



# Remote Learning Readiness Index

## Data and Methodology Note

### Introduction

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This document provides an overview of the methodological work behind a new UNICEF composite indicator, the Remote Learning Readiness Index (RLRI). While the results of the assessment are presented in the report, this document aims to clarify the steps and statistical procedures taken to derive the index.

The context of the assessment goes back to April 2020 when most countries worldwide closed their schools for in-person instruction, putting more than 1.5 billion students at risk of falling behind in their education. Although 18 months have passed since the pandemic was first announced and most countries have moved back to in-person or hybrid instruction, 27 per cent of countries worldwide have kept schools fully or partially closed, and more than 130 million students in 11 countries missed at least three-quarters of all in-person instruction time during this period of time (UNICEF, 2021). Available evidence suggests that about 30 per cent of schoolchildren worldwide are not able to learn remotely, and large variations are observed between countries, levels of education, and family socio-economic status (UNICEF, 2020).

As the end of the COVID-19 pandemic is not foreseeable, remote learning will continue to play an important role in delivering education in the near future, as well as in providing remedial support for students most affected by learning loss. Furthermore, school closures are not unique to the COVID-19 pandemic and can happen due to environmental factors or conflicts that lead to displacement and migration, affecting the most vulnerable children.

Proceeding from this, the work behind the RLRI was motivated by the following research **question**: *how can one tell which part(s) of the education system should be improved to ensure continuous provision of education to all children through remote learning in extreme cases that lead to school closures?* In other words, the RLRI aims to estimate how resilient national education systems are to crises in terms of ensuring continuity of learning through the remote channels if schools are closed. This metric provides valuable information on the current status of readiness for remote learning, as well as information on how to increase readiness for future school closures.

The main **objective** of the RLRI in terms of its policy application is *to determine which part(s) of the education system need to improve in order to provide all schoolchildren with remote learning opportunities*. Furthermore, the index is also useful in assessing if remote learning channels can be used to mitigate learning losses after school closures in the most affected countries, bringing the most vulnerable back on track in their education pathways.

The RLRI is calculated at the national level, with disaggregation for each education level from pre-primary to upper secondary school. Disaggregation by level of education reveals differences in resilience and vulnerability and highlights where more attention to ensure the continuity of learning is needed. It is critical to consider that countries have different capacities,

preparedness, and resources allocated to cope with crises from pre-primary to upper secondary school, so readiness for remote learning can vary at different education levels.

The RLRI is based on four key **guiding principles**:

1. **Simplicity**: the RLRI should employ a methodology that is easy to understand and replicate.
2. **Sustainability**: new rounds of assessment can be produced annually as new data emerges.
3. **Usability**: the RLRI can and should be used to analyze education systems by education level and domain, and to guide policy discussions at the national level.
4. **Robustness**: the RLRI should be statistically robust in terms of its performance.

The **target audience** for the RLRI is composed of education policymakers and stakeholders at the national level. The index can identify critical domains where additional attention and efforts need to be made to more efficiently mitigate the negative consequences of the COVID-19 pandemic on learning, helping to increase the resilience and preparedness for potential school closures in the future.

The assessment performed by the RLRI is aligned with the global education agenda, which identifies the possible areas where the index could guide policy action. UNICEF is working to connect the world's approximately 3.5 billion children and young people to world-class digital learning solutions by 2030 through the [Reimagine Education](#) campaign, and the RLRI could inform this initiative by providing insights on where countries stand in terms of internet access and coverage of digital infrastructure among the student population.

Another initiative, "[Mission: Recovering Education in 2021](#)," was launched jointly by UNICEF, UNESCO and the World Bank to advocate for reopening schools, catch-up learning initiatives that include digital technologies, and supporting teachers. Proceeding from this, the **application of the RLRI** could be useful, but not limited to, the following areas:

- Identification of high-risk countries for learning loss
- Identification of program entry points to improve remote learning, including teacher training for remote learning (an essential aspect of the "mission")
- Informing education sector planning (ESP) processes to improve remote learning preparedness and the resilience of the education sector
- Providing education for out-of-school children and refugees
- Informing UNICEF country offices on how to improve education sector resilience, i.e., making the RLRI part of UNICEF's Strategic Plan monitoring framework.

