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**Sustainable energy in the Arab region****Energy-related sustainable development goals****Summary**

The present document provides an overview of Sustainable Development Goal 7 (SDG7) on ensuring access to affordable, reliable, sustainable and modern energy for all. It highlights the Goal's strong connection to the following three pillars of the United Nations Sustainable Energy for All Decade: energy access, energy efficiency, and renewable energy. The three main targets of SDG7 with respect to energy access, energy efficiency and renewable energy, and its two means of implementation, are discussed while providing a detailed account of their retained indicators. The document also covers other SDGs that have explicit or implicit links to sustainable energy.

The document also sets out the ESCWA contribution to sustainable energy in the Arab region, particularly its recent contribution to the reporting process on achieving SDG7 and other energy-related SDGs. The Committee on Energy is invited to consider regional activities to prepare Arab countries for implementation, monitoring and reporting on the energy-related SDGs, and recommend ways forward.

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## Introduction

1. The 2030 Agenda for Sustainable Development<sup>1</sup> sets out a wide range of economic, social and environmental objectives through 17 Sustainable Development Goals (SDGs), and defines 169 associated targets to be achieved by 2030. The SDGs are to be used as a framework for the development agendas of United Nations member States, and to inspire the private sector to contribute significantly to the achievement of these universal goals.

2. SDG 7 specifically targets energy. Its objective is to ensure access to affordable, reliable, sustainable and modern energy for all. However, many other SDGs and targets either explicitly or implicitly refer to the sustainable management of energy resources, including climate change considerations. Goal 8 calls for sustainable economic growth by improving global resource efficiency in consumption and production, and by decoupling economic growth from environmental degradation. Goal 12 calls for ensuring sustainable consumption and production patterns by achieving the sustainable management and efficient use of natural resources by 2030, and by rationalizing inefficient fossil-fuel subsidies. Goal 13 calls for taking urgent action to combat climate change and its impacts by integrating climate change measures into national policies, strategies and planning.

### I. FROM THE SUSTAINABLE ENERGY FOR ALL INITIATIVE TO SDG7

3. Prior to the adoption of the 2030 Agenda and SDG7, the international community had already pledged to achieve universal energy access and make substantial advances in energy efficiency and renewable energy by 2030. This commitment was made through the Sustainable Energy for All (SEforALL) initiative.<sup>2</sup> The three goals of the initiative were essentially retained as the three main targets of SDG7.

#### A. DEVELOPMENT OF THE SEFORALL INITIATIVE

4. The SEforALL initiative is built around the following three objectives to be achieved by 2030:

- (a) Ensuring universal access to modern energy services;
- (b) Doubling the global rate of improvement in energy efficiency (with respect to 2010);
- (c) Doubling the share of renewable energy in the global energy mix (with respect to 2010).

5. Many supporting structures and programmes have since been developed around the initiative, involving different institutions and countries. These include regional and thematic hubs<sup>3</sup> and monitoring mechanisms specifically developed for the initiative. These mechanisms include the SEforALL Global Tracking Framework (GTF), initiated in 2013 to measure progress towards achieving the three SEforALL goals at the global and country levels by tracking a set of indicators.<sup>4</sup> They also include the recently developed Regulatory Indicators for Sustainable Energy (RISE) to assess the ability of existing policies and regulations to provide a suitable framework for supporting the SEforALL objectives.<sup>5</sup> These structures and programmes have been retained to support the implementation of SDG7.

#### B. SDG 7, ITS TARGETS AND INDICATORS

6. SDG7 is the first time that energy has been explicitly recognized as a key component of a global development agenda. SDG7 has three targets to be achieved at the global level by 2030 on energy access,

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<sup>1</sup> A/RES/70/1.

<sup>2</sup> [www.SEforALL.org/](http://www.SEforALL.org/).

<sup>3</sup> [www.SEforALL.org/hubs](http://www.SEforALL.org/hubs).

<sup>4</sup> <http://trackingenergy4all.worldbank.org/>.

<sup>5</sup> [www.SEforALL.org/content/rise-regulatory-indicators-sustainable-energy](http://www.SEforALL.org/content/rise-regulatory-indicators-sustainable-energy).

renewable energy and energy efficiency; and two additional targets focusing on the means of implementation. A set of six indicators were retained for the five SDG7 targets.<sup>6</sup> Table 1 provides a summary of the targets associated with SDG7 and their corresponding indicators.

