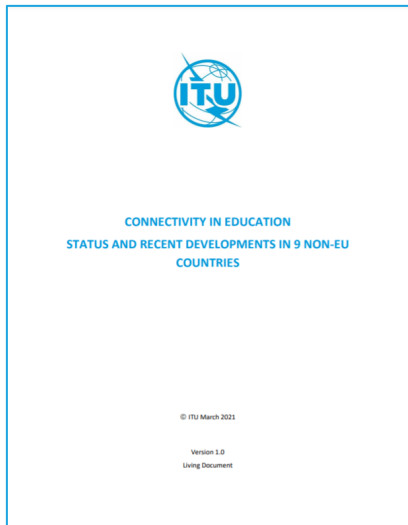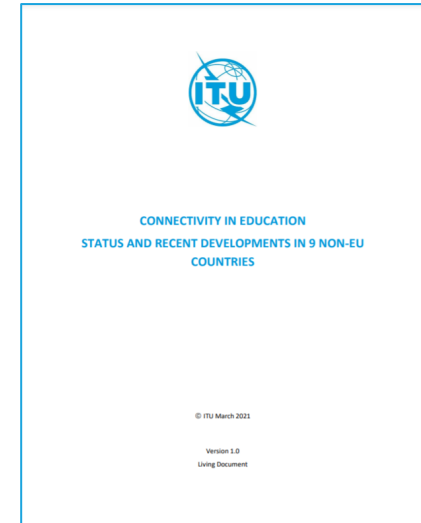# *Connectivity in Education: Status and recent developments in 9 non-EU countries*

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International Telecommunication Union

EUROPE

REGIONAL INITIATIVES

BUENOS AIRES ACTION PLAN | 2018-2021

EUROPE - REGIONAL INITIATIVE 1

Objective: To facilitate high-speed connectivity with resilient and synergistic infrastructure development, deployment and sharing, whilst ensuring a trusted and quality user experience.

Regional initiative 1

Broadband infrastructure, broadcasting and spectrum management

Connectivity in Education
Status and Recent Developments in 9 non-EU Countries

- Albania
- Bosnia and Herzegovina
- Georgia
- Moldova
- Montenegro
- North Macedonia
- Serbia
- Turkey
- Ukraine

Introduction

Each country profile covers the following:

1. Overview of the **education system** and **status of broadband**

2. Government strategies, status of the **quality of education**, and the **role of ICTs**
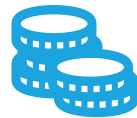
3. Multi-stakeholder partnerships and **financing mechanisms** fostering investment in school connectivity

4. National **responses to COVID-19** and pedagogic initiatives for **distance education**

1. Overview of the Education Systems

- **25 million pupils** between ages 6 and 17 and around **130,000 schools** covered by the analysis

- All require **eight or more years of compulsory education**

- According to UNESCO, **975,812 children/adolescents** between 6 and 17 still **out of school** in these countries

Length of Compulsory Education

Albania	9
Bosnia and Herzegovina	9
Georgia	9
Moldova	11
Montenegro	9
North Macedonia	13
Serbia	8
Turkey	12
Ukraine	11

Number of children and adolescents out of school (as % of those in school)

