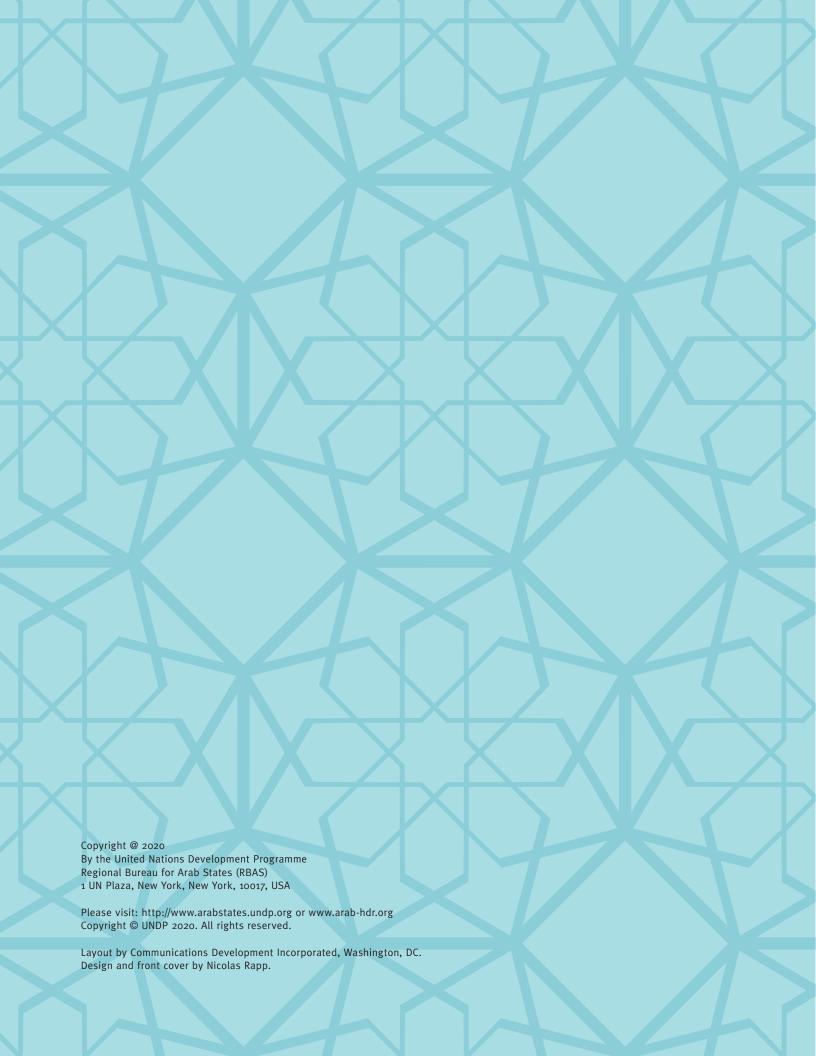
Arab Human Development Report RESEARCH PAPER



Inclusive Citizenship and the Data Imperative in Arab Countries

Paola Pagliani





Arab Human Development Report Research Paper

Inclusive Citizenship and the Data Imperative in Arab Countries

Paola Pagliani



Acknowledgments

The present research paper was prepared to provide the context and thinking that motivated the commission of the Citizenship 360° survey by the Arab Human Development Report. It was authored by Paola Pagliani, with the valuable contribution of Adel Abdellatif and Ellen Hsu, and edited by Andrea Davis.

The findings, interpretations and conclusions do not necessarily represent the views of the United Nations Development Programme or United Nations Member States.

Contents

Acknowledgments	iv
Preface	1
Shortcomings in data for responsive policymaking	2
Shortcomings in monitoring the SDGs	8
Shortcomings in monitoring inequality	11
Old and new tools to address data deprivations	13
New technologies: who generates and who owns the data	16
Citizen-generated data	18
References	22
Annex: Availability of SDG Tier I indicators	24

Preface

The 2019 Arab Human Development Report (AHDR) research paper Leaving No One Behind: Towards Inclusive Citizenship in Arab Countries analyses the challenge to achieve inclusive citizenship through the lens of five forces of exclusion: discrimination, socio-economic exclusion, spatial exclusion, unaccountable governance, and shocks and fragility. The limitations in applying this framework to Arab countries came into focus because of the significant data scarcity that the region suffers from, which prohibits us from quantifying the extent of exclusion, and often from identifying which groups or individuals are most excluded from the development process. Beyond national averages, few Arab countries collect disaggregated data that could account for those not benefitting equally from advances in human development, data that is needed to uphold the central pledge of the 2030 Agenda for Sustainable Development to "leave no one behind". The present paper was thus motivated by the desire to shed light on the chronic data deprivation that Arab countries face and the imperative for them to fill persisting data gaps that have long been overlooked.

If Arab countries are to realize the Sustainable Development Goals (SDGs) by 2030, it is critical to know where their progress stands. Yet availability of SDG indicators in the region is far from being comprehensive, with data not only missing but also outdated, unable to offer an accurate picture of the development trajectory that Arab countries have taken since the 2011 uprisings. Meanwhile, we have witnessed an increasing number of countries in the region falling into protracted conflicts, making it even more difficult to gather and manage data with

regularity, consistency, and rigor. More recently, the COVID-19 pandemic has served as a stark reminder that up-to-date, granular and dynamic data is crucial in times of crises, as governments in the Arab region have been caught unprepared to quickly understand and mitigate the impact of COVID-19 by leveraging digital tools, including data tools. Decisionmakers require better data and analytical tools to inform their policy choices in the management of the crisis, including the ability to optimize the use of various rapid assessments.

Finally, in addition to strengthening production of traditional statistics, Arab countries need to start tapping into the potential of new, big and lean data made available by digital transformation. From AI-powered forecasting models to satellite imagery, a plethora of innovative data uses are emerging that could empower stakeholders and citizens alike to advocate for more inclusive and equitable policies. Given this, the AHDR sought to experiment with new technologies to gain further insights into the five forces of exclusion framework mentioned above, by commissioning a survey administered through mobile application in 12 Arab countries. The analysis of the data collected through the survey, together with further details on the methodology, are included in a separate paper entitled Citizenship 360° in the Arab Region: Perceptions on Sustainable Development across Countries, Income, and Gender. We hope that the present paper will be a valuable addition to the chorus of voices calling for an urgent data revolution in the Arab region, which must go hand in hand with accelerated digital transformation benefitting all segments of the population.

Shortcomings in data for responsive policymaking

The Arab region has long faced a challenge of data deprivation, with systematic gaps in data and evidence to measure socio-economic trends, thus compromising the effectiveness of policies and social services in responding to people's needs. Statistical capacity is associated with important governance functions, including service quality, the reach of the civil administration, and the ability to address issues from health monitoring to environmental challenges. Statistics contribute to government effectiveness in terms of regulatory power, quality of public services and civil service,1 and efficiency of the tax collection system. Statistical openness is a factor in government transparency and accountability, which can impact political stability.²

Understanding and measuring progress (or reversals) require the sustained production of robust and granular data, which still eludes the capacity of many governments, hindering policy responses. When priorities, legitimate demands and grievances are difficult to detect, policy responses become inadequate and ineffective. Development strategies and plans are prepared in the dark, and policymaking is uninformed by the light that robust data could cast on assumptions that may or may not hold true. This predicament disproportionately affects those at the margins, those most in need of targeted interventions, whose needs are often not captured in national statistics, and those who lack other avenues to voice their needs. It is not by chance that the 2030 Agenda associates leaving no one behind with a data revolution: in the absence of disaggregated data and targeted analysis, marginalized groups become invisible.

The World Bank assessment of statistical capacity scores countries against 25 criteria, using publicly available information and country inputs. It covers three areas (see Figure 1):³

- Methodology: adherence to internationally recognized standards for collecting
- **Sources:** frequency and reliability of data collection; and
- Periodicity and timeliness: availability and dissemination of socio-economic indicators to internal and external consumers.

According to the World Bank Statistical Capacity Index, the Middle East and North Africa region is among the low performers, surpassing only Sub-Saharan Africa, with all sub-indices below world averages, and large gaps in data collection methods.4 On a scale from 0 (lowest) to 100 (highest), Arab countries for which the index is available are performing worse in terms of sources (43 on average in 2018) and methodology (53 on average in 2018) than they are in periodicity and timelines (73 on average in 2018). Methodology deficiencies prevent the use of data for international comparisons, and cast doubts on the reliability of statistics for policymaking or for informing public debate. It is a positive sign that in most Arab countries, statistical methodogy performance has improved since 2009 (in the case of Sudan, in all three areas). Neverthless, there have been reversals in at least 50 percent of the countries in both sources and periodicity, signaling that data has not been updated or disseminated. While those reversals can be expected in war-torn countries such as Libya, Syria, and Yemen, where data collection is challenging and rarely a priority, it is

 $As per the World Bank government {\it effective ness definition (https://datacatalog.worldbank.org/government-effective ness definition)} and {\it effective ness definition (https://datacatalog.worldbank.org/government-effettive ness definition)} and {\it effettive ness definition (https://datacatalog.worldbank.org/government-effettive ness definition)} and {\it effettive ness definition (https://datacatalog.worldbank.org/government-effettive$

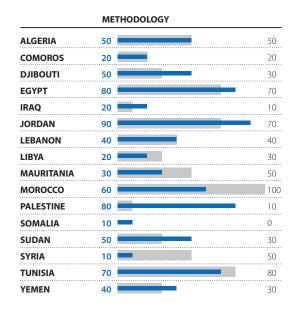
Anderson and Whitford (2017).

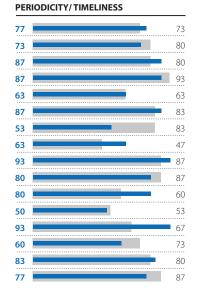
For additional details see http://datatopics.worldbank.org/statisticalcapacity/SCIdashboard.aspx.

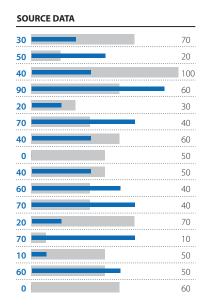
World Bank (2011).











SOURCE: WORLD BANK (2019), STATISTICAL CAPACITY INDICATOR DASHBOARD (DATABASE)

concerning that they have happened also in Egypt and Morocco.

The International Monetary Fund (IMF) has set standards for the dissemination of economic and financial data to contribute to sound macroeconomic policies and the efficient functioning of financial markets. The standards are ranked in three incremental tiers. As Table 1 shows, most countries in the Arab region fall into the first tier of general data dissemination standards; six countries subscribe to the second tier of special data dissemination standards; no country has subscribed to the third tier; and Somalia falls outside the standards altogether.

