

# Seminar on: “Monitoring the Implementation of Energy Related SDG Indicators in the Arab Region”

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Economic and Social Commission for Western Asia

Session I. Universal Access to affordable, reliable and modern energy

ENERGY ACCESS (EA) IN THE ARAB REGION

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## 2. Access to Clean Cooking Fuels and Technologies (CFTs)

- The overall picture
- Are we on track?
- Data observations
- Policy implications

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## 1.1. Access to electricity

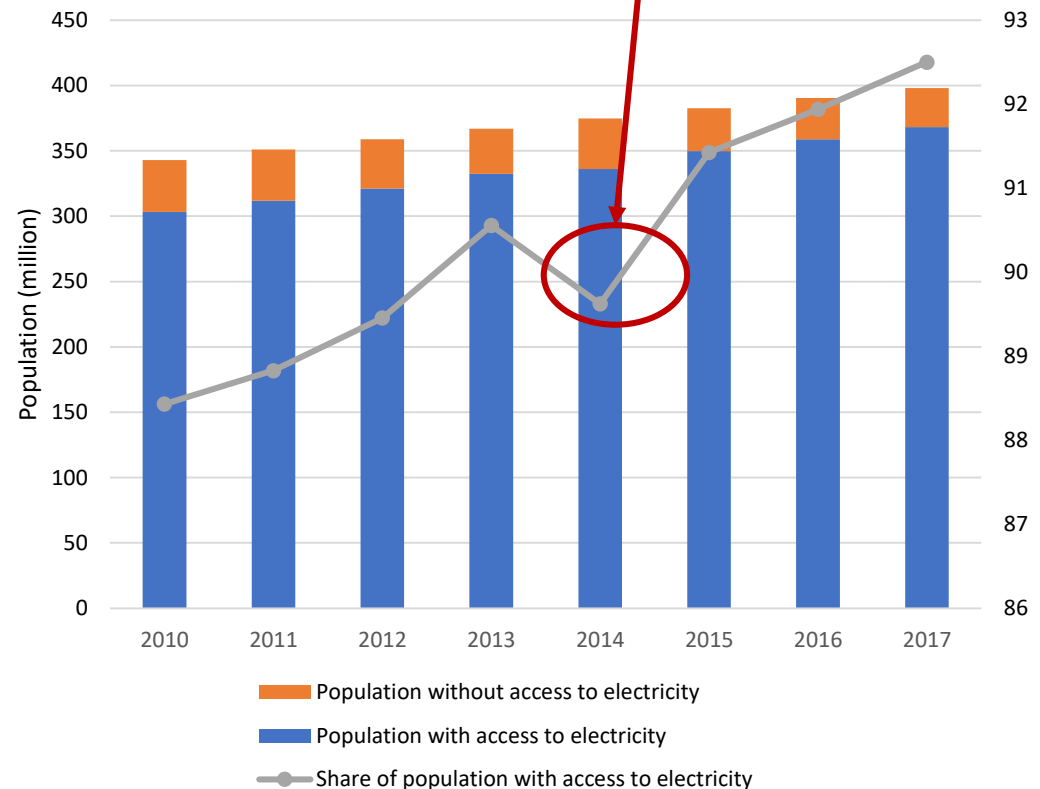
# The overall picture

- Access to electricity is to a large degree a bright spot in the Arab region's sustainable development agenda.
- The Arab region's electrification rate rose from 88.4% in 2010 to 92.5% in 2017, at an average annual electrification rate of **0.7** percentage points, making it the most electrified regional group of countries in the developing world.
- Encouragingly, the decline of the region's access deficit has been accelerating in recent years.

Small data observation: Dip in the growth rate of the share of population with access in 2014

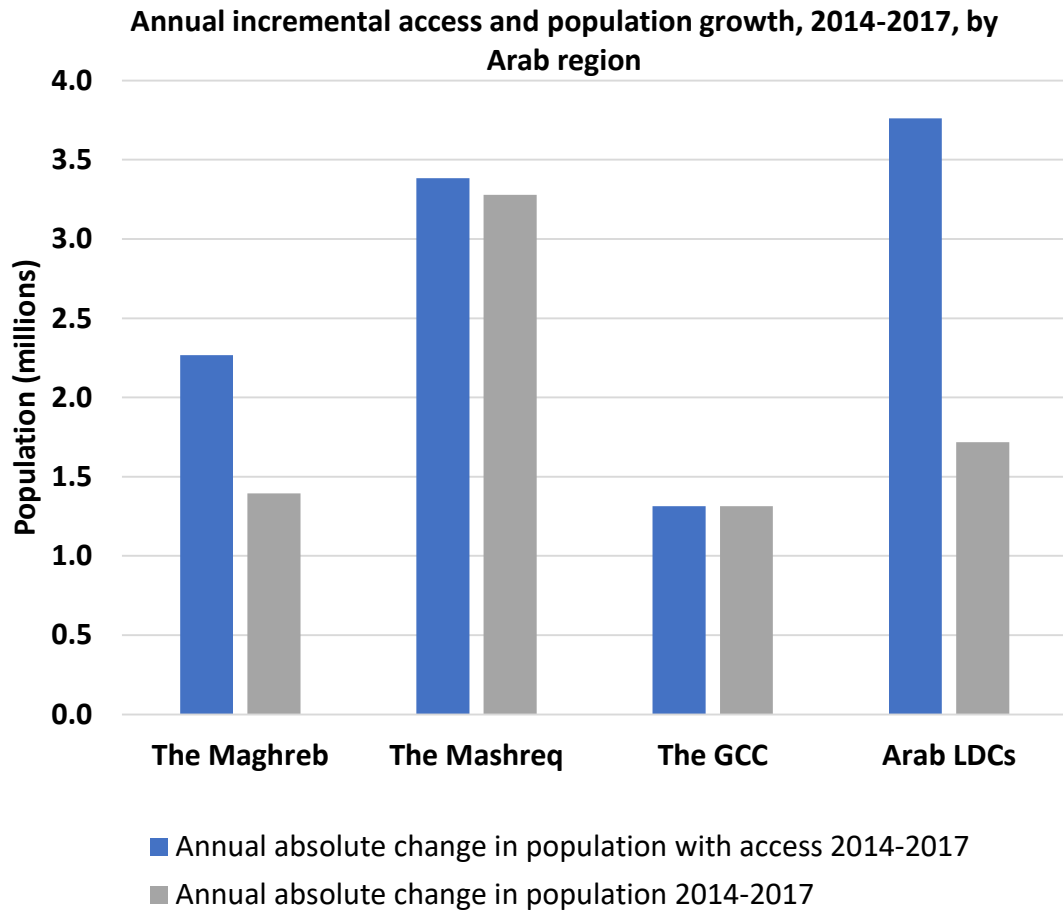
- This is primarily due to a sudden dip in access rates in Morocco, and to a lesser extent Syria in 2014

Progress in electricity access in the Arab region from 2010 to 2017 (millions of people and share of population with access to electricity)



# Electricity access and population growth

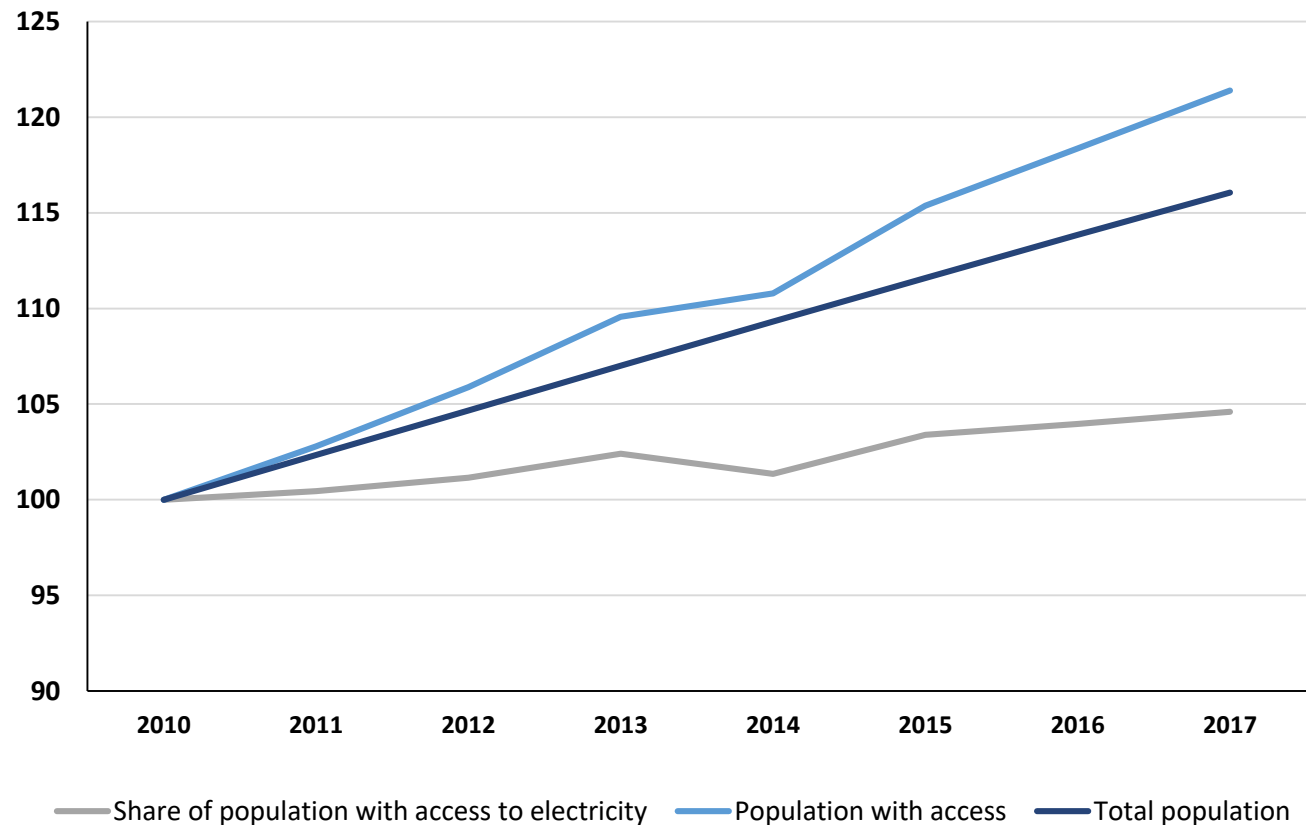
- Throughout the Arab region, additional population with electricity access grew faster than population growth between 2014 and 2017.
- This is due to
  - Near-universal electricity access across many parts of the region
  - Substantive progress in electrification efforts in Arab LDCs
- The same period also saw a further net decline in population lacking access to electricity, reinforcing a region-wide pattern since the mid-2000s.
- In the Arab LDCs, which account for virtually all of the Arab region's remaining electricity access deficit, population with access **grew at double the rate as population, a highly encouraging result.**



# Electricity access and population growth

- Faster growth of population with access than population growth is also clearly visible when looking at regional results.