Country	Value
Albania	1.98
Bosnia and Herzegovina	18.65
Georgia	0.35
Moldova	10.06
Montenegro	2.33
North Macedonia	
Serbia	1.27
Turkey	3.56
Ukraine	4.39
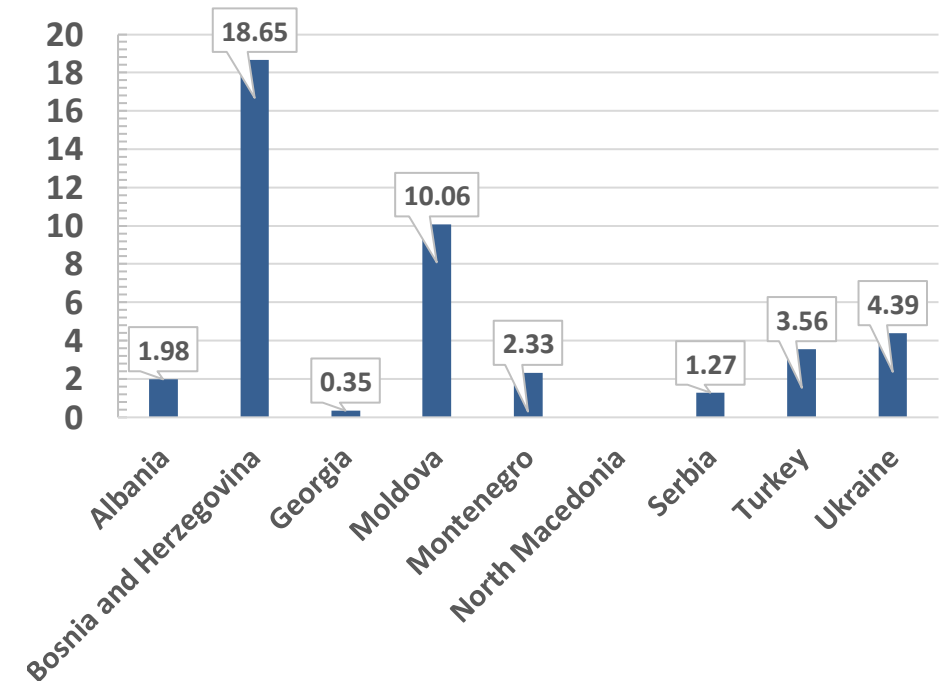
UNESCO country data (http://uis.unesco.org/)

1. ICT background and current status of broadband

Internet Users (as % of population)
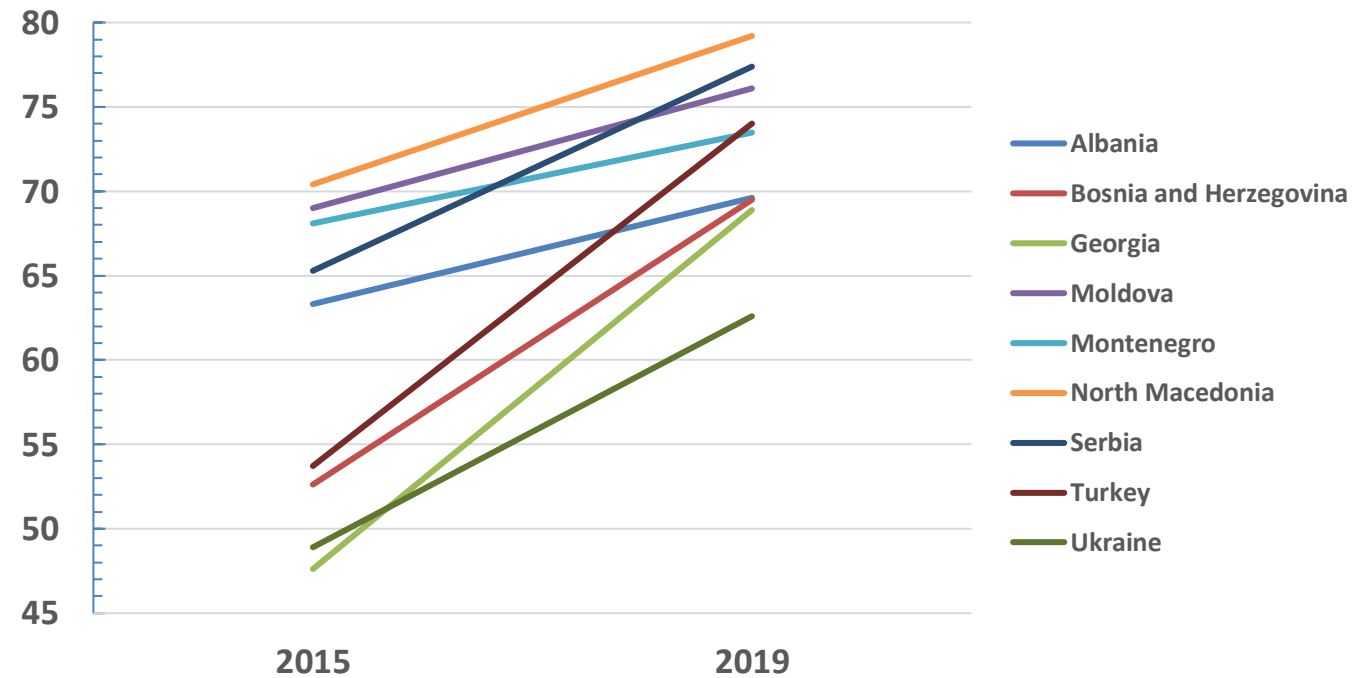
- **27 million people have been brought online** since 2015