The criticality of updated and reliable statistics has been captured in the SDGs through two dedicated targets on support to (SDG 17.8) and availability of (SDG 17.9) statistical tools in developing countries. Figure 2a shows that only 10 Arab countries have an official statistical plan approved by competent statistical authorities, and only four countries in the region have all necessary statistical instruments. Crisis countries are mostly deprived of basic stastistical instruments. Moreover, steady funding of national statistical plans by either the

TABLE 1

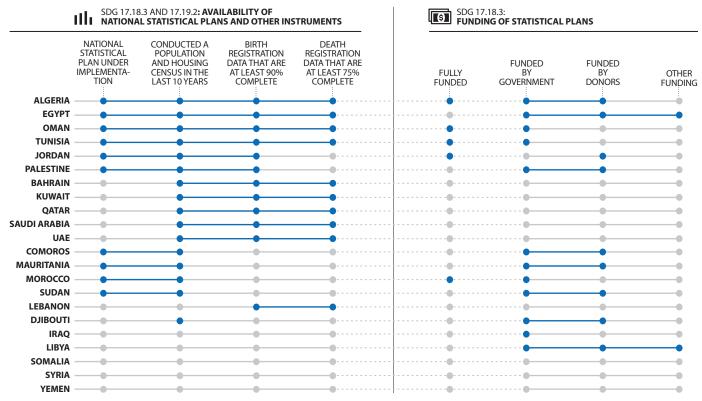
IMF Data Dissemination Standards

Standards	Countries in the Arab region based on standard subscription
Out of standards	Somalia
e-GDDS (General Data Dissemination Standards): publishing essential data for the analysis of macroeconomic conditions.	Algeria, Bahrain, Comoros, Djibouti, Iraq, Kuwait, Lebanon, Libya, Mauritania, Oman, Qatar, Sudan, Syria, the United Arab Emirates, and Yemen
SDDS (Special Data Dissemination Standards): a country meets the test of "good statistical citizenship" in four areas: coverage, periodicity, and timeliness of data; public access to those data; data integrity; and data quality	Egypt, Jordan, Morocco, the State of Palestine, Saudi Arabia and Tunisia
SDDS Plus: aimed at economies with systemically important financial sectors, in addition to the SDDS, it emphasizes stronger data dissemination practices to enhance data transparency and strengthen the international financial system	

Source: IMF Dissemination Standards Bulletin Board https://dsbb.imf.org/.

government or donors is limited to a few countries (Figure 2b); only five countries have sufficient funds to cover approved statistical plans. Djibouti, Iraq, and Libya have both government and donor resources FIGURE 2a FIGURE 2b

EXAMPLE 2 PERFORMANCE AGAINST SDG INDICATORS ON STATISTICS AVAILABILITY AND FUNDING



SOURCES: 17.18.3: PARTNERSHIP IN STATISTICS FOR DEVELOPMENT IN THE 21ST CENTURY (PARIS21); 17.19.2: DEMOGRAPHIC AND SOCIAL STATISTICS BRANCH, UNSD, DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS, UN

allocated to statistics, but no clear plan against which to spend the funds. Libya reports the highest dollar value of resources spent on statistics (an average of 20 million USD per year between 2006 and 2016⁵), yet has among the lowest coverage of SDG indicators (as per Figure 5b below).

But data availability and quality alone are not enough to yield policies that are more responsive to people's needs. The principles of the data revolution set forth in the 2030 Agenda also emphasize data *timeliness*, under the motto, "data delayed is data denied"; *usability*, prioritizing user-centred design in data architecture; and *governance*, based on transparent, independent, and accountable national statistical offices and systems. The importance of data openness is also captured

in the SDGs, through SDG Target 16.10 on public access to information.

The Open Data Inventory provides annual assessments of the coverage and openness of official statistics in 178 countries. The inventory is aligned with the principles of using, re-using, and distribution put forth by the Open Knowledge Foundation "Open Definition" (see Box 1) and the Open Data Charter, a collaboration between governments and organizations working to open up data.⁷

The score can be broken down into two sub-scores measuring the following elements:

 Coverage, as there is no open data without data: data available at various administrative levels; data available in last ten or five years; and indicators' coverage and disaggregation.

^{5.} Source: UNDESA SDG indicator database https://unstats.un.org/sdgs/indicators/database/.

^{6.} Independent Expert Advisory Group on a Data Revolution for Sustainable Development (2014).

^{7.} For additional details consult https://opendatacharter.net/.

What is open? - Open Definition

'Open knowledge' is any content, information or data that people are free to use, reuse and redistribute — without any legal, technological or social restriction.

Source: https://okfn.org/opendata/.

• Openness: terms of use, data download options, machine readability, metadata availability, and non-proprietary conditions.

Increasing coverage requires expanding or improving data collection, while increasing openness requires making more of the existing data available to the public. Both criteria are assessed in 21 social, economic and environmental categories that are relevant to measuring progress against Agenda 2030 and the SDGs.8

Figures 3a, b, and c summarize the assessment of data openness in the Arab region. Figure 3a shows that openness varies across the Arab region. In most countries, coverage is the main data deficiency, but in Algeria, Egypt, Jordan, Libya, Qatar, and Saudi Arabia, substantive gains could be achieved by publishing available datasets. Comparing Arab upper middle-income countries with similar countries in other regions (Figure 3c) reveals that only African countries have lower openness and coverage scores. Figure 3b shows that economic indicators are more accessible in terms of both openness and coverage than social or environmental data,

a common feature in most regions, which reflects a prioritization of economic policies and related research and analysis, partly in response to due diligence requirements on sovereign bonds for indebted countries.

Although the open data inventory is a recent initiative, changes in data openness have already been recently registered in Arab countries. Considerable improvements, in openness more than in coverage, have been achieved in countries such as Morocco, Oman, Palestine, and the United Arab Emirates. Yet some countries have experienced reversals, for example in terms of data coverage in Iraq and Lebanon and openness in Egypt (Figure 4). As the assessment was started only in 2016, it does not reflect that in 2015, Tunisia was the frontrunner, and remains the only country in the region to align national statistical law to the spirit of data openness and statistical independence.9 Tunisia is also the only Arab country in Africa to have signed and ratified the African Charter on Statistics, which calls for scientific independence, impartiality, responsibility, and transparency.¹⁰

It must be noted that these assessments of statistical capacities do not fully cover the capacities needed to face the challenges of the new data ecosystem: challenges such as coordination, to manage the complexity of monitoring progress under the multiple dimensions of 2030 Agenda for Sustainable Development; and partnership engagement, to benefit from new technologies.¹¹

The categories are: energy use, pollution, resource use, land use, crime and justice statistics, population and vital statistics, education facilities, education outcomes, health facilities, health outcomes, reproductive health, gender statistics, labour statistics, built environment, poverty and income statistics, balance of payment, money and banking, government finance, international trade, national accounts, and price indices. For additional information, consult the Open Data Inventory 2018/19 Methodology Report, available at http://odin.opendatawatch.com

Decree of the Minister of Development and Investment and International Cooperation, September 30, 2015, on the adoption of the National Charter of public statistics http://www.ins.tn/ar/node/285.

https://au.int/en/treaties/african-charter-statistics.

PARIS 21 (2019).

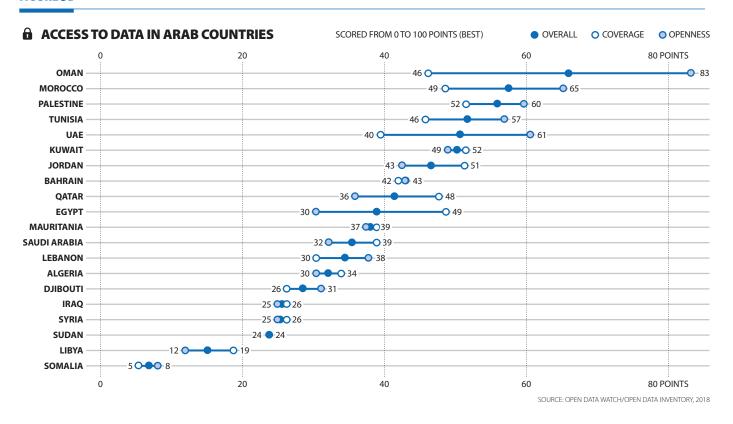


FIGURE 3b

OVERALL OPENNESS OF STATISTICS BY SECTOR

	ECONOMIC STATISTICS	SOCIAL STATISTICS	ENVIRONMENT STATISTICS
OMAN	83	72	44
MOROCCO	68	58	47
PALESTINE	68	48	53
TUNISIA	63	34	60
U.A.E.	70	42	41
KUWAIT	61	44	46
JORDAN	56	39	46
BAHRAIN	61	41	27
QATAR	43	41	40
EGYPT	43	32	43
ARAB COUNTRIES	49	34	32
MAURITANIA	48	34	33
SAUDI ARABIA	50	30	28
LEBANON	50	36	18
ALGERIA	48	28	22
DJIBOUTI	43	27	16
SYRIA	33	17	28
IRAQ	30	27	20
SUDAN	23	23	26
LIBYA	25	1 1	1 1
SOMALIA	22	0	0

Note that in Figure 3c "Western Asia and North Africa" includes Armenia, Azerbaijan, Iraq, Jordan, Lebanon, Turkey Algeria, Libya, and Tunisia.

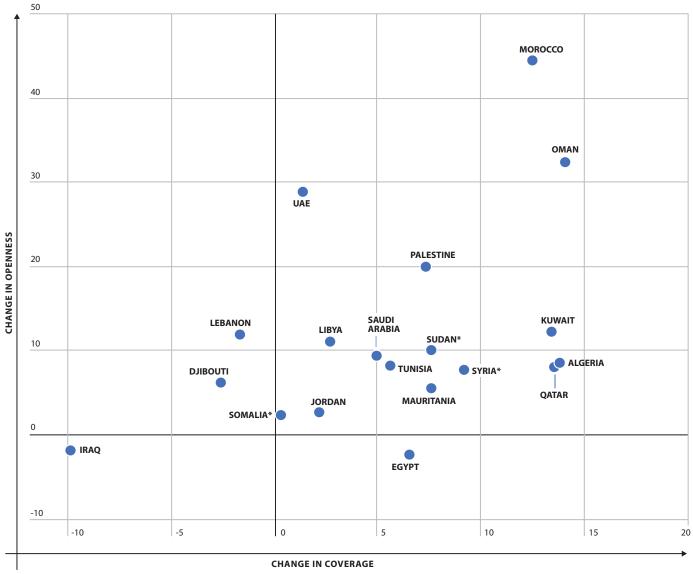
SOURCE: OPEN DATA WATCH/OPEN DATA INVENTORY, 2018

FIGURE 3c

REGIONAL SCORES AMONG UPPER-MIDDLE INCOME COUNTRIES COVERAGE OPENNESS EAST AND SOUTHERN WESTERN LATIN ASIA, N. AFRICA **EUROPE AFRICA AMERICA ASIA** 48 51 48 47 33 38 42 41 53 50 47 42 36 OVERALL SCORE

SOURCE: OPEN DATA WATCH/OPEN DATA INVENTORY, 2018

CHANGE IN DATA OPENNESS IN ARAB COUNTRIES 2016-2018, IN POINTS



* 1ST AVAILABLE ASSESSMENT IN 2017

SOURCE: OPEN DATA WATCH/OPEN DATA INVENTORY, 2018

Shortcomings in monitoring the SDGs

Soon after the adoption of the 2030 Agenda, it became evident that monitoring the SDGs, with their numerous and complex indicators, would be a challenge, particularly for developing countries with limited statistical capacities (see Box 2). In the Arab region, only 41 percent of the 117 country-level Tier I indicators—those with an internationally established methodology—are systematically available and updated across at least 20 countries in the region; 11 percent of the Tier I indicators have not been updated since 2015, and 18 percent have not been calculated since 2000 (see Annex).

Not all SDGs are equally endowed with a critical mass of indicators. For example, Goal 3, on health, has 25 available Tier I indicators, while Goal 13, on climate action, has none. Nevertheless, a closer look at indicator gaps in the Arab region in Figure 5a reveals significant shortcomings in availability of basic socio-economic indicators to measure poverty and food security (Goals 1 and 2), as well as gender parity (Goal 5). Across other goals, indicators that are systematically under-reported in the region cover some critical development deficits that the region has been suffering from, such as unemployment and youth unemployment (Indicators 8.5.2, 8.6.1, and 9.2.2), investment in research and development (9.5.1 and 9.5.2), financial soundness (10.5.1), and the amounts and sources of public expenditures (16.6.1, 17.1.1, and 17.1.2).