TABLE 1. SDG7 TARGETS AND CORRESPONDING INDICATORS

Targets	Corresponding indicators
<b>Main targets</b>	
<b>7.1</b> By 2030, ensure universal access to affordable, reliable and modern energy services	<b>7.1.1</b> Proportion of population with access to electricity <b>7.1.2</b> Proportion of population with primary reliance on clean fuels and technology
<b>7.2</b> By 2030, increase substantially the share of renewable energy in the global energy mix	<b>7.2.1</b> Renewable energy share in the total final energy consumption
<b>7.3</b> By 2030, double the global rate of improvement in energy efficiency	<b>7.3.1</b> Energy intensity measured in terms of primary energy and GDP
<b>Means of implementation:</b>	
<b>7.a</b> By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology	<b>7.a.1</b> Mobilized amount of United States dollars per year starting in 2020 accountable towards the \$100 billion commitment. <i>[This indicator is a duplicate of Indicator 13.a.1- Would most likely be driven by SDG13]</i>
<b>7.b</b> By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States and landlocked developing countries, in accordance with their respective programmes of support	<b>7.b.1</b> Investments in energy efficiency as a percentage of GDP and the amount of foreign direct investment in financial transfer for infrastructure and technology to sustainable development services

7. Indicator 7.1.1 focuses on access to electricity, and measures it as the proportion of the population that have access to it. However, no indicators have yet been developed to measure the quality of access, duration/frequency of power supply interruption, power rating, etc.). Indicator 7.1.2 tracks the proportion of the population relying mainly on clean fuels and technology for non-electric end uses, mostly at the household level, and primarily for cooking. These two indicators were formulated to correspond to generally available statistical data, and can be utilized to measure the progress for the first SDG7 target. At this stage, there are no specific indicators retained to measure access to energy services, their affordability, or reliability.

8. Indicator 7.2.1 tracks the contribution of renewable energy sources to final energy consumption with regard to economic sectors and end-users. This renewable energy contribution can be in the form of delivered electrical power, biofuel, and solar thermal or wind energy, among others.

9. Indicator 7.3.1 uses the evolution of energy intensity<sup>7</sup> as a proxy to track the evolution of energy efficiency. However, this indicator cannot distinguish between efficiency changes in the use of energy and changes in the components of gross domestic product (GDP), which are not strongly related to energy efficiency. Changes in GDP also reflect changes in the structural mix and size of economic activities.

10. It should be noted that indicator 7.a.1 is duplicated in indicator 13.a.1 for target 13.a of SDG13 on climate change. Therefore, it is most likely that this indicator will be led by the development work associated with SDG13,

<sup>6</sup> See E/CN.3/2016/2/Rev.1, Annex IV.

<sup>7</sup> Energy intensity is defined as the ratio of total primary energy supply to GDP.

which is closely tied to the climate change negotiation process. Institutional boundaries must be well defined for monitoring this indicator to avoid confusion regarding the respective responsibilities of relevant agencies.

11. Indicator 7.b.1 calls for monitoring investments in energy efficiency as a percentage of GDP, and the amount of foreign direct investment in infrastructure and technology for sustainable development services. This indicator also requires further clarification with regard to its monitoring mechanisms.

### C. COMPARING THE SEFORALL INITIATIVE OBJECTIVES WITH SDG7 TARGETS

12. The three main targets of SDG7 reflect, with some slight variations, the three goals of the SEforALL initiative. However, SDG7 calls for a more binding commitment within the context of the 2030 Agenda, and its formulation adds precision by stating that access to energy for all should be affordable, reliable, sustainable and modern. The 2030 Agenda thus recognizes the central role that energy plays in all socioeconomic development efforts, and sets the terms for future energy systems developed to support the SDGs.

13. SEforALL was initially developed as an idealistic initiative with no binding commitments. In contrast, SDG7 was formulated in the context of a wider socioeconomic development agenda resulting from a negotiated process involving member States, which took into account their current capabilities and socioeconomic development priorities. Table 2 sets out key differences between SEforALL and SDG7.

TABLE 2. COMPARISON BETWEEN SEFORALL AND SDG7

	<b>SEforALL</b>	<b>SDG 7</b>
Year of Adoption	2012 (for the SEforALL decade)	2015
Target year	2030	2030
General statement	“Achieve sustainable energy for all”	“Ensure <i>access to affordable, reliable</i> , sustainable and <i>modern</i> energy for all”
Energy Access	<b>Objective</b> By 2030, ensure universal access to modern energy services	<b>Target</b> 7.1: By 2030, ensure universal access to <i>affordable, reliable</i> and modern energy services
	<b>Indicator</b> ✓ Percentage of population with access to electricity ✓ Percentage of population with access to <i>non-solid fuels</i>	<b>Indicator</b> ✓ Percentage of population with access to electricity ✓ Percentage of population with <i>primary reliance on clean fuels and technology</i>
Renewable Energy	<b>Objective</b> By 2030, <i>double</i> the share of renewable energy in the global energy mix	<b>Target</b> 7.2: By 2030, <i>increase substantially</i> the share of renewable energy in the global energy mix
	<b>Indicator</b> Renewable energy share in Total Final Energy Consumption	<b>Indicator</b> Renewable energy share in Total Final Energy Consumption
Energy Efficiency	<b>Objective</b> By 2030, double the global rate of improvement in energy efficiency	<b>Target</b> 7.3: By 2030, double the global rate of improvement in energy efficiency.
	<b>Indicator</b> <i>Compound annual growth rate of energy intensity</i> in terms of total primary energy supply and GDP	<b>Indicator</b> <i>Energy intensity</i> measured in terms of primary energy and GDP

*Note:* Significant language differences are indicated in bold italicised text.