- However, **44 million individuals** do not make use of the Internet in 2019

Legend:
- Albania
- Bosnia and Herzegovina
- Georgia
- Moldova
- Montenegro
- North Macedonia
- Serbia
- Turkey
- Ukraine

Elaborated based on data available in the ITU World Telecommunication/ICT Indicators Database online (2020): http://handle.itu.int/11.1002/pub/81550f97-en

Fixed Broadband Subscriptions per 100 inhabitants

- Fixed broadband subscriptions **average around 20 per 100 inhabitants** in 2019

- In absolute terms, **7.7 million** fixed broadband subscriptions have been activated since 2015.
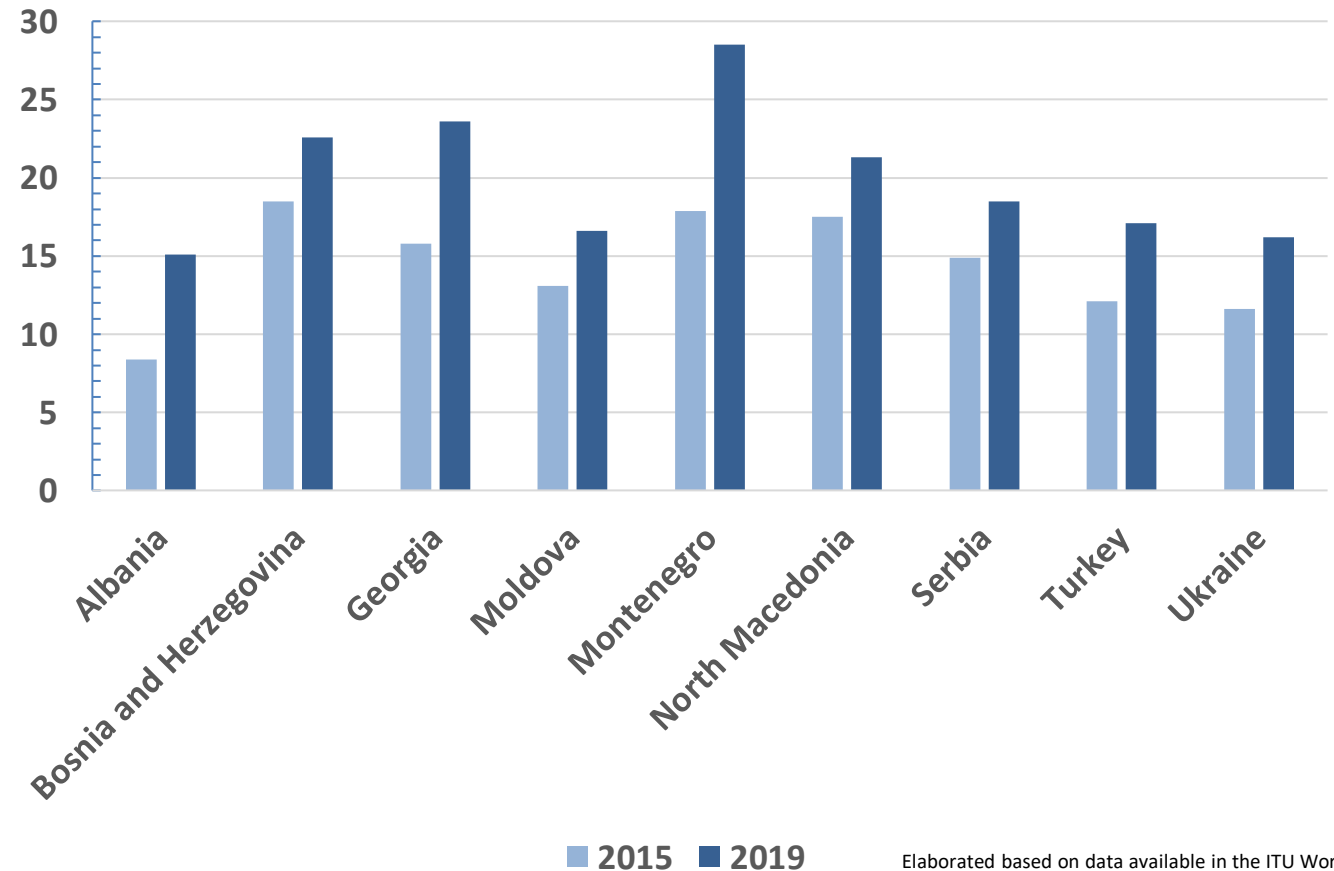
2015   2019