The ability to monitor the SDGs varies slightly across the region (see Figure 5b). Egypt, Jordan, Morocco, and Tunisia are the only Arab countries capable of monitoring at least 80% of the SDG Tier I indicators. Data collection is often interrupted in conflict-affected countries. For example, in Syria and Yemen, about 20% of Tier I indicators, especially those in critical human development areas such as poverty, health, education, and economic development (Goals 1, 2, 3, 4 and 8), have not been updated recently. Because statistics do not reflect current circumstances in these countries affected by protracted crisis, they are not fit to inform policies that can mitigate the effects of the crisis.

BOX 2

Sustainable Development Goals (SDG) Indicators*

The SDG indicators framework was developed by a UN Inter-Agency and Expert Group and adopted by the General Assembly on July 2017 (A/RES/71/313). The framework proposes to measure achievements against 17 goals with 244 indicators, of which nine are repeated under different goals, for a total of 232 individual indicators. Indicators are classified into three tiers based on methodological development and data availability:

Tier I: the indicator is conceptually clear, with an internationally established methodology

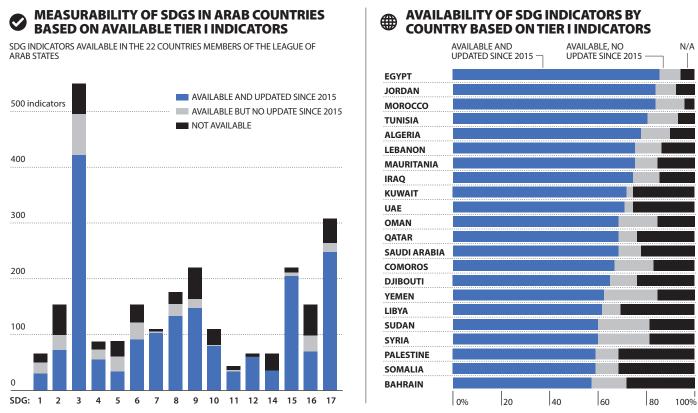
and standards, and data are regularly produced by at least 50 per cent of countries. (49% of the indicators)

Tier II: the indicator is conceptually clear, with an internationally established methodology and standards, but data are not regularly produced. (42%)

Tier III: No internationally established methodology or standards yet available, but methodology/standards are being (or will be) developed or tested. (9%)

^{*} A full list of SDG indicators, their classification and related methodologies, can be found at https://unstats.un.org/sdgs.

FIGURE 5a FIGURE 5b



SOURCE: UN STATISTICS DIVISION GLOBAL SDG INDICATORS DATABASE HTTPS://UNSTATS.UN.ORG/SDGS/INDICATORS/DATABASE/

Agenda 2030 underscores the importance of going beyond national averages to ensure that development leaves no one behind. Towards that end, disaggregated data is required to understand which groups or people are at risk of being left behind. The SDG framework has identified a set of indicators. including at least seven Tier I indicators, where monitoring requires some level of disaggregation by sex, age, urban or rural residence, socio-economic status, belonging to a minority or migrant group, or disability. Figure 6a shows that in the Arab region, the capacity to produce and publish disaggregated data is very limited, with 43 percent of the required disaggregated indicators not available, 25 percent of the available ones outdated, and only 32 percent updated since 2015. Only sex-disaggregated employment and HIV data disaggregated by sex and age

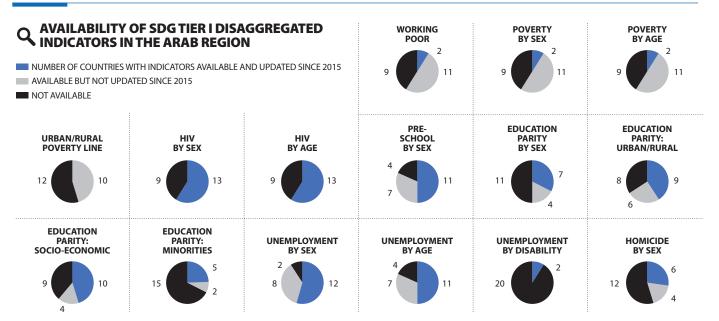
are available in more than 50 percent of Arab countries.

Despite a sustained rate of urbanisation and recorded issues related to spatial inequalities,12 no country has updated statistics to compare levels of rural and urban poverty. Recording of disability statistics is in its infancy in the region.¹³ In terms of SDG targets in this area, only Egypt and Palestine report against indicator 8.5.2, on unemployment rate by persons with disabilities. Egypt, Algeria, Qatar, and Morocco are the most advanced countries in the region when it comes to producing disaggregated statistics, while in countries affected by protracted conflicts such as Libya, Syria, and Yemen, there is virtually no usable disaggregated indicator available, making it very challenging to understand the impact of war on the most vulnerable (see Figure 6b).

^{12.} Abdellatif, Pagliani and Hsu (2019).

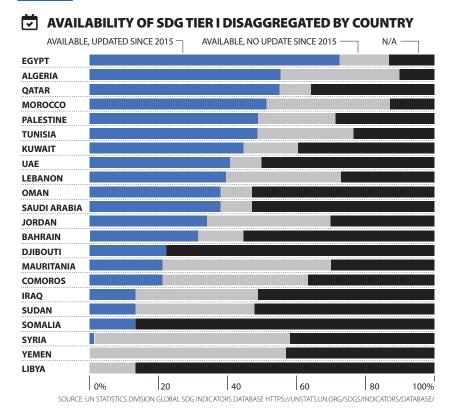
^{13.} ESCWA (2018).

FIGURE 6a



SOURCE: UN STATISTICS DIVISION GLOBAL SDG INDICATORS DATABASE HTTPS://UNSTATS.UN.ORG/SDGS/INDICATORS/DATABASE/

FIGURE 6b



Monitoring the SDGs is a shared challenge, not only for developing countries with limited statistical capacities, but also in the building of a comprehensive data ecosystem for the entirety of Agenda 2030, in which most countries should become capable of reporting against Tier II and Tier III indicators as well. However, SDG monitoring should not be aimed primarily at international reporting. Instead, data collection and publication should align with national priorities, in order to generate strong institutional support and lead to the right allocation of capacities, resources and coordination mechanisms to inform policymaking and public debate. 14

^{14.} Center for Open Data Enterprise (2018).

Shortcomings in monitoring inequality

Inequality, polarization and unequal access to opportunities have been identified as triggers in the process of erosion of the social contract.15 Beyond the lack of disaggregated data to monitor the SDGs, granular knowledge about those multifaceted phenomena is scarce in Arab countries.¹⁶ Most inequality measures are based on household surveys, which have been conducted by only half of the 22 Arab countries in the last five years, with inconsistent quality and methodologies that preclude systematic regional comparisons (see Table 2). As mentioned in the section on data openness, access to existing data remains limited, or the data is not available in a format that permits robust insights on inequality and deprivation.

The available conventional measures of economic well-being show average levels of economic inequality, with Gini coefficients of .30-.45 in Arab countries. Attempts to combine household surveys with income tax data reveal much higher income inequality, but such analysis is only in its preliminary stages, and the necessary data is not available in enough countries to allow for regional analysis.17

According to multi-dimensional measures of inequalities, such as the Inequalityadjusted Human Development Index, Arab countries experience some of the greatest losses worldwide in human development due to inequality, second only to Sub-Saharan Africa (see Figure 7a). The sub-components of the index reveal that, while in education and life expectancy the region has seen a slow but continuous reduction of inequalities since 2010, income inequality has sharply increased after 2014, although there has been some reversal in more recent years (Figure 7b).

TABLE 2

Available Household Surveys

Country	Latest Household Survey	Year
Oman	Household Expenditure and Income Survey	2019
United Arab Emirates	Household Expenditure and Income Survey	2019
Saudi Arabia	Household Expenditure and Income Survey	2018
Jordan	Household Expenditure and Income Survey	2017-2018
Djibouti*	Household Survey on Social Indicators	2017
Palestine	Living Standards Measurement Survey	2017
Libya	Household surveys to assess family needs	2016
Egypt.	Household Income, Expenditure, and Consumption Survey	2015
Tunisia	Household Survey on Income, Consumption and Standards of Living	2015
Bahrain	Household Expenditure and Income Survey	2014-2015
Mauritania	Household Survey on Standards of Living	2014
Morocco	Household Survey on Consumptions and Expenditures	2013/2014
Comoros	Household Survey on Consumptions and Expenditures	2013
Kuwait	Household Income and Expenditure Survey	2013
Somalia (Somaliland only)*	Household Survey on Income and Consumption	2013
Qatar	Living Conditions Index Survey, and Household Expenditure and Income Survey	2012-2013
Iraq*	Household Socio-Economic Survey	2012
Lebanon	Household Budget Survey	2012
Algeria	Household Survey on Income, Consumption and Standards of Living	2011
Sudan*	National Baseline Household Survey	2009
Syria	Household Income and Expenditure Survey	2008–2009
Yemen*	Household Budget Survey	2005–2006

Source: national statistical authorities, unless otherwise indicated.

^{15.} Arampatzi and others (2018).

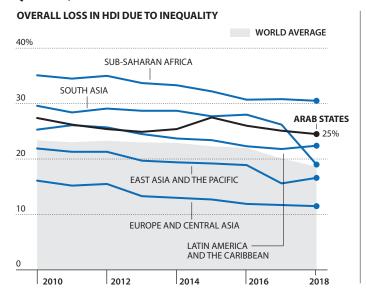
^{16.} Bibi and Nabli (2010).

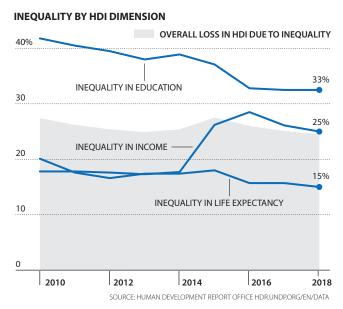
^{17.} Alvaredo, Assouad and Piketty (2018).

^{*}Source: World Bank

FIGURE 7a FIGURE 7b

≠ INEQUALITY ADJUSTED HUMAN DEVELOPMENT INDEX





From a data-need perspective, to understand and document the impact of intersecting inequalities on social and other forms of exclusion, the region largely lacks practical micro-level studies to shed light on those interconnections. Notwithstanding the absence of systematically collected robust data, this element is crucial to understanding both the dissatisfaction expressed during the Arab uprisings and perceptions of institutional performance and accountability.18

^{18.} Abdellatif, Pagliani and Hsu (2019).

Old and new tools to address data deprivations

The Cape Town Global Action Plan for Sustainable Development Data, agreed by the UN Statistical Commission in March 2017, is the current roadmap for expanding statistical capacity and gearing it to the needs of Agenda 2030. The Action Plan is based on the principles of completeness of scope, accountability, and cooperation (see Box 3).