14. To implement SDG 7 targets, they should be integrated into national socioeconomic development plans, in line with country specificities. As such, SDG 7 is a global process, whose implementation and primary responsibilities lie at the national level, as stated in the 2030 Agenda for all the SDGs.

## II. MEASURING PROGRESS TOWARDS SDG 7

15. Measuring progress towards the implementation of SDG7 is realized through the “Follow-up and review” component of the 2030 Agenda, which outlines the principles for monitoring the implementation progress. The follow-up and review process operates at the national, regional and global levels. It should promote accountability, support effective international cooperation in achieving the 2030 Agenda and foster exchanges of best practices and mutual learning.

16. The United Nations Statistical Commission led the work of the Inter-Agency and Expert Group on the development of a global indicator framework for the Goals and targets of the 2030 Agenda for Sustainable Development (IAEG-SDG),<sup>8</sup> to prepare the list of indicators for monitoring progress towards the SDG targets. The final list comprises 230 indicators, including nine that are repeated under two or three different SDG targets. The indicators are classified into three tiers: a tier for which an established methodology exists and data are already widely available (Tier I); a tier for which a methodology has been established but for which data are not easily available (Tier II); and a tier for which an internationally agreed methodology has not yet been developed (Tier III).<sup>9</sup>

17. In July 2016, the Secretary-General delivered the first global report entitled “Progress towards the Sustainable Development Goals” to the High-level Political Forum on Sustainable Development, based on the retained set of 230 indicators.<sup>10</sup>

### A. TRACKING THE PROGRESS OF SDG7 INDICATORS

18. The following classifications were initially proposed by the Secretariat for SDG7 indicators, and confirmed by the IAEG-SDG: Tier I for the indicators of the three main targets of SDG 7 (indicators 7.1.1, 7.1.2, 7.2.1 and 7.3.1); and Tier III for the two SDG7 indicators associated with the two means of implementation targets (indicators 7.a.1 and 7.b.1),<sup>11</sup> since no internationally agreed methodology for tracking the progress of these two indicators currently exists. The IAEG-SDG also proposed partner agencies and possible custodian agencies for each of the indicators.<sup>12</sup> These stakeholders are set out in table 3.

19. As indicated in table 3, the SE4ALL Global Tracking Framework (GTF) Consortium<sup>13</sup> is a key partner. All the other partner agencies are also members of this Consortium, as are the possible custodian agencies proposed for the three indicators. When the list of SDG 7 indicators was released, the consortium lead agency, the World Bank, declared that the Consortium would further align GTF with what was needed to support monitoring of SDG7 indicators.<sup>14</sup>

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<sup>8</sup> <https://unstats.un.org/sdgs/iaeg-sdgs>.

<sup>9</sup> Available from [www.un.org/ga/search/view\\_doc.asp?symbol=E/CN.3/2016/2/Rev.1](http://www.un.org/ga/search/view_doc.asp?symbol=E/CN.3/2016/2/Rev.1).

<sup>10</sup> Available from [www.un.org/ga/search/view\\_doc.asp?symbol=E/2016/75&Lang=E](http://www.un.org/ga/search/view_doc.asp?symbol=E/2016/75&Lang=E).

<sup>11</sup> See [https://unstats.un.org/sdgs/files/meetings/iaeg-sdgs-meeting-04/Tier%20Classification%20of%20SDG%20Indicators\\_21%20Dec%20for%20website.pdf](https://unstats.un.org/sdgs/files/meetings/iaeg-sdgs-meeting-04/Tier%20Classification%20of%20SDG%20Indicators_21%20Dec%20for%20website.pdf).

<sup>12</sup> Ibid.

<sup>13</sup> The GTF Consortium includes the following international agencies: Food and Agricultural Organization (FAO), Global Alliance for Clean Cook stoves (GACC), Global Water Partnership (GWP), International Institute for Applied Systems Analysis (IIASA), International Energy Agency (IEA), International Network on Gender and Sustainable Energy (Energia), International Partnership for Energy Efficiency Cooperation (IPEEC), International Renewable Energy Agency (IRENA), Practical Action, Renewable Energy Network for the 21<sup>st</sup> Century (REN21), Stockholm International Water Institute (SIWI), UN Energy, United Nations Development Program (UNDP), United Nations Foundation (UNF), United Nations Department of Economic and Social Affairs (UNDESA), United Nations Industrial Development Organization (UNIDO), United Nations Statistics Division (UNSD), World Bank (Lead agency), World Energy Council (WEC), and the World Health Organization (WHO).