Elaborated based on data available in the ITU World Telecommunication/ICT Indicators Database online (2020): http://handle.itu.int/11.1002/pub/81550f97-en

Mobile Broadband Subscriptions per 100 inhabitants

Legend:
- Albania
- Bosnia and Herzegovina
- Georgia
- Moldova
- Montenegro
- North Macedonia
- Serbia
- Turkey
- Ukraine

Elaborated based on data available in the ITU World Telecommunication/ICT Indicators Database online (2020): http://handle.itu.int/11.1002/pub/81550f97-en
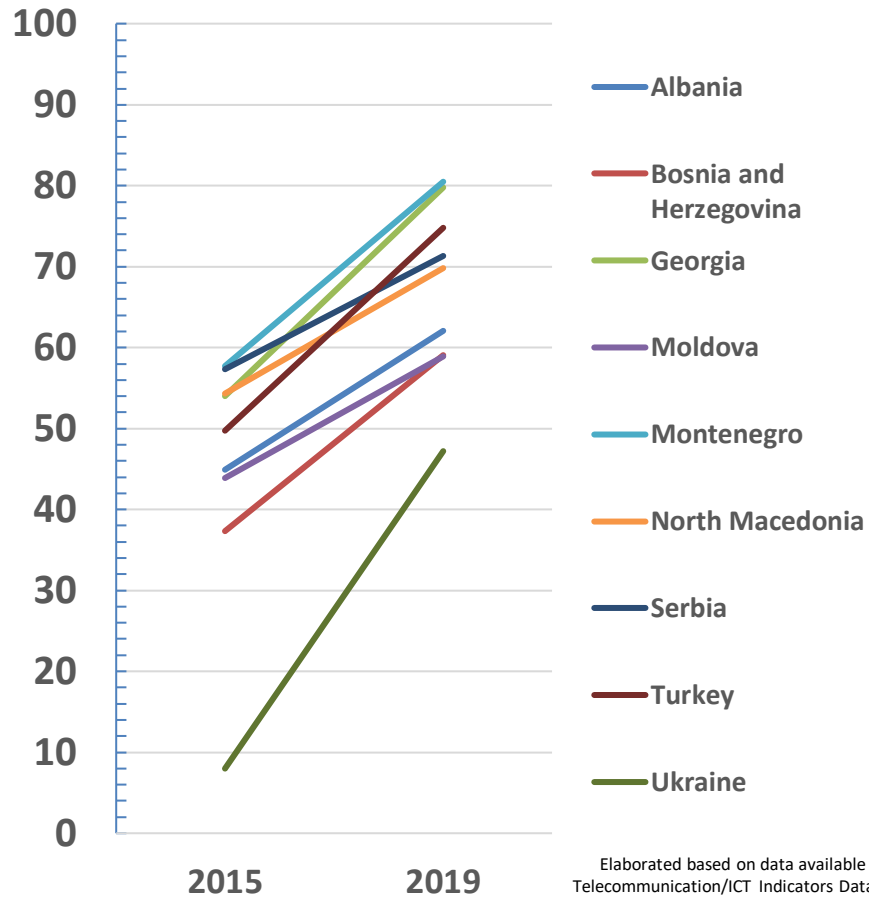
Per cent of population with 4G coverage
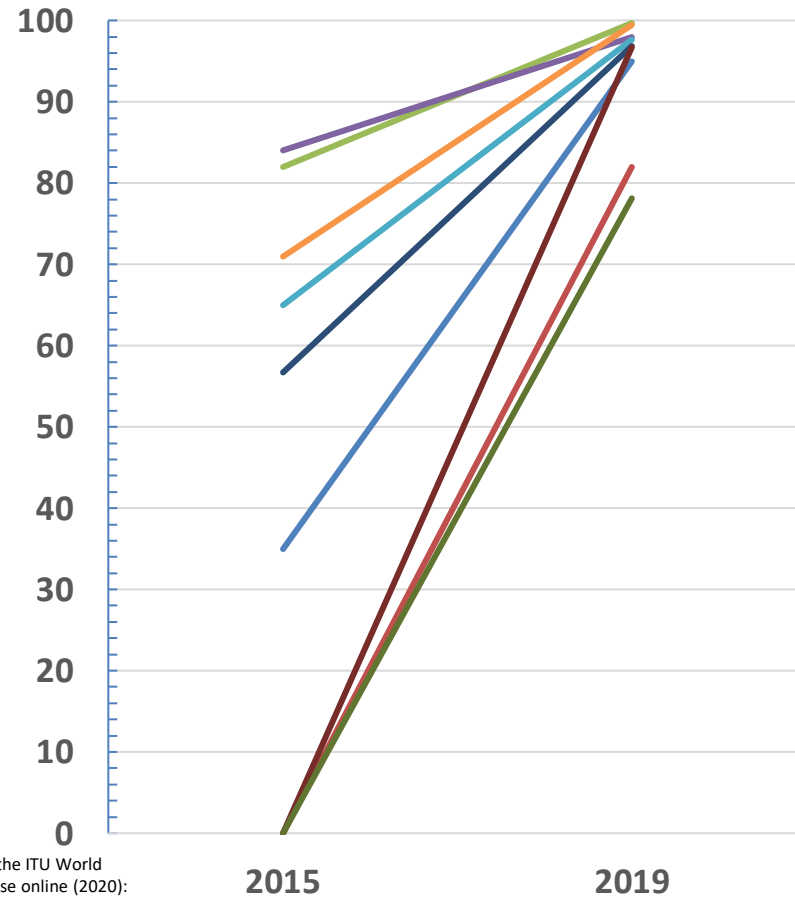
- Real **"boom"** in the number of mobile subscriptions per 100 inhabitants—in 2019, more than **55 million active mobile broadband subscriptions** have been reported throughout the countries

- Population covered by 4G/LTE technology has seen an almost **800% increase** in only five years with total coverage of 91.4% of the population for 2019