# Conceptual Framework

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When one talks about a country's readiness for remote learning, several things appear to be critical. First, household-level factors like access to information and communication technology (ICT) assets at home play a big role in the ability of a schoolchild to access remote learning. A child that has radio, television, mobile phones, personal computers, and internet access at home has a lower likelihood of being affected in terms of learning loss if schools are closed. However, since many children who are unable to have in-person interaction with their teachers might need additional support, parental education is another critical factor in the household environment. It is assumed that more educated parents are better prepared to support their children when they learn from home. As such, the share of mothers who completed at least secondary education was taken as a proxy for parental support that a child could potentially receive at home to facilitate their learning. Combined, these components allow for identifying the household-level domain in a country's readiness for remote learning.

However, even the highest household-level readiness won't help much without an effective policy response. Internet access from home is of little use in continuing to follow coursework if the government does not design a remote learning policy based on online platforms. An efficient policy response provides as many schoolchildren as possible with remote learning opportunities and mitigates the effects of socio-economic status (e.g., possession of ICT assets at home). The more remote learning policies a country deploys, the more schoolchildren have a chance to continue learning while schools are closed. Therefore, policies that use broadcast channels such as radio or television are as important as those that use online channels, since lower-tech options provide better opportunities to reach children from the poorest households or rural areas. However, a country's policy response is not limited to the deployment of remote learning modalities. It is also very important to support teachers by providing them training on how to instruct classes through remote channels. Untrained teachers often struggle to remotely deliver materials to schoolchildren in an efficient way. Thus, factors related to the deployment of remote learning opportunities and related training for teachers constitute the policy response factors critical to a country's remote learning readiness.

Finally, as remote learning is a measure adopted in response to crises that lead to school closures and the disruption of in-person instruction, it is essential to assess how well a country's education system is prepared to respond to emergencies. The ability to assess and mitigate

risks, and to allocate sufficient human and financial resources in response, comprise the factors related to education system-level preparedness for emergencies.

It is important to emphasize their complementary nature of the three domains of remote learning readiness. The domains are not fungible – for example, as outlined, high readiness for remote learning is impossible to achieve by advancing household-level factors but without an efficient policy response. The complementary nature of the relationship between the remote learning readiness domains is opposed to the substitute one, when advancement in one component could compensate for lower performance in another one. Remote learning systems must be envisioned as chains that are only as strong as their weakest link. The successful delivery of remote learning depends on a country performing well in all three domains. The RLRI highlights the areas where a country most needs to strengthen its readiness and ensure learning continuity through remote channels. Figure 1 presents the relationship between the key dimensions of the RLRI and the way the domains are grouped to produce the aggregate composite measure.

**Figure 1. RLRI domains and variables**

	Households	Policy Response Capacity	System-Level Emergency Preparedness
Variables	<p>The share of schoolchildren with home access to:</p> <ul style="list-style-type: none"> <li>■ Radio</li> <li>■ Television</li> <li>■ A computer</li> <li>■ The internet</li> <li>■ At least one mobile phone owned by a family member</li> </ul> <p>As well as</p> <ul style="list-style-type: none"> <li>■ The share of school children whose mothers completed upper secondary education or higher</li> </ul>	<p>Provision, through ministry of education policies, of remote learning opportunities via:</p> <ul style="list-style-type: none"> <li>■ Radio</li> <li>■ Television</li> <li>■ Online Platforms</li> </ul> <p>As well as</p> <ul style="list-style-type: none"> <li>■ Training for teachers to use remote learning tools</li> </ul>	<ul style="list-style-type: none"> <li>■ Risk assessment for education sector is implemented.</li> <li>■ Risk reduction for education sector is in place.</li> <li>■ Human and financial resources for implementing risk reduction and assessment strategies are allocated</li> </ul>
Source	Multiple Indicator Cluster Surveys 2010-2020), Demographic and Health Surveys (2010-2020)	The first round of the UNESCO-UNICEF-WB survey (to be replaced by ad hoc annual surveys from 2022 onward)	UNICEF Strategic Monitoring Questions (2020)

## Data Sources and Coverage

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The RLRI relies on three major data sources. The data on schoolchildren who have the necessary ICT assets at home, as well as information on potential parental support expressed as the share of mothers who have completed upper secondary school, come from household surveys such as Multiple Indicator Cluster Surveys (MICS) and Demographic and Health Surveys (DHS). Survey data collected between 2010-2020 were used to produce the current set of estimates, of which two-thirds of the data refer to the 2015-2020 period. The data covers 67 mostly low- and middle-income countries.

