Series of SDG Webinars for the Arab Region:
World Bank
SDG 7.1.1

An Interagency and Experts Collaboration to Improve the Production and Dissemination of SDG Indicators from Official National Sources

15 June 2021

Report of the Meeting

Contents

The need to improve the production and dissemination of reliable comparable and timely data on SDG

In September 2015, the United Nations General Assembly adopted by consensus Resolution 70/1: Transforming our world: the 2030 Agenda for Sustainable Development (the 2030 Agenda). The Resolution reaffirms the need for the strengthening of national data systems through "collaboration between national statistical systems and the relevant international and regional organizations to enhance data reporting channels and ensure the harmonization and consistency of data and statistics for the indicators used to follow up and review the Sustainable Development Goals and targets".

The resolution also urges countries, the specialized agencies, the regional commissions, and the Bretton Woods institutions among others "to intensify their support for strengthening data collection and statistical capacity-building, including capacity-building that strengthens coordination among national statistical offices". Moreover, the resolution "Urges international organizations to base the global review on data produced by national statistical systems and, if specific country data are not available for reliable estimation, to consult with concerned countries to produce and validate modelled estimates before publication, urges that communication and coordination among international organizations be enhanced in order to avoid duplicate reports, ensure consistency of data and reduce response burdens on countries, and urges international organizations to provide the methodologies used to harmonize country data for international comparability and produce estimates through transparent mechanisms;"

Five years after the adoption of the 2030 Agenda several countries are facing considerable challenges in monitoring targets in many policy areas. The current COVID-19 pandemic highlights the value of measuring and monitoring: no strategy can be developed, and no measure can be implemented without a proper monitoring and evaluation system.

Many countries in the Arab region are reporting on SDG indicators, however, reporting on progress on many of the SDG indicators, remains limited in the region. Insufficient availability and quality of statistical information on SDG indicators hamper the capacity of policymakers to generate evidence-based and effective policy responses and implement the 2030 Agenda.

Translating these recommendations and resolutions into tangible results is imperative and will require intensive collaboration at the national, regional and global levels. Regional Commissions' Statistical bodies "are the nexus between the Statistical Commission at the global level and the implementation at the national level of the norms endorsed by the Commission. In the context of the 2030 Agenda, the support provided by the regional commissions to assist Member States in adapting, implementing and measuring progress towards the implementation of national development plans is of particular significance as it influences the quality of statistics and methodologies used, as well as the use of new and innovative methodologies and sources of data, known as the transformative agenda for official statistics. The regional commissions carry out activities to strengthen the capacity of Member States to produce, use and dissemination official statistics and also provide a regional platform for sharing experiences and practices in statistics work[1]."

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[1] Source: Relevance and effectiveness of the statistical work of regional commissions - thematic evaluation of regional commissions, Committee for Programme and Coordination, 57th session, April 2017 (E/AC.51/2017/8)

Interagency and Experts Collaboration- ESCWA & World Bank

In this context, the Economic and Social Commission for Western Asia (ESCWA) implemented an assessment of data disseminated through the UNSD SDG Global database and those in national SDG official sources to identify indicators that are less produced, disseminated, or less understood by national statistical offices (NSOs), and are more available in UN Agencies' and UNSD databases.

Based on the assessment results, ESCWA in collaboration with World Bank met on 18 March 2021 to discuss the organization of a joint webinar to build capacities of Arab countries to produce and disseminate indicator 7.1.1.

OBJECTIVE- WHY?
ESCWA and World Bank organized a webinar on SDG indicator 7.1.1 that are less produced/disseminated in the Arab region to create a common understanding among data producers on how to collect, measure and disseminate this indicator to increase data availability and enhance national data flow to national policy makers, regional users including the custodian agency.