<sup>14</sup> See [www.se4all.org/content/solid-indicators-proposed-sdg7-global-tracking-framework-ready-support](http://www.se4all.org/content/solid-indicators-proposed-sdg7-global-tracking-framework-ready-support).

20. The metadata presented by IAEG-SDG on the SDG7 indicators<sup>15</sup> confirmed that the methodologies developed for monitoring the three SEforALL objectives, through the SEforALL GTF<sup>16</sup> process, were a strong basis for developing the monitoring and reporting process for the three main targets of SDG7.

TABLE 3. TIER CLASSIFICATIONS, PARTNER AGENCIES AND POSSIBLE CUSTODIAN AGENCIES FOR SDG 7 INDICATORS (AS AT 21 DECEMBER 2016)

<b>SDG7 targets</b>	<b>Tier classification</b>	<b>Partner agencies</b>	<b>Possible custodian agencies</b>
<b>7.1.1</b> Proportion of population with access to electricity	Tier I	International Energy Agency (IEA), UN-Energy, SE4ALL GTF Consortium	World Bank
<b>7.1.2</b> Proportion of population with primary reliance on clean fuels and technology	Tier I	UN Energy and SE4ALL GTF Consortium	World Health Organization
<b>7.2.1</b> Renewable energy share in the total final energy consumption	Tier I	International Renewable Energy Agency (IRENA), World Bank, UN-Energy, SE4ALL GTF Consortium	United Nations Statistics Division (UNSD), IEA
<b>7.3.1</b> Energy intensity measured in terms of primary energy and GDP	Tier I	World Bank, UN-Energy, SE4ALL GTF Consortium	UNSD, IEA
<b>7.a.1</b> Mobilized amount of United States dollars per year starting in 2020 accountable towards the \$100 billion commitment [ <i>duplicate of 13.a.1</i> ]	Tier III	United Nations Framework Convention on Climate Change, United Nations Environment Programme	Organization for Economic Cooperation and Development (OECD)
<b>7.b.1</b> Investments in energy efficiency as a percentage of GDP and the amount of foreign direct investment in financial transfer for infrastructure and technology to sustainable development services	Tier III		IEA

#### B. GLOBAL TRACKING FRAMEWORK (GTF)

21. The indicators developed by GTF to measure progress towards achieving the three SEforALL objectives were identified based on their availability and technical ability to represent these objectives. However, secondary indicators were also identified by GTF to provide insight into observed trends, and to complement some of the gaps associated with the primary indicators of the SEforALL objectives.<sup>17</sup>

22. This is particularly the case for energy efficiency, where the methodology was supplemented with additional metrics to better understand the contribution of improvements in energy efficiency to estimated changes in energy consumption. These include examining energy intensity, based on sectoral final energy consumptions (industry, agriculture, transportation, services and residential) and their respective added value.

<sup>15</sup> See <https://unstats.un.org/sdgs/files/metadata-compilation/Metadata-Goal-7.pdf>.

<sup>16</sup> See <http://trackingenergy4all.worldbank.org/reports>.

<sup>17</sup> See [www.se4all.org/sites/default/files/GTF-2105-Full-Report.pdf](http://www.se4all.org/sites/default/files/GTF-2105-Full-Report.pdf).

Furthermore, a statistical decomposition method was developed to analyse the contributions of activities, economic structure and sectoral energy intensity to changes in energy consumption.

23. Similar secondary indicators were adopted to better assess progress in energy access. A multitier system was developed for both indicators on energy access. The system is based on a set of attributes for energy access and six corresponding levels of access: from Tier 0 (no/very low access level) to Tier 5 (very high access level). Attributes are defined by the following criteria: service adequacy, availability, reliability, quality, affordability, convenience, legality, and health and safety. This multitier analysis is proposed for use across all energy service applications, and conducted at different entity levels: households, entities performing productive activities, and community facilities. Two multitier matrices have been fully developed, and others are currently under development.

24. To track the progress of renewable energy shares, several data gaps and methodological problems have been identified by the GTF Consortium. These include improving inadequate definitions and data collection on bioenergy; providing a better distinction between modern and traditional uses of solid biofuels; improving inadequate definitions and data collection for distributed renewable energy power generation, both for grid-connected and off-grid systems; and implementing or promoting a harmonized approach for national target setting. Several solutions are being developed, led by IRENA, to address these issues.

25. The third and latest GTF report,<sup>18</sup> released in April 2017, included for the first time a contribution by the five United Nations regional commissions. They provided a regional perspective on the analysis. The report comprises two main parts. The first presents the “Global story” and the second the “Regional stories”, with a chapter dedicated to each region.