Addressing gaps in data coverage requires modernizing national statistical systems to improve the quality and usability of administrative data and surveys. Among the most common obstacles preventing the production of more granular data are the sample size of most surveys, which does not allow representativeness of marginalized and excluded groups; the absence of income accounts at regional, local and household levels; and the lack of statistical harmonization of the definitions of rural and urban areas or informal settlements.19

Moreover, advanced approaches to statistics call for the integration of different data sources, promoting data interoperability and fostering collaboration among diverse data producers.²⁰ National statistical offices are best placed to provide interoperability, by coordinating and harmonizing data from different sources so that they can be used and exchanged within the same statistical system. They can achieve more by integrating often underutilized administrative data systems (e.g., from electoral bodies, public administration and judiciary institutions, etc.) and exploring unofficial data sources to complement more traditional ones (e.g., experimental and big data from civil society, academia, and the private sector).21 The interoperability of different data sets enhances the usability of

BOX 3

Cape Town Global Action Plan for Sustainable Development Data -**Strategic Areas and Objectives**

1: Coordination and strategic

- 1.1 strengthen national statistics 1.2 coordination with regional and international organisations
- 2: Innovation and modernization
- 2.1 governance and institutional frameworks
- 2.2 statistical standards
- 2.3 new technologies and data

3: Strengthening of basic statistics

- 3.1 household business and other surveys, integrated survey systems, census, civil registration and vital statistics
- 3.2 national statistical registers and administrative records

- 3.3 System of National Accounts and the System of Environmental **Economic Accounts**
- 3.4 geospatial data
- 3.5 data on all groups of population
- 3.6 data on domains currently not well developed

4: Dissemination and use

4.1 strategies for dissemination

5: Multi-stakeholder partnerships 5.1 partnerships with governments, academia, civil society, private

sector and other stakeholders 6: Mobilize resources and coordinate efforts

6.1 Ensure resources are available, both domestic and from international cooperation

Source: https://unstats.un.org/sdgs/hlg/cape-town-global-action-plan/.

official statistics for policymaking. For example, Mexico's National Institute of Statistics and Geography estimated that it has data to cover approximately 40 to 50 percent of the SDG indicators, and is planning to fill the gap via non-traditional data sources such as Twitter, data from local research institutes, and satellite imagery.²² Similarly, well-functioning civil registries and vital statistics can facilitate data collection on health outcomes, crime and justice, reproductive health, and more.²³

Increasing data openness by releasing available datasets to the public facilitates the use of

^{20.} Decision of the UN Statistical Commission, 50th session (2019), Data and indicators for the 2030 Agenda for Sustainable Development, available at https://unstats.un.org/unsd/statcom/decisions-ref/?code=50/102.

^{21.} PARIS 21 (2020).

^{22.} DI Development Initiative (2017).

^{23.} ODIN (2018 - 19).

data to foster public debate and policymaking, which in turn further increases the demand for data. Arab countries such as Morocco, Oman, Palestine, and Tunisia have leapt forward by publishing more data in machine-readable and non-propriety format through existing data portals, and by adopting open data licences and terms of use. Oman, for example, has made great progress simply by removing restrictive conditions that forbid any type of use of official statistics without receiving prior permission.²⁴

New technologies and alternative data sources can provide cost-effective and timely solutions. Technology can help enhance statistical capacity by facilitating information-sharing and managing and improving the accuracy of field observations, verifications, and sampling procedures.25

Satellite imagery, remote sensing, and cartography can be used to improve population coverage and provide accurate geographic boundaries for field surveys and censuses.²⁶ Earth observations already provide reliable information on the state of the atmosphere, ecosystems, and natural resources, contributing to the capacity to address challenges such as climate change, water availability, food security, and safe and secure transport. Satellite data is currently used to monitor some of the SDG indicators related to forest management (SDG 15.2.1), the mountain green cover (SDG 15.4.2), and water ecosystems (SDG 6.6.1).

Other SDGs can benefit from enhanced monitoring options as well. For example, Goal 11 on sustainable cities calls for addressing challenges of access to services and infrastructure for an increasingly urbanized population. Earth observations are a promising tool, together with automated methods of data processing and image analysis, for providing up-to-date information on urban settlements.²⁷ Similarly, Goal 7 on affordable and clean energy can be visualized using night-time satellite imagery to assess the location and spread of electric lighting.²⁸ The support to developing countries in exploiting the capabilities afforded by a wide range of data, including earth observation and geospatial information, is clearly stated in Article 76 of the 2030 Agenda for Sustainable Development.²⁹

Satellite data can complement traditional data sources by providing spatially and temporally denser information, improving data frequency and richness. As of this writing, high-quality satellite imagery is either not available to the public or comes with a considerable price tag, while also requiring sophisticated processing and analytical skills. Nonetheless, it is more cost-effective than traditional survey approaches, and allows for more data consistency across countries and regions.

Pioneer applications of high-resolution satellite imagery paired with survey data in Sri Lanka generated accurate predictions of local-level poverty and welfare. Poverty surveys are costly and usually subject to multi-year lags; the ability to actualize information on poverty prevalence and dynamics can be a valuable tool to understand the spatial nature of poverty and inform policymaking.³⁰ Such results cannot as yet be generalized and automatically applied to different areas. But if robust accuracy tests are developed to avoid misleading policies, the rapid evolution of this type of data and tools can significantly advance the measurement of various dimensions of human development.31

The use of new technologies to complement official statistics is still limited by factors such as standardization, validation vis-à-vis stringent statistical standards, and access to proprietary data and technologies. Further challenges include the accuracy of mapping results in diverse conditions and the high computing and storage needs associated with processing vast amounts of satellite data.32

Developing countries are particularly disadvantaged in using these tools if they lack the

^{24.} Ibid.

^{25.} Anderson and Whitford (2017).

^{26.} OECD (2018).

^{27.} Earth Observations in Support of the 2030 Agenda for Sustainable Development v1.1 (JAXA, GEO, 2017).

^{28.} Anderson and others (2017).

^{29.} UN Resolution 70/1, adopted by the General Assembly on 25 September 2015.

^{30.} Engstrom, Hersh and Newhouse (2017).

^{31.} Head, Manguin, Tran and Blumenstock (2017).

^{32.} GEO (2017).

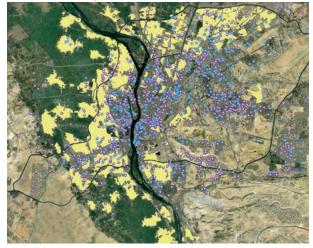
expertise and infrastructure required to retool national systems and processes as needed.33 These challenges are well known, but so are the limitations of current statistical systems. The extensive use of geospatial and mobile signal data for commercial purposes, and the growing uptake among humanitarian and development actors, as well as their timeliness and decreasing marginal costs compared to traditional surveys and statistical methodologies, reveal the potential of these tools to contribute to the data revolution needed to monitor and thus achieve the SDGs.34

During the preparation of this analysis, we have tested the application of these technologies to identifying development challenges in slums in Cairo. Satellite imagery analysis provided information about the expansion of the Cairo urban area during the past 18 years and facilitated the visual identification of informal settlement locations. Overlaying the images with data from OpenStreetMap35 on health and education facilities helped in identifying underserved areas. Tracking mobile signals can help create near-real time population density maps, and understand where residents of informal settlements tend to work or access services during the day.36

The pace of technological change is having an impact on people's ability to generate, access and use statistical information. Digital information continuously generated by GPS devices, mobile phones, satellites, and social media require new tools, methods, and a regulatory framework for capturing, managing and processing them efficiently.³⁷ While national statistical authorities are the main entities in charge of generating official data, with the rapid spread of new technologies, statistical data in most domains is co-produced by governments and non-state actors. As not all countries have the capacity to adopt new technologies to fill

FIGURE 8

Cairo slum analysis



Areas shaded in yellow correspond to identified slums while blue and purple dots represent health and education facilities, respectively. Source: UNDP analysis and OpenStreetMap.

statistical gaps, the openness of data from both public and private sources is fundamental for their uptake in measuring the SDGs.³⁸

To leverage existing and future opportunities, national statistical systems need to boost their capacities in information-sharing and expand both data capture and data availability to external stakeholders.³⁹ Partnerships with private companies, universities, civil society, and other third-party actors can contribute to data availability and affordable technical solutions. Fostering these partnerships requires overcoming current organisational and methodological challenges, and setting clear rules to deal with data privacy,⁴⁰ ownership and use.⁴¹

New skills, organisational practices, and modern data processing techniques must be put in place if national statistical systems in Arab countries are to benefit from new technologies and the massive increase in data availability to enhance both decision-making and accountability.42

^{33.} GEO (2017).

^{34.} Engstrom, Hersh and Newhouse (2017).

^{35.} See openstreetmap.org.

^{36.} Muggenburg, Sen and Lewandowski (2019).

^{37.} Anderson and others (2017).

^{38.} GEO (2017).

^{39.} Anderson D. M. & Whitford A. (2018).

^{40.} One of the most advanced regulation in this sphere is the European Union General Data Protection Regulation. See https:// gdpr-info.eu/.

⁽SDSN TReNDS) (2018).

^{42.} PARIS 21 (2019).

New technologies: who generates and who owns the data

The rapid growth of the "Internet of Things" - a system of interrelated computing devices provided with unique identifiers and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction - has led to an exponential increase in data. Globally, more data was generated in 2017 than in all previous years combined.⁴³ The new types of data enabled by internet-related technologies belong to three categories:44

- Government data generated through engagement with public institutions, such as tax details, licences, etc.;
- Regulated data generated in sectors where there is a clear regulator, such as mobile phone records, medical records, banking and insurance data, etc.; and
- **Private data** generated by the interaction between an individual and a private service provider, such as browsing history, social media data, airline history, etc.

This rise of personal data poses both opportunities and challenges for individuals and communities. Individuals are generating the supply of personal data that fuel the data economy, but the creation of data depends on platforms provided by technology companies. Current dynamics of data economies tend to skew power away from individuals, who generate the data, and towards platform companies. For example, social media companies provide free services in exchange for extracting personal data to be sold to advertisers. This business model increases tech companies' authority and ownership over data collection. 45 Platforms thrive on collecting and analysing data, so they aim to

expand data reserves and invest in artificial intelligence to make data more valuable. In this context, economies of scale tend to create data dominators. Reaping the benefits of the data economy requires taking part in it, but having data controlled by a small set of actors reduces individuals' control over how their data is shared and used.46

Beyond the private sector, big data, satellite imagery, and other new technologies such as biometrics have been increasingly used by humanitarian agencies, because they are seen as more efficient in reaching populations in emergency settings and can yield more accurate insights on their needs. But these supposed solutions have attracted criticism for their tendency to exclude those most affected by a crisis, who often lack access to the required technology. Additional concerns about the safety of affected populations are related to the need for humanitarian agencies to partner with private sector companies owning the technology and ultimately the associated data, which are occasionally used for non-aid-related purposes, such as monitoring and surveillance.⁴⁷

From a community perspective, access to this type of data can equip policymakers and service providers with valuable information on economic trends, population preferences, and needs.⁴⁸ Recent attempts to balance the power dynamics associated with new technologies have focused on individuals' rights to their data, technology that improves identity protection and data management, and tools that help individuals to benefit more from their data use.

The current approach to data governance is fragmented; no country so far has established

^{43.} CISCO (2019).

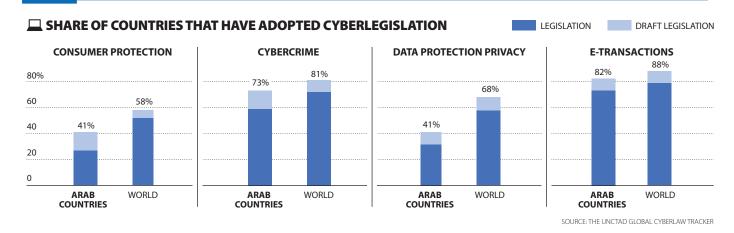
^{44.} McGowan and others (2018).

^{45.} Vaidhyanathan (2018).

^{46.} McGowan and others (2018).

^{47.} Madianou (2019).

^{48.} McGowan and others (2018).