The main objectives of the regional training are:
- Enhancing understanding of metadata and nature of data in the UNSD SDG database.
- Improving statistical capacities to invigorate production and use of comparable SDG indicator.
- Strengthening inter-institutional coordination to invigorate production of SDG indicators and data flow.
- Sharing and discussing country challenges in measuring SDG indicator 7.1.1

TARGET AUDIENCE
The meeting was attended by 28 representatives from 12 national statistical offices namely: Algeria, Bahrain, Egypt, Jordan, Kuwait, Libya, Morocco, Qatar, Saudi Arabia, Somalia, Sudan, and United Arab of Emirates. The meeting was also attended by representatives from the World Bank, Resident Coordinator Office (RCO), UNAMI, and UNDP.

SCHEDULE & LANGUAGE– PLATFORM?
The regional training was held on 15 of June from 3:00 to 4:45 P.M. via Zoom. Facilitation of the workshop was conducted in Arabic/English with simultaneous interpretation in English and Arabic languages.

OUTCOME- FINDINGS AND RECOMMENDATIONS
NSO participants and other relevant stakeholders were familiarized with concepts, methods including data flow and dissemination channels. The webinar encouraged interactive dialogue and participants were invited to share national experiences in data collection and dissemination including challenges and concerns. Presentations to the meetings were made available in the Arabic and English languages. A record of the discussions is provided in Annex on Q&A of this report. The full webinar proceedings were recorded to develop training materials.

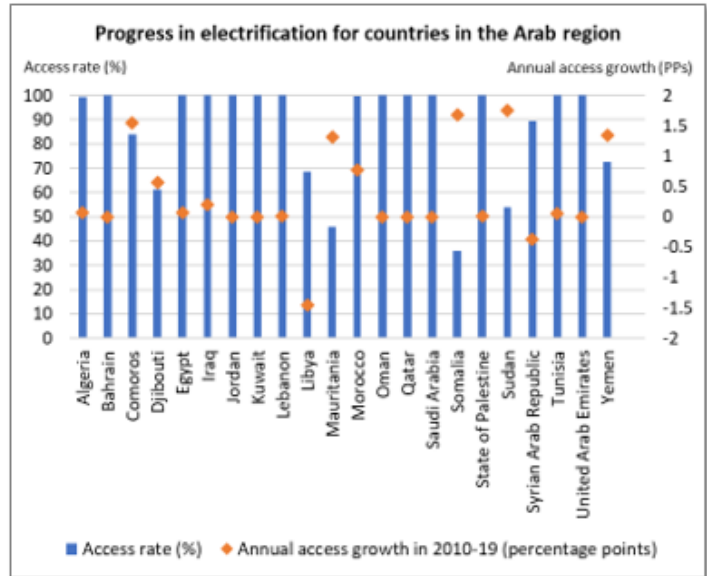### 7.1.1 Proportion of population with access to electricity

The annual World Bank report on Tracking SDG7, prepared in collaboration with WHO, IEA, IRENA and UNSD, tracks the energy pillars: access to electricity and clean cooking, renewables, efficiency, and international public financial flows. The 2021 report was launched in June 2021 and is a key document for the High-level Dialogue on Energy meeting to be held in September 2021. This indicator focuses on the share of population in a defined area (country, region global, urban and rural) that has access to electricity.

Figure 1: Electrification data in the Arab region

Source: World Bank

Over the last decade, the proportion of population with access to electricity in the Arab region has increased remarkably from 86% in 2010 to 90% in 2019, equal to the World average. During the same period, 78 million people have gained access to electricity, while 45 million people were still lacking access in 2019.