26. The latest GTF report confirms that at the global level, the pace of progress on sustainable energy for the period 2012–2014, as for 2010–2012, did not reach the rates required to meet the global objectives by 2030. The world made slow progress in terms of access to electricity and modest progress on clean cooking. The share of renewable energy evolved at a slow pace, because final energy consumption also grew over the same period. Only energy efficiency was advancing at a pace sufficiently close to the required rates. The analysis shows that most regions converged towards the same energy intensity level (around 5 mega joules per 2011 United States dollar purchasing power parity), with Europe showing the highest decrease in energy intensity.

27. For the Arab region, energy access is already high, and continues to grow at a slow pace. The share of renewable energy in the energy mix is declining, despite a substantial increase in renewable energy installed capacity. Energy consumption growth continued to be higher than GDP growth, indicating that there is yet no decoupling between energy consumption growth and GDP, and thus no increase in energy productivity. The report also sets out progress from SEforALL and SDG7 standpoints, but future editions of the GTF report will significantly focus on tracking the SDG 7 indicators.

### C. REGULATORY INDICATORS FOR SUSTAINABLE ENERGY

28. Another tracking process was recently initiated by the Knowledge Hub for SEforALL, led by the World Bank. This process involves tracking a set of indicators that focuses on the enabling environment for investment in sustainable energy, in full alignment with SDG7 targets and SEforALL objectives. Regulatory indicators for sustainable energy (RISE)<sup>19</sup> are a tool for policy makers to assess the multidimensional aspects of the enabling environment required to achieve sustained progress on sustainable energy objectives. The process groups these aspects into the following four categories: planning, policies and regulations, pricing and subsidies, and procedural efficiency.

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<sup>18</sup> [http://gtf.esmap.org/data/files/download-documents/eeep17-01\\_gtf\\_full\\_report\\_final\\_for\\_web\\_posting\\_0402.pdf](http://gtf.esmap.org/data/files/download-documents/eeep17-01_gtf_full_report_final_for_web_posting_0402.pdf).

<sup>19</sup> <http://documents.worldbank.org/curated/en/538181487106403375/pdf/112828-WP-P154461-PUBLIC-RISEReport65151book0206.pdf>.



29. The first edition of the RISE report was published in February 2017, describing the situation as of December 2015. It includes an assessment, based on a scoring system for 27 indicators, covering 111 countries that represent 96 per cent of the world's population. Only 14 Arab countries are included in the first report, namely Algeria, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Mauritania, Morocco, Qatar, Saudi Arabia, the Sudan, Tunisia, the United Arab Emirates and Yemen.

30. The 27 indicators are based on 80 sub-indicators and 158 questions representing the unique data points for each country, and are used to assign a score of 0-100 per country for each of the 27 indicators. An aggregate score for each of the three sustainable energy pillars (energy access, energy efficiency and renewable energy) is also provided, as well as a global score reflecting a country's overall performance.

31. The 27 scoring indicators were designed to evaluate policy capacity in addressing existing barriers to scaling up sustainable energy across its three pillars. These indicators encompass the multiple aspects of the policies and regulatory environment that directly support sustainable energy, including national planning and proposed regulatory and financial instruments, and appropriate pricing signals for markets and subsidy mechanisms to support the development of sustainable energy.

32. Four additional non-scoring indicators are also covered by the RISE process. These indicators assess whether the administrative procedures adopted for the implementation of sustainable energy are executed within reasonable time and cost, and determine the administrative ease of doing business. Table 4 shows the RISE scores and rankings of the 14 Arab countries included in the report.

TABLE 4. OVERALL RISE SCORE FOR SELECTED ARAB COUNTRIES AND THEIR GLOBAL AND ARAB RANKINGS

Country	Overall score	Energy access score	Renewable energy score	Energy efficiency score	Global ranking	Arab ranking
Algeria	69	100	51	55	41	5
Bahrain	47	100	15	27	73	11
Egypt	71	100	65	48	36	4
Jordan	75	100	70	55	30	2
Kuwait	55	100	34	30	61	9
Lebanon	52	100	20	35	65	10
Mauritania	13	19	11	9	109	14
Morocco	69	100	65	42	42	6
Qatar	62	100	35	50	53	8
Saudi Arabia	61	100	33	50	52	7
Sudan	25	35	21	19	94	12
Tunisia	72	100	50	68	34	3
United Arab Emirates	77	100	67	63	28	1
Yemen	19	19	24	13	102	13

Score ≥ 67

33 < Score <67

Score ≤33

Source: <http://documents.worldbank.org/curated/en/538181487106403375/pdf/112828-WP-P154461-PUBLIC-RISEReport6515Ibook0206.pdf>.