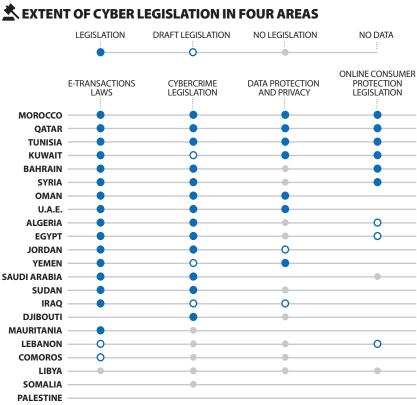


a single comprehensive vision of how to govern individuals' data. Figure 9a shows that Arab countries on average lag in all four areas of cyber legislation, but more significantly in terms of consumer protection, where only 27 percent of countries in the region have enacted legislation, compared to 52 percent worldwide, and data protection and privacy, with legislation available in only 32 percent of the Arab countries, compared to 58 percent worldwide. While 59 percent of Arab countries have cybercrime legislation, this is still a significant gap compared to 72 percent of countries worldwide. In e-transaction legislation, the distance is smaller, with 79 percent of countries worldwide covering it, as compared to 73 percent in the Arab region.

Tunisia, Qatar, and Morocco are the only countries in the region with approved legislation in all four areas, followed by Kuwait (with three enacted and one draft legislation). Bahrain, Syria, the United Arab Emirates, and Oman all lack at least one piece of legislation. Conflict countries like Libya, Somalia, and Palestine have no legislation in this field, while Lebanon, a middle-income country, has so far produced only two draft pieces of legislation, leaving data governance completely unregulated (Figure 9b).

Data governance has the potential to leverage the public good element of individuals' generated data. For example, in Estonia, the

FIGURE 9b



SOURCE: THE UNCTAD GLOBAL CYBERLAW TRACKER

mandatory national digital ID combined with a government interoperability platform contributed to notable progress in service provision in areas as diverse as taxes and health care.49

^{49.} Kattel and Mergel (2018).

Citizen-generated data

In the above examples, citizens passively produce data when using tracked devices or accessing public or private services. For example, big data applications track and analyse transactions and interactions as a by-product of people's interaction with digital media. More opportunities are emerging from the active and conscious engagement of citizens in data production, beyond mandatory registration and the by-product of their online activity. Citizen-generated data has been defined as data that people or their organisations produce to directly monitor, demand, or drive change on issues that affect them.⁵⁰ It is actively given by citizens, providing direct representation of their perspectives and alternative or complementary information to datasets collected by governments or international institutions.

Citizen-generated data can contribute to a better understanding of sustainable development issues in multiple ways, ranging from contributing spatially significant data for remote locations in the absence of geographic disaggregation of critical statistics, to periodic cheaper and faster data collection to monitor circumstances affected by rapid change. These approaches are already contributing to the monitoring of the Sustainable Development Goals. For example, the "Red List Index" (SDG 15.5.1) captures the risk of extinction for birds, mammals, amphibians, and corals, using data generated by a network of scientists and more than 5,000 trained volunteers.51

Beyond filling existing data gaps, citizen-generated data can expand, complement, or cross-verify official measurements, as in the already mentioned example on health and education facilities in Cairo, which used citizens' self-reported data through OpenStreetMap. This type of data can also empower citizens to shape or challenge official narratives. For example, in several countries, national and local institutions have benefited from the application of citizen-generated data such as social audits and community scorecards to monitor the impact of policies and service delivery, educate citizens about available services, and create feedback loops to improve the quality and reach of services. Monitoring how problems are seen from the perspective of service providers and users, or policymakers and citizens affected by the policies, can open new ways to identify solutions, gather context around problems otherwise unnoticed, and translate people's lived realities into indicators.⁵² For example, in Malawi, community scorecards have enhanced the use of and satisfaction with health services, and improved relationships between service providers and users.⁵³

A critical challenge related to these approaches is the harmonization of data quality with traditional statistical standards to ensure complementarity. Comparison with professionally collected data, expert peer reviews, and filtering of outliers are all techniques that help address this challenge to harvest the biggest potential of citizen-generated data: embedding the needs and views of the community in the production of data.⁵⁴ While citizen-generated data may not always conform to established statistical practices, their added value lies in offering new perspectives based on local insights, checking plans and policies against experience, fostering civic involvement, and helping to identify and address people-centred problems that official statistics may not capture. In gauging the viability of this type of data in informing policies and analysis, rather than looking for

^{50.} See https://www.civicus.org/thedatashift/.

^{51.} Fritz and others (2019).

^{52.} Lämmerhirt and others (2018).

^{53.} Gullo and others (2017).

^{54.} Fritz and others (2019).

strict adherence to traditional notions of data quality, it is critical to determine whether the data is relevant and usable enough.55

Citizenship 360° in Arab **Countries**

The Arab Human Development Report initiative opted to apply new technologies and use citizen-generated data to collect perceptions through the Citizenship 360° survey. While the survey does not aspire to fill gaps in official statistics, its results reveal valuable insights into people's priorities and concerns beyond what can be derived from national accounts.

Perception surveys are often considered unreliable tools to offer concrete inputs into policymaking, mostly due to the assumptions that ordinary citizens lack critical information and technical knowledge to provide meaningful contributions. But perceptions and official statistics can assess complementary aspects of these areas. Analysing gaps between perceptions and objective indicators can improve understanding of how and why people are dissatisfied and the underlying drivers of feelings of injustice and inequality.56 Applied research has demonstrated that public officials are often insufficiently informed about citizens' preferences, which is a constraint on democratic accountability and on institutional responsiveness. The same research has also revealed that when provided with accurate information about citizens' preferences, policymakers are keen to use it to inform their decision-making, particularly when preferences are expressed by societal groups whose voices are less often heard, such as women.57

This research made a deliberate attempt to hear the voices of Arab citizens on what affects their capability to enjoy a complete and fulfilling citizenship. Rather than asking direct questions on the meaning of citizenship, it aimed to understand people's perceptions

55. Lämmerhirt, Gray, Venturini, and Meunier (2018).

FIGURE 10

IIII FIVE-FACTOR FRAMEWORK OF EXCLUSION



SOURCE: UNDP 2018. "WHAT DOES IT MEAN TO LEAVE NO ONE BEHIND? A UNDP DISCUSSION PAPER AND FRAMEWORK FOR IMPLEMENTATION."

on the five forces of exclusion identified as the critical bottlenecks to re-establishing a viable social contract: unaccountable governance, socio-economic exclusion, discrimination, spatial exclusion, and shocks and fragilities (see Figure 10). An overview of the survey results is presented in a separate paper titled Citizenship 360° in the Arab Region: Perceptions on Sustainable Development across Countries, Income, and Gender while a deeper dive into each of the five areas of exclusion covered by the survey is also available at http://www.arab-hdr.org/citizenship360.

The Citizenship 360° survey built on the scientific questionnaire elaborated in the framework of the United Nations My World initiative to help monitor the Sustainable Development Goals.58 The questions reflected all 17 goals and were clustered around the five areas of exclusion. The survey was administered through a mobile application which recruited respondents through social media campaigns. Respondents who completed the entire questionnaire were remunerated via modest mobile payments through local

^{56.} Rodríguez Takeuchi and Hine with Chávez C. (2015).

^{57.} Liaqat A. (2019).

^{58.} See about.myworld2030.org/myworld-scientific.

payment providers. Contributions from respondents who voluntarily offered them were quality assured to certify their authenticity, while safeguarding their anonymity. The full questionnaire as well as details of the survey methodology are available as Annexes in the above mentioned AHDR paper.

The survey ran during the period 15 May—31 July 2019, obtaining a total of 6,722 responses in 12 countries, about 500 responses per country. While the sample is too small to be representative of in-country diversities, it does hint at potential drivers of exclusion, compounded sources of grievances, and nuances among countries. In Algeria, Egypt, Iraq, Jordan, Lebanon, Morocco, Palestine, Tunisia, and Yemen, the survey was made available through the app. Enumerators who entered responses in the same app for multiple contributors were hired in Syria, Somalia, and Libya, where payment providers were not available through the app.

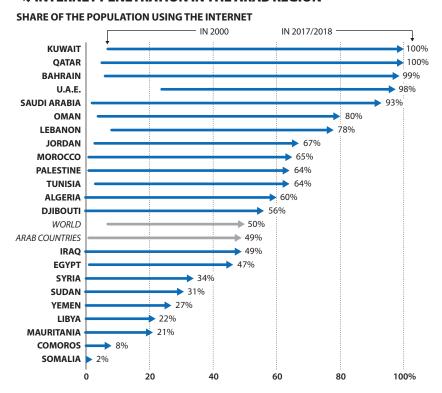
The data collected through the survey can be accessed here: http://www.arab-hdr.org/citizenship360/data.

As the methodology required respondents to have a smart phone and to react to a social media campaign, intergenerational and income-based biases that would affect the sample representativeness were anticipated, as internet and mobile penetration have not achieved 100 percent of coverage in many Arab countries.

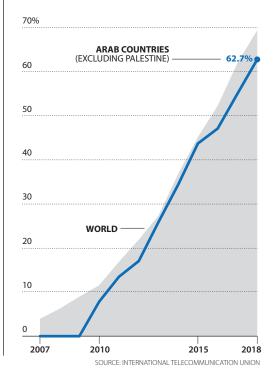
Nevertheless, the fast pace with which these technologies are spreading will soon allow these challenges to be overcome. Figure 11a shows how internet penetration is above global and regional averages in many of the countries where the survey was administered through the mobile app. The Middle East and Africa are also experiencing the strongest mobile data traffic growth of any region, with a 92 percent increase in 2017 and an estimated 56 percent average

FIGURE 11a FIGURE 11b

🔭 INTERNET PENETRATION IN THE ARAB REGION



ACTIVE MOBILE BROADBAND SUBSCRIPTIONS



compound annual growth rate until 2022, while the proportion of the population using smart devices and connections is expected to triple (see Figure 11b).59

To control for the inherent sample bias, a comparison between the demographics of the Citizenship 360° survey with those of the Arab Barometer, a relatively similar survey for which the sample is derived according to traditional statistical approaches, can be found in Annex B.2 of the AHDR paper Citizenship 360° in the Arab Region. As expected, the Citizenship 360° sample is biased towards a younger population, which tends to be more active on social media. This affects other factors of the sample, such as the higher percentage of unemployed respondents and higher levels of education. Gender and the distribution between rural and urban areas are more representative in most countries covered by the sample. Not by design, but simply by allowing any individual with a smart phone to take part in the survey, respondents from Lebanon included a 31 percent cohort of Syrians, reflecting the presence of people displaced due to the war in Syria.

Figure 12 shows the geographic dispersion of in-app submissions, which extends beyond the main cities, although it is reduced in the three countries where enumerators were used, as data from different respondents was entered by a limited number of people.

The Citizenship 360° survey allowed the collection of conspicuous albeit still partial perception data. The inherent bias towards younger segments of the population is conducive to the continuation of the seminal work done in the 2016 Arab Human Development

FIGURE 12

☐ GEOGRAPHIC DISTRIBUTION OF CITIZENSHIP 360° RESPONSES NUMBER OF SUBMISSIONS: 6-100

SOURCE: BASED ON GEOLOCATION WHERE DATA WAS ENTERED IN THE APP

Report, which called on Arab states to invest in their youth and to empower them to engage in development processes. 60 The methodology proved both time- and cost-effective compared to traditional perception surveys. The increasing accessibility of mobile data technologies, including for less affluent segments of the population, suggests promising opportunities to leverage rapidly evolving technologies to allow citizens to contribute directly to the debate on development priorities and challenges. Deploying the application at the national and local levels, where surveys can be further tailored to context and targeted to specific population segments, can facilitate much-needed dialogue among institutions, policymakers, and citizens.