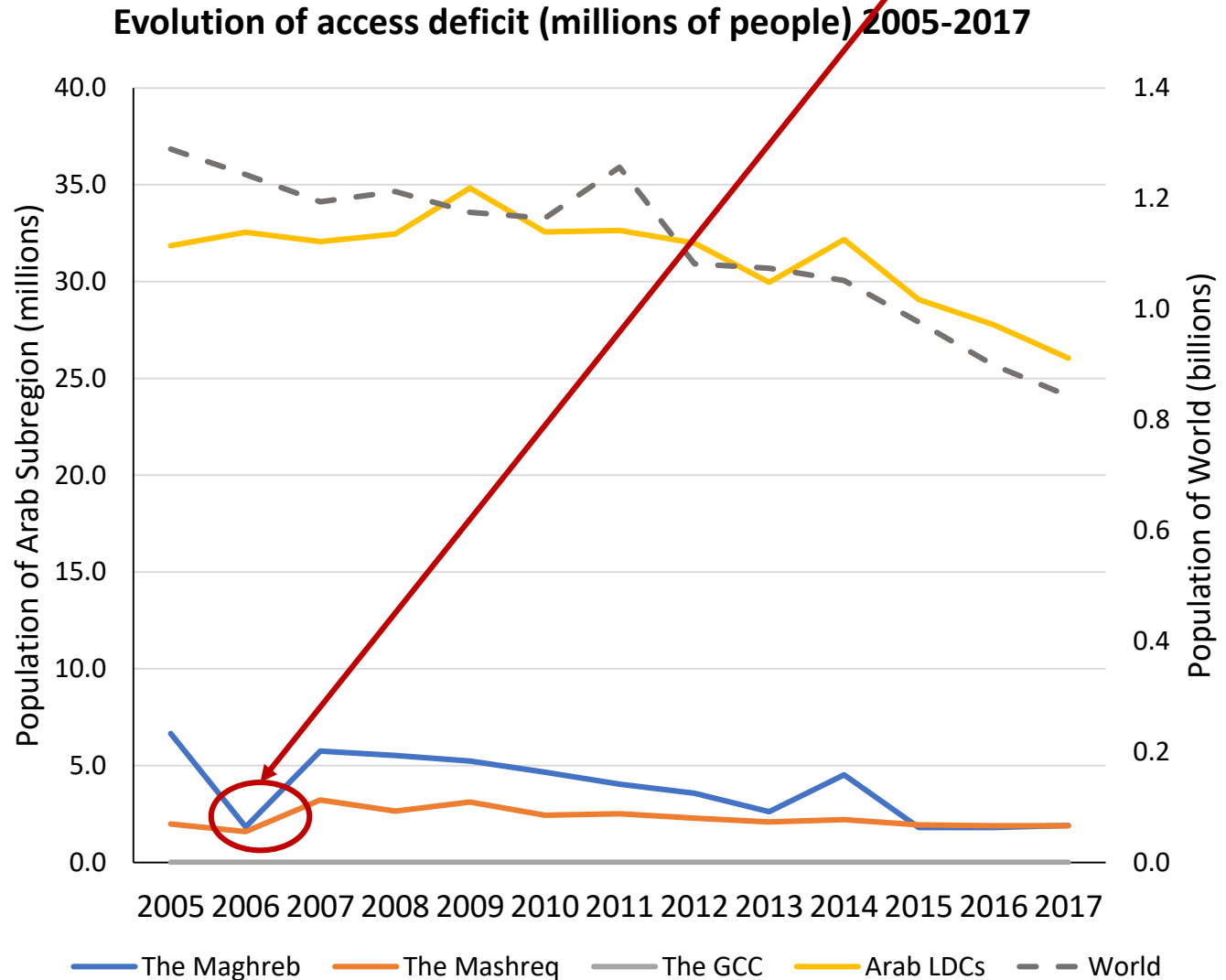
Electricity access and population growth in the Arab region from 2010 to 2017 (index: 2010 = 100)



# Sub-regional dynamics

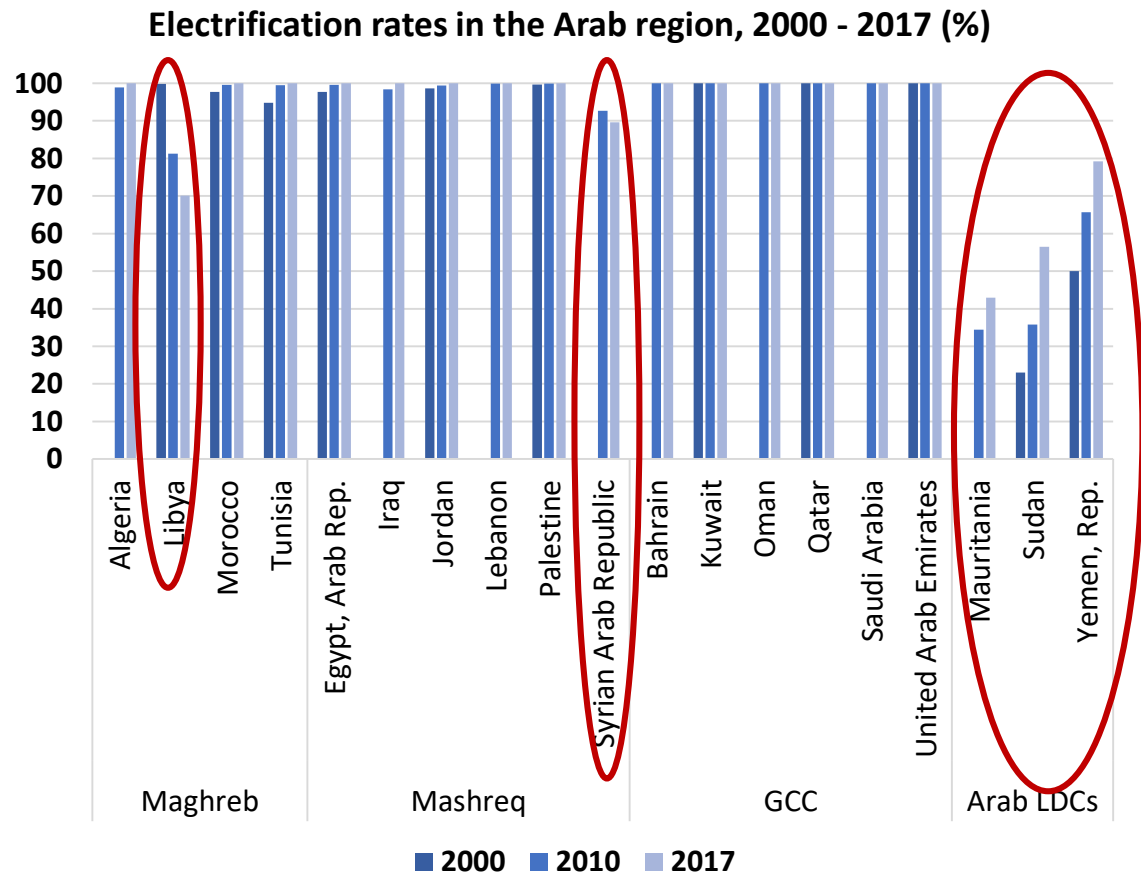
Morocco's changing access rate in 2006 accounts for this sudden dip in the Maghreb's trajectory

At sub-regional level, we observe a steady decline in the region's electricity access deficit in all sub-regions except the Arab LDCs (Mauritania, Sudan and Yemen).



# Key deficit countries

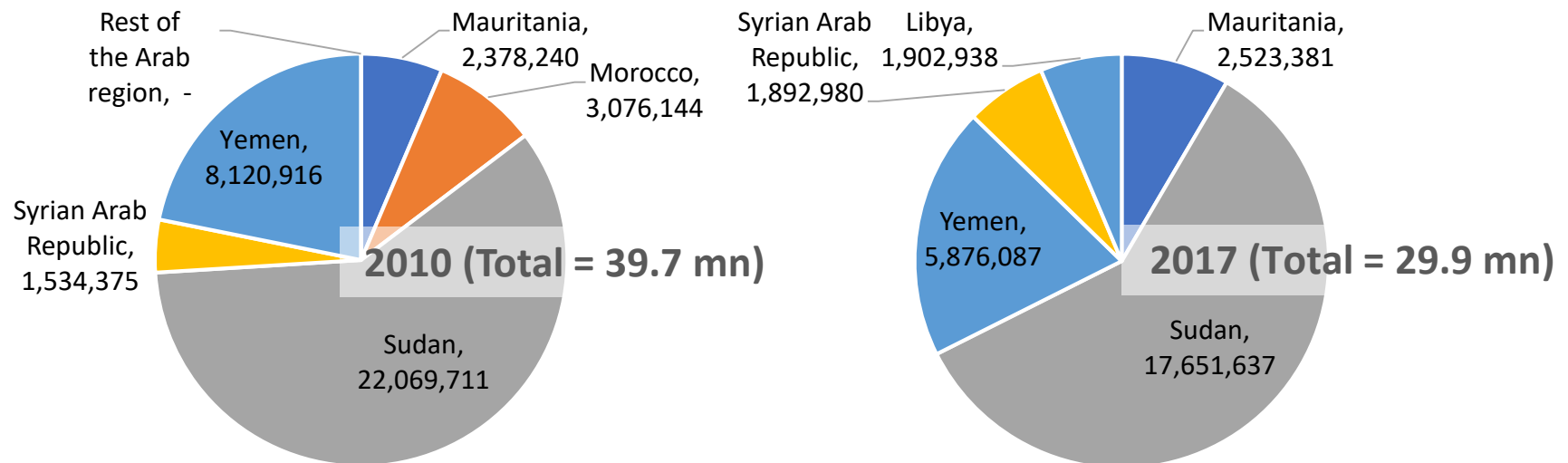
- Access is universal in most countries in the Maghreb, Mashreq, and the GCC
- Remaining access deficits in five countries
  - ✓ Libya
  - ✓ Syria
  - ✓ Mauritania
  - ✓ Sudan
  - ✓ Yemen
- Only in Syria and Yemen we see a decline in access rates