Censuses and household surveys such as DHS, LSMS, IEHS, MICS, WHS and MTF, are the main data sources as it captures end-user perception of access to electricity including off-grid connection, shared connection, illegal connection. Meanwhile, since government data only focus on-grid connections and overlook data for off-grid, shared and illegal connections, the administrative data are not considered for the sake of consistency in methodology across countries. For certain regions like Latin America and the Caribbean, the World Bank incorporates socio-economic data such as SEDLAC database. The World Bank assumes 100% access to electricity for countries considered "developed" by the United Nations and classified as high income by the World Bank income classification.
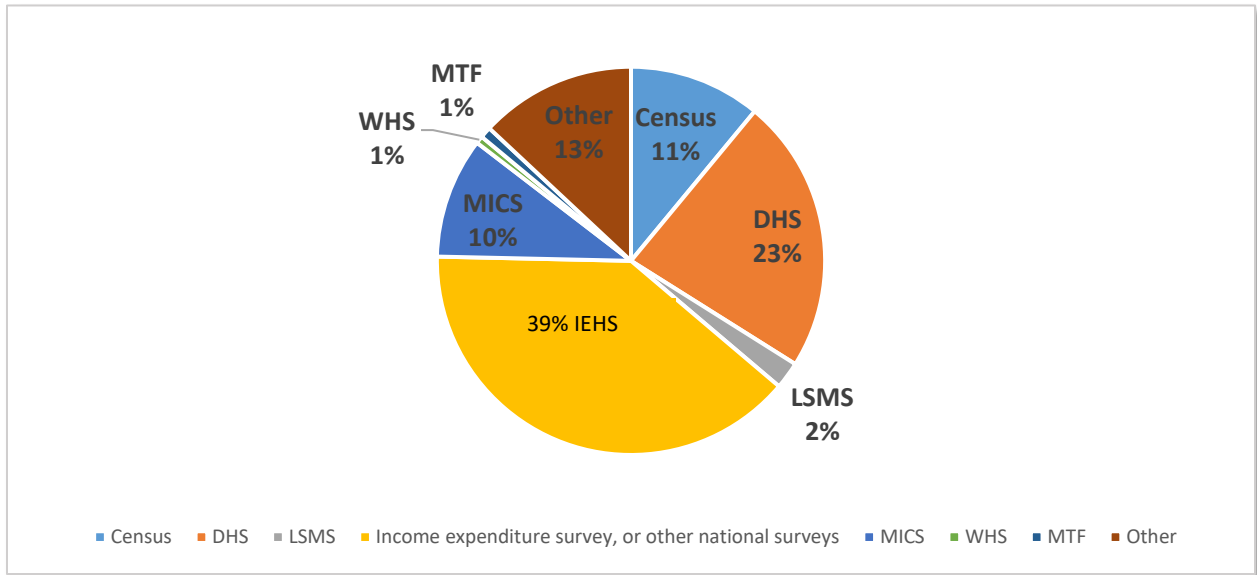
Tunisia has the highest number of household surveys (23) with data on access to electricity mostly from Income expenditure survey followed by Jordan and Morocco from Demographic Household Surveys and other national household surveys since 1990.

Figure 2: Types of data sources from 1990 to 2019

Source: World Bank

The World Bank follows a three-step process for data collection and validation as follows:

1. Data are collected (September to February) from latest household surveys and censuses including those from earlier surveys and censuses to establish time series. Consultation with Regional Commissions to ensure completeness of data will also be made on regular basis.

2. Estimates for access rates are calculated using linear nonparametric modeling based on empirical data between household surveys. The estimation is made twice for the periods 1990-2010 and 2010-2019 to recognize efforts made by countries since 2010. Estimated values are clearly identified as "estimates" in the database.

3. Consultation with countries are conducted to validate data as per local context.

Based on the validated electrification data, total population with access is calculated as follows.

$$(Total\ rate\ * Total\ population) = (Urban\ rate\ * Urban\ population) - (Rural\ rate\ * Rural\ population)$$

Due to poor quality of data on rural population in some countries, total population is not equal to the sum of rural population and urban population. This is an issue with regard to access-deficit in numbers. Therefore, the World Bank assumed that urban population data is more reliable than rural population data and that's why rural rate is found by back-calculation:

$$Rural\ rate = \frac{(Total\ rate\ * Total\ population) - (Urban\ rate\ * Urban\ population)}{Rural\ population}$$

The binary questions, however, used in earlier household surveys/censuses were limited in capturing the multi-dimensional access to energy as shown in Table 1 below.