^{59.} CISCO (2019).

^{60.} UNDP (2016).

References

- Abdellatif, A., P. Pagliani and E. Hsu (2019). Leaving No One Behind: Towards Inclusive Citizenship in Arab Countries. New York: United Nations Development Programme.
- Alvaredo, F., L. Assouad and T. Piketty (2018). Measuring inequality in the Middle East 1990-2016: The World's Most Unequal Region? WID.world working paper series 2017/15. Paris: World Inequality Database.
- Amin-Salem, H. and others (2018). Sustainable Development Goal Diagnostics: The Case of the Arab Republic of Egypt. Washington, DC: World Bank.
- Anderson, D. M. and A. Whitford (2017). Developing Knowledge States: Technology and the Enhancement of National Statistical Capacity. Review of Policy Research, Volume 34, Issue 3.
- Anderson, D. M. and A. Whitford (2018). Designing systems for the co-production of public knowledge: considerations for national statistical systems. Policy Design and Practice, 1:1, 79-89.
- Anderson, K. and others (2017). Earth observation in service of the 2030 Agenda for Sustainable Development. Geo-spatial Information Science, 20:2, 77-96, DOI: 10.1080/10095020.2017.1333230.
- Arampatzi, E. and others (2018). Unhappy Development: Dissatisfaction with Life on the Eve of the Arab Spring. The Review of Income and Health Volume 64, Issue 1.
- Gullo, S. and others (2017). Effects of a social accountability approach, CARE's Community Score Card, on reproductive health-related outcomes in Malawi: A cluster-randomized controlled evaluation. PLoS One. 2017; 12(2): e0171316.
- Head, A. and others (2017). Can Human Development *Be Measured with Satellite Imagery?* Association for Computing Machinery. ICTD 17: Proceedings of the Ninth International Conference on Information and Communication Technologies and Development, November 2017.
- Bibi, S. and M. Nabli (2010). Equity and inequality in the Arab region. Policy Research Report 33, Economic Research Forum, Giza, Egypt.
- Center for Open Data Enterprise (2018). Strategies for SDG National Reporting: a Review of Current Approaches and Key Considerations for Government Reporting on the UN Sustainable Development Goals.
- CISCO (2019). Cisco Visual Networking Index: Global Mobile Data Traffic Forecast, Update, 2017–2022.
- DI Development Initiative (2017). The Frontiers of Data Interoperability for Sustainable Development.

- Engstrom, R., J. Hersh and D. Newhouse (2017). Poverty from space: using high-resolution satellite imagery for estimating economic well-being. Policy Research working paper no. WPS 8284. World Bank Group.
- Fritz, S. and others (2019). Citizen science and the United Nations Sustainable Development Goals. Nat Sustain 2, 922-930 doi:10.1038/s41893-019-0390-3.
- GEO Group on Earth Observations (2017). Earth Observations in support of the 2030 Agenda for Sustainable Development.
- Independent Expert Advisory Group on a Data Revolution for Sustainable Development (2014). A World That Counts: Mobilizing the Data Revolution for Sustainable Development.
- Kattel, R. and I. Mergel (2018). Estonia's digital transformation: Mission mystique and the hiding hand. UCL Institute for Innovation and Public Purpose Working Paper Series (IIPP WP 2018–09).
- Lämmerhirt, D. and others (2018). Advancing sustainability together? Citizen-generated data and the Sustainable Development Goals. Global Partnership for Sustainable Development.
- Liagat, A. (2019). No representation without information: Politician responsiveness to citizen preferences. International Growth Centre Working Paper S-89478-NOC-1.
- Madianou, M. (2019). Technocolonialism: Digital Innovation and Data Practices in the Humanitarian Response to Refugee Crises. Social Media + Society DOI: 10.1177/2056305119863146.
- McGowan, K. and others (2018,). Personal data empowerment: restoring power to the people in a digital age. Pathways for Prosperity Commission Background Paper Series, no. 11. Oxford, United Kingdom.
- Muggenburg, E.L., S. Sen and E. Lewandowski (2019). Geolocation Data for Pattern of Life Analysis in Lower-Income Countries. Prepared by Orbital Insights and UNDP, available at https://orbitalinsight.com/ blog/understand-lower-income-areas-cairo.
- ODIN, Open Data Inventory 2018-2019 Annual Report, A Progress Report on Open Data.
- OECD (2018). Development Co-operation Report 2018: Joining Forces to Leave No One Behind. Paris: OECD Publishing, https://doi.org/10.1787/ dcr-2018-en.
- Paris 21 (2019). Statistical Capacity Development Outlook 2019.
- Paris 21 (2020). Handbook on Governance Statistics. Governance Statistics, Praja City Group.

- Rodríguez, Takeuchi L. and S. Hine with C. Chávez (2015). Asking people what they think: Using perceptions data to monitor the post-2015 agenda. ODI Working Paper 413.
- (SDSN TReNDS) Sustainable Development Solutions Network Thematic Research Network on Data and Statistics (2018). Counting on the World: Building Modern Data Systems for Sustainable Development.
- United Nations Development Programme (2016). Arab Human Development Report 2016: Youth and the Prospects for Human Development in a Changing Reality. New York.
- -. 2018 "What does it mean to leave no one behind? A UNDP discussion paper and framework for implementation." New York.
- United Nations Economic and Social Commission for Western Asia (2018). Disability in the Arab region. Beirut, Lebanon.
- Vaidhyanathan, S. (2018). Anti-social media. Oxford, UK: Oxford University Press.
- World Bank (2011). Arab World Brief, Enhancing Access to Micro-Data in the Middle East and North

Annex: Availability of SDG Tier I indicators

SDG Tier I Indicators	Algeria	Bahrain	Comoros	Djibouti	Egypt	Iraq	Jordan	Kuwait	Lebanon	Libya	Mauri- tania
1.1.1 Population below the international poverty line	2011	no data	2013	2017	2015	2012	2010	no data	2011	no data	2014
1.2.1 Population living below the national poverty line	2011	no data	2013	2017	2015	2012	2010	no data	2012	no data	2014
1.4.1 Population living in households with access to basic services	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
2.1.1 Under-nourishment	2016	no data	no data	2016	2016	2016	2016	2016	2016	no data	2016
2.1.2 Food insecurity	no data	no data	no data	no data	2016	no data	2016	no data	no data	no data	no data
2.2.1 Stunting among children under5 years	2012	no data	2012	2012	2014	2011	2012	2015	2004	2007	2015
2.2.2 Malnutrition among children under5 years	2012	no data	2012	2012	2014	2011	2012	2015	2004	2007	2015
2.5.1 Plant and animal genetic resources for food and agriculture secured	no data	no data	no data	no data	2018	no data	2018	no data	2018	2018	2018
2.a.1 Agriculture orientation index for government expenditures	2009	2008	no data	no data	2017	no data	2017	2015	2016	no data	no data
2.a.2 Official flows to the agriculture sector	2017	2003	2017	2017	2017	2017	2017	no data	2017	2016	2017
3.1.1 Maternal mortality ratio	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015
3.1.2 Births attended by skilled health personnel	2013	2016	2012	2012	2014	2018	2018	2016	2004	2013	2015
3.2.1 Under-5 mortality rate	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
3.2.2 Neonatal mortality rate	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
3.3.1 New HIV infections	2017	2017	2017	2017	2017	no data	no data	2017	2017	no data	2017
3.3.2 Tuberculosis incidence	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
3.3.3 Malaria incidence	2017	no data	2017	2017	2017	2017	2017	no data	no data	no data	2017
3.3.4 Hepatitis B incidence	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015
3.3.5 People requiring interventions for neglected tropical diseases	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
3.4.1 Mortality rate due to cardiovascular disease, cancer, diabetes or chronic respiratory disease	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016
3.4.2 Suicide mortality rate	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016
3.5.2 Harmful use of alcohol	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016
3.6.1 Death rate due to road traffic injuries	2013	2013	2016	2013	2016	2016	2016	2016	2016	2016	2016
3.7.1 Women of reproductive age who have their need for family planning satisfied	2013	no data	2012	no data	2014	2011	2018	no data	no data	2014	2015
3.7.2 Adolescent birth rate	2015	2014	2011	2011	2014	2009	2016	2015	2003	2013	2014
3.8.1 Coverage of essential health services	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
3.8.2 Population with large household expenditures on health	no data	no data	2014	2012	2012	2012	2008	no data	no data	no data	2014
3.9.1 Mortality rate due to air pollution	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016

SDG Tier I Indicators	Morocco	Oman	Pales- tine	Qatar	Saudi Arabia	Somalia	Sudan	Syria	Tunisia	UAE	Yemen
1.1.1 Population below the international poverty line	2013	no data	2016	no data	no data	no data	2009	2004	2015	no data	2014
1.2.1 Population living below the national poverty line	2013	no data	2016	no data	no data	no data	2009	2007	2015	no data	2014
1.4.1 Population living in households with access to basic services	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
2.1.1 Under-nourishment	2016	2016	no data	no data	2016	no data	2016	no data	2016	2016	2016
2.1.2 Food insecurity	no data	no data	2016	no data	no data	no data	no data	no data	no data	no data	no data
2.2.1 Stunting among children under5 years	2011	2014	2014	2005	no data	2005	2014	2009	2012	no data	2013
2.2.2 Malnutrition among children under 5 years	2011	2014	2014	no data	2005	2009	2014	2009	2012	no data	2013
2.5.1 Plant and animal genetic resources for food and agriculture secured	2018	no data	no data	no data	no data	no data	2018	no data	2018	no data	no data
2.a.1 Agriculture orientation index for government expenditures	2012	2014	2017	2005	no data	no data	no data	2009	2012	2015	no data
2.a.2 Official flows to the agriculture sector	2017	2010	2017	no data	2006	2017	2017	2017	2017	no data	2017
3.1.1 Maternal mortality ratio	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015
3.1.2 Births attended by skilled health personnel	2018	2017	2014	2017	2017	2006	2014	2009	2012	2015	2013
3.2.1 Under-5 mortality rate	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
3.2.2 Neonatal mortality rate	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
3.3.1 New HIV infections	2017	no data	no data	2017	no data	2017	2017	no data	2017	no data	no data
3.3.2 Tuberculosis incidence	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
3.3.3 Malaria incidence	2017	2017	no data	2017	2017	2017	2017	2017	no data	2017	2017
3.3.4 Hepatitis B incidence	2015	2015	no data	2015	2015	2015	2015	2015	2015	2015	2015
3.3.5 People requiring interventions for neglected tropical diseases	2017	2017	no data	2017	2017	2017	2017	2017	2017	2017	2017
3.4.1 Mortality rate due to cardiovascular disease, cancer, diabetes or chronic respiratory disease	2016	2016	no data	2016	2016	2016	2016	2016	2016	2016	2016
3.4.2 Suicide mortality rate	2016	2016	no data	2016	2016	2016	2016	2016	2016	2016	2016
3.5.2 Harmful use of alcohol	2016	2016	no data	2016	2016	2016	2016	2016	2016	2016	2016
3.6.1 Death rate due to road traffic injuries	2016	2016	no data	2016	2016	2016	2016	2016	2016	2016	2013
3.7.1 Women of reproductive age who have their need for family planning satisfied	2018	2014	2014	2012	no data	no data	2014	2009	2013	no data	2013
3.7.2 Adolescent birth rate	2009	2016	2014	2016	2007	2005	2013	2009	2011	2017	2012
3.8.1 Coverage of essential health services	2017	2017	no data	2017	2017	2017	2017	2017	2017	2017	2017
3.8.2 Population with large household expenditures on health	2006	no data	2016	no data	no data	no data	2009	2007	2015	no data	2014
3.9.1 Mortality rate due to air pollution	2016	2016	no data	2016	2016	2016	2016	2016	2016	2016	2016