Est. % Households with PC at home
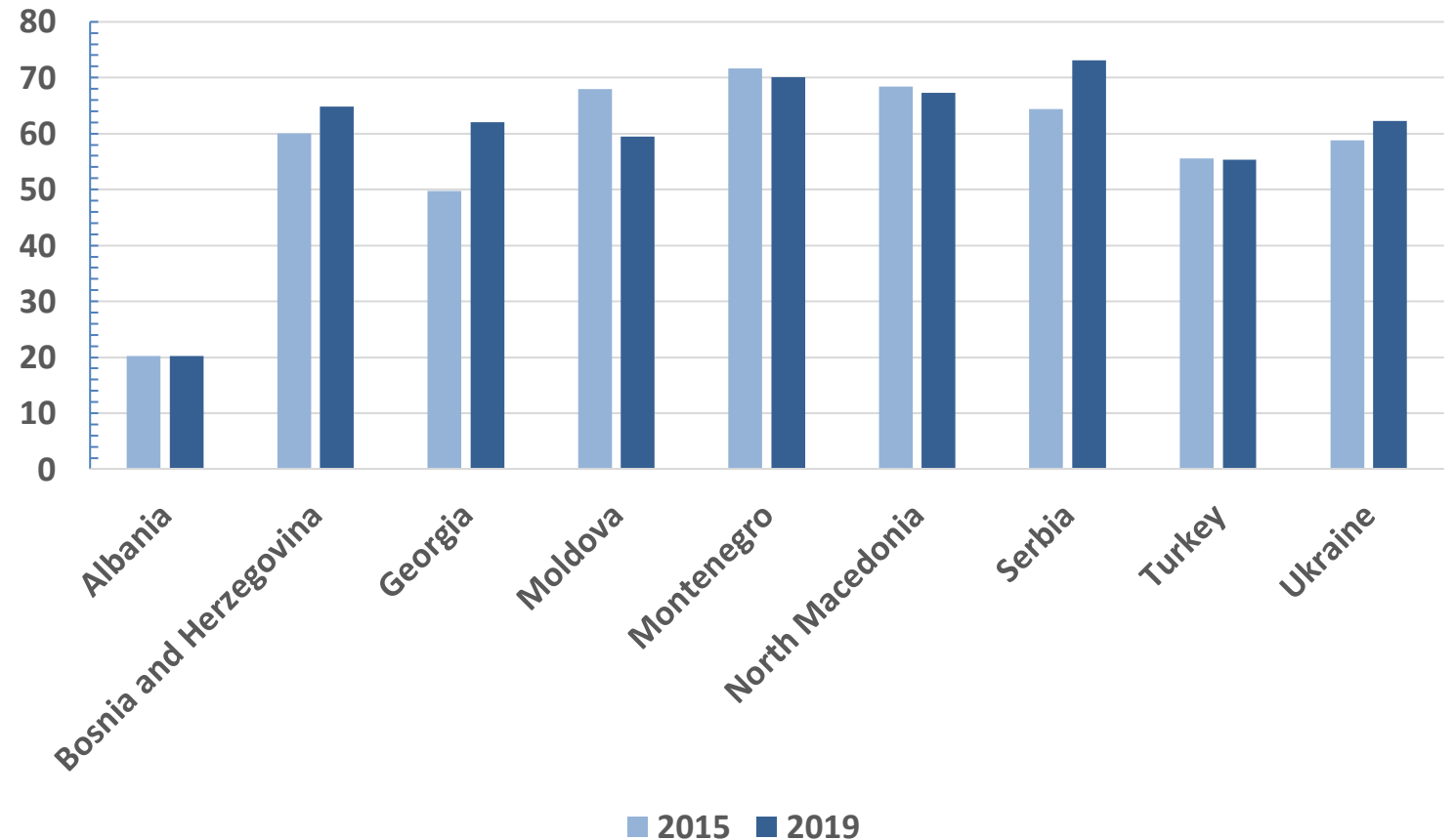
- More than **18 million households,** or 41% are **not in possession of a PC** in 2019.