Table 1: Overview of questions on electricity access by data sources

Name	Statistical Agency	Number of countries	Number of surveys	Questions on electrification standardized across countries
Census	National statistical agencies	76	141 (11%)	Is the household connected to an electricity supply? Does household have electricity?
Demographic and Health Survey (DHS)	Funded by the USAID; Implemented by ICF International	91	294 (23%)	Does your household have electricity?
Living Standards Measurement Survey (LSMS)	National statistical agencies supported by the World Bank	22	29 (2%)	Does your household have electricity? What is your main source of energy for lighting?
Income expenditure survey (IEHS) or other national surveys	National statistical agencies supported by the World Bank	115	502 (39%)	Is the house connected to an electricity supply? What is your primary source of lighting?
Multi Indicator Cluster Survey (MICS)	United Nations Children's Fund (UNICEF)	68	129 (10%)	Does your household have electricity?
World Health Survey (WHS)	World Health Organization (WHO)	8	8(1%)	
Multi-Tier Framework (MTF)	World Bank and national statistical offices	12	12 (1%)	
Other		73	167 (13%)	

Source: World Bank

Multi-Tier Framework (MTF) module

WHO, the World Bank ESMAP and LSMS teams joined effort to develop a practical guidebook on Measuring Energy Access with the following objectives:

- To provide survey practitioners with the requisite tools and technical support to successfully integrate the new energy access questions into existing national household surveys.
- To provide support on the computation of data collected to track the progress toward SDG 7.1, towards informing more effective policies and programs.

This MTF came in response to the limitations of the old questions and the need to improve this questionnaire to capture multi-dimensionality access to energy. It will include geospatial and satellite data tracking night-time lights to assess electrification rates. It is important to integrate the questions adequately in a national representative survey. Moreover, the module is designed in a cohesive manner; no need to maintain the questions sequence while integrated in a longer household survey.

The World Bank proposes eight attributes to measure SDG 7.1.1:

	ESSENTIAL SURVEY QUESTIONS	INDICATORS
SDG 7.1.1		Percentage of population with access to electricity (Population with access to Tier 1 or above for all seven following sub-indicators).
Capacity	HE3. What source of electricity is used most of the time in this household? HE4. What appliances are powered using this household's solar device/system? HE5. How many lightbulbs can be powered using this household's solar device/system?	Capacity of electricity
Availability	HE7. In the last 7 days, how many hours of electricity were available each day on average from [NAME MAIN electricity system]? (Maximum 24 hours) HE8. In the last 7 days, how many hours of electricity were available each evening on average, from 6:00 pm to 10:00 pm from [NAME MAIN electricity system]? (Maximum 4 hours)	Availability of electricity supply
Reliability	HE9. In the last 7 days, how many times were there unscheduled outages or blackouts from [NAME MAIN electricity system]? HE10. What is the total duration of all the unscheduled outages or blackouts in the last 7 days?	Reliability of electricity supply
Quality	HE12. In the last 12 months, did any of this household's appliances get damaged because the voltage was going up and down in the [NAME MAIN electricity system from HE3]?	Voltage fluctuation of electricity supply
Affordability	This information is collected in the expenditure/consumption module	Affordability of electricity service
Formality	HE6. Who does this household currently pay for [NAME MAIN electricity system]?	Formality of electricity
Safety	HE13. In the last 12 months, did anyone using [NAME MAIN electricity system from HE3] die or have permanent limb (bodily injury) damage?	Safety of electricity

