

## Annex to chapter 7

### 1. Data for SDG 7

SDG 7 comprises five targets and a total of six indicators (none of which contain multiple subindicators). Of these indicators, four are tier I, one is tier II and one is tier III, for which data are not available as the indicator is still in the process of methodological definition.

The United Nations Statistics Division provides data sets for a total of four indicators: 7.1.1 - Proportion of population with access to electricity; 7.1.2 - Proportion of population with primary reliance on clean fuels and technology; 7.2.1 - Renewable energy share in the total final energy consumption; and 7.3.1 - Energy intensity measured in terms of primary energy and gross domestic product (GDP).

None of the provided data sets include sex disaggregated data.

The data used in the analysis of SDG 7 was downloaded on 3 September 2018. After a country-level data check following a major global SDG data update of the United Nations Statistics Division on 8 July 2019, no large differences were found, and thus none of the data series needed to be replaced or amended.

We examine data availability in the Arab region and implement data substitution, when needed, based on the criterion of having to cover half or more of the total population of the Arab region and at least the third of the Arab countries for an indicator/subindicator to be kept in the analysis.

All of the indicators/subindicators are subject to our data substitution scheme for the year 2017, considering the data spanning 2009-2017. Table 7.1 shows the number of substituted data points for each year, including those from Arab countries.

**Table 7.1 Data substitution scheme for selected indicators and subindicators**

Indicator or subindicator	Number of substituted data points (Arab)	Year
7.1.1 (Proportion of population with access to electricity, by urban/rural (percentage))	214 (22)	2016
7.1.2 (Renewable energy share in the total final energy consumption (percentage))	191 (19)	2015
7.2.1 (Renewable energy share in the total final energy consumption (percentage))	221 (22)	2015
7.3.1 (Energy intensity level of primary energy (megajoules per constant 2011 purchasing power parity GDP))	188 (20)	2015

For 7.1.2, the data set provided by the United Nations Statistics Division contains data points such as ">95.0", indicating a value higher than 95, and "<5.0", indicating a value lower than 5. We replace the former by 95 as a ceiling and the latter by 5 as a floor, making 5 and 95 the minimum and maximum values of this indicator.

This leaves us with four integral indicators/subindicators with which we can assess the position of the region, as noted in box 7.1.

Box 7.1	Summary list of preserved and examined indicators/subindicators
	<ul style="list-style-type: none"> <li>Indicator 7.1.1 – Proportion of population with access to electricity, by urban/rural (percentage)</li> <li>Indicator 7.1.2 – Proportion of population with primary reliance on clean fuels and technology (percentage)</li> <li>Indicator 7.2.1 – Renewable energy share in the total final energy consumption (percentage)</li> <li>Indicator 7.3.1 – Energy intensity level of primary energy (megajoules per constant 2011 purchasing power parity GDP)</li> </ul>

Accordingly, three targets are evaluated in this chapter. However, we lose the ability to determine the region's position on the rest of the targets and indicators as noted in box 7.2.

Box 7.2	Summary list of omitted targets
<ul style="list-style-type: none"> <li>• 7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology</li> <li>• 7.b By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States and landlocked developing countries, in accordance with their respective programmes of support</li> </ul>	

The non-featured indicators, due to not being included in the global SDG database, can also be determined from table 7.2 on targets, indicators, tiers and data availability in Arab countries for SDG 7.

Annex 7.2 comprises a graph for each of the evaluated series/indicators, showing the country level data values of the series/indicator for the years whose data points were used for every included country.