- Persistent **lack of PCs in households has exacerbated inequalities** during the global pandemic

■ 2015 ■ 2019

Elaborated based on data available in the ITU World Telecommunication/ICT Indicators Database online (2020): http://handle.itu.int/11.1002/pub/81550f97-en

Est. % Households with Internet access at home
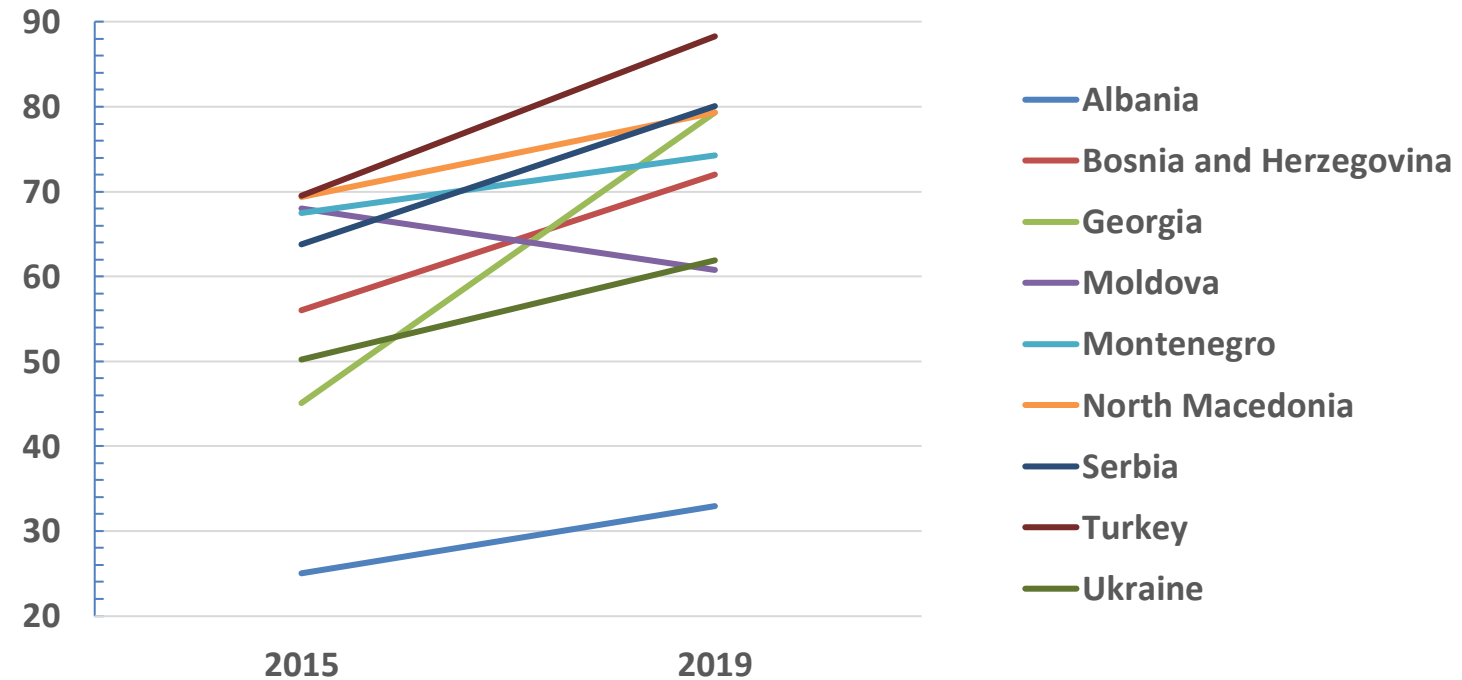
- More than **11 million households,** or 25%, **do not have access to the Internet** in 2019.

Legend:
- Albania
- Bosnia and Herzegovina
- Georgia
- Moldova
- Montenegro
- North Macedonia
- Serbia
- Turkey
- Ukraine

Elaborated based on data available in the ITU World Telecommunication/ICT Indicators Database online (2020):
http://handle.itu.int/11.1002/pub/81550f97-en

2. Government strategies, status of the quality of education, and the role of ICTs

Education Quality and Governance

- **Education policy is a strategic priority** in all 9 countries.