Results of the first round of the UNESCO-UNICEF-World Bank Survey on National Education Responses to COVID-19 School Closures that took place in May-June 2020 provide information on policies that were adopted and teacher training conducted. Ministries of education were asked to indicate if radio, television, or online platforms were deployed as “education delivery systems as part of the national (or subnational) distance education strategy for different levels of education,” or if at the national level “teachers had been trained to use remote learning platforms” for different education levels from pre-primary to upper secondary school (UNESCO, UNICEF, World Bank, 2020). For future rounds of the RLRI, an ad-hoc survey of UNICEF country offices will be implemented to collect the data on how ministries of education use remote learning either during school closures or to provide the remedial support to mitigate learning loss.

Finally, the data on system preparedness for emergencies comes from UNICEF’s Strategic Monitoring Questions (SMQ), a complex assessment carried out by UNICEF HQ and country offices in consultation with ministries of education. The SMQ have a section on system strengthening, represented by indicator “2.a.2 Equitable education systems for access,” that has emergency preparedness and resilience as one of its subdimensions. This subdimension, in turn, is comprised of three core indicators: risk assessment, risk reduction strategy, and human and financial resources. UNICEF country offices are asked to rate their country’s education sector on a scale from 1 (weak) to 4 (strong) to indicate the extent to which they are implementing risk assessment and risk reduction, as well as allocating human and financial resources for these needs. An aggregated score of these three variables indicates the emergency preparedness and resilience of the education sector in a given country.

The RLRI uses 13 input variables from these three data sources and covers 67 low- and middle-income countries. The data coverage by country income group and region is presented in Table 1. Furthermore, detailed descriptive statistics of the input variables used to produce the RLRI are presented in Tables 2-4.

**Table 1. Data coverage by country income group and region**

Income Group/Region	N
High income (H)	2
Low income (L)	18
Lower middle income (LM)	28
Upper middle income (UM)	19
East Asia and the Pacific	10
Eastern and Southern Africa	11
Eastern Europe and Central Asia	6
Latin America and the Caribbean	13
Middle East and North Africa	3
South Asia	7
West and Central Africa	17
World	67

**Table 2. Household level factors**

Variable	Min	Median	Mean	SD	Max	NAs
Share of schoolchildren with radio at home	0.01	0.53	0.50	0.24	0.96	1
Share of schoolchildren with TV at home	0.02	0.66	0.64	0.29	1.00	0
Share of schoolchildren with at least one family member having a mobile phone	0.57	0.92	0.88	0.12	1.00	0
Share of schoolchildren with PC at home	0.02	0.18	0.28	0.25	0.92	7
Share of schoolchildren with internet access at home	0.01	0.31	0.35	0.28	0.95	28
Share of schoolchildren whose mothers completed secondary education or higher	0.02	0.29	0.38	0.28	0.94	7

**Source:** Authors' calculations based on Multiple Indicator Cluster Surveys (2010-2020) and Demographic and Health Surveys (2010-2020).

**Table 3. Policy capacity response**

Variable	Yes	No
Radio was deployed for any level of education	45	22
TV was deployed for any level of education	54	13
Online platforms were used for any level of education	52	15
Teachers were trained to use remote learning platforms	32	35

**Source:** Authors' calculations based on the first round of the UNESCO-UNICEF-World Bank Survey on National Education Responses to COVID-19 School Closures, May-June 2020.

**Table 4. Education system preparedness for emergency**

Variable	1	1.5	2	2.5	3	3.5	4	NA
Risk reduction for education sector is implemented	4	8	8	17	22	6	0	2
Risk assessment for education sector is in place	3	4	8	13	25	5	1	8
Human and financial resources are allocated for implementing risk reduction and assessment strategies	5	8	20	8	13	3	0	10

**Source:** UNICEF Strategic Monitoring Questions, December 2020.

## Aggregation

The data analysis and index construction employed a sequential approach based on first- and second-stage ranking. The first-stage ranking relates to the domain-level analysis and refers to two key steps, namely, aggregation of three domains based on the input variables, and evaluation of the computed aggregated scores against theoretical benchmarks. The second-stage ranking relates to the aggregation across three domains to produce each country's final ranking.