33. A colour-coded system (green, yellow and red zones) provides a snapshot of a country's enabling environment status based on its RISE aggregate score. Green indicates that the policy framework addresses many of the important issues that need to be considered and is a strong indication that the Government has prioritized the respective sustainable energy pillar, but does not exclude the existence of potential gaps and room for possible improvements. A red colour usually indicates that the country has considerable opportunities for improving its policy environment.

34. The three Arab least developed countries have scores in the red zone for energy access, indicating that major efforts need to be made to provide a better policy and institutional environment for enabling better

progress with respect to energy access.<sup>20</sup> Only two Arab countries have scores in the green zone for renewable energy and only one Arab country has a green score for energy efficiency. This indicates that, according to RISE, most Arab countries need to boost their efforts to provide better policy and institutional environments for renewable energy and energy efficiency development.

35. However, the information provided in the RISE report seems to indicate that some of the policy efforts in Arab countries may not be fully reflected, particularly with respect to energy efficiency. Relevant country officials should therefore be more involved in the validation process of the official information used as a basis for the RISE data.

36. It should be noted that RISE is limited in its ability to capture implementation outcomes of policies. Though indicators on administrative procedures attempt to measure effectiveness of policy implementation, RISE does not yet offer a comprehensive assessment of how policies, as designed, are implemented.

### III. ENERGY AS A CROSS-SECTORIAL ENABLER: OTHER ENERGY-RELATED SDGS

37. “Energy is crucial for achieving almost all of the Sustainable Development Goals, from its role in the eradication of poverty through advancements in health, education, water supply and industrialization, to combating climate change.”<sup>21</sup>

38. Although energy has a dedicated SDG (Goal 7), many other SDGs explicitly or implicitly include energy related targets. SDGs 4 and 13 include targets or indicators based on criteria that explicitly involve SDG7. Other SDGs have clear implicit links to sustainable energy (table 5).

TABLE 5. SDGS WITH LINKS TO SUSTAINABLE ENERGY

<b>SDGs and targets linked to sustainable energy</b>	<b>contribution of sustainable energy</b>
<b>SDG1 - End poverty in all its forms everywhere</b>	Access to energy services is a necessary condition for socioeconomic development and therefore ending poverty.
<b>SDG2 - End hunger, achieve food security and improved nutrition and promote sustainable agriculture</b>	Energy is needed for irrigation of agricultural land, food processing and conservation (water-energy-food nexus).
<b>SDG3 - Ensure healthy lives and promote well-being for all at all ages</b> <i>Target 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.</i>	Access of medical facilities to sustainable energy is essential to ensure high quality health care. Such air pollutants include smoke from traditional cooking technologies that, according to WHO, cause millions of premature deaths per year. Access to clean cooking technologies is one of the targets of SDG7.
<b>SDG4 - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</b> <b>Target 4.a</b> Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all	<i>In addition to specifically mentioning access to electricity (indicator 4.a.1), access to energy services is essential to ensure suitable learning conditions (adequate lighting, ventilation, space heating/cooling) and enable the use of modern communication and learning tools.</i>

<sup>20</sup> The other Arab countries had full scores of 100 because RISE does not assess energy access policies in countries where less than 10 per cent of the population and less than 1 million people lack access to electricity. Such countries receive a score of 100.

<sup>21</sup> See [www.un.org/ga/search/view\\_doc.asp?symbol=E/2016/75&Lang=E](http://www.un.org/ga/search/view_doc.asp?symbol=E/2016/75&Lang=E).

<b>SDGs and targets linked to sustainable energy</b>	<b>contribution of sustainable energy</b>
<p><b>SDG5 - Achieve gender equality and empower all women and girls</b></p> <p><i>Target 5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate</i></p> <p><i>Target 5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women</i></p>	<p>Access to energy reduces time spent on domestic work, particularly access to modern cooking technologies (indicator SDG7.1.2) considerably reduces the time associated with the use of traditional biomass (gathering firewood and cooking).</p> <p>Energy services are required to power enabling technology.</p>
<p><b>SDG6 - Ensure availability and sustainable management of water and sanitation for all</b></p> <p><i>Target 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all</i></p> <p><i>Target 6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene ...</i></p> <p><i>Target 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping ...</i></p> <p><i>Target 6.4 By 2030, substantially increase water-use efficiency across all sectors ...</i></p>	<p>All targets associated with SDG6 require access to sustainable energy to ensure water pumping, treatment and distribution, and wastewater collection, treatment and disposal/valorisation.</p> <p>Essentially, the water-energy nexus is one of the most important questions to be considered in sustainable planning.</p>
<p><b>SDG8 - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</b></p>	<p>In addition to energy being an essential enabler for all economic activities, green technologies associated with sustainable energy targets can be the source of new business opportunities and can create many jobs.</p>
<p><b>SDG9 - Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</b></p> <p><i>Target 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with <u>increased resource-use efficiency</u> and <u>greater adoption of clean and environmentally sound technologies</u> and industrial processes, with all countries taking action in accordance with their respective capabilities</i></p>	<p>All targets require sustainable energy as an enabler for all associated activities.</p> <p>Target 9.4, particularly, mentions resource-use efficiency, which would include energy efficiency, and the adoption of green technologies that would include all technologies associated with sustainable energy.</p>
<p><b>SDG11 - Make cities and human settlements inclusive, safe, resilient and sustainable</b></p>	<p>Sustainable energy is an essential principle in the development and preservation of sustainable cities.</p> <p>Most SDG11 targets require sustainable management of energy and access to sustainable energy services.</p>
<p><b>SDG12 - Ensure sustainable consumption and production patterns</b></p> <p><i>Target 12.1 Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries</i></p>	<p>Targets 12.1 and 12.2 involve the sustainable management of energy resources.</p> <p>Target 12.c specifically mentions rationalizing fossil fuel subsidies, a significant barrier to the development of renewable energy and energy efficiency (targets SDG 7.2 and 7.3) by reducing their economic attractiveness. Furthermore, energy efficiency can be an effective accompanying measure for lifting fossil fuel subsidies.</p>