## Key deficit countries continued...

### Total population without access to electricity

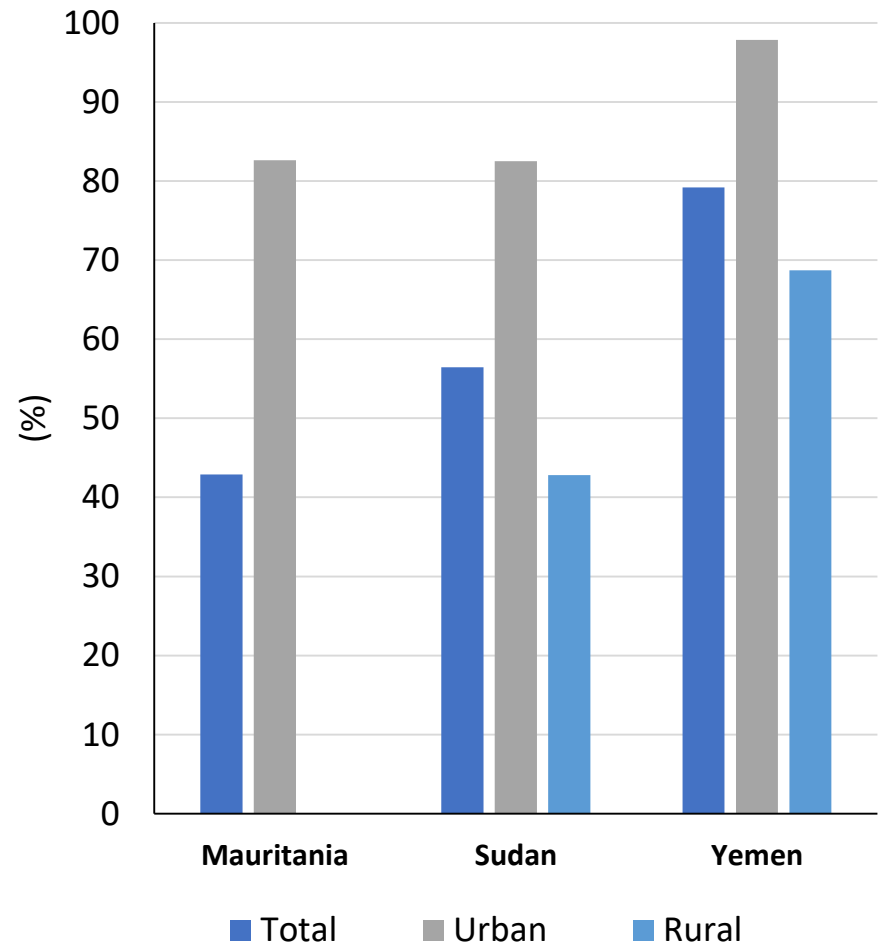


- The total number of people without access declined from almost 40 mn in 2010 to 30 mn in 2017.
- Only in Syria did more people lack access to electricity in 2017 than seven years before.
- Some 9 million people gained access to some form of electricity between 2014 and 2017 alone, around 43% of the total number of people gaining access since 2000, underlining strong progress in closing the last gaps in access in recent years in all but a few cases.

## The urban-rural divide

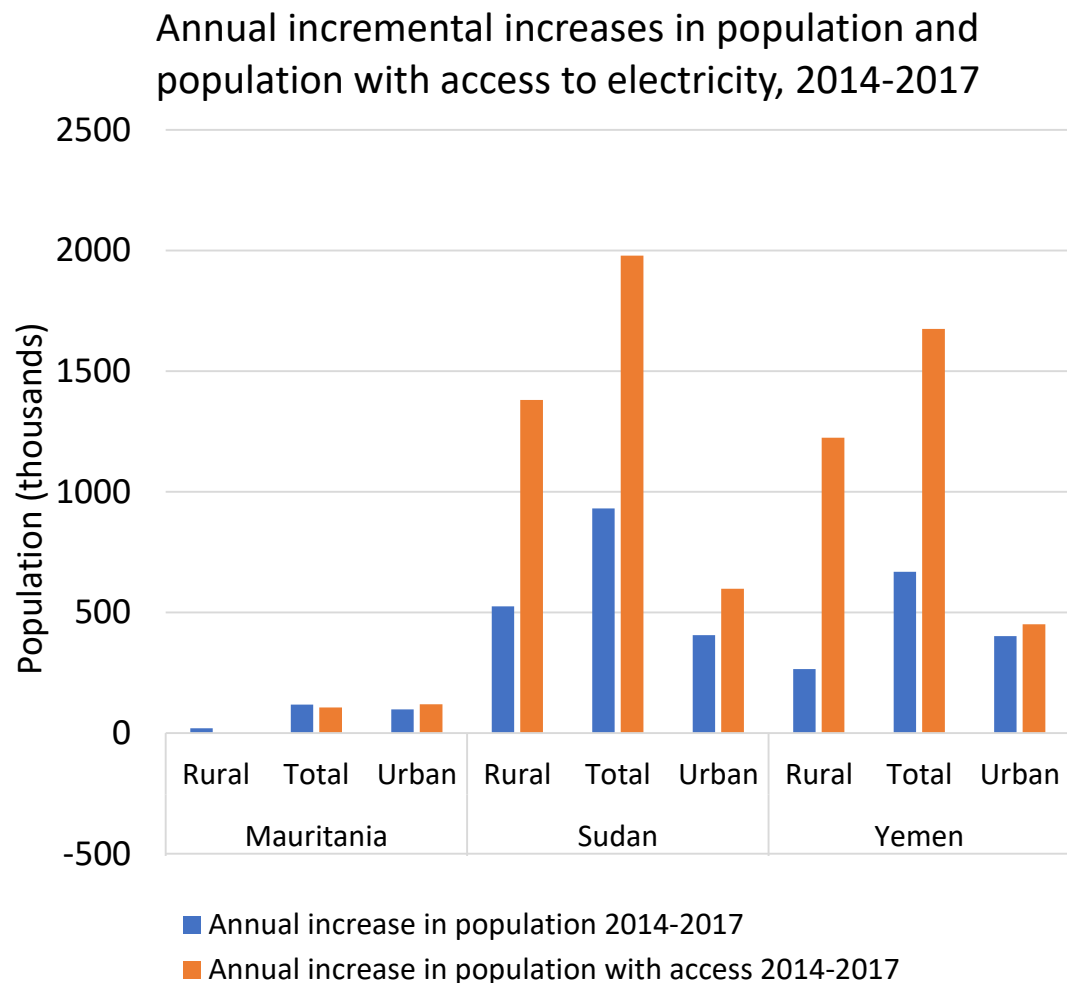
- The Arab region's remaining electricity access deficit is predominantly a rural problem.
- **88%** of Arab LDCs' urban, but only around 50% of its rural population had access to electricity in 2017.
- In Yemen, **98%** of the urban population have access to electricity, versus **69%** in rural areas.
- In Sudan and Mauritania, these numbers are **82%** for urban access, versus **43%** rural access in Sudan and no access at all for rural populations in Mauritania.
- We have no disaggregated data for rural-urban electrification rates for the Arab region's two other deficit countries, Libya and Syria.

Share of population with access to electricity (%)



## The urban-rural divide, continued...

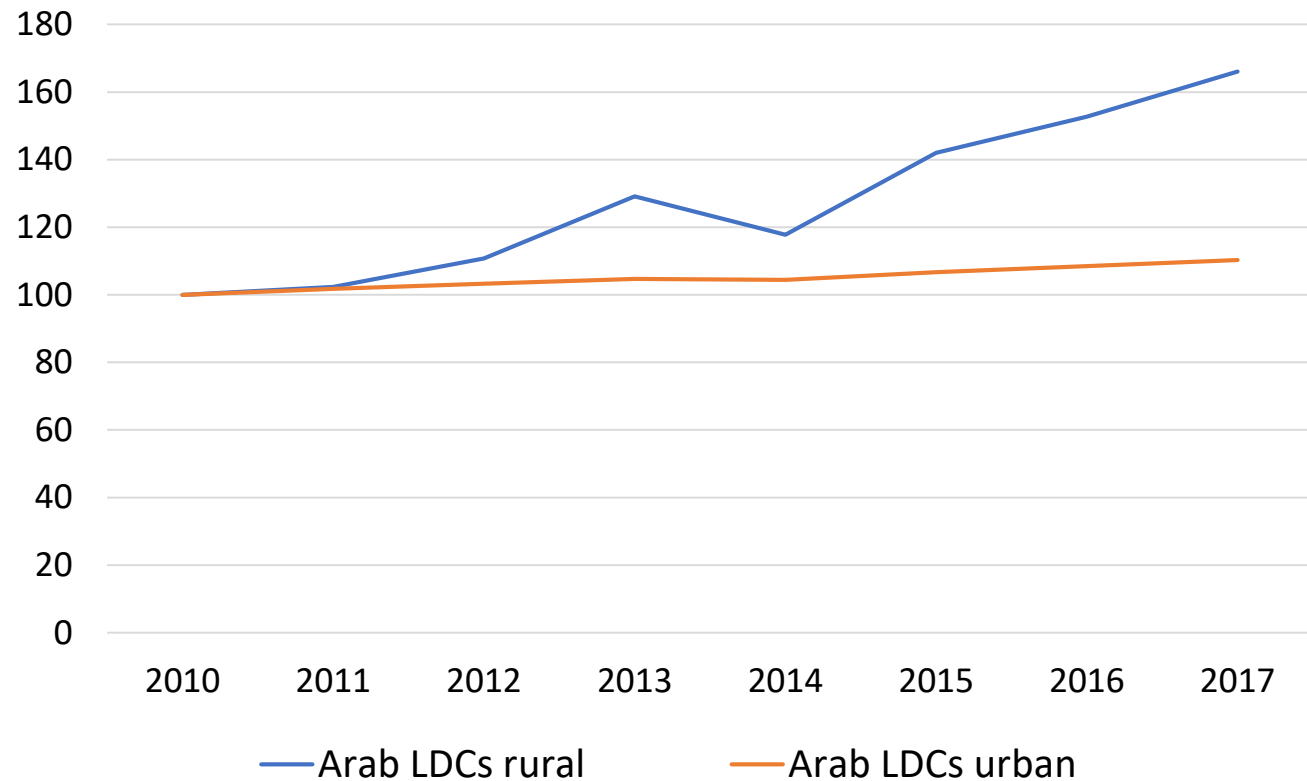
- As a result of much higher access rates in urban areas, the pace of urban access expansion in Arab LDCs has been almost constant.
- Rural access has grown fast in Sudan and Yemen, albeit from very low rates to begin with.
- Mauritania is the only country in the panel with no positive progress in rural electrification. By contrast, its urban access rates have almost doubled since 2000.
- Geographically, urban access deficit is more prevalent in Sudan than in Mauritania and Yemen.



## The urban-rural divide

- Regional data (which reflects developments in the region's five deficit countries), reflect this trend: **slow growth** in relatively high **urban** access versus **higher growth** in the more deficit-prone **rural** access segment.