Source: World Bank

Figure 1: Survey data and model estimates for access-deficit countries in Arab region
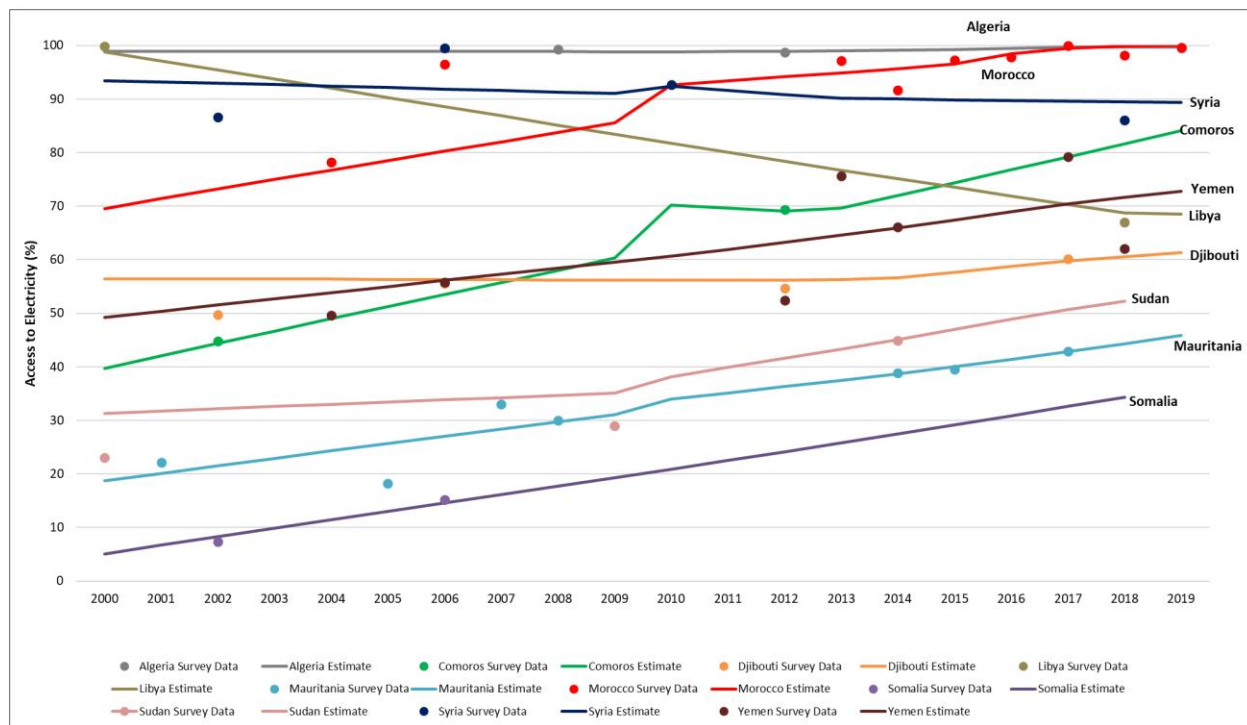
Source: World Bank

The graph above shows the time series comprising of survey data and model estimates per each access-deficit country (did not reach universal access of 100%) in the Arab region.

In most countries, survey data and model estimates were in line with each other. Although, few discrepancies were found in some countries. For Morocco and Comoros, model estimates seem to become steep from 2009 to 2010 because these estimates were influenced by recent electrification survey data since 2010.

There are 17 countries who succeeded in disseminating their country data in the UNSD SDG Database, however, none of them reported their national data in SDG dashboards/VNRs. The indicator is being estimated for the 22 Arab countries to cover the missing values.

Indicator	UNSD SDG Database (C-CA)	UNSD SDG Database (E-M-N-NA-G)	SDG in national report
7.1.1 Proportion of population with access to electricity	17 (C): Algeria, Comoros, Djibouti, Egypt, Iraq, Jordan, Lebanon, Libya, Mauritania, Morocco, Saudi Arabia, Somalia, State of Palestine, Sudan, Syrian Arab Republic, Tunisia, Yemen	22 (E) 19 (M)	

C: country data, CA: country adjusted data, E: estimated data, G: global monitoring data, M: modeled data, N: non-relevant data, NA: data nature not available