<b>SDGs and targets linked to sustainable energy</b>	<b>contribution of sustainable energy</b>
<p><b>Target 12.2</b> <i>By 2030, achieve the sustainable management and efficient use of natural resources</i></p> <p><b>Target 12.3</b> <i>By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses</i></p> <p>One of the means of reducing food waste is through food conservation (drying, refrigeration or freezing), which require access to sustainable energy</p> <p><b>Target 12.c</b> <i>Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities</i></p>	<p>One of the means of reducing food waste (target 12.3) is through food conservation (drying, refrigeration or freezing), which require access to sustainable energy services.</p>
<p><b>SDG13 - Take urgent action to combat climate change and its impacts</b></p> <p><b>Target 13.2</b> <i>Integrate climate change measures into national policies, strategies and planning</i></p> <p><b>Target 13.3</b> <i>Improve education, awareness-raising, and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning</i></p> <p><b>Indicator 13.3.2</b> <i>Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions</i></p>	<p>In addition to sharing indicator 13.a.1 with SDG 7 (indicator 7.a.1), energy efficiency and renewable energy (two of the three main targets of SDG 7) are the main measures for achieving climate change mitigation.</p>
<p><b>SDG15 - Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</b></p> <p><b>Target 15.2</b> <i>By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally</i></p>	<p>Promoting efficient wood stoves for cooking and heating, and access to clean technologies for cooking reduces pressure on forests, thus contributing to efforts to halt deforestation.</p>
<p><b>SDG17 - Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development</b></p> <p><b>Target 17.7</b> <i>Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed</i></p> <p><b>Target 17.8</b> <i>Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology</i></p>	<p>SDG 17 targets cover all SDGs. Technologies related to energy efficiency and renewable energy are an important part of environmentally sound technologies.</p> <p>Access to sustainable energy services is a prerequisite to accessing information and communications technologies.</p>

#### IV. ESCWA REGIONAL CONTRIBUTION TO SUSTAINABLE ENERGY

39. At its second meeting (Amman, 14-16 December 2015), the ESCWA Executive Committee made several recommendations on implementing the 2030 Agenda,<sup>22</sup> including the following:

(a) To help member States to implement the 2030 Agenda by assisting in the examination of links between its goals and targets, in order to identify areas of common interest to member States, enhance their capacity to incorporate those goals effectively into their national strategies and provide multiple avenues for their achievement;

(b) To build the capacity of member States to monitor progress on achieving the SDGs, generate relevant statistics and ensure the consistency of indicators listed in the regional SDG monitoring framework, for use in the domestic policy of (but not limited to) conflict-affected States.

40. All current programmes integrate SDG issues into their work, and ESCWA has established a dedicated SDG unit to ensure coordination and coherence in these efforts to support member States. ESCWA is also leading preparations for the next sessions of the Arab Forum on Sustainable Development, in collaboration with other regional stakeholders including the League of Arab States. The upcoming sessions of the Arab Forum plan to address the same themes as the sessions of the High-level Political Forum. This will enable Arab countries to prepare for the High-level Forum sessions by articulating their priorities and concerns at the Arab Forum. The next Arab Forum is scheduled for May 2017, focusing on SDGs 1, 2, 3, 5, 9 and 14. The 2018 Arab Forum will focus on SDGs 6, 7, 11, 12 and 15. The 2019 Arab Forum will focus on SDGs 4, 8, 10, 13 and 16.