The global, regional, and subregional aggregates of all the evaluated indicators of SDG 7 (i.e., 7.1.1, 7.1.2, 7.2.1 and 7.3.1) are calculated using a weighted average. The method of aggregation, in general, as well as the weighting variables to be used for the weighted averages and the properties of the weighting variables are all chosen based on what is advised by the corresponding United Nations Statistics Division Metadata or by the original source of the corresponding data that is referred to by this Metadata. If none of these two references advise on the aggregation methods or weights, the decisions are made based on the most common scientific logic fitting the case and its feasibility (e.g. the availability of the needed data for the weighting variables). The year of the weighting variable data is the most commonly used year for the data of the respective series/indicator. The following weights were actually used for the series/indicators evaluated under this Goal: Total population in 2015 (from the World Population Prospects), Total final energy consumption (TJ) in 2015 (from the World Development Indicators Database, which gathers this data from the original sources, namely the national statistical offices, just as the International Energy Agency does), and constant 2011 purchasing power parity GDP in international United States dollars for the year 2015 (from the World Development Indicators Database). The chapter includes more details about the weighting variables, including which weight was used for which series or indicator.

We note that when a certain series or indicator (namely indicators 7.1.1 and 7.1.2) need a population- related weighting variable in 2016 or 2017, we use the latest available data for this variable, i.e. data for 2015 provided by the World Population Prospects.

Finally, we note that the weighting variables sometimes prevent us from evaluating the series/indicator using the full data that are available or provided to us. As such, our final data coverage for the series/indicators is sometimes slightly undermined by the data availability of the weighting variable. This applies for indicator 7.3.1 where 18 Arab countries out of a potential of 20 are covered after weighting. While this affects the global, regional, and/or subregional aggregates, the country-year graphs include all the Arab countries that have data for the evaluated series/indicator, regardless of the data availability of the weighting variable.

We calculate the world, regional and subregional aggregates for each indicator and include the target value – when available – to facilitate comparability. For indicators 7.1.1 and 7.1.2, we consider the target values as 100 per cent of the population with access to electricity and 100 per cent of the population with primary reliance on clean fuels and technology, respectively, since target 7.1 aims to “ensure universal access to affordable, reliable and modern energy services, by 2030”. However, we remain unable to determine the desired target values for the rest of the evaluated indicators (7.a.1 and 7.b.1) since it is not possible to infer them from the official titles of the corresponding targets, nor are they explicitly mentioned in the official title of each target. Thus they are not shown.

**Table 7.2 Targets, indicators, tiers and data availability for Arab countries – SDG 7 (Ensure access to affordable, reliable, sustainable and modern energy for all)**

Target	Indicator	Number of subindicators	Tier	Data availability*
7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	7.1.1 Proportion of population with access to electricity	1 chosen out of 1	Tier I	22
	7.1.2 Proportion of population with primary reliance on clean fuels and technology	1 chosen out of 1	Tier I	19
7.2 By 2030, increase substantially the share of renewable energy in the global energy mix	7.2.1 Renewable energy share in the total final energy consumption	1 chosen out of 1	Tier I	22
7.3 By 2030, double the global rate of improvement in energy efficiency	7.3.1 Energy intensity measured in terms of primary energy and GDP	1 chosen out of 1	Tier I	20
7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology	7.a.1 International financial flows to developing countries in support of clean energy research and development and renewable energy production, including in hybrid systems	(No data)	Tier II	x
7.b By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States and landlocked developing countries, in accordance with their respective programmes of support	7.b.1 Investments in energy efficiency as a proportion of GDP and the amount of foreign direct investment in financial transfer for infrastructure and technology to sustainable development services	(No data)	Tier III	x