Recommendations for Countries:
- All countries, including the high-income countries, are to apply the new MTF module in their household surveys even, if the assumption is 100% access rate.
- Countries to request assistance on how to implement the new questionnaire

Recommendations for ESCWA/World Bank:
- World Bank to consult with ESCWA and use Arab Register for updates on latest household surveys in the region.
- World Bank to provide ESCWA and countries with the "Measuring Energy Access" guidebook when published.
- World Bank to provide ESCWA and countries with the short version of the questionnaire.
- World bank to organize bilateral meetings with countries to brief them on the questionnaire
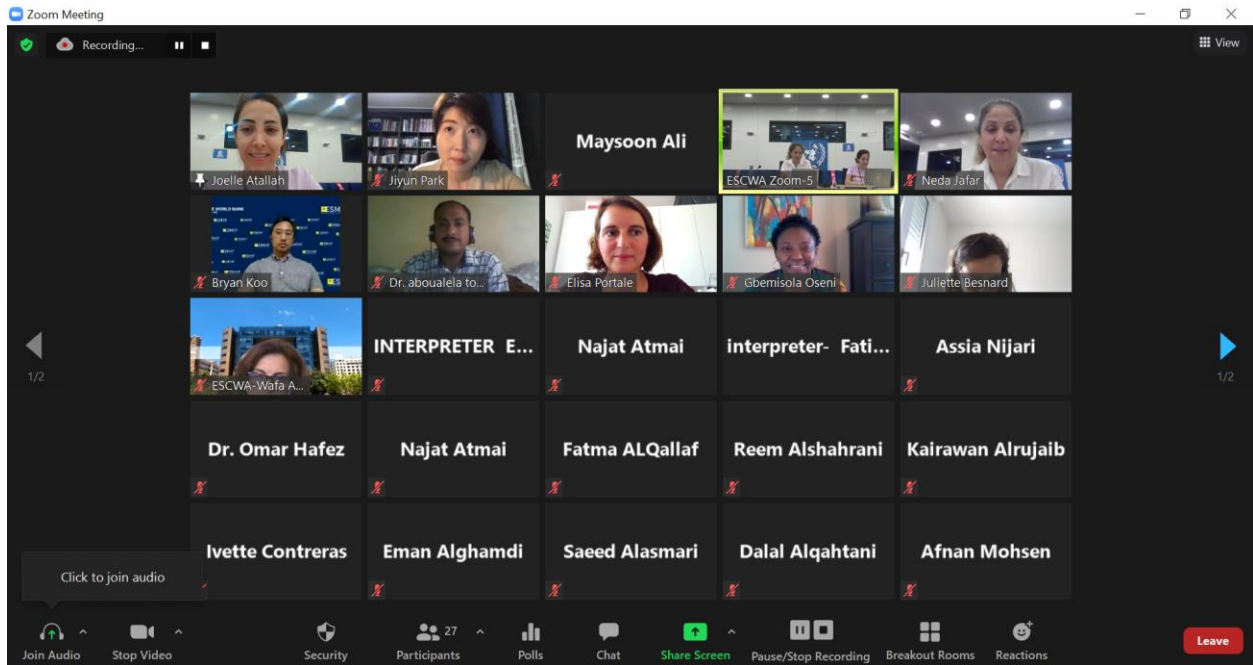
ATTENDANCE AND EVALUATION

An electronic evaluation was completed by 11 participants during the webinar. The results were as follows:

- 55 per cent of respondents rated the overall quality of the webinar as "Excellent" and 45 per cent as "good".
- 55 per cent indicated that the webinar was successful in reaching its intended objectives as "Excellent", 45 per cent as "good".
- 36 per cent rated the inputs provided by presenters in reaching the intended outcome of the webinar as "Excellent" and 64 per cent as "Good".
- 55 per cent rated the overall organization and logistics of the webinar as "Excellent" and 45 per cent assessed it as "Good".

TRAINING CERTIFICATION

Participants successfully attended the ESCWA SDG webinar were awarded a training certificate by the organizers.