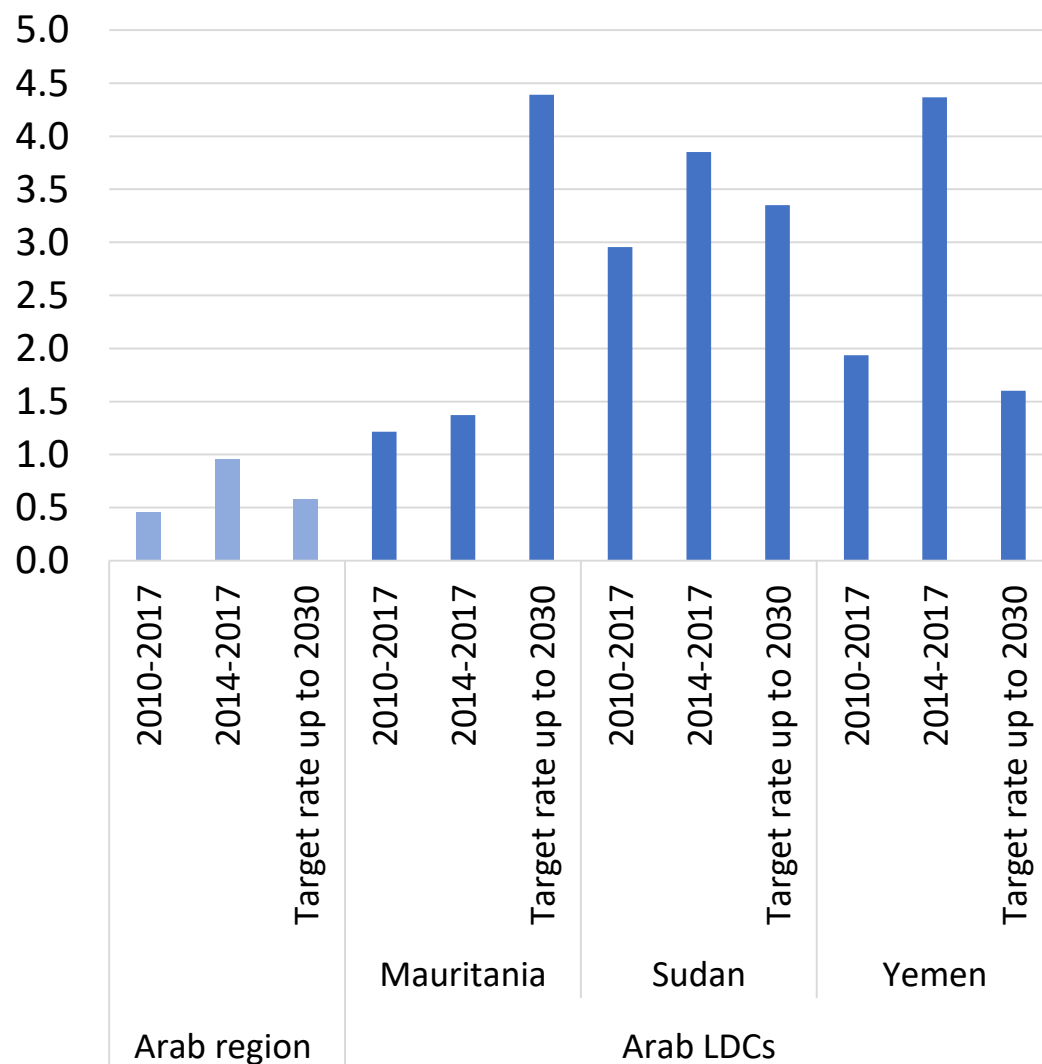
Share of population with electricity access in urban and rural areas from 2010 to 2017, (index, 2010 = 100)



## Are we on track?

- Overall, the Arab region is on track with its target of achieving universal access to electricity by 2030.
- Regionwide growth in access over the period of 2014-2017 averaged 1%, requiring further average annual growth of 0.5% until 2030 to reach universal electricity access.
- Among the Arab LDCs, which account for most of the Arab region's electricity access deficit, both Sudan and Yemen are on track, with average annual growth in access between 2014-2017 exceeding their required growth rates for the period of 2018-2030.
- Only **Mauritania lags behind**. With little progress made over the tracking period, the country must more than **quadruple its current access** growth rate of 1% between over the period up to 2030 in order to electrify all households.

Annualized increase in access rate to electricity (percentage points)



# Data observations

country	year1980	year1991	year1992	year1993	year1994	year1995	year1996	year1997	year1998	year1999	year2000	year2001	year2002	year2003	year2004	year2005	year2006	year2007	year2008	year2009	year2010	year2011	year2012	year2013	year2014	year2015	year2016	year2017	
Algeria																			99	99	99	99	99	100	100	100	100	100	
Bahrain												100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Egypt			93	95	95	96	96	96	97	97	98	97	98	99	98	99	99	99	100	99	100	100	100	100	100	100	100	100	100
Iraq																	98	98	98	98	98	98	99	99	100	100	100	100	100
Jordan		97	97	98	98	98	98	99	98	99	99	99	100	99	99	99	99	99	99	99	99	100	100	100	100	100	100	100	100
Kuwait		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Lebanon															100	100	99	100	100	100	100	100	100	100	100	100	100	100	100
Libya											100	97	95	94	92	90	88	87	85	83	81	80	78	76	75	73	72	70	
Mauritania												22	22	23	24	18	27	33	30	31	34	36	37	38	39	40	41	43	
Morocco			49	55	57	57	61	63	66	68	70	72	74	76	78	80	97	84	86	88	91	93	95	97	92	100	100	100	
Oman																		100	100	100	100	100	100	100	100	100	100	100	
Qatar		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Saudi Arabia															100	100	100	100	100	100	100	100	100	100	100	100	100	100	
State of Palestine								98	99	99	100	99	99	99	99	99	100	99	99	99	100	100	100	100	100	100	100	100	100
Sudan		33	27	27	28	28	29	29	30	31	31	23	32	32	33	33	34	34	34	35	29	36	36	39	42	45	49	53	56
Syrian Arab Republic													87	93	92	92	100	91	91	91	93	92	91	91	90	90	90	90	
Tunisia					87	89	90	92	93	94	95	97	98	98	99	99	99	99	99	100	100	100	100	100	100	100	100	100	100
United Arab Emirates		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Yemen			44	39	41	42	44	43	47	48	50	51	53	54	50	57	56	60	61	63	66	68	69	76	66	74	76	79	
Region	6.7	6.2	38.4	39.2	42.8	43.4	44.1	45.4	46.1	46.5	48.2	49.8	55.3	56.2	65.1	66.1	76.8	76.4	87.6	87.1	88.4	88.8	89.5	90.6	89.6	91.4	91.9	92.5	

Many missing values for electrification rates prior to the 2000s and up to 2007

The reporting begins from the first available survey data between 1990 and 2017.

# Data observations

country	year2004	year2005	year2006	year2007	year2008	year2009	year2010	year2011	year2012	year2013	year2014	year2015	year2016	year2017
Algeria					99	99	99	99	99	100	100	100	100	100
Bahrain	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Egypt	98	99	99	99	100	99	100	100	100	100	100	100	100	100
Iraq			98	98	98	98	98	98	99	99	100	100	100	100
Jordan	99	99	99	99	99	99	99	100	100	100	100	100	100	100
Kuwait	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Lebanon	100	100	99	100	100	100	100	100	100	100	100	100	100	100
Libya	92	90	88	87	85	83	81	80	78	76	75	73	72	70
Mauritania	24	18	27	33	30	31	34	36	37	38	39	40	41	43
Morocco	78	80	97	84	86	88	91	93	95	97	92	100	100	100
Oman				100	100	100	100	100	100	100	100	100	100	100
Qatar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Saudi Arabia	100	100	100	100	100	100	100	100	100	100	100	100	100	100
State of Palestine	99	99	100	99	99	99	100	100	100	100	100	100	100	100
Sudan	33	34	34	34	35	29	36	36	39	42	45	49	53	56
Syrian Arab Republic	92	92	100	91	91	91	93	92	91	91	90	90	90	90
Tunisia	99	99	99	99	99	100	100	100	100	100	100	100	100	100
United Arab Emirates	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Yemen	50	57	56	60	61	63	66	68	69	76	66	74	76	79
Region	65.1	66.1	76.8	76.4	87.6	87.1	88.4	88.8	89.5	90.6	89.6	91.4	91.9	92.5

Libya's electrification rate currently peaks in 2005, then declines to 70% in 2017.

The model projects a gradual decline from near 100% access in 2000 and 67% in 2018 - the two years for which data is available.

# Data observations

country	year2004	year2005	year2006	year2007	year2008	year2009	year2010	year2011	year2012	year2013	year2014	year2015	year2016	year2017
Algeria					99	99	99	99	99	100	100	100	100	100
Bahrain	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Egypt	98	99	99	99	100	99	100	100	100	100	100	100	100	100
Iraq			98	98	98	98	98	98	99	99	100	100	100	100
Jordan	99	99	99	99	99	99	99	100	100	100	100	100	100	100
Kuwait	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Lebanon	100	100	99	100	100	100	100	100	100	100	100	100	100	100
Libya	92	90	88	87	85	83	81	80	78	76	75	73	72	70
Mauritania	24	18	27	33	30	31	34	36	37	38	39	40	41	43
Morocco	78	80	97	84	86	88	91	93	95	97	92	100	100	100
Oman				100	100	100	100	100	100	100	100	100	100	100
Qatar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Saudi Arabia	100	100	100	100	100	100	100	100	100	100	100	100	100	100
State of Palestine	99	99	100	99	99	99	100	100	100	100	100	100	100	100
Sudan	33	34	34	34	35	29	36	36	39	42	45	49	53	56
Syrian Arab Republic	92	92	100	91	91	91	93	92	91	91	90	90	90	90
Tunisia	99	99	99	99	99	100	100	100	100	100	100	100	100	100
United Arab Emirates	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Yemen	50	57	56	60	61	63	66	68	69	76	66	74	76	79
Region	65.1	66.1	76.8	76.4	87.6	87.1	88.4	88.8	89.5	90.6	89.6	91.4	91.9	92.5

Mauritania's electrification rate fluctuates but has overall increased considerably since the 2000s.

The data reported is prioritized in the order of real data point available from survey > model estimates. The data fluctuation is due to this reason.