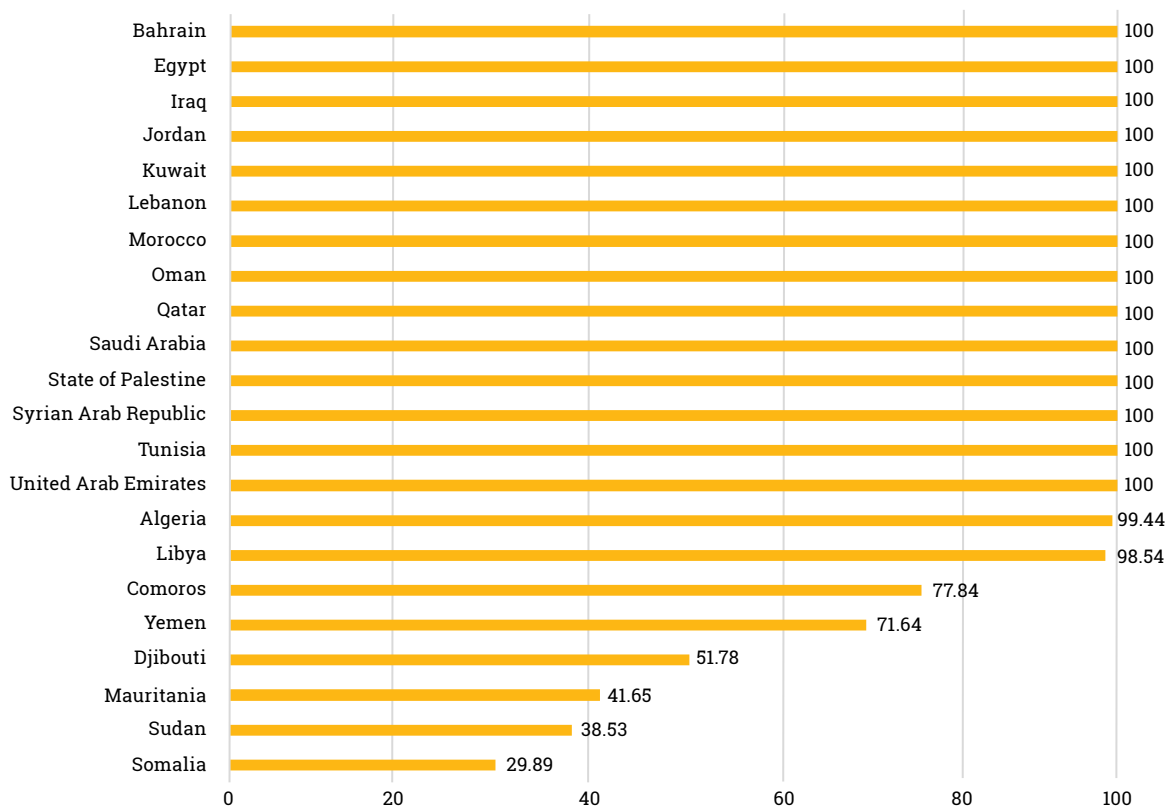
Notes: \* Figures refer to the number of Arab countries with data for the indicator, while x means there are no data or the indicator was dropped.

Weighting variables sometimes prevent us from evaluating the series/indicator using the full data that are available/provided to us. As such, our final data coverage for the series/indicators is sometimes slightly undermined by the data availability of the weighting variable. While this affects the global, regional, and/or subregional aggregates, the country-year graphs include all the Arab countries for the evaluated series/indicator that have data, regardless of the weighting variable's data availability.

Source: <https://unstats.un.org/sdgs/indicators/indicators-list/> and author's calculations.