GROUP PHOTO

LIST OF ANNEXES

Day: Tuesday 15 June		Speakers
3:00-3:05 P.M.	Introduction to the Webinar (objective, speakers, and content)	ESCWA – Neda Jafar
3:05-4:40 P.M.	7.1.1 Proportion of population with access to electricity - Remark/introduction to tracking SDG7 report - Presentation: - Electrification data model and country examples - First round: Discussion and Q&A session - Guidance note on the MTF approach - Second round: Discussion and Q&A session	World Bank – Umar Serajuddin Gbemisola Oseni Elisa Portale Juliette Besnard Bryan Koo Jiyun Park
	Country experience Discussion – Q&A	
4:40-4:45 P.M.	Way Forward and Conclusion	ESCWA – Neda Jafar

Annex 2: LIST OF ORGANIZERS AND PARTICIPANTS

LIST OF ORGANIZERS

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- About Multi-Tier Framework (MTF). https://www.esmap.org/node/71201
- ESMAP Technical Report – Beyond Connections: Energy Access Redefined. https://openknowledge.worldbank.org/handle/10986/24368
- Tracking SDG7: The Energy Progress Report. https://trackingsdg7.esmap.org
- Electrification Data available on https://trackingsdg7.esmap.org/
- Datasets for MTF surveys: https://energydata.info/dataset?q=mtf
- Arab Union Electricity: https://auptde.org/en/open-data

Country /Name	Questions	Answers
Indicator 7.1.1		
Saudi Arabia – Dr. Omar	What is the impact of Covid-19 pandemic on collecting the data for this indicator?	It is a bit too early to assess the results of the pandemic on the data. IEA has done a scenario showing the potential impact. But the full picture is not seen yet, and it will take up to 2 years to be able to assess the situation. In the upcoming data collection cycle, we will be able to assess to what extent new surveys are available. World bank was helping countries maintain data availability in covid-19 pandemic by conducting phone surveys. Three months after lockdown, countries have opened and resumed face to face surveys with the guidance produced by the agency to help them conduct safely face to face surveys.
ESCWA	What are the sources of electricity? Do you have a script to do collect data through questionnaires on mobile phones?	While collaborating with LSMS team, a paper-based questionnaire was developed at the same time build up a script for the stand-alone survey. Before covid-19, stand-alone survey was preferred because more questions can be asked and getting more information using a simplified expenditure module to understand the welfare level. Once all the data is collected through stand-alone survey, energy access issues can be linked to the welfare household level. During covid-19 and due to impossibility of conducting face-to-face survey, in collaboration with LSMS team, a phone survey was developed to collect data within 15 minutes in addition to a script. Regarding the first part of the question, in the stand-alone survey, questions are asked on all sources of electricity the household is using and to determine the main source of electricity.
ESCWA	As mentioned data for the seven domains are to be collected, is the indicator calculated as an index or a score? How do you analyze data for example in Lebanon to account for the many cuts in electricity?	It depends on the definition of the availability and the reliability. Availability can capture all the scheduled outages, people can for example specify the number of hours having access of electricity and the number of hours of the blackout. Reliability can capture the unscheduled outages. In this case, the electricity supply can be captured from the availability attribute. The only question asked is about the unscheduled interruptions. In the pilot process done, we recognized that unscheduled interruptions are usually uncommon in countries. Initially, the numbers were produced as index. Currently, the agency looks at tier 1 plus population number. They look at all seven attributes, and for each attribute they assign a tier