- OECD's Programme for International Student Assessment (**PISA**) reveal two significant factors that characterize underperformance in school: the **urban versus rural divide** and the **high-income vs. low-income divide,** two patterns similar to the **Digital Divide**

- Best practices in education management: implementing **Education Management and Information Systems (EMIS**), **centralized information systems** established to collect, manage and utilize education data more efficiently.

2. Government strategies, status of the quality of education, and the role of ICTs

Existing ICT Gaps in Education

In numbers

- Divide exists, both **number of available devices per student** and **computers connected to the Internet**.

- Need for **better data and indicators** to better understand the gap

0.15	**Number of PCs per students (9 countries assessed)**
0.77	**Number of Computers per students (OECD average)**
80 (est)	**% of PCs with internet Access of at least 2Mbps**
15 million (est)	**Computers needed to reach OECD average**
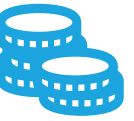
3. Multi-stakeholder partnerships and financing mechanisms fostering investment in school connectivity
Challenges and Opportunities

- Some countries have established **minimum requirements for equipment** in public schools (includes the distribution of PCs and the allocation of public budget to provide minimum equipment)

- Connectivity remains a challenge from **financial, technical and logistical** perspective. Schools are often located in **remote geographic areas** where adequate provision of service is not available/commercially viable for operators.

- Ministries in charge of the ICT development tend to **prioritise the financing ICT infrastructure to reach all** *households* and cover the largest possible share of the population with the highest quality of services. But for rural and remote areas, **focusing primarily on schools can be the solution for bringing connectivity to rural households**.
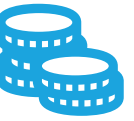
3. Multi-stakeholder partnerships and financing mechanisms fostering investment in school connectivity
Solutions

- **International financial mechanisms** for broader broadband infrastructure investment *are* present (i.e. WBIF with the EIB, EBRD, WB)

- Apart from some notable exceptions, while Ministries in charge of ICTs have been building a constructive dialogue, **Education systems have not captured these opportunities** for school connectivity.

- ITU and UNICEF at the forefront of closing the gap with the **Giga project**

4. National responses to COVID-19 and pedagogic initiatives for distance education

Pandemic Strikes

- March 2020: All nine countries in scope of this study faced school shutdowns due to COVID-19 outbreak.

Schools shut down

- 23 million primary and secondary school students and at least an equal number of households impacted.

ICTs Critical to Immediate Response

- Most popular Solutions:
  1. Broadcasting lessons on national TV
  2. Creating/Strengthening online digital learning
  3. Online classes to replicate classroom

Long-Term Innovations

- School connectivity as an enabling factor for education.
- Ensure a smarter administration of the education system
- Strengthen the presence of digital in school curricula
- Ensure that hybrid solutions can be sustained in times of crisis

	Albania	Bosnia and Herzegovina	North Macedonia	Montenegro	Serbia	Georgia	Moldova	Turkey	Ukraine
Television broadcasting to transmit lessons	✔	✔	✔	✔	✔	✔		✔	✔
Created/strengthened national online distance learning platforms	✔		✔	✔	✔	✔	✔	✔	✔
Organisation of online classes replicating the physical classroom								✔	
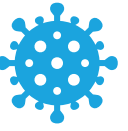
Main Takeaways

- Over the past decade, the **intersection of the policy areas of education and telecommunications** has become more evident, consistent with a wider trend of the "**digitalization of everything**."

- This integration between education and the digital has evolved in three main directions:
    1. **ICTs as a tool for public administration in education;**
    2. **ICTs as a medium to ensure continuity of digital services in education in times of emergency; and**
    3. **ICTs as an integral part of education curricula to create a workforce fit for the job market.**

- Need of **strategic policies** fostering **connectivity infrastructure and the fruition of devices in schools and households**

- Thank you -

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