### *First-stage ranking: aggregation of the domains*

The first-stage ranking started with producing an aggregated value for each domain. At this stage, the major challenge behind producing the composite indicator stemmed from the fact that all the variables represent different types and statistical distributions. Variables derived from household data are continuous; scaled between 0 to 1, they express shares of schoolchildren. The data from the policy response capacity domain present binary outcomes, i.e., a policy was



either deployed (1) or not (0). Finally, SMQ data are fixed on an ordinal scale, with values varying between 1 to 4. Given the continuous nature of the underlying statistical distribution, an arithmetic mean across six quantitative variables from the household surveys was used to produce an aggregated value for the household domain. The policy response capacity domain represented by four binary variables was aggregated by counting the number of times a policy was implemented by a country. It resulted in an aggregated domain on a scale of 0 to 4, where 0 indicates that a country did not implement any remote learning policy and 4 shows that it implemented all possible policies. Finally, a median value across three variables from UNICEF's SMQ was calculated to represent the emergency preparedness of the education system domain. Since the variables from the SMQ represent ordinal ranks that are qualitative by their nature, the median score appears to be the optimal way to summarize the central tendency of this kind of distribution. Consequently, the aggregated score for this domain ranges from 1 to 4. In the final step of the first-stage ranking, each aggregated domain was evaluated against four theoretical benchmarks, such as "low," "medium-low," "medium-high," and "high." These benchmarks were produced in a way that divides the distribution of each aggregated score into four bins of relatively equal size.

### ***Second-stage ranking: identification of the weakest links***

The second-stage ranking started with the identification of the two weakest domains in a country's performance. Given the complementary nature of the three domains, it is logical to assume that the overall resilience of an education system to crises is defined by the weakest links in the chain, i.e., by the domains in which a country has the lowest performance. Proceeding from this, it was essential for each country to have data for all three domains to derive a final score.

Focusing on the two weakest links is justified by several factors. First, it allows for simplicity while also capturing critical information on a country's performance. Using two domains produces 16 possible outcomes, whereas using all three domains would produce 64 outcomes, making it difficult to summarize the results in an easy-to-understand manner. Furthermore, taking information from the best domain does not contribute to the identification of the areas where improvement is needed. Second, the complementary nature of the three domains places the focus on the weaker parts of the system. Alternatively, focusing on one – the weakest – domain could result in a loss of information on how resilient the country is toward school closures. And lastly, choosing two domains produces results which are more sensitive to improvements over time.

Each country’s two weakest domains were used to produce final scores ranging between one and five stars, with five being the best. For example, if a country scored “high” in the household domain but performed “medium-high” in the policy response and “medium-low” in the emergency preparedness domains, the combination of the latter two was used to determine the final score. Table 5 presents how the 16 possible combinations of the two weakest domains were classified into the final score. To facilitate understanding of the index, each level is color-coded.

**Table 5. Methodology of aggregating the final score**

		Lowest Domain			
		High	Medium-High	Medium-Low	Low
2nd Lowest Domain	High	5 Stars	5 Stars	4 Stars	3 Stars
	Medium-High	5 Stars	4 Stars	3 Stars	2 Stars
	Medium-Low	4 Stars	3 Stars	2 Stars	1 Stars
	Low	3 Stars	2 Stars	1 Stars	1 Stars

## Treatment of missing values

As noted, because the RLRI is based on identification of the weakest links, (i.e., the two domains in which a country performs worst), the final rank was produced only for countries with available data across all three domains. Additional criteria were applied for producing aggregated domains at the first-stage ranking. Given that countries show different data availability (as was indicated in Tables 2, 3, and 4), the aggregations of the household and policy response domains were carried out only if at least half of the variables within each domain were present. However, to avoid a loss of coverage, an exception was made for the domain of education system preparedness. The item-total correlation using the Spearman rank correlation coefficient showed high values (above 0.7) for all input variables with an aggregated domain score. This allowed for concluding that even one variable could be a meaningful proxy for the education system preparedness for emergencies. As a result, if a country had only one value across three variables from UNICEF’s SMQ, it was taken as a final score of the aggregated domain.

# Interpretation of final scores

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The RLRI evaluates each country's performance across three domains, and then assigns a star ranking based on the country's performance in the two domains in which it is weakest. The following interpretation of each rank is suggested:

**1 star:** A country receives one star if it demonstrates poor performance in its two weakest domains. A one-star rating highlights the urgent need for a country to invest in developing a remote learning system, as the current system is only available to a limited number of schoolchildren, making learning continuity during school closures very difficult.

**2 stars:** A country receives two stars if it demonstrates lowest or medium-low performance in its two weakest domains. A two-star rating highlights that while some students can benefit from remote learning, it remains unavailable for the majority of students in the country due to a combination of factors.

