 schools as part of their $60M education sector improvement project
Source: Dalberg Analysis based on Giga mapping and modelling data, 2020

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Giga has started to engage with the Government of Honduras

Key Stakeholders: La Secretaría de Educación (SEDUC), Dirección General de Construcciones Escolares y Bienes Inmuebles (DGCE), Secretario de Gobierno Digital, Comisión Nacional de Telecomunicaciones (CONATEL)

Giga engagement to date

- High level buy in from Government including the establishing of a focal point in SEDUC and Secretario de Gobierno Digital
- Completion of an upfront assessment to align on opportunities and constraints
- Engagement with IDB to align on shared vision and objectives

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In partnership with the GoH, Giga has identified the following activities to support the cost-effective connection of 16,445 schools

Expand Project Connect mapping to identify connectivity vs coverage in order to articulate needs and refine the business case and investment opportunity

Use mapping to monitor real time connectivity and ensure project sustainability and accountability

Refine school connectivity strategy with the Government based on benchmarks and set targets for connectivity in the coming years

Survey the landscape of implementation options to identify appropriate last mile connectivity cases for schools

Provide technical assistance on the development of performance contracts/results-based financing impact bond models for connectivity that can become best practices in the sector

Prepare procurement lots with the Government for school connections to ISPs and MNOs

Strengthen the Honduran entrepreneurial ecosystem, to build a pipeline of locally developed digital public services and goods and identify solutions to scale in other Giga countries

Work with GoH to put in place processes to strengthen accountability and ensure good governance

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Rapid Regulatory Scan

Policies

Sector strategies:[1]	
Digital transformation/broadband strategy	Yes
Planned e-government roll out	Yes
Digital education in strategy	Yes
Child Online Protection:[2]	
National strategy/policy?	Yes
Responsible agency?	No
Non-discriminatory inclusive use policy?	No
Data Sharing:[2]	
Data protection policy?	No
Privacy and data protection laws	No

ICT Regulatory Tracker[3]

Sector strategies:	
Generation of ICT Regulation	G3
Overall	79/100
C1: Regulatory Authority	16/20
C2: Regulatory Mandate	19/22
C3: Regulatory Regime	24/30
C4: Competition Framework	20/28

Regulation

Regulatory structure[1]	
Public/private sector consultation	Yes
Regulatory autonomy from the government[9]	Yes
Clear planning and licensing process?	Yes
Procurement or competition agency?	Yes

Competition

Regulatory structure[1]	
SMP in national anti-trust/competition law	Yes
Spectrum technology neutrality in place	No
No foreign investment restrictions?	No
Infrastructure sharing?[9]	Yes
Wireless Operators Market HHI[4]	5063
Fixed Broadband Operator Market HHI[4]	3347

Taxation

Services	
VAT[5]	15%
Sector specific tax on internet services[5]	0%
ITA Participant[6]	Yes
ICT Equipment import duties[7]	0%
Ongoing regulatory/license fees[1]	TBC

Universal Access

Services[8]	
Is school broadband a universal service?	Yes
Operational Universal Service Fund (USF)?	Yes
Total amount allocated/disbursed in 2019	16.7M
Contributions as % of revenue	1%
Other public financing mechanisms?	No
Fully utilized currently?	No
Fully active in the last 5 years?	Yes

Notes: HHI – Hirschman Herfindahl Index (HHI) Score, > 4,000 Highly concentrated. Import duties based on a review of several Telecommunications, Electrical and Radio Transmission Equipment HS codes
Sources: 1) Latest ITU World Telecommunication/ICT Regulatory Survey 2019 2) ITU (2019) Global Cyber Security Index 3) ITU (2018) ICT Regulatory Tracker 4) EIU (2020) The Inclusive Internet Index 5) ITU (2019) Taxation Survey Country
6) World Trade Organization (2020) Information Technology Agreement Website 7) WITS (2020) World Integrated Trade Solution – Tariff Database 8) Latest ITU Global Report (2020) and, where available, the country's Universal Service Fund website 9) Latest ITU ICTEye

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