# Data observations

country	year2004	year2005	year2006	year2007	year2008	year2009	year2010	year2011	year2012	year2013	year2014	year2015	year2016	year2017
Algeria					99	99	99	99	99	100	100	100	100	100
Bahrain	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Egypt	98	99	99	99	100	99	100	100	100	100	100	100	100	100
Iraq			98	98	98	98	98	98	99	99	100	100	100	100
Jordan	99	99	99	99	99	99	99	100	100	100	100	100	100	100
Kuwait	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Lebanon	100	100	99	100	100	100	100	100	100	100	100	100	100	100
Libya	92	90	88	87	85	83	81	80	78	76	75	73	72	70
Mauritania	24	18	27	33	30	31	34	36	37	38	39	40	41	43
Morocco	78	80	97	84	86	88	91	93	95	97	92	100	100	100
Oman				100	100	100	100	100	100	100	100	100	100	100
Qatar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Saudi Arabia	100	100	100	100	100	100	100	100	100	100	100	100	100	100
State of Palestine	99	99	100	99	99	99	100	100	100	100	100	100	100	100
Sudan	33	34	34	34	35	29	36	36	39	42	45	49	53	56
Syrian Arab Republic	92	92	100	91	91	91	93	92	91	91	90	90	90	90
Tunisia	99	99	99	99	99	100	100	100	100	100	100	100	100	100
United Arab Emirates	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Yemen	50	57	56	60	61	63	66	68	69	76	66	74	76	79
Region	65.1	66.1	76.8	76.4	87.6	87.1	88.4	88.8	89.5	90.6	89.6	91.4	91.9	92.5

- Odd 97% rate for Morocco in 2006, followed by 84% in 2007.
- A sudden dip in access rates in 2014, which affects the region' totals for this year
- Universal electrification according to current data reached in 2015.

# Data observations

country	year2004	year2005	year2006	year2007	year2008	year2009	year2010	year2011	year2012	year2013	year2014	year2015	year2016	year2017
Algeria					99	99	99	99	99	100	100	100	100	100
Bahrain	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Egypt	98	99	99	99	100	99	100	100	100	100	100	100	100	100
Iraq			98	98	98	98	98	98	99	99	100	100	100	100
Jordan	99	99	99	99	99	99	99	100	100	100	100	100	100	100
Kuwait	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Lebanon	100	100	99	100	100	100	100	100	100	100	100	100	100	100
Libya	92	90	88	87	85	83	81	80	78	76	75	73	72	70
Mauritania	24	18	27	33	30	31	34	36	37	38	39	40	41	43
Morocco	78	80	97	84	86	88	91	93	95	97	92	100	100	100
Oman				100	100	100	100	100	100	100	100	100	100	100
Qatar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Saudi Arabia	100	100	100	100	100	100	100	100	100	100	100	100	100	100
State of Palestine	99	99	100	99	99	99	100	100	100	100	100	100	100	100
Sudan	33	34	34	34	35	29	36	36	39	42	45	49	53	56
Syrian Arab Republic	92	92	100	91	91	91	93	92	91	91	90	90	90	90
Tunisia	99	99	99	99	99	100	100	100	100	100	100	100	100	100
United Arab Emirates	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Yemen	50	57	56	60	61	63	66	68	69	76	66	74	76	79
Region	65.1	66.1	76.8	76.4	87.6	87.1	88.4	88.8	89.5	90.6	89.6	91.4	91.9	92.5

Sudan's electrification rate has risen significantly since 2010

This is progress seen based on survey data from 2009 (National baseline survey 29%) and 2014 (MICS 45%)

# Data observations

country	year2004	year2005	year2006	year2007	year2008	year2009	year2010	year2011	year2012	year2013	year2014	year2015	year2016	year2017
Algeria					99	99	99	99	99	100	100	100	100	100
Bahrain	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Egypt	98	99	99	99	100	99	100	100	100	100	100	100	100	100
Iraq			98	98	98	98	98	98	99	99	100	100	100	100
Jordan	99	99	99	99	99	99	99	100	100	100	100	100	100	100
Kuwait	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Lebanon	100	100	99	100	100	100	100	100	100	100	100	100	100	100
Libya	92	90	88	87	85	83	81	80	78	76	75	73	72	70
Mauritania	24	18	27	33	30	31	34	36	37	38	39	40	41	43
Morocco	78	80	97	84	86	88	91	93	95	97	92	100	100	100
Oman				100	100	100	100	100	100	100	100	100	100	100
Qatar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Saudi Arabia	100	100	100	100	100	100	100	100	100	100	100	100	100	100
State of Palestine	99	99	100	99	99	99	100	100	100	100	100	100	100	100
Sudan	33	34	34	34	35	39	36	36	39	42	45	49	53	56
Syrian Arab Republic	92	91	100	91	91	91	93	92	91	91	90	90	90	90
Tunisia	99	99	99	99	99	100	100	100	100	100	100	100	100	100
United Arab Emirates	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Yemen	50	57	56	60	61	63	66	68	69	76	66	74	76	79
Region	65.1	66.1	76.8	76.4	87.6	87.1	88.4	88.8	89.5	90.6	89.6	91.4	91.9	92.5

Syria's electrification rate has declined since the mid-2000s.

- Reasons why the decline would start in the 2000s?
- Are conflict-induced losses in access reflected in the data from 2010?

The three data points available during this period is 2006 (MICS 100%), 2010 (HH survey 93%) and 2018 (UNHCR 86%). Based on these datapoints, the model estimates a gradual decline from 2006 to 2017.

# Data observations

country	year2004	year2005	year2006	year2007	year2008	year2009	year2010	year2011	year2012	year2013	year2014	year2015	year2016	year2017
Algeria					99	99	99	99	99	100	100	100	100	100
Bahrain	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Egypt	98	99	99	99	100	99	100	100	100	100	100	100	100	100
Iraq			98	98	98	98	98	98	99	99	100	100	100	100
Jordan	99	99	99	99	99	99	99	100	100	100	100	100	100	100
Kuwait	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Lebanon	100	100	99	100	100	100	100	100	100	100	100	100	100	100
Libya	92	90	88	87	85	83	81	80	78	76	75	73	72	70
Mauritania	24	18	27	33	30	31	34	36	37	38	39	40	41	43
Morocco	78	80	97	84	86	88	91	93	95	97	92	100	100	100
Oman				100	100	100	100	100	100	100	100	100	100	100
Qatar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Saudi Arabia	100	100	100	100	100	100	100	100	100	100	100	100	100	100
State of Palestine	99	99	100	99	99	99	100	100	100	100	100	100	100	100
Sudan	33	34	34	34	35	29	36	36	39	42	45	49	53	56
Syrian Arab Republic	92	92	100	91	91	91	93	92	91	91	90	90	90	90
Tunisia	99	99	99	99	99	100	100	100	100	100	100	100	100	100
United Arab Emirates	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Yemen	50	57	56	60	61	63	66	68	69	76	66	74	76	79
Region	65.1	66.1	76.8	76.4	87.6	87.1	88.4	88.8	89.5	90.6	89.6	91.4	91.9	92.5

Steadily increasing access rates in Yemen.

- Are conflict-induced access losses reflected in this data?

The estimates are based on increasing access rates from both grid and off grid sources captured in household surveys. Although the grid has been destroyed in major cities, off grid solar has become a major source of supply

# Data observations – rural electrification

Country/U	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Algeria					98	97	97	98	98	99	100	100	100	100
Bahrain	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Egypt	97	99	99	98	100	99	100	100	100	100	100	100	100	100
Iraq			93	95	94	95	95	93	98	98	99	100	100	100
Jordan	98	98	96	98	95	98	96	98	100	100	100	100	100	100
Kuwait	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Lebanon	100	100	99	99	99	99	99	99	100	100	100	100	100	100
Libya	92	90	88	87	85	83	81	80	78	76	75	73	72	70
Mauritania	4	1	4	4	4	3	0	0	0	0	0	0	0	0
Morocco	58	62	93	69	73	77	81	85	90	95	86	100	100	100
Oman				100	100	100	100	100	100	100	100	100	100	100
Qatar	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Saudi Arabia	100	100	100	100	100	100	100	100	100	100	100	100	100	100
State of Palest	98	98	99	98	99	99	100	99	100	100	100	100	100	100
Sudan	17	17	18	18	19	15	19	19	22	26	29	34	39	43
Syrian Arab Re	84	83	99	81	80	80	84	82	82	80	79	79	78	78
Tunisia	98	99	99	98	99	99	99	99	98	99	99	100	100	100
United Arab E	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Yemen	33	44	39	46	47	49	51	53	55	64	51	62	64	69

- Currently no separate rural/urban data for some countries (e.g. Libya, Syria), i.e. rural and urban rates are identical with total access rates
- Mauritania's rural access rate shows as 0%

Rural access rates are back calculated: total access rate \* total population - urban access rate \* urban population. This could cause Mauritania's rural access rate to tend to 0. for some countries, there is no distinction in rural and urban rates because no distinction is available in household surveys. Only a total rate is published, we cannot therefore back calculate the rural rate

## We still lack a lot of data

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- Service quality data
  - ✓ Reliability of service/frequency of disruptions
- Affordability of electricity once a connection is in place
  - ✓ Comparable data for electricity prices versus income ranges
- Gender-relevant data
  - ✓ Access rates by gender of head of household
  - ✓ Affordability of electricity services by gender of head of household
- Off-grid data
  - ✓ Off-grid uses by numbers and types of technology used
- Energy used by refugees and IDPs
  - ✓ Currently those consumer groups appear to not be captured by any of our data

# Policy implications

- **Many positives, but also increasing challenges.** Despite very positive progress in regional electrification prior to, and over the tracking period, the Arab region faces a considerable remaining gaps in access.
- **The gap is widening.** In addition to the long-term challenge of closing the access deficit in Arab LDCs, a major issue of concern is the setbacks in past progress in a number of conflict-affected countries.
- **Conflict-induced losses in access present a long-term regional challenge.** The long-term consequences of the systematic destruction of infrastructure, and the huge number of refugees and IDPs produced in the past few years by conflict in Syria, Iraq, Yemen and Libya is a long-term challenge that cannot be sufficiently relieved unless conflict countries and their neighbours receive wider regional assistance.
- **Off-grid technologies are becoming increasingly important.** In particular the off-grid solar technology market segment has shown strong growth in recent years – highlighting the large potential for decentralized generation to form part of the solution to access deficits in different parts of the region.
- **Affordability and finance are key.** Key to closing the Arab region's electricity access gap are sustainable long-term solutions that are affordable larger number of households. This is a call for more policy action targeting the availability of financing and information.
- **We need better data.** At another level, we need higher quality, reliable and comparable data that makes decision-making data driven and drives effective policy action where access remains incomplete.