**3 stars:** A country receives three stars if it demonstrates average performance in its two weakest domains. A three-star rating signifies that the country's remote learning systems can be regarded as relatively resilient, although serious concerns still remain about the potential for learning loss and the extent to which learning can continue in case of disrupted in-person instruction.

**4 stars:** A country receives four stars if it demonstrates medium-high performance in its two weakest domains. A four-star rating identifies countries with well-established and resilient systems of remote learning, where most students can continue to learn if schools are closed, although there are areas where improvement is still needed.

**5 stars:** A country receives five stars if it demonstrates high performance across all domains. A five-star rating identifies countries with the best readiness for remote learning and the highest resilience to crises that lead to disruption of in-person instruction, although other factors beyond the assessment (such as actual learning or within-country inequalities) should guide further policy discussions to strengthen the overall ecosystem of remote learning in the country.

# Limitations

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Two major limitations exist in the context of the RLRI, and both are imposed by the data. While the household domain mostly refers to issues related to the household possessions, sufficient data are not available on actual learning outcomes. Having the necessary ICT assets at home is not enough to ensure a schoolchild can actually learn. Potential obstacles can occur due to the number of assets, the size and composition of the household, stability of the home's internet connection, and so on. Furthermore, having an educated parent does not automatically mean that a child can count on parental support. In future rounds of the RLRI assessment, when more countries participate in MICS6 and will release data, it may be possible to include parental engagement in child's learning to account for this issue. Since data on learning outcomes are currently only available for a limited number of countries, its inclusion in the initial RLRI assessment was not feasible.

The second limitation refers to the policy response domain. For the initial RLRI assessment, the data used to produce this domain were collected in May-June 2020, at the beginning of the pandemic. As such, subsequent improvements in countries' policy responses were not captured. More and more countries are moving toward hybrid learning that combines in-person and remote instruction, a fact that will be reflected in future RLRI assessments.

## Annex. List of countries and sources of household data used to calculate the index<sup>1</sup>

ISO3	Country	Region	Household survey	Year
AFG	Afghanistan	South Asia	Demographic and Health Survey	2015
ALB	Albania	Eastern Europe and Central Asia	Demographic and Health Survey	2017-18
AGO	Angola	Eastern and Southern Africa	Demographic and Health Survey	2015-16
ARG	Argentina	Latin America and the Caribbean	Multiple Indicator Cluster Survey	2011-12
ARM	Armenia	Eastern Europe and Central Asia	Demographic and Health Survey	2015-16
BGD	Bangladesh	South Asia	Multiple Indicator Cluster Survey	2019
BRB	Barbados	Latin America and the Caribbean	Multiple Indicator Cluster Survey	2012
BLZ	Belize	Latin America and the Caribbean	Multiple Indicator Cluster Survey	2015-16
BEN	Benin	West and Central Africa	Multiple Indicator Cluster Survey	2014
BTN	Bhutan	South Asia	Multiple Indicator Cluster Survey	2010
BIH	Bosnia and Herzegovina	Eastern Europe and Central Asia	Multiple Indicator Cluster Survey	2011-12
BFA	Burkina Faso	West and Central Africa	Demographic and Health Survey	2010
BDI	Burundi	Eastern and Southern Africa	Demographic and Health Survey	2016-17
KHM	Cambodia	East Asia and the Pacific	Demographic and Health Survey	2014
TCD	Chad	West and Central Africa	Multiple Indicator Cluster Survey	2019
COL	Colombia	Latin America and the Caribbean	Demographic and Health Survey	2015-16
COM	Comoros	Eastern and Southern Africa	Demographic and Health Survey	2012
COG	Congo	West and Central Africa	Multiple Indicator Cluster Survey	2014-15
CRI	Costa Rica	Latin America and the Caribbean	Multiple Indicator Cluster Survey	2018
CIV	Cote d'Ivoire	West and Central Africa	Multiple Indicator Cluster Survey	2016
CUB	Cuba	Latin America and the Caribbean	Multiple Indicator Cluster Survey	2019