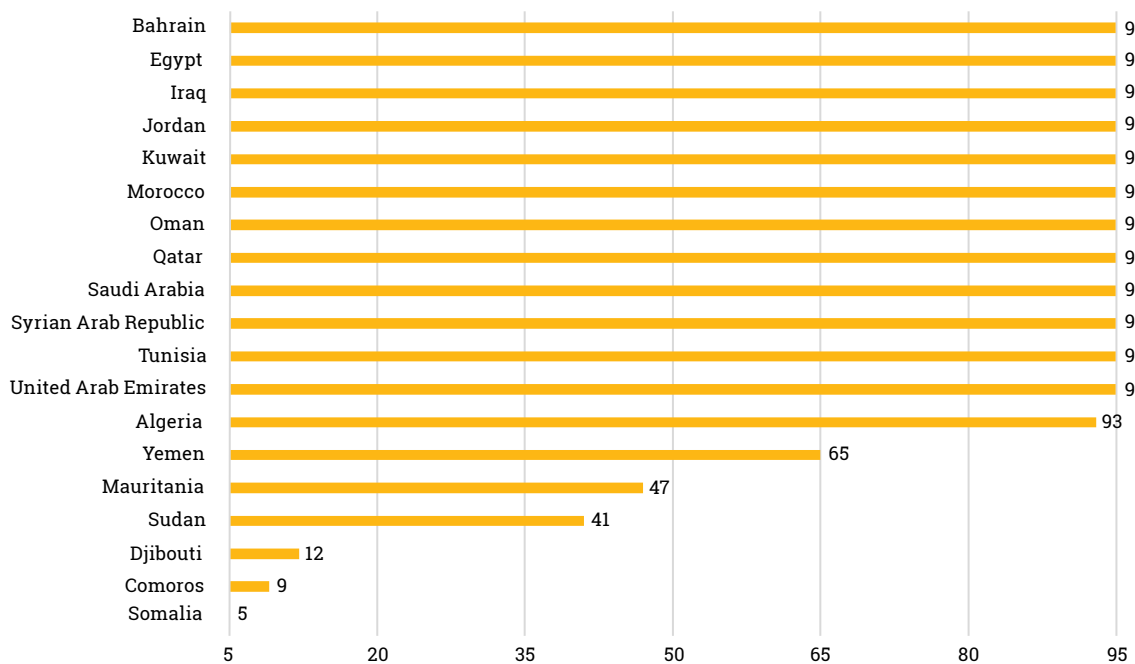
## 2. Country graphs

**Figure 7.1 Indicator 7.1.1 - Proportion of population with access to electricity, by urban/rural (percentage)**  
Proportion of population with access to electricity (percentage)



Note: All data are for 2016.

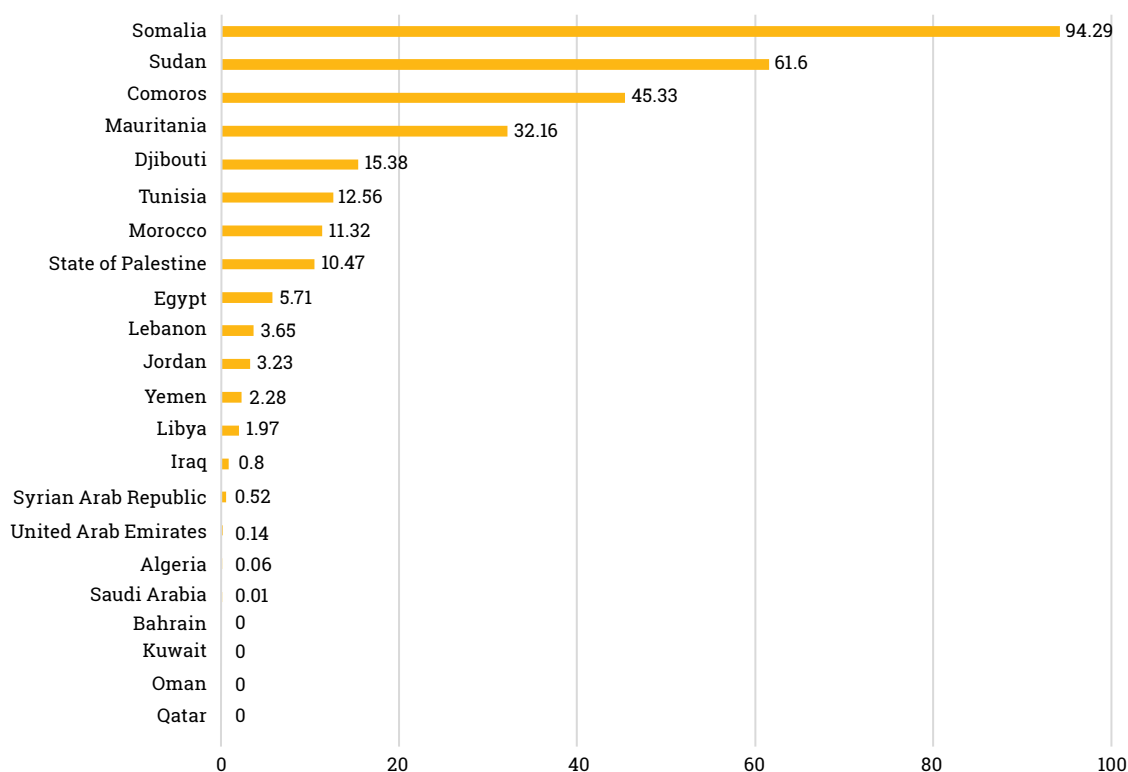
**Figure 7.2 Indicator 7.1.2 - Proportion of population with primary reliance on clean fuels and technology (percentage)**  
Proportion of population with primary reliance on clean fuels and technology (percentage)