##### A. CONTRIBUTION TO THE GLOBAL TRACKING PROCESS

41. ESCWA participated in the 2017 edition of the GTF report by preparing a chapter on evaluating sustainable energy indicators for the Arab region from a regional perspective. ESCWA is also finalizing a report on tracking progress for SDG 7 in the Arab region, which provides an overview of the progress made in the region over the last two decades on sustainable energy issues. Through dedicated chapters on each of the three main SDG7 targets, the report provides an analysis of the observed trends. Another chapter gives policy recommendations to help Arab countries achieve a better progress rate, particularly with respect to energy efficiency and renewable energy. These two SDG7 targets are most relevant to the region, in view of the prevailing domestic energy patterns characterized by a substantial lack of energy productivity, and a notably low development rate of the region's significant renewable energy resources.

42. In January 2017, ESCWA held an expert group meeting on tracking progress towards the implementation of energy related SDGs in the Arab region. Participants discussed the GTF data reporting mechanism, the GTF 2017 findings for the Arab region, and the need for Arab countries to accelerate their efforts to achieve the SDG7 targets by 2030.<sup>23</sup>

##### B. SUPPORT TO REGIONAL ACTIVITIES PROMOTING SUSTAINABLE ENERGY

43. ESCWA is involved in many activities supporting sustainable energy at the regional level. These activities include coordination with the Energy Department of the League of Arab States on programmes related to the promotion of energy efficiency and renewable energy in the region. ESCWA is also cooperating with King Abdullah Petroleum Studies and Research Centre on a project to improve energy productivity in Gulf Cooperation Countries.

44. ESCWA is also working with the other four regional commissions to promote energy for sustainable development. The regional commissions organize an annual international forum on energy for sustainable development, as a follow up to the established roadmap.

<sup>22</sup> See [www.regionalcommissions.org/ESCWAres2016.pdf](http://www.regionalcommissions.org/ESCWAres2016.pdf).

<sup>23</sup> See [www.unescwa.org/events/tracking-progress-energy-sdgs-arab-region](http://www.unescwa.org/events/tracking-progress-energy-sdgs-arab-region).

## V. WAY FORWARD AND RECOMMENDATIONS

45. The 2030 Agenda offers a unique opportunity to blend international commitments into national socioeconomic development goals. As such, global, regional and national efforts should converge to achieve its goals and targets. The energy-related SDGs, and particularly the energy dedicated SDG7, stresses the enabling role that sustainable energy systems play in supporting sustainable socioeconomic development. Energy planning should no longer focus of just supplying energy to fuel the economy, but rather on managing energy resources using energy systems built on sustainability principles. Such approaches require integrated and systemic sustainable development planning, supported through coherent global, regional and national plans, and commitment to the SDGs and the Paris Agreement.

46. The Committee on Energy is requested to consider the following recommendations to ESCWA member States to support the implementation of energy-related SDGs:

(a) Reinforce country capacity to collect detailed national energy and other relevant data, to ensure an adequate assessment of progress in implementing the energy-related SDGs;

(b) Incorporate sustainable energy-related objectives, targets and indicators in national and sectoral socioeconomic development plans, specifically on energy access, energy efficiency and renewable energy;

(c) Inform ESCWA of ongoing national efforts to implement, monitor and report on the energy-related SDGs, which might sometimes entail the development of more ambitious national targets;

(d) Seek ESCWA support in examining and analysing existing indicators and sub-indicators, and develop other regional and national sub-indicators to better understand the energy-related SDGs evolution trends at the national and regional levels. This is particularly important since the region has many economies that are in transitional modes, requiring sub-indicators addressing such modes.

47. The Committee on Energy is requested to consider the following recommendations to the ESCWA secretariat to support member States' efforts in implementing energy-related SDGs:

(a) Provide continued technical support to Arab countries on collecting and calculating national energy and other relevant data, to provide a basis for monitoring the implementation of the energy-related SDGs;

(b) Work with member States to identify priority actions at the regional level to support the implementation of the energy-related SDGs, based on national strategies and sustainable energy targets included in their socioeconomic development plans;

(c) Work with member States to evaluate the use of secondary indicators and other assessment approaches, proposed at the global level to monitor the evolution of energy-related SDGs;

(d) Identify additional regional and national sub-indicators to better understand the evolution of their trends in the region. These may include assessing the state of economic regional integration with regard to energy-related issues that impact the implementation of energy-related SDGs (e.g. transnational electrical grid interconnections, etc.); and national sub-indicators that provide further understanding of progress in implementing the energy-related SDGs and gaps that need to be addressed (e.g. quality of access to energy services, etc.).

(e) Participate actively and engage member States in preparations for the 2018 and 2019 sessions of the Arab Forum and the High-level Political Forum, which will focus on SDGs 7 and 13, respectively;

(f) Explore, with the support of member States and other regional stakeholders, the possibility of creating and sustaining a regional observatory for monitoring the implementation of the energy-related SDGs in the Arab region. The observatory would, among other things, coordinate and support the collection of energy and other relevant data at the regional and national levels.

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