SDG Tier I Indicators	Algeria	Bahrain	Comoros	Djibouti	Egypt	Iraq	Jordan	Kuwait	Lebanon	Libya	Mauri- tania
3.9.2 Mortality rate due to unsafe water, sanitation and lack of hygiene	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016
3.9.3 Mortality rate due to unintentional poisoning	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016
3.a.1 Prevalence of tobacco use	2016	2016	2016	2016	2016	no data	no data	2016	2016	no data	no data
3.b.1 Target population covered by vaccines	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
3.b.2 Official development assistance to health sectors	2017	2002	2017	2017	2017	2017	2017	no data	2017	2017	2017
3.c.1 Health worker density and distribution	2007	2015	2012	2014	2017	2017	2017	2015	2017	2017	2017
3.d.1 International Health Regulations (IHR) capacity and health emergency preparedness	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
4.1. Children and youth achieving at least a minimum proficiency level in (i) reading and (ii) mathematics	2015	2015	2007	no data	2015	no data	2015	2015	2015	no data	2003
4.2.2 Participation rate in organized learning	2010	2017	2017	2018	2017	2007	2004	2017	2017	no data	no data
4.5.1 Parity indices for education indicators	2015	2017	2017	2018	2017	2007	2017	2017	2017	no data	2017
4.b.1 Official development assistance flows for scholarships	2017	no data	2017	2017	2017	2017	2017	no data	2017	2017	2017
5.3.1 Women married or in a union before age 15 and 18	2013	no data	2012	2006	2014	2018	2012	no data	2009	no data	2015
5.3.2 Girls and women who have undergone female genital mutilation/cut	no data	no data	no data	2006	2015	2018	no data	no data	no data	no data	2015
5.5.1 Seats held by women in parliaments	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019
5.5.2 Women in managerial positions	2017	2004	2004	no data	2017	2012	no data	2016	2007	no data	no data
6.4.1 Water-use efficiency	2015	2015	2000	no data	2015	2015	2015	2000	2015	2010	2005
6.4.2 Water stress	2017	2017	2002	2002	2017	2017	2017	2002	2017	2012	2007
6.5.1 Integrated water resources management	2018	2018	2018	no data	2018	2018	2018	2018	2018	2018	2018
6.5.2 Transboundary basin area cooperation	no data	Not relevant	Not relevant	no data	no data	2017	2017	no data	no data	no data	no data
6.6.1 Water- ecosystems	2016	2016	2016	2016	2016	2016	2016	2016	2017	2016	2016
6.a.1 Water- and sanitation official development assistance	2017	2004	2017	2017	2017	2017	2017	no data	2017	2017	2017
6.b.1 Participation of local communities in water and sanitation management	no data	no data	2019	no data	2012	no data	2019	no data	2019	no data	2019
7.1.1 Population with access to electricity	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
7.1.2 Population relying on clean fuels and technology	2017	2017	2017	2017	2017	2017	2017	2017	no data	no data	2017
7.2.1 Renewable energy share in consumption	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016
7.3.1 Energy intensity	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016
7.a.1 Financial flows in support of clean energy	2016	Not relevant	2016	2016	2016	2016	Not relevant	2016	2016	no data	2016
8.1.1 GDP growth per capita	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
8.2.1 GDP growth per employed person	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
8.4.2 Domestic material consumption	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
8.5.2 Unemployment rate	2017	2012	2014	no data	2017	2017	2016	2016	2009	2012	2012

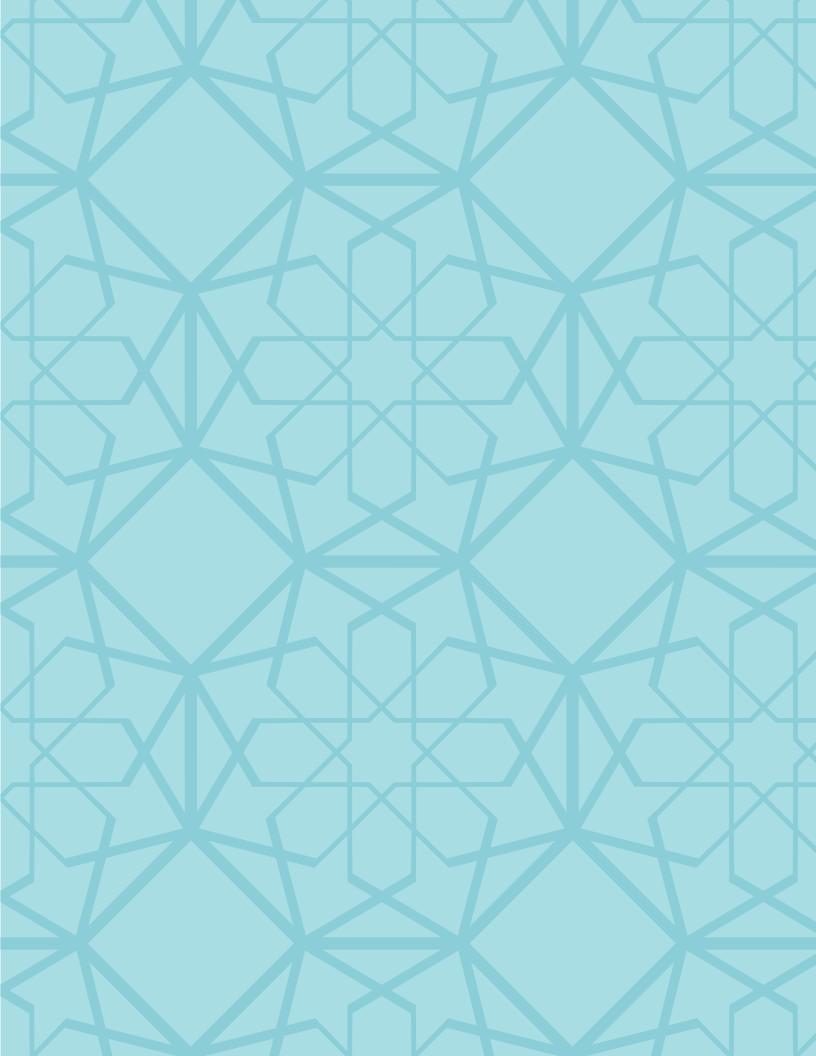
SDG Tier I Indicators	Morocco	Oman	Pales- tine	Qatar	Saudi Arabia	Somalia	Sudan	Syria	Tunisia	UAE	Yemen
3.9.2 Mortality rate due to unsafe water, sanitation and lack of hygiene	2016	2016	no data	2016	2016	2016	2016	2016	2016	2016	2016
3.9.3 Mortality rate due to unintentional poisoning	2016	2016	no data	2016	2016	2016	2016	2016	2016	2016	2016
3.a.1 Prevalence of tobacco use	2016	2016	no data	2016	2016	no data	no data	no data	2016	2016	2016
3.b.1 Target population covered by vaccines	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
3.b.2 Official development assistance to health sectors	2017	2003	2017	no data	2003	2017	2017	2017	2017	no data	2017
3.c.1 Health worker density and distribution	2017	2017	no data	2016	2016	2014	2015	2016	2016	2016	2014
3.d.1 International Health Regulations (IHR) capacity and health emergency preparedness	2018	2018	no data	2018	2018	2018	2018	2018	2018	2018	2018
4.1. Children and youth achieving at least a minimum proficiency level in (i) reading and (ii) mathematics	2015	2015	2011	2015	2015	no data	no data	2011	2015	2015	2011
4.2.2 Participation rate in organized learning	2017	2017	2017	2017	2017	no data	no data	2013	2002	2013	2013
4.5.1 Parity indices for education indicators	2017	2017	2017	2017	2016	no data	2009	2013	2016	2016	2013
4.b.1 Official development assistance flows for scholarships	2017	2010	2017	no data	2007	2017	2017	2017	2017	no data	2017
5.3.1 Women married or in a union before age 15 and 18	2011	2014	2014	2012	no data	2006	2014	2006	2012	no data	2013
5.3.2 Girls and women who have undergone female genital mutilation/cut	no data	no data	no data	no data	no data	2006	2014	no data	no data	no data	no data
5.5.1 Seats held by women in parliaments	2019	2019	no data	2019	2019	2019	2019	2019	2019	2019	2019
5.5.2 Women in managerial positions	2008	2017	2017	2017	2015	no data	no data	2010	2012	2017	2014
6.4.1 Water-use efficiency	2010	2000	2005	2005	2015	2000	2005	2005	2015	2005	2000
6.4.2 Water stress	2012	2007	2017	2007	2017	2007	2012	2007	2017	2007	2007
6.5.1 Integrated water resources management	2018	2018	no data	2018	2018	2018	2018	no data	2018	2018	2018
6.5.2 Transboundary basin area cooperation	2017	no data	no data	2017	no data	2017	no data	no data	2017	no data	no data
6.6.1 Water- ecosystems	2017	2016	no data	2016	2016	2016	2017	2016	2016	2016	2016
6.a.1 Water- and sanitation official development assistance	2017	2010	2017	no data	2010	2017	2017	2017	2017	no data	2017
6.b.1 Participation of local communities in water and sanitation management	2019	2019	2019	no data	no data	no data	2019	2019	2019	no data	2014
7.1.1 Population with access to electricity	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
7.1.2 Population relying on clean fuels and technology	2017	2017	no data	2017	2017	2017	2017	2017	2017	2017	2017
7.2.1 Renewable energy share in consumption	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016
7.3.1 Energy intensity	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016
7.a.1 Financial flows in support of clean energy	2016	2016	2016	Not relevant	Not relevant	no data	2016	2010	2016	Not relevant	2014
8.1.1 GDP growth per capita	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
8.2.1 GDP growth per employed person	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
8.4.2 Domestic material consumption	2017	2017	no data	2017	2017	2017	2017	2017	2017	2017	2017
8.5.2 Unemployment rate	2016	2018	2018	2018	2018	no data	2009	2010	2018	2018	2014