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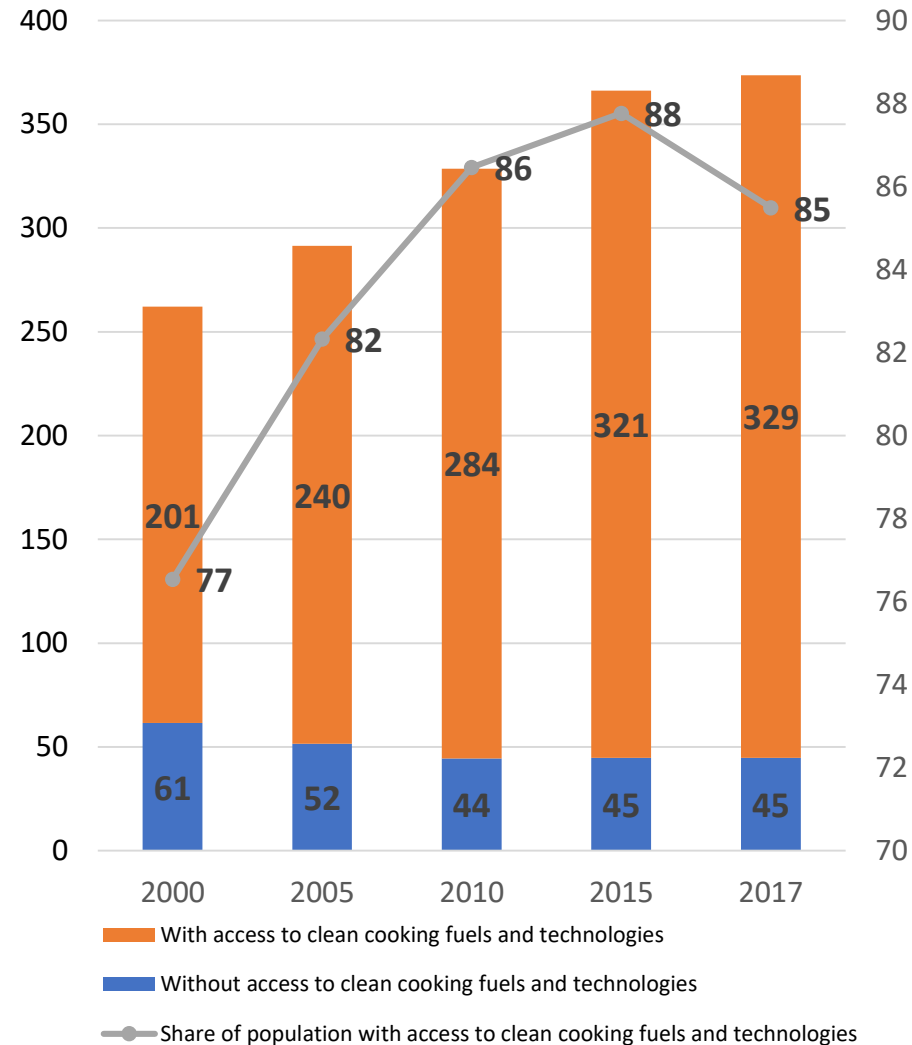
## 1.2. Access to CFTs



# The overall picture

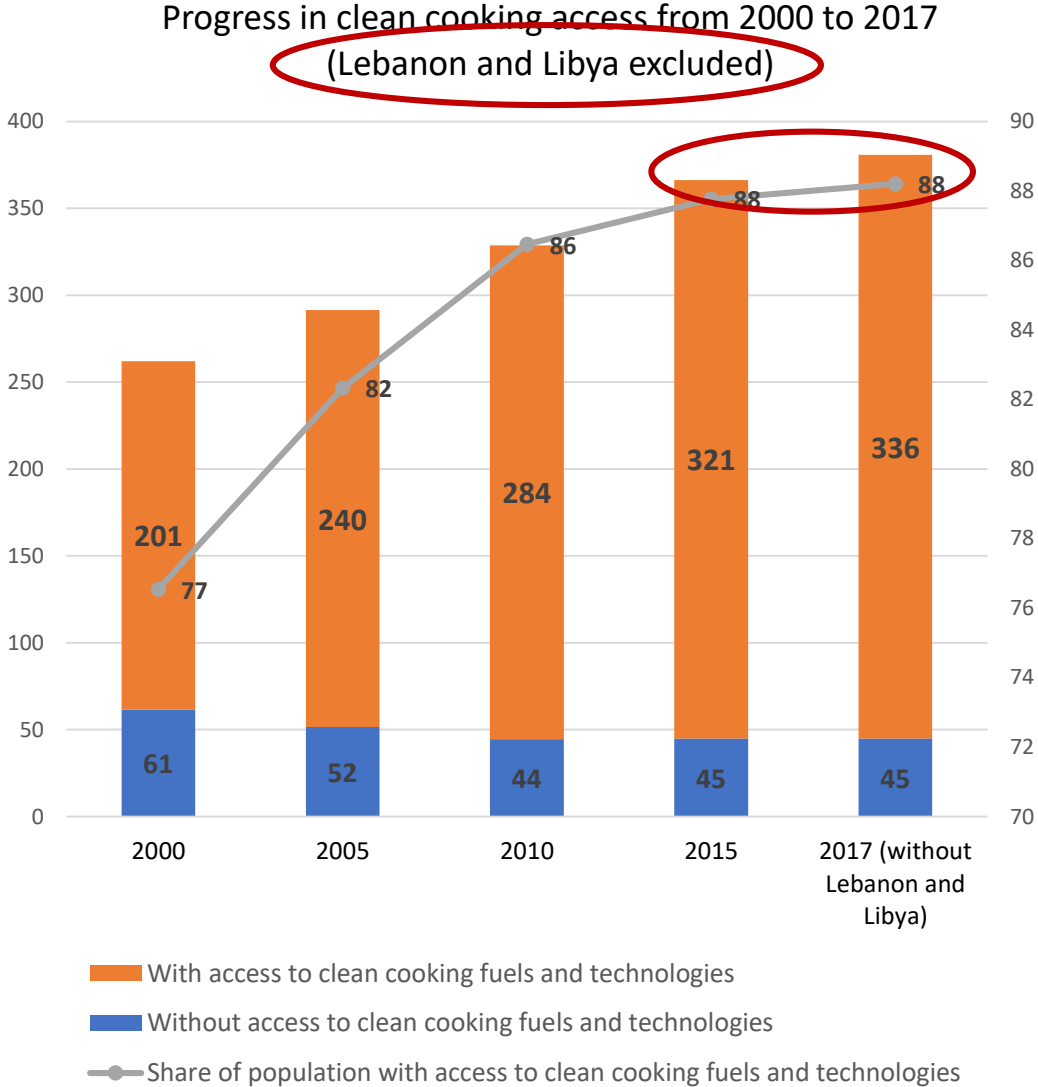
- **Access to CFTs is encouragingly high in the Arab region.**
- ✓ In 2017, 14 out of 19 countries had access rates above 95%, as in the case of electricity with a long history of high access rates.
- ✓ Region-wide access to CFTs grew steadily at an average annual rate of 1.1% throughout the 2000s driven primarily by significant improvements in access in the Arab LDCs, which account for virtually all of the region's access deficit.
- By contrast, the tracking period saw a decline in access. The share of the Arab region's population with access to CFTs declined from **86% in 2010 and 88% in 2015 to 85% in 2017.**
- While declining partly reflect stagnating growth in CFT access in Arab LDCs with Libya and Lebanon rapidly declining access rates **to <5% in 2017.**
- This is a discouraging result that reflects the enormous costs brought about by the unparalleled level of violence and **conflict in a number of Arab countries in recent years, which has effectively reversed previous decades' achievements in a matter of just a few years.**

Progress in clean cooking access from 2000 to 2017



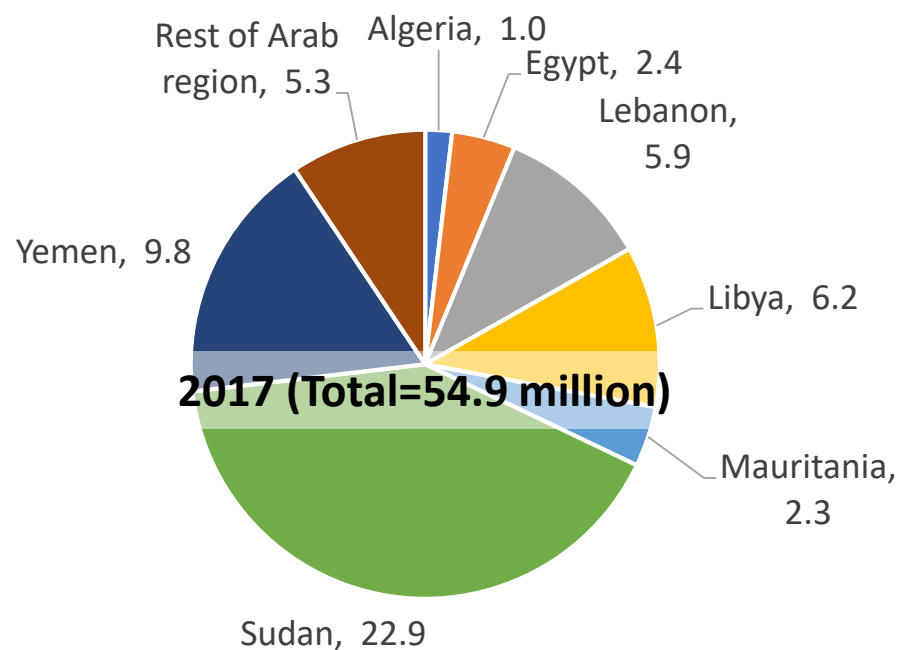
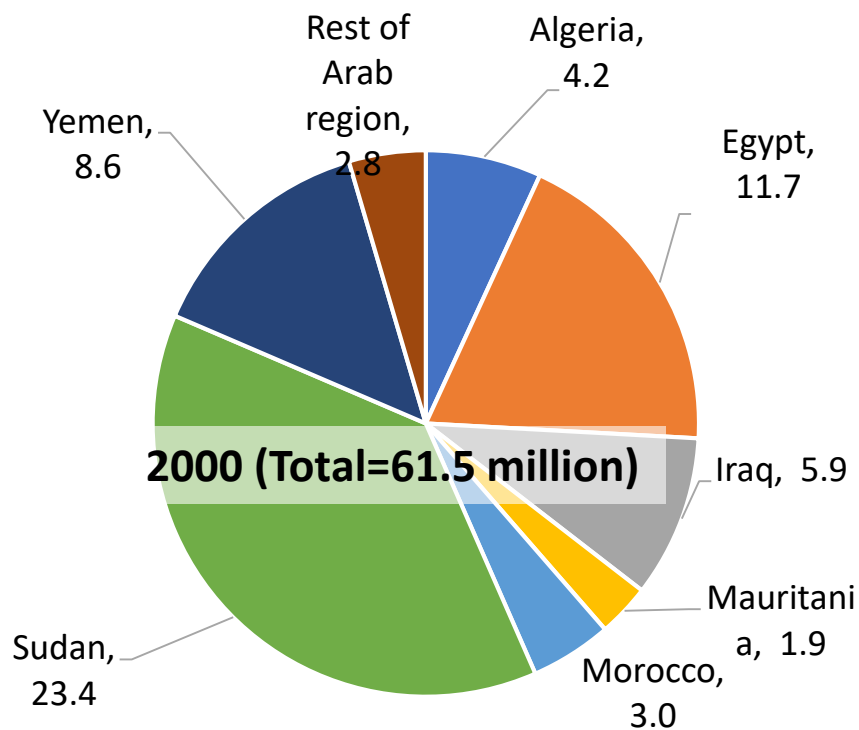
# The overall picture, continued...