		and then determine household final tier by looking into the lowest tier among the seven attributes which is going to be the final aggregated tier. After this, they will check throughout the whole population, how many percentages of households are in tier 0 meaning no access to electricity or with access to some sort of electricity but lack from sufficient electricity supply like three hours per day. In the report, the agency is only presenting the populations in tier 1 and above.
UAE – Abeer Alaysah	Do the GCC countries (high-income) need to apply the new module?	From the annual survey perspective, even if countries reached 100% access to electricity, it would be better to do include MTF module in a household survey to have more insights on all the attributes, to understand if they have more granular energy access, how they are using the electricity. Even countries with 100% access can benefit of receiving a very rich sets of information and being able to understand their tier level to progress toward the universal access to reliable, affordable, and modern energy services. Moreover, the new module is a very important complement to the SDG7 indicators.
Kuwait - Maysoon Ali	Is the MTF module flexible? Can we add or remove questions?	There are a short and long version of the module and a script ready. You can add questions. And as you can see, the questions are following a certain sequence and they are coming in between some other questions. Here is a link where you can download the dataset and report for your information: https://energydata.info/dataset?q=mtf. Countries can find stand-alone questionnaire (long questionnaire) which usually take 3 hours.

Indicators	Data Source	Metadata	Questions
7.1.1 Proportion of population with access to electricity	Multi-tier Framework (MTF), Demographic and Health Survey (DHS), Living Standards Measurement Survey (LSMS), Multi Indicator Cluster Survey (MICS), World Health Survey (WHS), Census, Income Expenditure Survey (IEHS), and other surveys developed and implemented by NSOs	Proportion of population with access to electricity is the percentage of population with access to electricity. SDG7 ensures access to affordable, reliable, sustainable and modern energy for all. Specifically, Indicator 7.1.1 refers to the proportion of population with access to electricity. This is expressed in percentage figures and is disaggregated by total, urban and rural access rates per country, as well as by UN regional and global classifications	Old methodology: Census: Is the household connected to an electricity supply? Does the household have electricity? DHS: Does your household have electricity? LSMS: Does your household have electricity? What is your main source of energy used for lighting? MICS: Does your household have electricity? Income Expenditure survey, or other national surveys: Is the house connected to an electricity supply? What is your primary source of lighting? New methodology: Capacity: HE3. What source of electricity is used most of the time in this household? HE4. What appliances are powered using this household's solar device/system? HE5. How many lightbulbs can be powered using this household's solar device/system? Availability: HE7. In the last 7 days, how many hours of electricity were available each day on average from (name main electricity system)? (Maximum 24 hours)

			HE8. In the last 7 days, how many hours of electricity were available each evening on average from 6:00 pm to 10 pm from (name main electricity system)? (Maximum 4 hours) Reliability: HE9. In the last 7 days, how many times were there unscheduled outages or blackouts from (name main electricity system)? HE10. What is the total duration of all unscheduled outages or blackouts in the last 7 days? Quality: HE12. In the last 12 months, did any of this household's appliances get damaged because the voltage was going up and down in the (name main electricity system from HE3)? Affordability: This information is collected in the expenditure/consumption module. Formality: HE6. Who does this household currently pay for (name main electricity system)? Safety: HE13. In the last 12 months, did anyone using (name main electricity system from HE3) die or have permanent limb (bodily injury) damage?

Annex 6: INCOME CLASSIFICATION 2019 FOR COUNTRIES IN ARAB REGION

Country	Income group	First year to join the group	Assumption
Algeria	Lower middle income		
Bahrain	High income	Joined since 2011	100
Comoros	Lower middle income		
Djibouti	Lower middle income		
Egypt, Arab Rep.	Lower middle income		
Iraq	Upper middle income		
Jordan	Upper middle income		
Kuwait	High income	Joined since 1990	100
Lebanon	Upper middle income		
Libya	Upper middle income		
Mauritania	Lower middle income		
Morocco	Lower middle income		
Oman	High income	Joined since 2007	100
Qatar	High income	Joined since 1990	100
Saudi Arabia	High income	Joined since 2004	100
Somalia	Low income		
Sudan	Low income		
Syrian Arab Republic	Low income		
Tunisia	Lower middle income		
United Arab Emirates	High income	Joined since 1990	100
State of Palestine	Lower middle income		
Yemen, Rep.	Low income		