SDG Tier I Indicators	Algeria	Bahrain	Comoros	Djibouti	Egypt	Iraq	Jordan	Kuwait	Lebanon	Libya	Mauri- tania
8.6.1 Youth not in education, employment or training	2017	no data	2004	no data	2017	2012	no data	no data	2007	no data	2012
8.10.1 Commercial bank branches and ATMs per 100,000 adults	2018	no data	2018	2018	2018	2018	2017	2018	2018	2017	2017
8.10.2 Adults with an account at a financial institution or a mobile-money-service provider	2017	2017	2011	2011	2017	2017	2017	2017	2017	2017	2017
8.a.1 Aid for Trade	2017	no data	2017	2017	2017	2017	2017	no data	2017	2017	2017
9.1.2 Passenger and freight volumes	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
9.2.1 Manufacturing value added	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
9.2.2 Manufacturing employment	2017	2015	2004	no data	2017	no data	2004	2017	no data	no data	no data
9.3.2 Small-scale industries with a line of credit	no data	no data	no data	no data	no data	no data	no data	2016	no data	no data	no data
9.4.1 CO2 emission	2016	2016	no data	no data	2016	2016	2016	2016	2016	2016	no data
9.5.1 R&D expenditure	2017	2014	no data	no data	2017	2017	2016	2017	no data	no data	no data
9.5.2 Researchers per million inhabitants	2017	2014	no data	no data	2017	2017	2017	2017	no data	no data	no data
9.a.1 International support to infrastructure	2017	2004	2017	2017	2017	2017	2017	no data	2017	2017	2017
9.b.1 Medium and high-tech industry value added	2016	2016	no data	no data	2016	2016	2016	2016	2016	no data	no data
9.c.1 Population covered by a mobile network	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
10.5.1 Financial Soundness	2016	no data	no data	no data	no data	no data	no data	2017	no data	no data	2017
10.6.1 Developing countries members in international organizations	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
10.a.1 Tariff to imports from least developed and developing countries	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
10.b.1 Resource flows for development	2017	2004	2017	2017	2017	2017	2017	2017	2017	2017	2017
10.c.1 Remittance costs	2018	no data	2018	no data	2018	no data	2018	no data	2018	no data	no data
11.1.1 Urban population in slums	no data	no data	2016	2016	2016	2016	2016	no data	2014	no data	2016
11.6.2 Fine particulate matter in cities	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016
12.2.2 Domestic material consumption	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
12.4.1 Meeting commitments and obligations against international environmental agreements	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015
12.c.1 Fossil-fuel subsidies	2015	2015	no data	2015	2015	2015	2015	2015	2015	2015	2015
14.5.1 Protected marine areas	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
14.6.1 Implementation of international instruments to combat illegal, fishing	no data	no data	no data	no data	no data	no data	no data	no data	2018	2018	2018
14.b.1 Application of a framework to protect small-scale fisheries	no data	no data	no data	no data	no data	no data	no data	no data	2018	2018	2018
15.1.1 Forest area	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015
15.1.2 Sites for terrestrial and freshwater biodiversity that are protected	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
15.2.1 Forest management	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
15.3.1 Degraded land	2015	no data	2015	no data	2015	2015	2015	2015	no data	no data	2015
Adamstalia biladinamita.	2018	no data	2018	2018	2018	2018	2018	no data	2018	2018	2018
15.4.1 Mountain biodiversity	2010	no data									
15.4.2 Mountain Green Cover	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017

SDG Tier I Indicators	Morocco	Oman	Pales- tine	Qatar	Saudi Arabia	Somalia	Sudan	Syria	Tunisia	UAE	Yemen
8.6.1 Youth not in education, employment or training	no data	no data	2017	2017	2015	no data	no data	no data	2010	2017	2014
8.10.1 Commercial bank branches and ATMs per 100,000 adults	2018	2018	2018	2018	2018	no data	2017	2013	2018	2018	2015
8.10.2 Adults with an account at a financial institution or a mobile-money-service provider	2017	2011	2017	2017	2017	2014	2014	2011	2017	2017	2014
8.a.1 Aid for Trade	2017	no data	2017	no data	no data	2017	2017	2017	2017	no data	2017
9.1.2 Passenger and freight volumes	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
9.2.1 Manufacturing value added	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
9.2.2 Manufacturing employment	2012	2010	2017	2017	2016	no data	2011	2011	2015	2017	2014
9.3.2 Small-scale industries with a line of credit	no data	no data	2016	no data	no data	no data	no data	no data	no data	no data	no data
9.4.1 CO2 emission	2016	2016	no data	2016	2016	no data	2016	2016	2016	2016	2016
9.5.1 R&D expenditure	2010	2017	2013	2015	2013	no data	2005	2015	2016	2016	no data
9.5.2 Researchers per million inhabitants	2016	2017	2013	2015	no data	no data	no data	2015	2016	2016	no data
9.a.1 International support to infrastructure	2017	2010	2017	no data	2007	2017	2017	2017	2017	no data	2017
9.b.1 Medium and high-tech industry value added	2016	2016	2016	2016	2016	no data	no data	2016	2016	2016	2016
9.c.1 Population covered by a mobile network	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
10.5.1 Financial Soundness	no data	no data	2017	no data	2017	no data	no data	no data	no data	2018	no data
10.6.1 Developing countries members in international organizations	2018	2018	no data	2018	2018	2018	2018	2018	2018	2018	2018
10.a.1 Tariff to imports from least developed and developing countries	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
10.b.1 Resource flows for development	2017	2010	2017	no data	2017	2017	2017	2017	2017	2017	2017
10.c.1 Remittance costs	2018	no data	2018	no data	no data	no data	2018	2018	2018	no data	2018
11.1.1 Urban population in slums	2016	no data	2016	no data	2014	2016	2016	2016	2016	no data	2016
11.6.2 Fine particulate matter in cities	2016	2016	no data	2016	2016	2016	2016	2016	2016	2016	2016
12.2.2 Domestic material consumption	2017	2017	no data	2017	2017	2017	2017	2017	2017	2017	2017
12.4.1 Meeting commitments and obligations against international environmental agreements	2015	2015	no data	2015	2015	2015	2015	2015	2015	2015	2015
12.c.1 Fossil-fuel subsidies	2015	2015	no data	2015	2015	no data	2015	no data	2015	2015	2015
14.5.1 Protected marine areas	2018	2018	no data	2018	2018	2018	2018	2018	2018	2018	2018
14.6.1 Implementation of international instruments to combat illegal, fishing	2018	2018	no data	no data	no data	2018	2018	no data	no data	no data	no data
14.b.1 Application of a framework to protect small-scale fisheries	2018	2018	no data	no data	no data	2018	2018	no data	no data	no data	no data
15.1.1 Forest area	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015
15.1.2 Sites for terrestrial and freshwater biodiversity that are protected	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
15.2.1 Forest management	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
15.3.1 Degraded land	2015	2015	2015	2015	2015	2015	2015	no data	2015	2015	no data
15.4.1 Mountain biodiversity	2018	2018	2018	no data	2018	2018	2018	2018	2018	2018	2018
15.4.2 Mountain Green Cover	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
15.5.1 Red List Index	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019

SDG Tier I Indicators	Algeria	Bahrain	Comoros	Djibouti	Egypt	Iraq	Jordan	Kuwait	Lebanon	Libya	Mauri- tania
15.6.1 Frameworks for fair and equitable sharing of benefits	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
15.a.1 Expenditure on conservation and biodiversity and ecosystems	2017	2003	2017	2017	2017	2017	2017	2017	2017	2016	2017
15.b.1 Expenditure on conservation and biodiversity and ecosystems	2017	2003	2017	2017	2017	2017	2017	2017	2017	2016	2017
16.1.1 Victims of homicide per 100,000 population	2015	2014	no data	no data	2012	2014	2017	2012	2016	no data	no data
16.3.2 Unsentenced detainees	2017	no data	no data	no data	no data	no data	2017	no data	no data	2017	no data
16.5.2 Businesses that paid a bribe or were asked for a bribe	no data	no data	no data	2013	2016	2011	2013	no data	2013	no data	2014
16.8.1 Developing countries membership in international organizations	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
16.9.1 Registered births	2013	no data	2012	2006	2014	2018	2012	no data	2009	no data	2015
16.10.2 Public access to information	no data	no data	no data	no data	no data	no data	2019	no data	2019	no data	no data
16.a.1 Independent national human rights institutions	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
17.1.1 Government tax revenue	2011	2013	no data	no data	2015	2016	2017	2015	2017	no data	no data
17.1.2 Domestic budget funded by domestic taxes	2010	2013	no data	no data	2015	2016	2017	2015	2017	no data	no data
17.3.1 FDI, official development assistance and South South cooperation	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
17.3.2 Remittances	2017	no data	2017	2017	2017	2017	2017	2017	2017	2006	2017
17.4.1 Debt service	2017	no data	2017	2017	2017	no data	2017	no data	2017	2017	2017
17.6.2 Internet broadband	2017	2017	2017	2017	2017	2017	2017	2017	2016	2017	2017
17.8.1 Individuals using the Internet	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
17.9.1 Official development assistance for technical cooperation	2017	Not relevant	2017	2017	2017	2017	2017	Not relevant	2017	2017	2017
17.10.1 Worldwide weighted tariff-average	2017	2017	2016	2015	2017	no data	2017	2017	2017	2015	2017
17.12.1 Average tariffs faced by developing countries	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
17.18.2 National statistical legislation that complies with Principles of Official Statistics	2018	no data	2018	2018	2018	2018	2018	no data	no data	2018	2018
17.18.3 National statistical plan fully funded	2018	no data	2018	2018	2018	2018	2018	no data	no data	2018	2018
17.19.1 Resources to strengthen statistical capacity	2016	2016	2016	2016	2016	2016	2016	2015	2016	2016	2016
17.19.2 Population and housing census and birth registration and death registration	2017	2017	2017	2017	2017	2017	2017	2017	2017	no data	2013

SDG Tier I Indicators	Morocco	Oman	Pales- tine	Qatar	Saudi Arabia	Somalia	Sudan	Syria	Tunisia	UAE	Yemen
15.6.1 Frameworks for fair and equitable sharing of benefits	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
15.a.1 Expenditure on conservation and biodiversity and ecosystems	2017	2010	2017	2017	2007	2017	2017	2017	2017	2017	2017
15.b.1 Expenditure on conservation and biodiversity and ecosystems	2017	2010	2017	2017	2007	2017	2017	2017	2017	2017	2017
16.1.1 Victims of homicide per 100,000 population	2017	2017	2016	2014	2017	no data	no data	no data	2010	2017	2012
16.3.2 Unsentenced detainees	2017	no data	no data	no data	no data	no data	no data	no data	no data	2017	no data
16.5.2 Businesses that paid a bribe or were asked for a bribe	2013	no data	2013	no data	no data	no data	2014	no data	2013	no data	2013
16.8.1 Developing countries membership in international organizations	2018	2018	no data	2018	2018	2018	2018	2018	2018	2018	2018
16.9.1 Registered births	2018	2018	2015	2017	no data	2006	2014	2006	2012	2012	2013
16.10.2 Public access to information	2019	no data	no data	no data	no data	no data	2019	no data	2019	no data	2019
16.a.1 Independent national human rights institutions	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
17.1.1 Government tax revenue	2017	2013	2017	2010	2017	2017	2016	no data	2012	2017	no data
17.1.2 Domestic budget funded by domestic taxes	2017	2013	2017	2010	2017	2017	2016	no data	2010	2017	no data
17.3.1 FDI, official development assistance and South South cooperation	2018	2018	2018	2018	2018	2018	2018	2007	2018	2018	2018
17.3.2 Remittances	2017	2017	2017	2017	2017	no data	2017	2007	2017	no data	2017
17.4.1 Debt service	2017	no data	no data	2017	no data	no data	2017	2010	2017	no data	2017
17.6.2 Internet broadband	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
17.8.1 Individuals using the Internet	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
17.9.1 Official development assistance for technical cooperation	2017	Not relevant	2017	Not relevant	Not relevant	2017	2017	2017	2017	Not relevant	2017
17.10.1 Worldwide weighted tariff-average	2017	2017	2017	2017	2017	no data	2017	2015	2017	2017	2017
17.12.1 Average tariffs faced by developing countries	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
17.18.2 National statistical legislation that complies with Principles of Official Statistics	2018	2018	2018	no data	no data	no data	2018	no data	2018	no data	no data
17.18.3 National statistical plan fully funded	2018	2018	2018	no data	no data	no data	2018	2018	2018	no data	no data
17.19.1 Resources to strengthen statistical capacity	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016
17.19.2 Population and housing census and birth registration and death registration	2017	2017	2017	2017	2017	no data	2008	2015	2017	2017	2017





United Nations Development Programme (UNDP)

Regional Bureau for the Arab States (RBAS) 1 UN Plaza, New York, New York, 10017, USA

 $oldsymbol{\Theta}$ http://www.arabstates.undp.org or www.arab-hdr.org $oldsymbol{f}$ @UNDPar

y @UNDPArabStates