- Looking at regional data without Lebanon and Libya, we would see slight growth in regional access rates, driven by slight increases in key deficit countries Mauritania, Sudan and Yemen.
- We still lack data for 2014, so our tracking period for CFT is currently 2015-2017.
- For Lebanon and Libya, we only have 2017 data, no previous data is available. This distorts regional historical data prior to 2017 as well.



# Key deficit countries

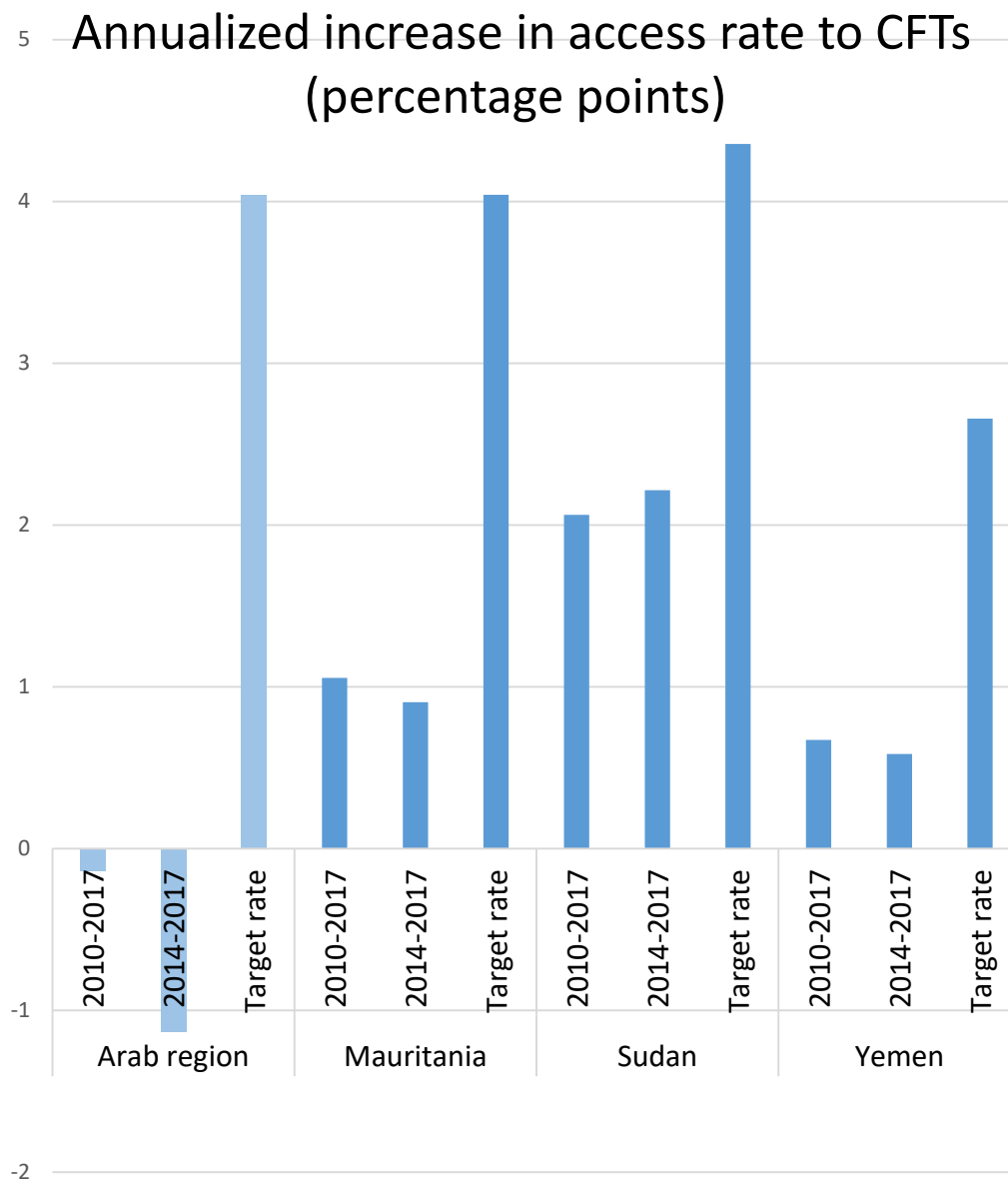
Share of CFT access deficit (millions of people) in Arab region



- In 2017, the total access deficit in the Arab region affected around 54.9 million people, considerably more than those without access to electricity. This indicates that CFT access still lags behind electrification in the effectiveness of available policies to make access universal.
- Around 4.4 million people gained access to CFTs between 2000 and 2017. While progress, this result is not overwhelming.

# Are we on track?

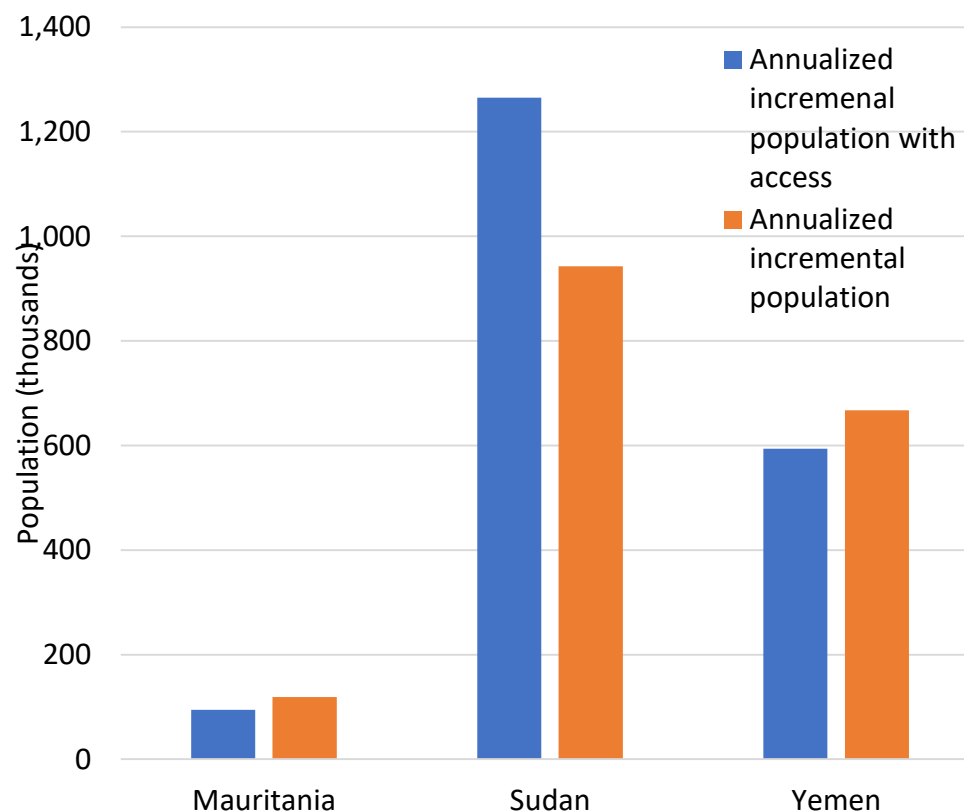
- The years 2014-2017 have thrown the Arab region backwards in its endeavor to universalize access to CFTs by 2030.
- In order to achieve SDG 7.1.2., the Arab region will need to speed up access growth to **around 4% per year**.
- Key deficit countries **Mauritania, Sudan and Yemen** will need to quadrupled their current growth rates as a result, indicating the urgent need for far more policy attention on CFTs than has been the case in the past.



## CFT access and population growth

- Not in all deficit countries did increasing access rates translate into fewer people without access.
- Among the Arab LDCs, only in Sudan did access growth exceeded population growth, implying 644,000 people more had access in 2017 than in 2015.
- In Mauritania and Yemen, high population growth implied small gains in percental access rates do not imply a reduction in the absolute number of people lacking access. In the two countries, an additional 50,000 and 146,000 people respectively lacked access to CFTs in 2017 relative to 2015, a sobering result.

Annual incremental access to clean cooking and population, by Arab LDC, 2015-2017



# Data observations

Country	2000	2005	2010	2015	2016	2017
Algeria	86.5	91.0	92.4	92.7	92.6	97.5
Bahrain	97.5	97.5	97.5	97.5	97.5	97.5
Egypt	83.3	92.0	97.5	97.5	97.5	97.5
Iraq	75.0	89.0	97.5	97.5	97.5	97.5
Jordan	97.5	97.5	97.5	97.5	97.5	97.5
Kuwait	97.5	97.5	97.5	97.5	97.5	97.5
Lebanon						2.5
Libya						2.5
Mauritania	29.0	34.5	40.1	45.7	46.6	47.5
Morocco	89.7	93.6	97.5	97.5	97.5	97.5
Oman	84.6	90.5	93.7	97.5	97.5	97.5
Qatar	92.1	97.5	97.5	97.5	97.5	97.5
Saudi Arabia	94.9	97.5	97.5	97.5	97.5	97.5
State of Palestine						
Sudan	14.2	20.6	28.9	39.0	41.3	43.4
Syrian Arab Rep	97.5	97.5	97.5	97.5	97.5	97.5
Tunisia	93.3	97.5	97.5	97.5	97.5	97.5
United Arab Em	97.5	97.5	97.5	97.5	97.5	97.5
Yemen	51.8	56.7	60.8	64.3	64.9	65.5
<b>ARAB REGION</b>	<b>76.5</b>	<b>82.3</b>	<b>86.5</b>	<b>87.8</b>	<b>88.0</b>	<b>85.5</b>

Lebanon and Libya's 2017 values are the only ones available and are lower than those in the Arab LDCs