Note: All data are for 2016.

**Figure 7.3 Indicator 7.2.1 - Renewable energy share in the total final energy consumption (percentage)**

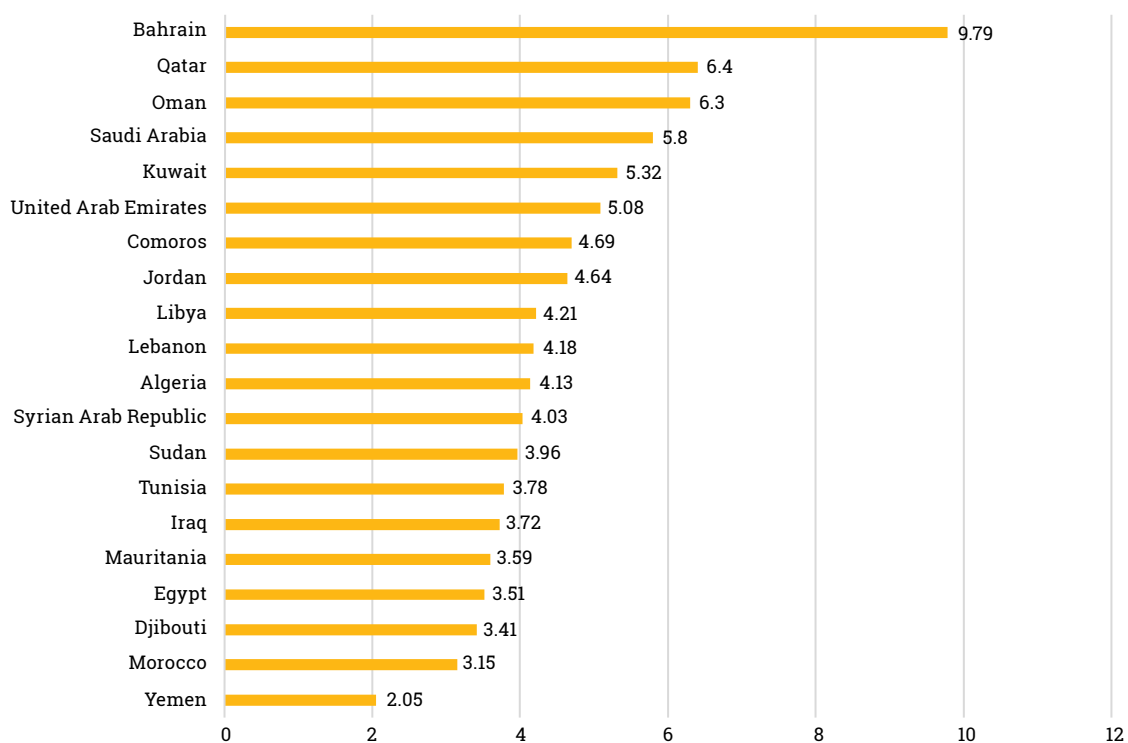
Renewable energy share in the total final energy consumption (percentage)



Note: All data are from 2015.

**Figure 7.4 Indicator 7.3.1 - Energy intensity level of primary energy (megajoules per constant 2011 purchasing power parity GDP)**

Energy intensity measured in terms of primary energy and GDP (megajoules per GDP - constant 2011 purchasing power parity GDP in United States dollars)



Note: All data are from 2015.