ISO3	Country	Region	Household survey	Year
COD	Democratic Republic of the Congo	West and Central Africa	Multiple Indicator Cluster Survey	2017-18
ETH	Ethiopia	Eastern and Southern Africa	Demographic and Health Survey	2016
GMB	Gambia	West and Central Africa	Multiple Indicator Cluster Survey	2018
GHA	Ghana	West and Central Africa	Multiple Indicator Cluster Survey	2017-18
GTM	Guatemala	Latin America and the Caribbean	Demographic and Health Survey	2014-15
GIN	Guinea	West and Central Africa	Multiple Indicator Cluster Survey	2016
GUY	Guyana	Latin America and the Caribbean	Multiple Indicator Cluster Survey	2014
HND	Honduras	Latin America and the Caribbean	Demographic and Health Survey	2011-12
IND	India	South Asia	Demographic and Health Survey	2015-16
IDN	Indonesia	East Asia and the Pacific	Demographic and Health Survey	2017
JAM	Jamaica	Latin America and the Caribbean	Multiple Indicator Cluster Survey	2011
JOR	Jordan	Middle East and North Africa	Demographic and Health Survey	2017-18
KAZ	Kazakhstan	Eastern Europe and Central Asia	Multiple Indicator Cluster Survey	2015
KEN	Kenya	Eastern and Southern Africa	Demographic and Health Survey	2014
KIR	Kiribati	East Asia and the Pacific	Multiple Indicator Cluster Survey	2018-19
KGZ	Kyrgyzstan	Eastern Europe and Central Asia	Multiple Indicator Cluster Survey	2018
LAO	Lao People's Democratic Republic	East Asia and the Pacific	Multiple Indicator Cluster Survey	2017
MDG	Madagascar	Eastern and Southern Africa	Multiple Indicator Cluster Survey	2018
MWI	Malawi	Eastern and Southern Africa	Demographic and Health Survey	2015-16
MDV	Maldives	South Asia	Demographic and Health Survey	2016-17
MLI	Mali	West and Central Africa	Multiple Indicator Cluster Survey	2015
MRT	Mauritania	West and Central Africa	Multiple Indicator Cluster Survey	2015
MEX	Mexico	Latin America and the Caribbean	Multiple Indicator Cluster Survey	2015
MMR	Myanmar	East Asia and the Pacific	Demographic and Health Survey	2015-16

ISO3	Country	Region	Household survey	Year
NPL	Nepal	South Asia	Multiple Indicator Cluster Survey	2019
NER	Niger	West and Central Africa	Demographic and Health Survey	2012
NGA	Nigeria	West and Central Africa	Multiple Indicator Cluster Survey	2016-17
PAK	Pakistan	South Asia	Demographic and Health Survey	2017
PNG	Papua New Guinea	East Asia and the Pacific	Demographic and Health Survey	2016-18
PHL	Philippines	East Asia and the Pacific	Demographic and Health Survey	2017
LCA	Saint Lucia	Latin America and the Caribbean	Multiple Indicator Cluster Survey	2012
STP	Sao Tome and Principe	West and Central Africa	Multiple Indicator Cluster Survey	2019
SEN	Senegal	West and Central Africa	Demographic and Health Survey	2017
SRB	Serbia	Eastern Europe and Central Asia	Multiple Indicator Cluster Survey	2019
SLE	Sierra Leone	West and Central Africa	Multiple Indicator Cluster Survey	2017
ZAF	South Africa	Eastern and Southern Africa	Demographic and Health Survey	2016
SDN	Sudan	Eastern and Southern Africa	Multiple Indicator Cluster Survey	2014
TLS	Timor-Leste	East Asia and the Pacific	Demographic and Health Survey	2016
TGO	Togo	West and Central Africa	Multiple Indicator Cluster Survey	2017
TON	Tonga	East Asia and the Pacific	Multiple Indicator Cluster Survey	2019
TTO	Trinidad and Tobago	Latin America and the Caribbean	Multiple Indicator Cluster Survey	2011
TUN	Tunisia	Middle East and North Africa	Multiple Indicator Cluster Survey	2018
TZA	United Republic of Tanzania	Eastern and Southern Africa	Demographic and Health Survey	2015-16
VNM	Viet Nam	East Asia and the Pacific	Multiple Indicator Cluster Survey	2013-14
YEM	Yemen	Middle East and North Africa	Demographic and Health Survey	2013
ZWE	Zimbabwe	Eastern and Southern Africa	Multiple Indicator Cluster Survey	2018-19

<sup>1</sup> Only household data are referenced here; for the policy response domain data from the first round of the UNESCO-UNICEF-World Bank Survey on National Education Responses to COVID-19 School Closures were used, and for the system emergency preparedness domain data from UNICEF's Strategic Monitoring Questions were used.

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