# Data observations

Country	2000	2005	2010	2015	2016	2017
Algeria	86.5	91.0	92.4	92.7	92.6	97.5
Bahrain	97.5	97.5	97.5	97.5	97.5	97.5
Egypt	83.3	92.0	97.5	97.5	97.5	97.5
Iraq	75.0	89.0	97.5	97.5	97.5	97.5
Jordan	97.5	97.5	97.5	97.5	97.5	97.5
Kuwait	97.5	97.5	97.5	97.5	97.5	97.5
Lebanon						2.5
Libya						2.5
Mauritania	29.0	34.5	40.1	45.7	46.6	47.5
Morocco	89.7	93.6	97.5	97.5	97.5	97.5
Oman	84.6	90.5	93.7	97.5	97.5	97.5
Qatar	92.1	97.5	97.5	97.5	97.5	97.5
Saudi Arabia	94.9	97.5	97.5	97.5	97.5	97.5
State of Palestine						
Sudan	14.2	20.6	28.9	39.0	41.3	43.4
Syrian Arab Rep	97.5	97.5	97.5	97.5	97.5	97.5
Tunisia	93.3	97.5	97.5	97.5	97.5	97.5
United Arab Em	97.5	97.5	97.5	97.5	97.5	97.5
Yemen	51.8	56.7	60.8	64.3	64.9	65.5
<b>ARAB REGION</b>	<b>76.5</b>	<b>82.3</b>	<b>86.5</b>	<b>87.8</b>	<b>88.0</b>	<b>85.5</b>

No data for  
Palestine

# Data observations

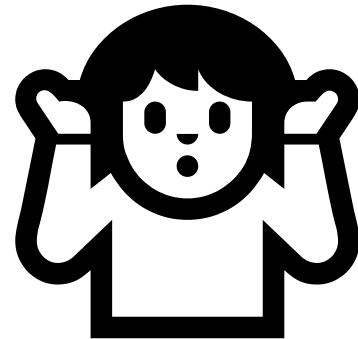
Country	2000	2005	2010	2015	2016	2017
Algeria	86.47	90.97	92.41	92.7	92.62	92.18
Bahrain	>95	>95	>95	>95	>95	>95
Egypt	83.28	91.98	>95	>95	>95	>95
Iraq	74.95	89.01	>95	>95	>95	>95
Jordan	>95	>95	>95	>95	>95	>95
Kuwait	>95	>95	>95	>95	>95	>95
Lebanon					<5	
Libya					<5	
Mauritania	29.04	34.51	40.08	45.66	46.56	47.47
Morocco	89.7	93.62	>95	>95	>95	>95
Oman	84.56	90.5	93.71	>95	>95	>95
Qatar	92.1	>95	>95	>95	>95	>95
Saudi Arabia	94.87	>95	>95	>95	>95	>95
State of Palestine						
Sudan	14.21	20.58	28.94	38.95	41.29	43.38
Syrian Arab Republic	>95	>95	>95	>95	>95	>95
Tunisia	93.3	>95	>95	>95	>95	>95
United Arab Emirates	>95	>95	>95	>95	>95	>95
Yemen	51.84	56.67	60.75	64.28	64.93	65.45
<b>ARAB REGION</b>	<b>76.54</b>	<b>82.32</b>	<b>86.46</b>	<b>87.76</b>	<b>88.02</b>	<b>85.49</b>

Very fast growth in Egypt and Iraq over a period of just one year (reasons?)



## Significant data gaps in covering Arab countries make further analysis difficult

- Data currently available only for 2000, 2005, 2010, 2015-2017
- No disaggregated data for urban-rural access
- No data for Palestine, except for one data point in 2014
- Key additional questions to improve the analysis for this exercise
  - What kind of cooking fuels and technologies does your country use?
    - ✓ Fuel
    - ✓ Stove types
  - What does improved access versus traditional uses look like in practice?



# Policy implications

- **Despite good progress, the access deficit remains hard to close.** While electrification appears to be on track, progress in CFT access lags behind. Access is not guaranteed even in fully electrified middle-income countries.
- **Substantial data gaps make it difficult to reliably track progress.** We need much better, **reliable data**. What is also lacking are systematic **household surveys** that could help us, and policymakers understand needs and design more effective solutions.
- **Access to finance and information is critical.** The uptake of CFTs critically depends on the availability of practical financing options – especially microfinance – to different kinds of households. In addition to finance itself, households need to be given information about the benefit of CFTs and of available financing options.

**Thank you**

Economic and Social Commission for Western Asia

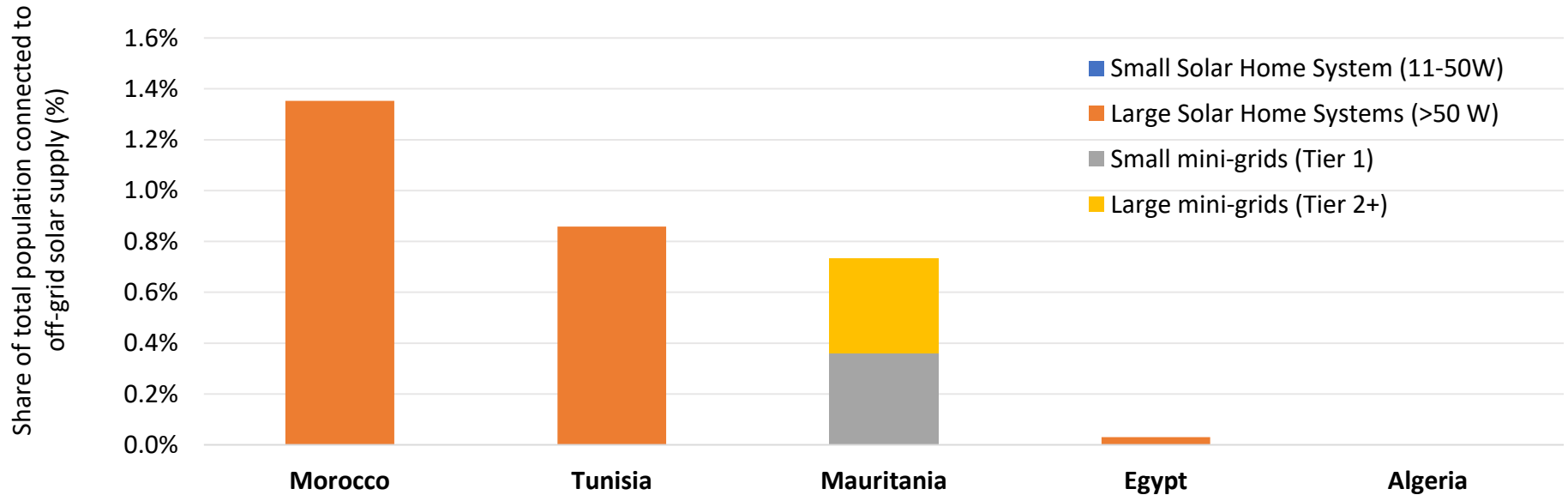


UNITED NATIONS

الاسكوا  
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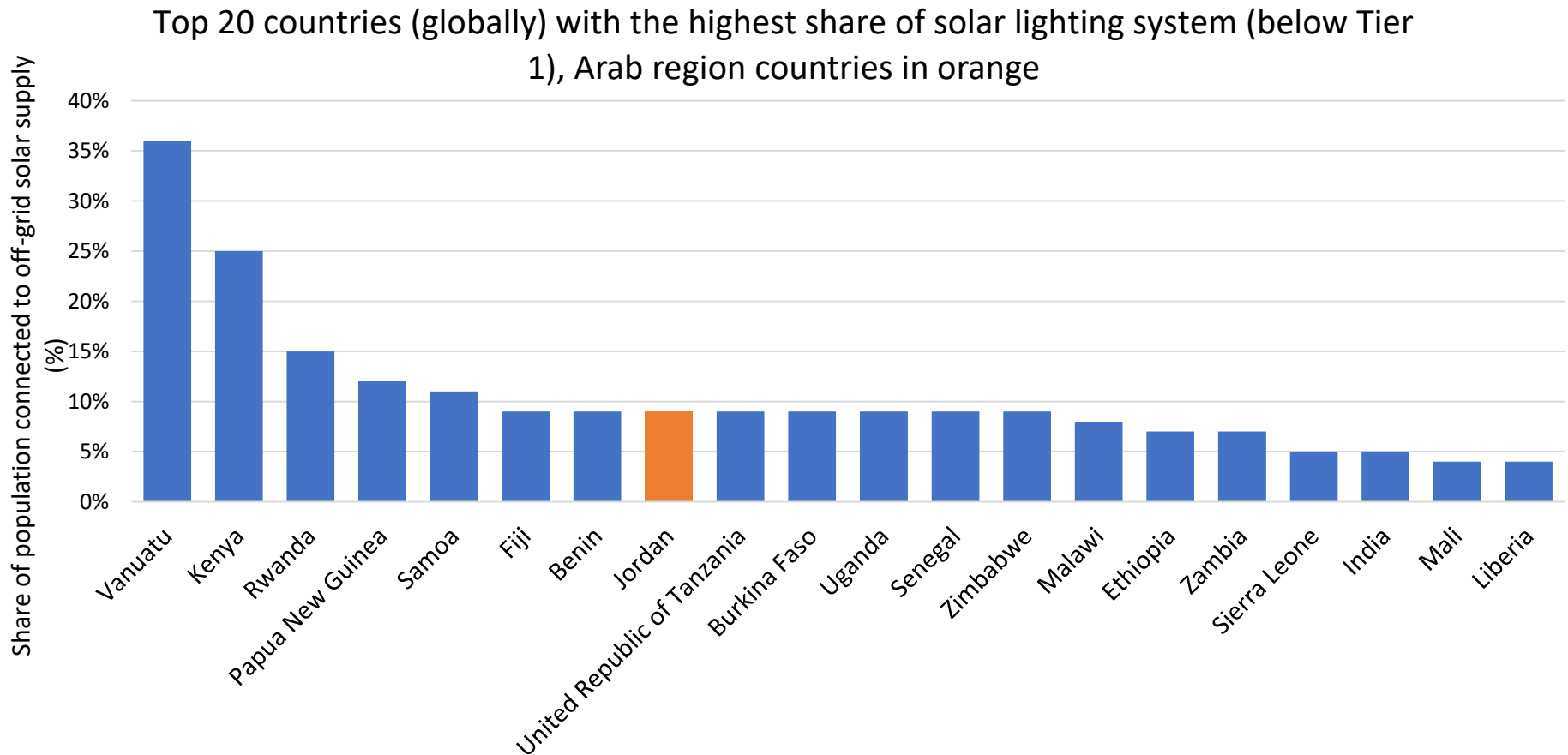
# Off-grid access

Arab countries with highest off-grid access rate (Tier 1 and above)



- IRENA data lists only 5 Arab countries as having off-grid rates of Tier 1 level and above (small and large solar home systems and mini-grids).
- Some use is shown for Morocco, Tunisia, Mauritania and Egypt, and none for Algeria.

## Off-grid access continued...



IRENA data lists Jordan as one of the world's 20 countries with the highest share of solar lighting systems. No other Arab country is listed.